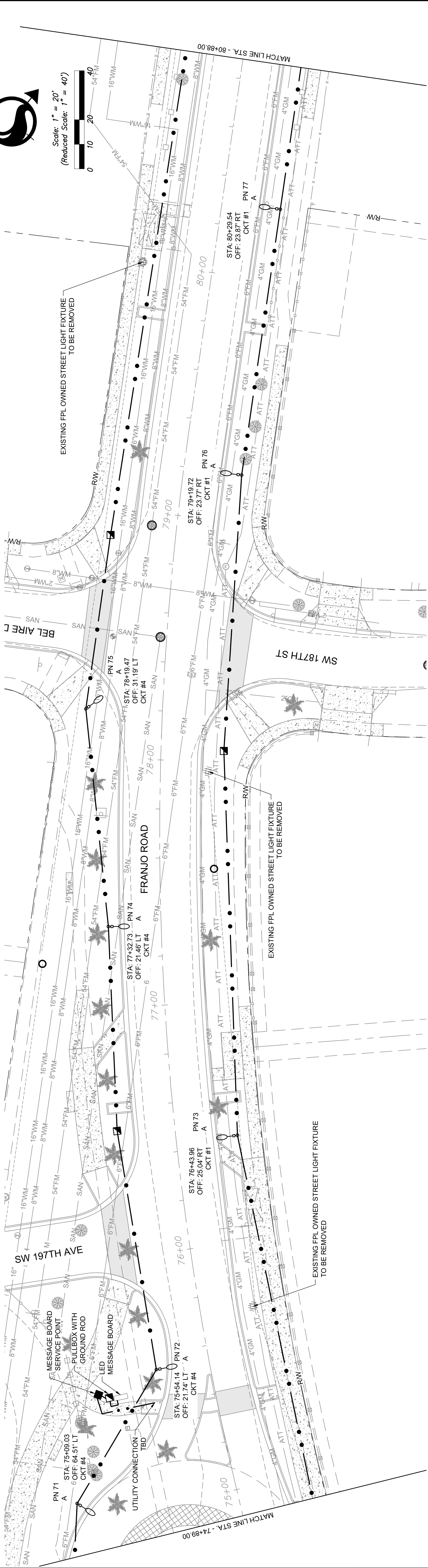
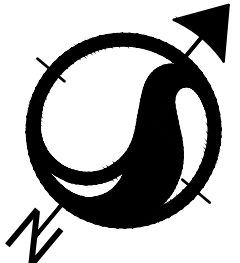
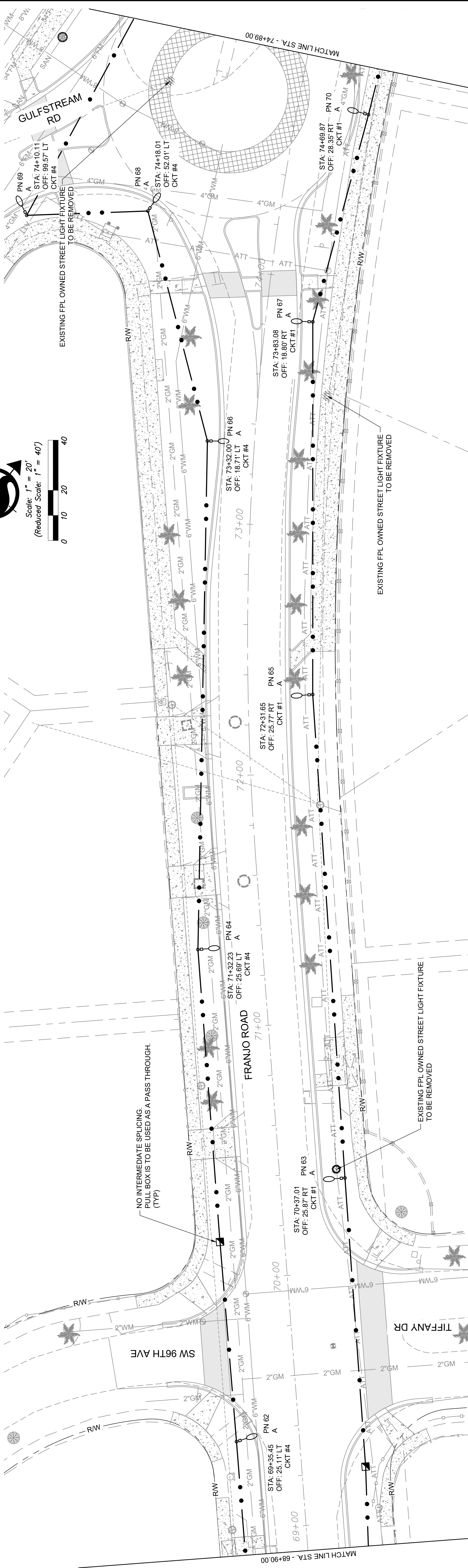
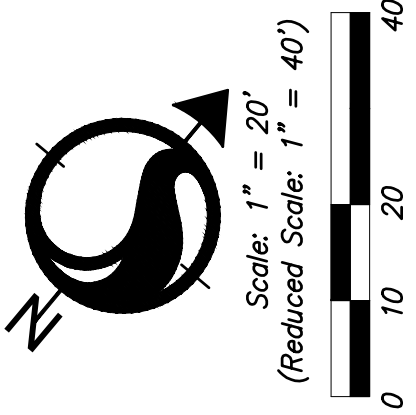


MIAMI-DADE COUNTY PUBLIC WORKS DEPT.  
HIGHWAY DIVISION  
FRANJO ROAD  
FROM OLD CUTLER RD TO SW 184TH STREET  
PROJECT NO. 215615952  
SHEET E-09 OF 19



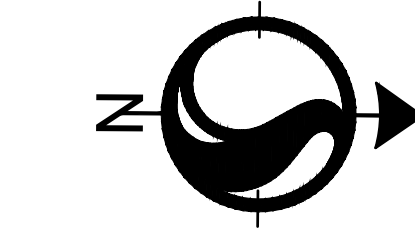
| REVISIONS      |    |             |      | DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS<br>HIGHWAY DIVISION |             |          |          | STREET LIGHTING PLAN 6 |      |                            |      |
|----------------|----|-------------|------|-------------------------------------------------------------------|-------------|----------|----------|------------------------|------|----------------------------|------|
| DATE           | BY | DESCRIPTION | DATE | BY                                                                | DESCRIPTION | NAME     | DATE     | NAME                   | DATE | NAME                       | DATE |
|                |    |             |      |                                                                   |             | DESIGNED | 3/7/2021 | DRAWN                  |      | MIAMI-DADE COUNTY          |      |
|                |    |             |      |                                                                   |             | CHECKED  |          | CHECKED                |      | STEPHEN J. GARDNER, CENTER |      |
|                |    |             |      |                                                                   |             | BY       |          | BY                     |      | MIAMI, FLORIDA 33128       |      |
| SUPERSEDED BY: |    |             |      |                                                                   |             |          |          |                        |      |                            |      |



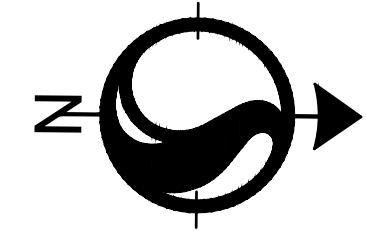
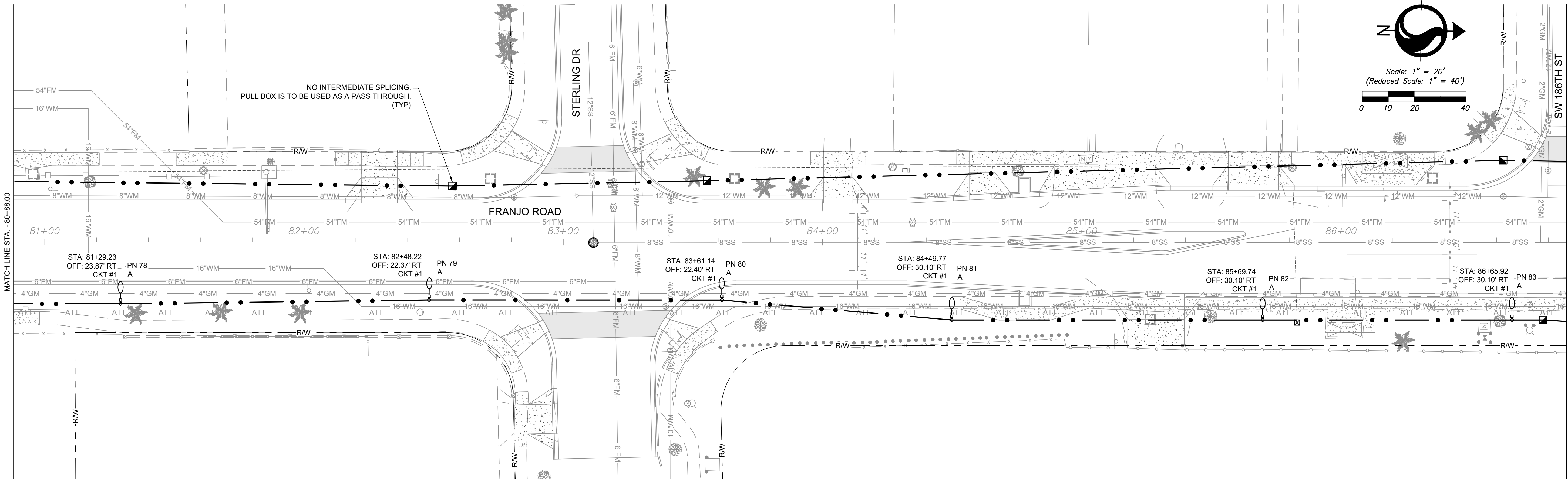
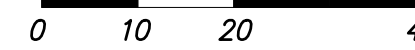
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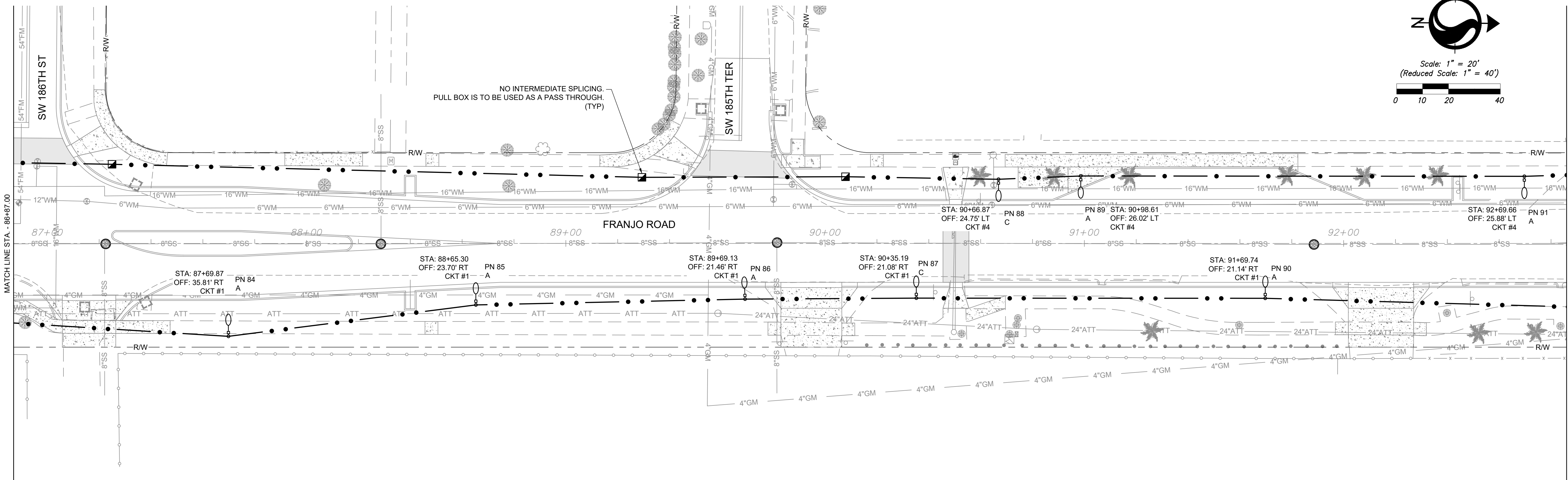
MIAMI-DADE COUNTY PUBLIC WORKS DEPT.  
HIGHWAY DIVISION  
FRANJO ROAD  
FROM OLD CUTLER RD TO SW 184TH STREET  
PROJECT NO. 215615952  
SHEET E-10 OF 19



Scale: 1" = 20'  
(Reduced Scale: 1" = 40')



Scale: 1" = 20'  
(Reduced Scale: 1" = 40')



REVISIONS

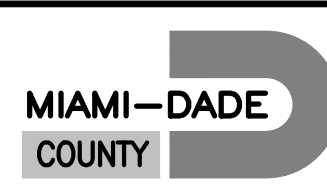
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| BB             | BB   | 3/26/2021 |            |      |      |
| CHECKED BY     | JN   |           | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |

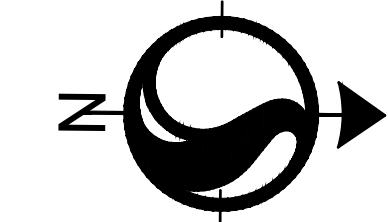


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STREET LIGHTING PLAN 7

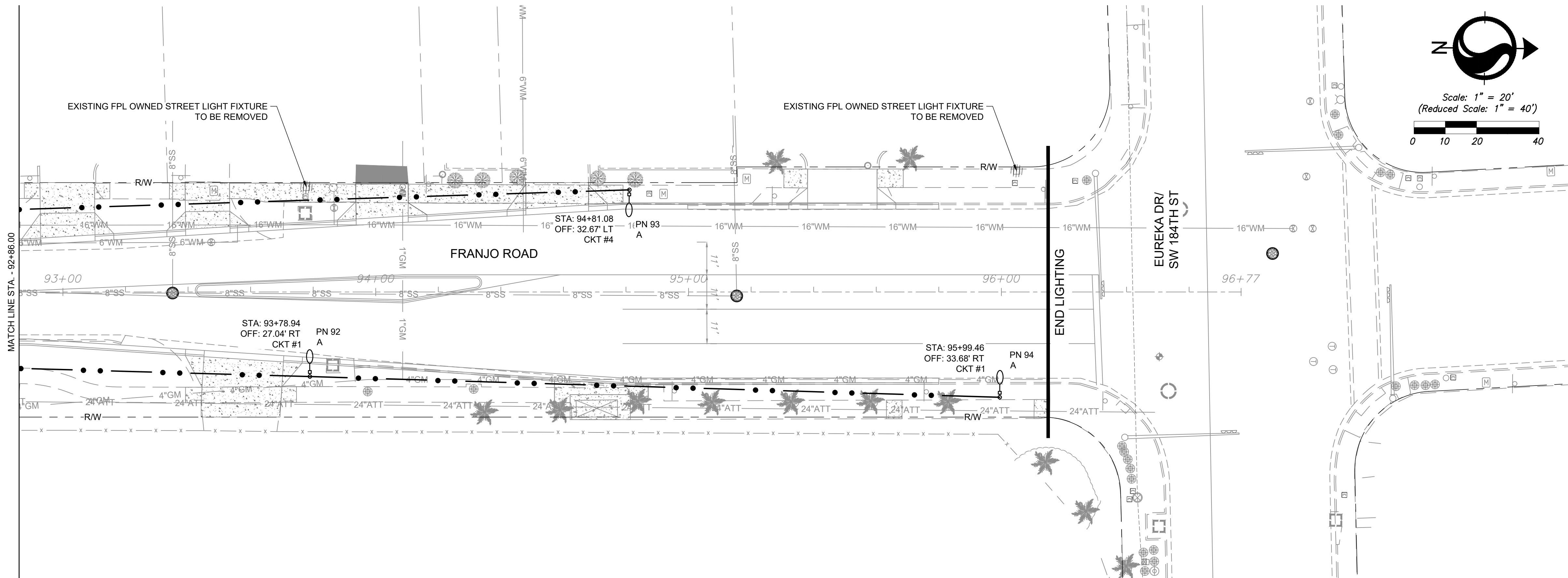


MIAMI-DADE COUNTY PUBLIC WORKS DEPT.  
HIGHWAY DIVISION  
FRANJO ROAD  
FROM OLD CUTLER RD TO SW 184TH STREET  
PROJECT NO. 215615952 SHEET E-11 OF 19



Scale: 1" = 20'  
(Reduced Scale: 1" = 40')

0 10 20 40



| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |
|           |    |             |      |    |             |



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| SUPERVISED BY: |      |           |            |      |      |

MIAMI-DADE COUNTY

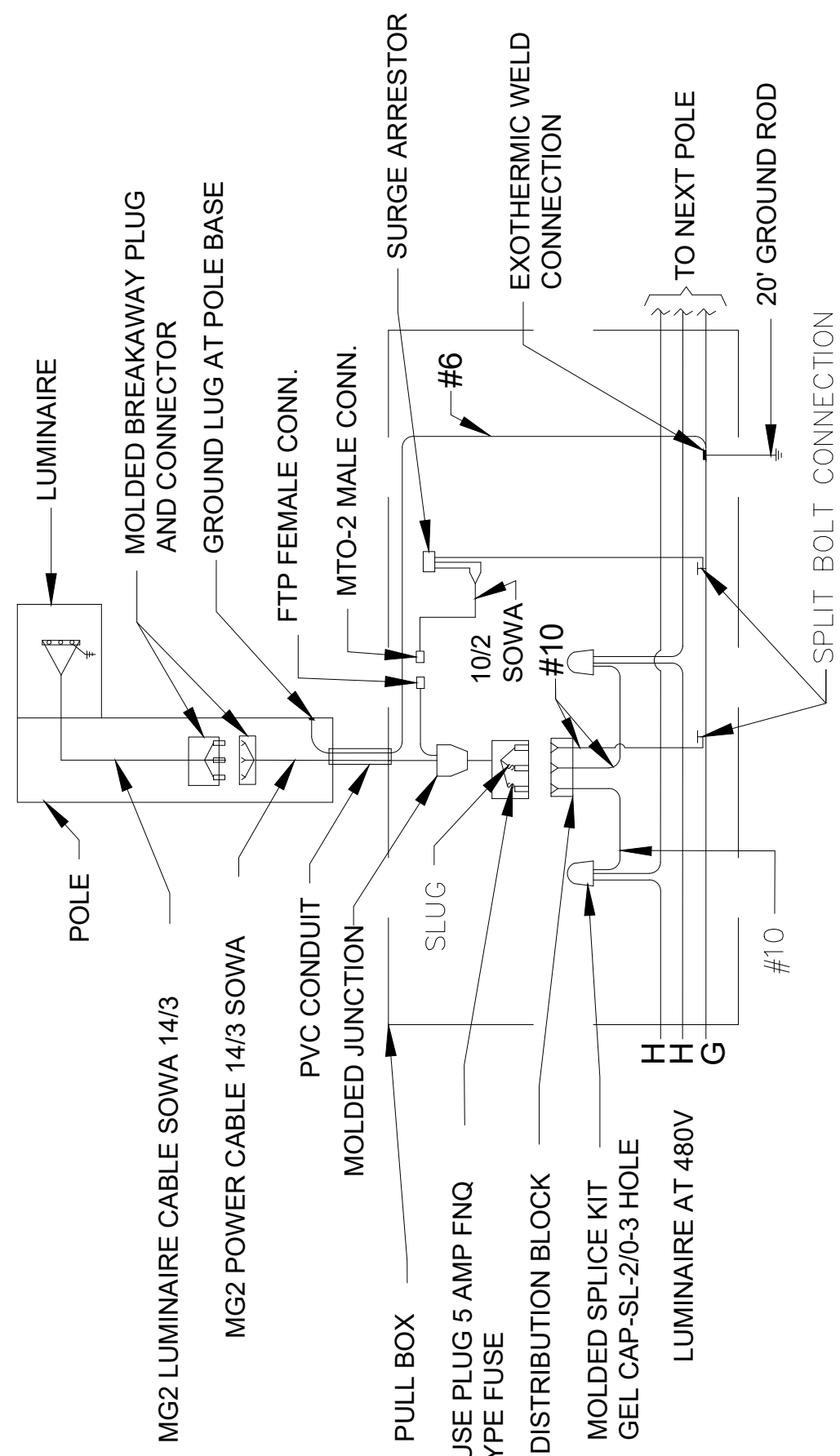
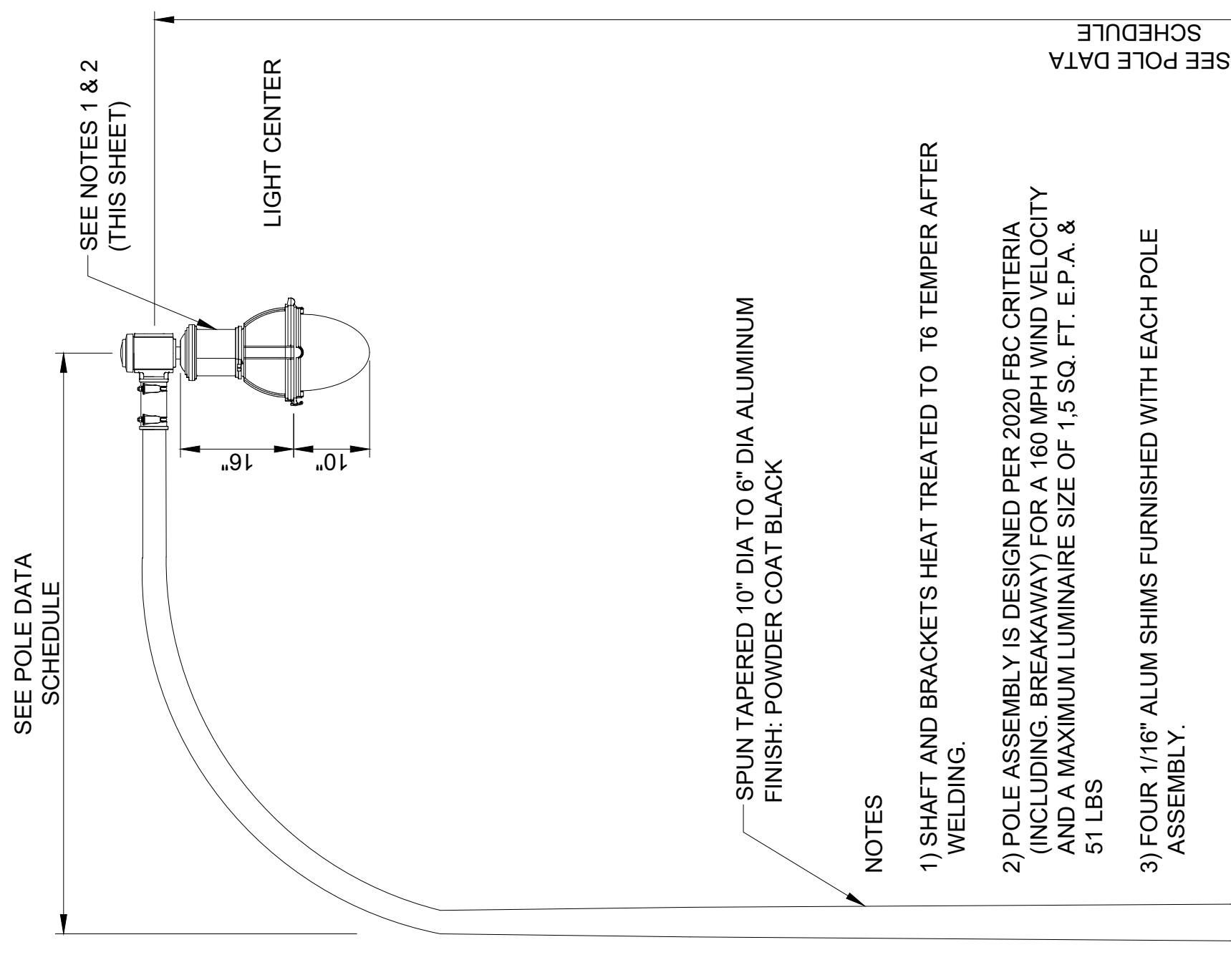
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STREET LIGHTING PLAN 8



## SHOP DRAWINGS

- A. DESIGN CRITERIA/PARAMETERS/POLE SHOP DRAWINGS
1. MUST COMPLY WITH CURRENT AASHTO SPECIFICATIONS IN REGARD TO GROUP LOADING, WIND VELOCITY, HEIGHT & DRAG COEFFICIENT ETC.
  2. LIST: AREA OF WIND EXPOSURE, COMPONENT DEAD WEIGHTS, APPLICABLE COEFFICIENT FOR EACH
  3. IDENTIFY ANY EXCEPTIONS TO AASHTO (LOADING/AND OR ANALYSIS)
  4. PROVIDE MATERIALS SPECIFICATIONS ALLOWABLE STRESSES, METHODS OF ANALYSIS.
- B. POLE SHAFT COMPUTATIONS
1. CONSIDER WIND AND DEAD LOAD ON ALL COMPONENTS
  2. ANALYSE EFFECTS OF COMBINED STRESS
    - A) MOMENT
    - B) SHEAR
    - C) TORSION
    - D) COMPUTE CSR PER AASHTO
  3. CRITICAL AREAS OF STRESS
    - A) BASE OF POLE
    - B) MANHOLE
    - C) POLE CROSS-SECTION
- C. ARM STRESS COMPUTATIONS
1. CONSIDER WIND AND DEAD LOAD ON ALL COMPONENTS.
  2. ANALYSE EFFECTS OF COMBINED STRESS.
    - A) MOMENT
    - B) SHEAR
    - C) COMPUTE CSR PER AASHTO
  3. CRITICAL AREAS OF STRESS
    - A) TUBE COMPONENTS AT POLE CONNECTION
    - B) ACTUAL CONNECTION/FASTENERS
- D. MISCELLANEOUS COMPUTATIONS / ANALYSIS
1. SECTION PROPERTIES
  2. WELD ANALYSIS (IF APPLICABLE)
  3. LOADING DIAGRAM (POLE AND ARM)
  4. CONNECTION DETAILS
  5. TEST REFERENCES EQUATIONS
- E. THE TEST REPORT SHALL BE CERTIFIED BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER.

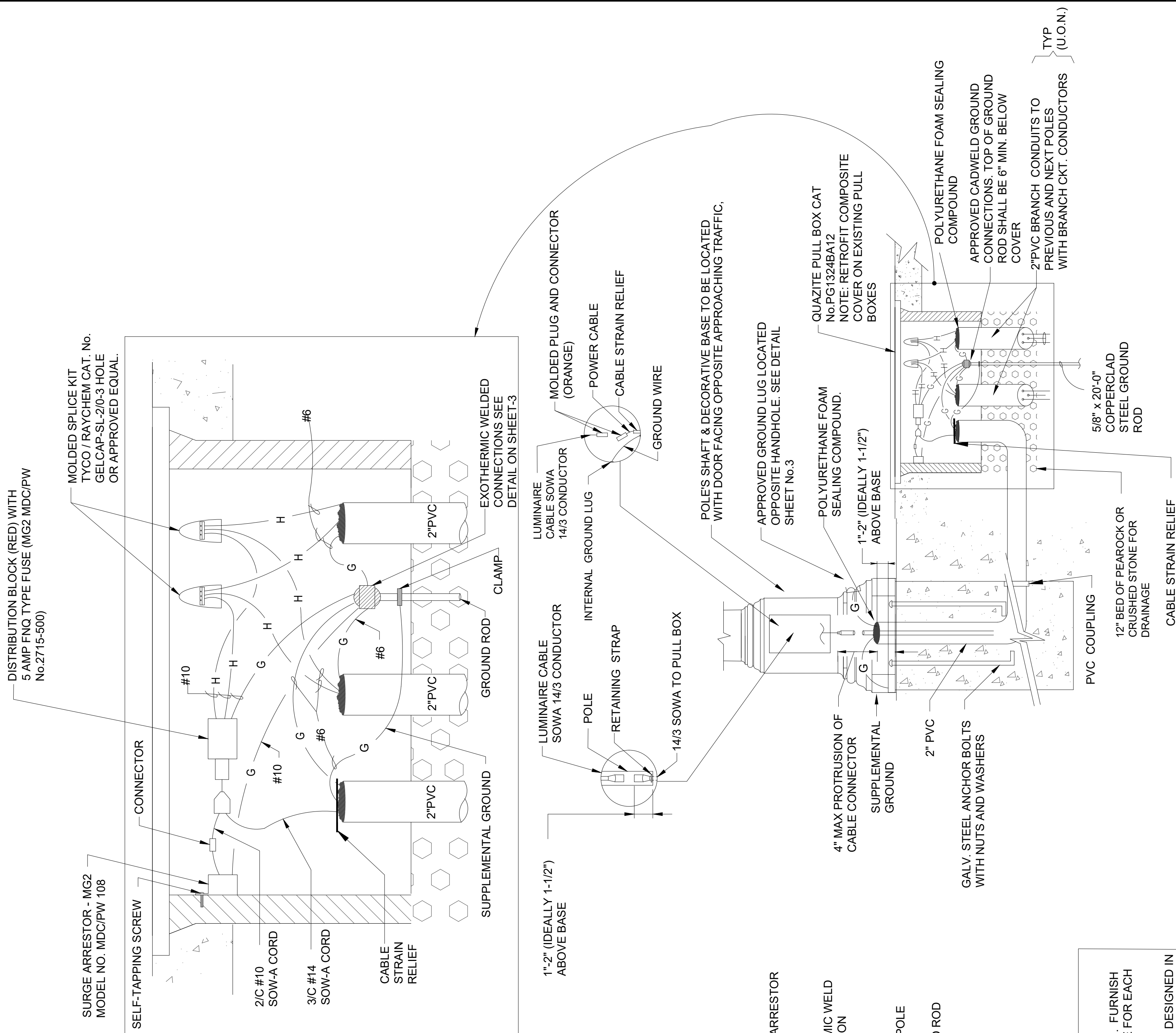


WIRING DIAGRAM ( MG SQUARE LIGHT POLE  
CABLE DISTRIBUTION SYSTEM)

N.T.S.

NOTES:

- 1) REFER TO THE FIXTURE SCHEDULE ON THE LEGEND SHEET FOR FIXTURE TYPE. FURNISH AND INSTALL A UBICQUIA UBICELL SMART NODE MODULE IN 7-PIN RECEPTACLE FOR EACH FIXTURE.
- 2) POLES, BRACKET'S ARMS AND TRANSFORMER BASES SHALL BE ALUMINUM AND DESIGNED IN ACCORDANCE WITH LOCAL DESIGN CRITERIA USING THE APPLICABLE EQUATIONS FOUND IN "STANDARD SPECIFICATIONS FOR HIGHWAY SIGNS, LUMINAIRE AND TRAFFIC SIGNALS" PUBLISHED BY CURRENT A.A.S.H.T.O. THE CONTRACTOR (SUPPLIER) SHALL SUBMIT EVIDENCE OF DEMONSTRATED COMPLIANCE WITH THE REQUIREMENTS OF THIS SPECIFICATION ALONG WITH HIS EQUIPMENT SUBMITTAL DATA. NO POLES ARE TO BE INSTALLED PRIOR TO DEPARTMENT APPROVAL.



## POLE WIRING DETAIL WITH PULL BOX

N.T.S.

[illegible]

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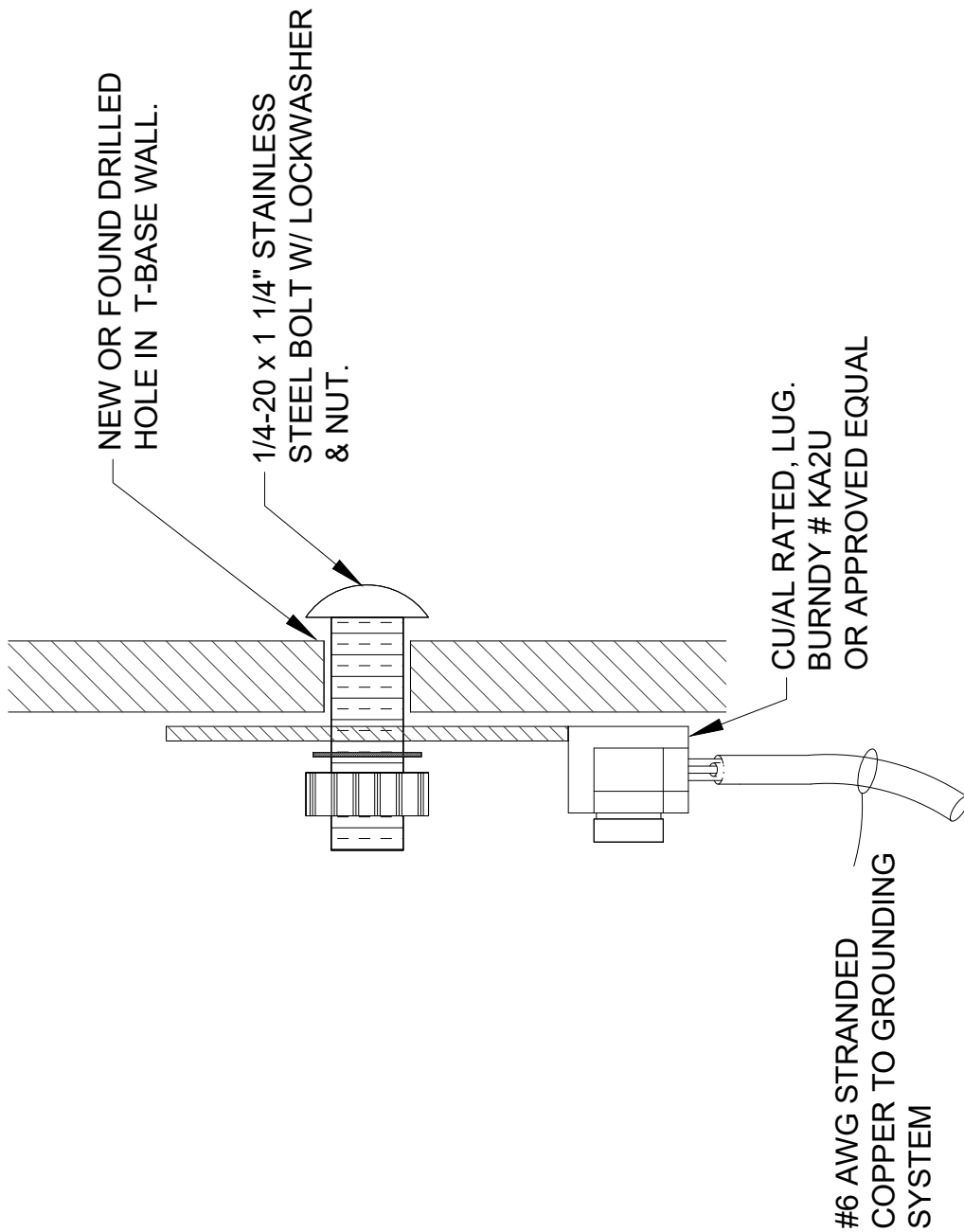
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|-------------|------|-----------|------------|------|
| DESIGNED BY | BB   | 3/26/2021 | DRAWN BY   |      |
| CHECKED BY  | JN   |           | CHECKED BY |      |

SUPERVISED BY:

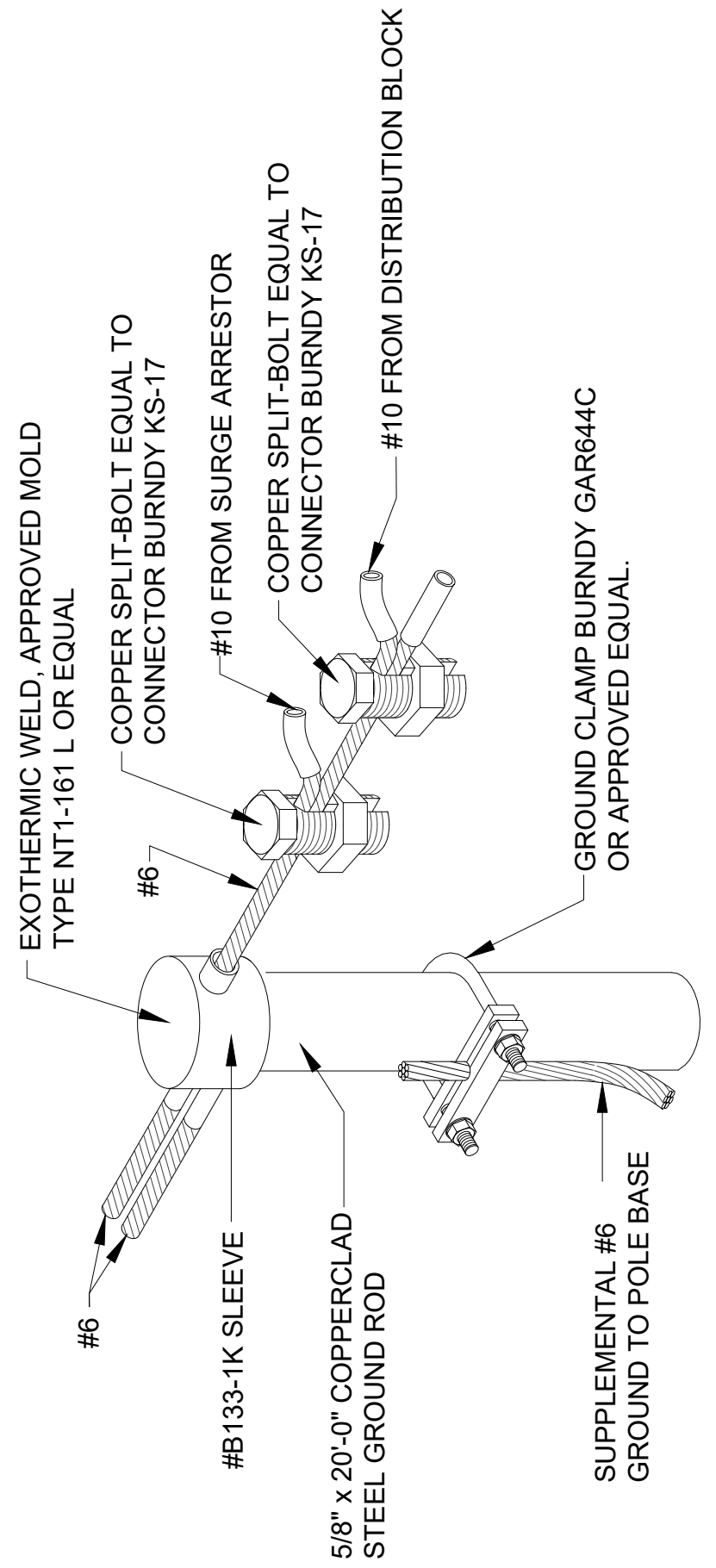
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## DECORATIVE POLE DETAIL





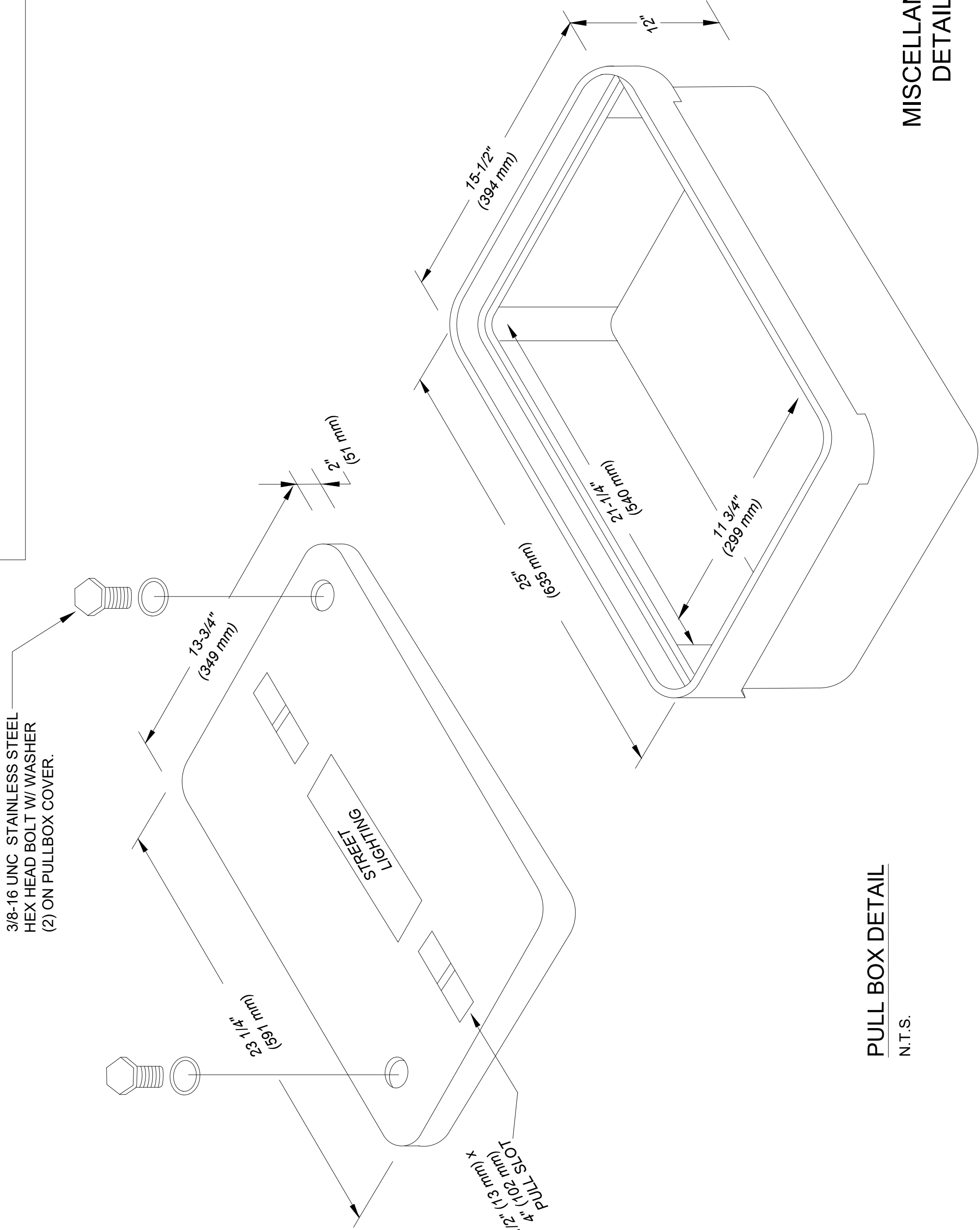
GROUND LUG DETAIL  
(COPPER WIRE FOR GROUNDING)  
N.T.S.



CABLE TO GROUND ROD DETAIL  
(COPPER WIRE FOR GROUNDING)  
N.T.S.

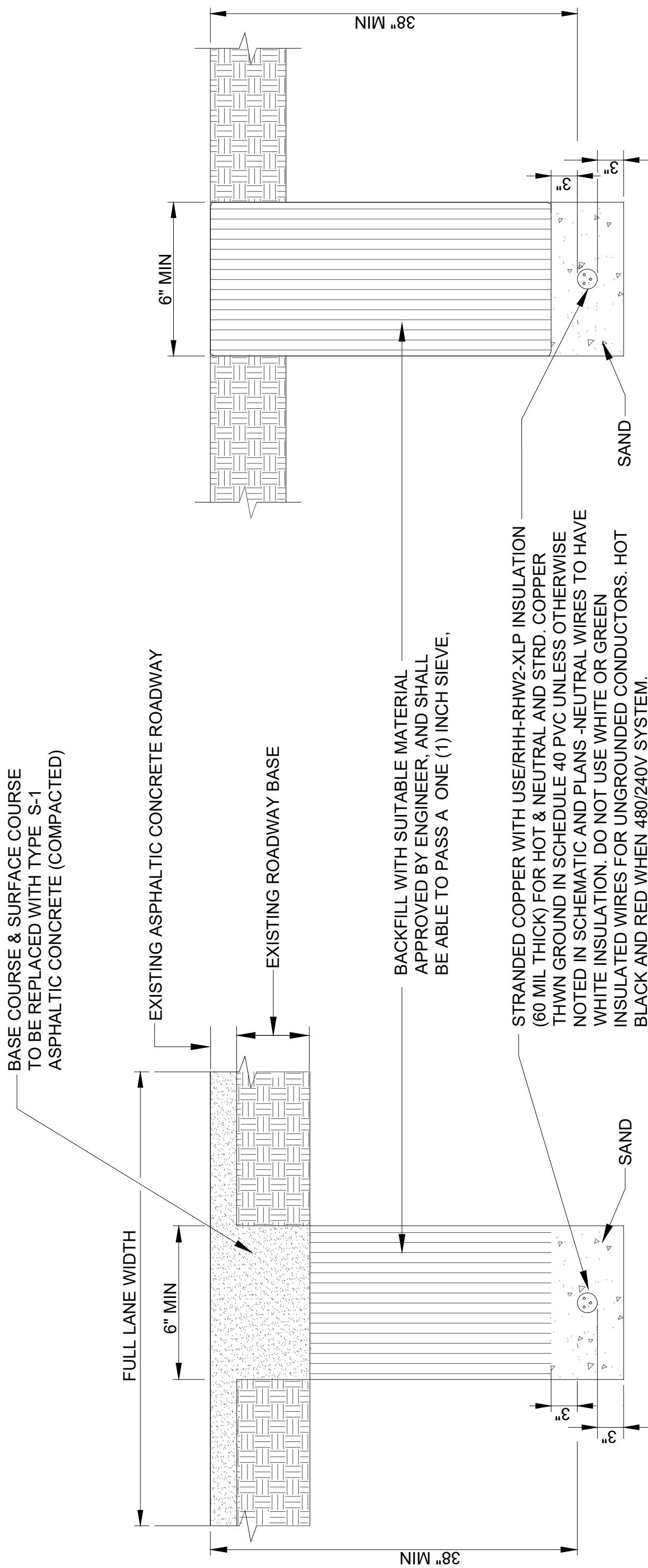
PULL BOX SPECIFICATION

- ALL STREET LIGHT PULL BOXES SHALL HAVE AN OPEN-BOTTOM, QUAZITE POLYMER CONCRETE DESIGN OR PRECAST CONCRETE DESIGN CONSTRUCTED OF CLASS I CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT TWENTY- EIGHT (28) DAYS. POLYMER CONCRETE PULL BOX SHALL BE QUAZITE PRODUCT NO. PG1324BA12 OR APPROVED EQUIVALENT. CONCRETE PULL BOX SHALL BE BROOKS 38 SERIES OR APPROVED EQUIVALENT. IN EITHER CASE, BOTH PULL BOXES SHALL BE CONSTRUCTED PER ABOVE SPECIFIED MANUFACTURERS SIZE, MATERIALS AND PERFORMANCE SPECIFICATIONS. THEREFORE, BELOW SPECIFIED PULL BOX COVER SHALL BE FULLY INTER- CHANGABLE WITH EITHER PULL BOX. ALL PULL BOX COVERS FURNISHED AND INSTALLED SHALL BE POLYMER CONCRETE QUAZITE PRODUCT NO. PG1324HA00 OR APPROVED EQUIVALENT. NO OTHER DESIGN, SIZE, MODIFICATION OR MATERIALS SHALL BE ACCEPTABLE. PULL BOX COVERS SHALL BE MARKED "STREET LIGHTING" OR "ELECTRIC/ MIAMI-DADE HD".
- IN SITUATIONS WHERE PULL BOX IS LOCATED OUTSIDE OF SIDEWALK, I.E. SWALE AREA, THE PULL BOX IS TO HAVE A 6"x6" MIN CONCRETE APRON (6" THICK) PLACED AROUND IT. COST OF CONCRETE APRON IS TO BE INCLUDED IN THE PULL BOX INSTALLATION COST.

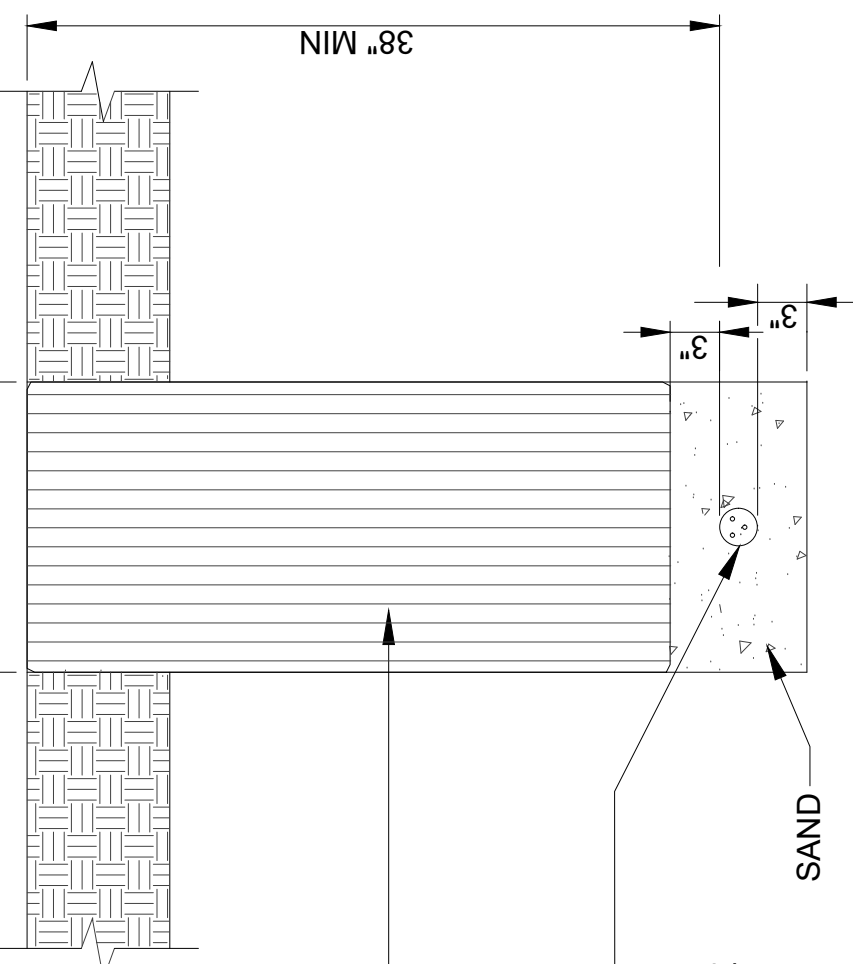


PULL BOX DETAIL  
N.T.S.

MISCELLANEOUS  
DETAILS 1



TRENCH DETAIL (ROAD)  
N.T.S.



TRENCH DETAIL (SWALE)  
N.T.S.

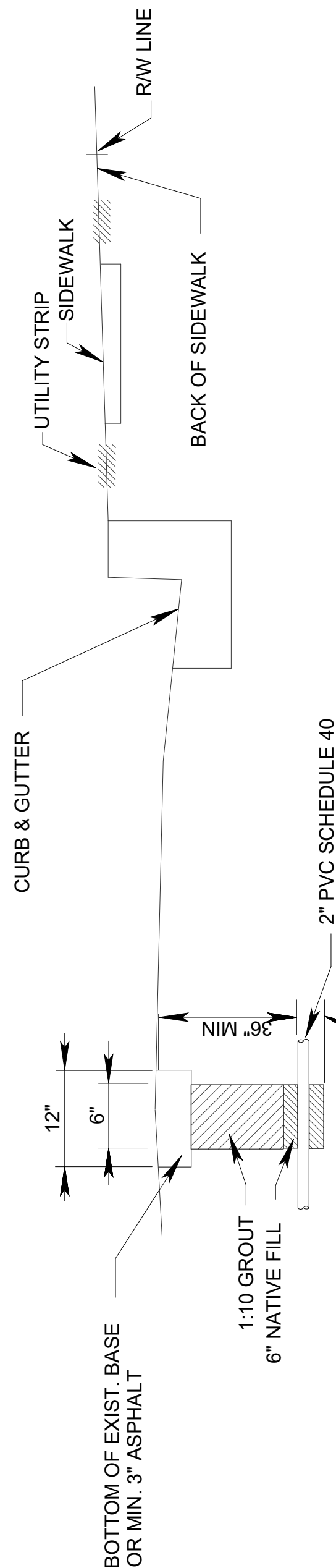
\* IF IN THE OPINION OF THE ENGINEER, APPRECIABLE SETTLEMENT OCCURS DURING THE ONE YEAR GUARANTEE PERIOD, THE CONTRACTOR WILL BE REQUIRED TO RESTORE THE AREA OF CUT TO ADJACENT ROADWAY ELEVATION. SEE "TRAFFIC CONTROL EQUIPMENT SPECIFICATIONS AND STANDARDS FOR THE MTC-SMDC".

| DATE                                                                                                                                                                                                                                                                                                                                                                                               | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-------------|------|----|-------------|------|----|-------------|
| R E V I S I O N S                                                                                                                                                                                                                                                                                                                                                                                  |    |             |      |    |             |      |    |             |
| The Contractor shall verify the accuracy of all dimensions. The Contractor shall be responsible for all dimensions. DO NOT scale the drawings - dimensions are critical. The Contractor shall be responsible for all dimensions. DO NOT scale the drawings - dimensions are critical. The Contractor shall be responsible for all dimensions. DO NOT scale the drawings - dimensions are critical. |    |             |      |    |             |      |    |             |
| DESIGNED: BB DATE: 3/24/2021 DRAWN: BB CHECKED: BB                                                                                                                                                                                                                                                                                                                                                 |    |             |      |    |             |      |    |             |
| CHECKED: JN DATE: 3/24/2021 SUPERVISED: BB                                                                                                                                                                                                                                                                                                                                                         |    |             |      |    |             |      |    |             |
| NAME: NAME: NAME: NAME: NAME: NAME: NAME: NAME: NAME:                                                                                                                                                                                                                                                                                                                                              |    |             |      |    |             |      |    |             |
| MISCELLANEOUS DETAILS                                                                                                                                                                                                                                                                                                                                                                              |    |             |      |    |             |      |    |             |
| DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS HIGHWAY DIVISION STREET LIGHTING CENTER MIAMI, FLORIDA 33128                                                                                                                                                                                                                                                                                         |    |             |      |    |             |      |    |             |



1 OPTION

## CONDUIT BURIED WHEN CROSSING ROAD

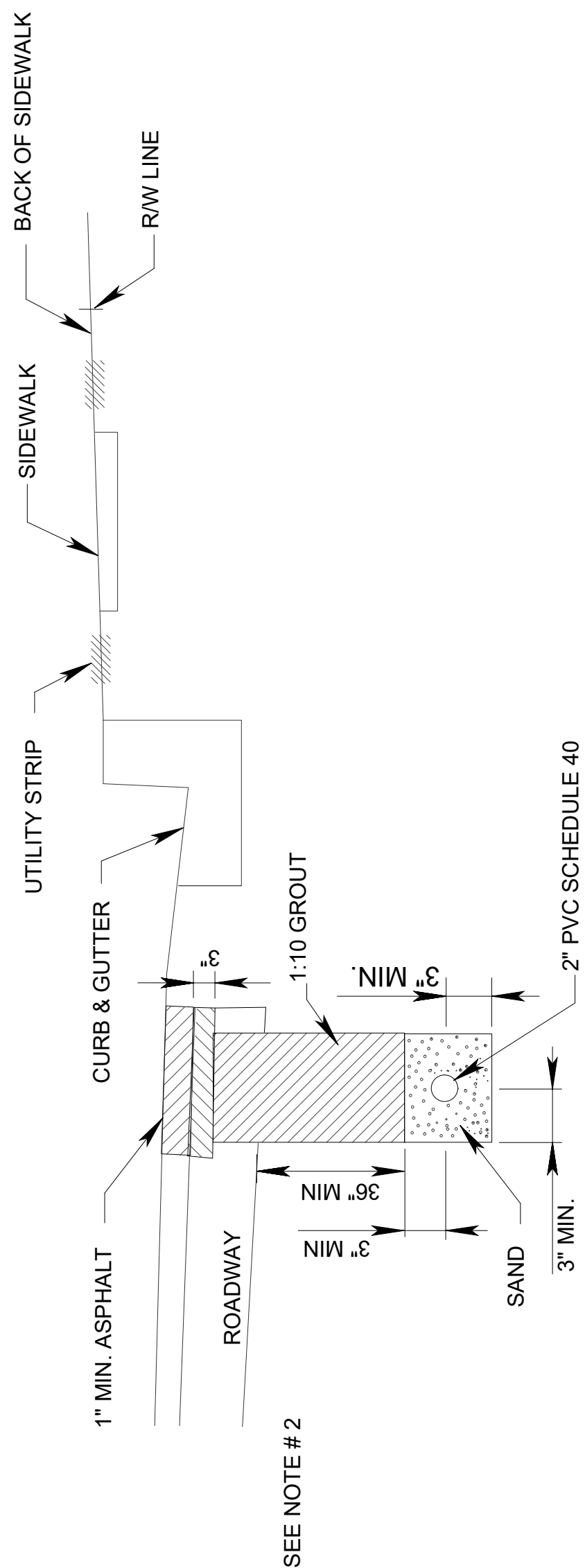


NOTE:  
TRENCH NOT TO BE OPENED MORE  
THAN 250' AT A TIME

MAY BE ADJUSTED IN FIELD DUE  
TO FIELD CONDITIONS AS DIRECTED  
BY THE ENGINEER.

2 OPTION

# CONDUIT BURIAL IN ROADWAY



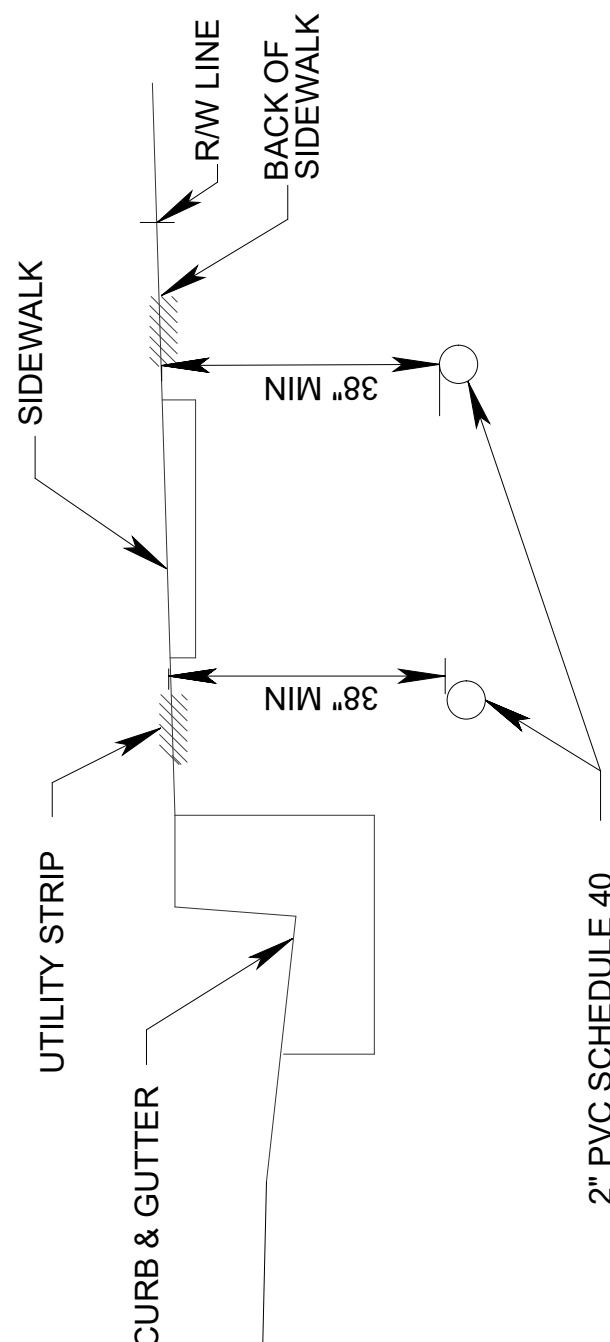
**NOTE:**

1. TRENCH NOT TO BE OPENED MORE THAN 250' AT A TIME.
2. THIS AREA SHALL BE BACKFILLED WITH TYPE S-1 ASPHALTIC CONCRETE TO WITHIN 1 INCH OF FINISHED GRADE.

\* MAY BE ADJUSTED IN FIELD DUE TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

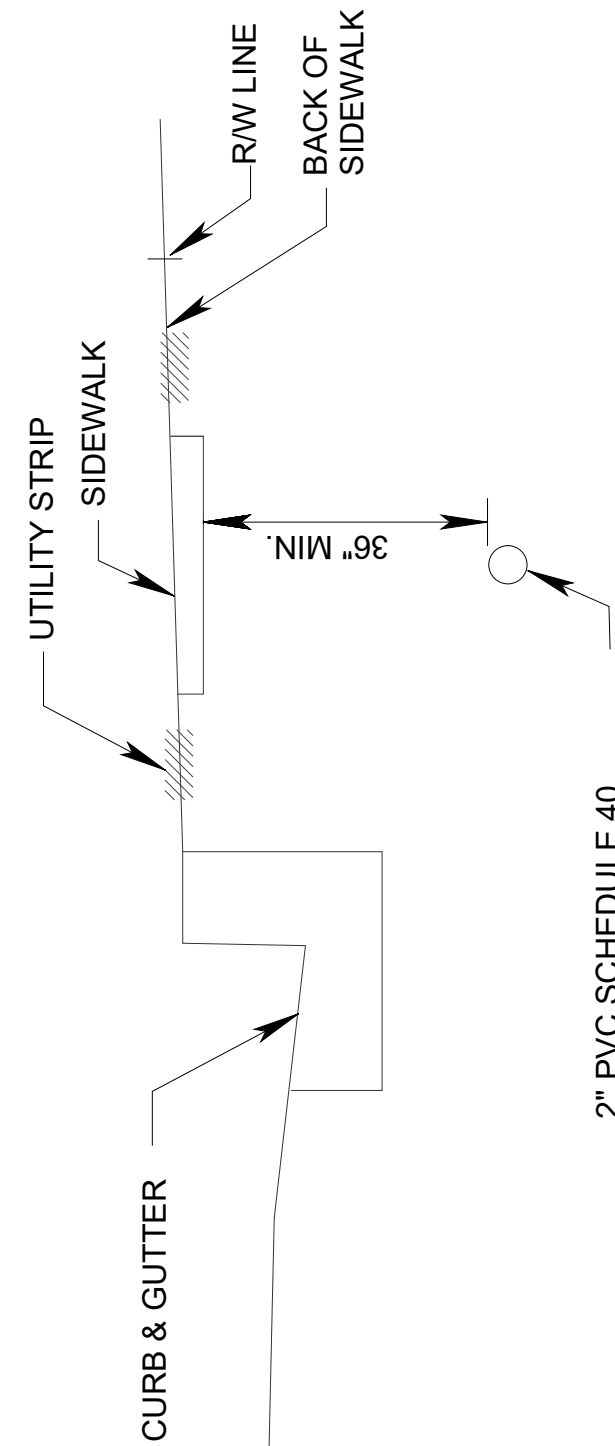
3 OPTION

## CONDUIT IN UTILITY AND BACK OF SIDEWALK



4 OPTION

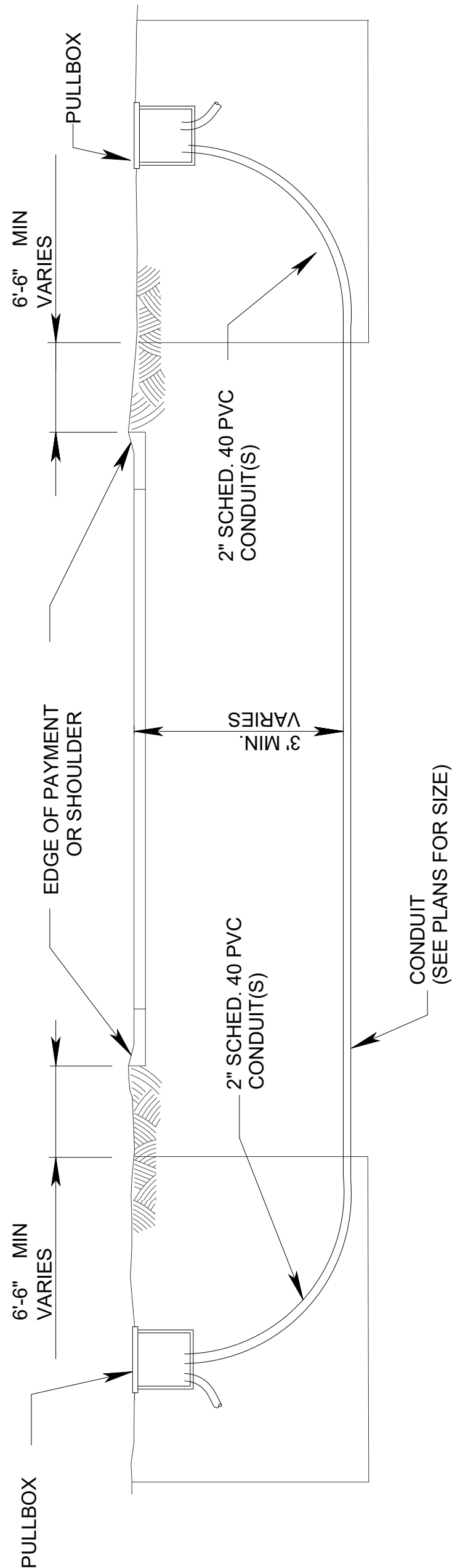
## CONDUIT UNDER SIDEWALK



NOTE:  
IN PLACING CONDUIT UNDER SIDEWALK  
REPLACEMENT OF ENTIRE SIDEWALK  
SECTION SHALL BE NECESSARY.

5 OPTION

## CONDUIT DIRECTIONAL BORE



NOTES:

1. DIRECTIONAL BORING OPERATIONS SHALL BE DONE IN ACCORDANCE WITH THE F.D.O.T. UTILITY ACCOMODATION MANUAL.

[illegible]

|                | NAME | DATE      | NAME       | DATE |
|----------------|------|-----------|------------|------|
| DESIGNED BY    | BBB  | 3/26/2021 | DRAWN BY   |      |
| CHECKED BY     | JIN  |           | CHECKED BY |      |
| SUPERVISED BY: |      |           |            |      |

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## CONDUIT BURIAL DETAILS



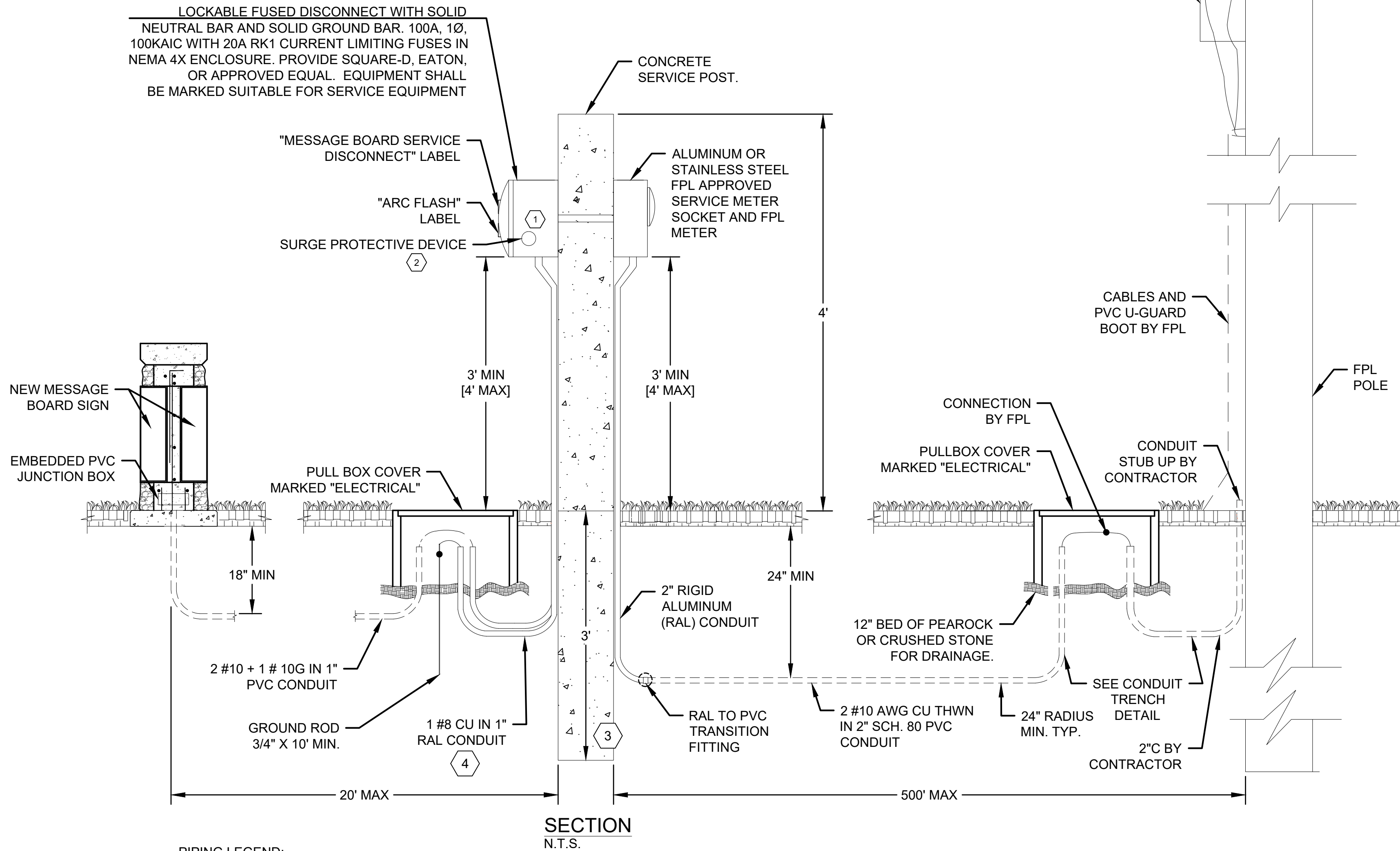




1. METER INSTALLATION CONNECTION AND ALL WORK RELATED TO ELECTRICAL POWER SERVICE SHALL BE COORDINATED WITH FULL UTILITY REPRESENTATIVE. COORDINATE EXACT LOCATION, EQUIPMENT DIMENSIONS, AND SERVICE INSTALLATION.
2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ELECTRICAL INSTALLATIONS WITH ALL OTHER TRADES TO AVOID ANY CONFLICTS.
3. ALL NEW WIRING SHALL BE INSTALLED IN CONDUIT WITHOUT EXCEPTION. MINIMUM SIZE CONDUIT SHALL BE 3/4".
4. ALL NEW CONDUCTORS SHALL BE TYPE THHN/THWN-2 90C COPPER FOR #10 AND SMALLER AND XHHW-2 FOR #8 AND LARGER.
5. THE USE OF NO. 14 AWG COPPER CONDUCTORS SHALL BE RESTRICTED TO CONTROL AND INSTRUMENT WIRING.
6. ALL ELECTRICAL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE N.E.C.
7. ALL CUTTING AND PATCHING REQUIRED FOR THE INSTALLATION OF NEW RACEWAYS OR EQUIPMENT SHALL BE PERFORMED BY A TRADESMAN EXPERIENCED IN THE WORK REQUIRED. ALL FINISHES SHALL MATCH EXISTING ADJACENT SURFACES.
8. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY LOSS OR DAMAGE CAUSED BY HIM OR HIS WORKMAN TO THE LOCATION DURING THE COURSE OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING SUCH LOSS OR DAMAGE AT NO ADDITIONAL COST TO THE OWNER.
9. THE ELECTRICAL WORK SHALL COMPLY WITH ALL APPLICABLE CITY, COUNTY, STATE AND SERVING ELECTRICAL UTILITY CODES, ORDINANCES, RULES AND REGULATIONS. THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH OR SURPASS THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
10. THE ELECTRICAL CONTRACTOR SHALL FURNISH ALL MATERIALS, TOOLS, LABOR, PLAN CHECK FEES, ETC., FOR A COMPLETE ELECTRICAL INSTALLATION UNLESS OTHERWISE NOTED ON PLANS.
11. ALL MATERIALS FURNISHED BY THE ELECTRICAL CONTRACTOR SHALL BE NEW AND OF FIRST CLASS QUALITY, SHALL BE U.L. LISTED AND FREE OF ANY DEFECTS UNLESS OTHERWISE NOTED ON PLANS.
12. ALL EQUIPMENT SHALL BE RATED FOR USE INTENDED - VOLTAGE, H.P., ETC. ALL DISCONNECT SWITCHES SHALL BE RATED FOR LOAD BREAK RATED.
13. ALL NECESSARY PERMITS REQUIRED FOR ELECTRICAL INSTALLATIONS ARE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR AND SHALL BE CONSIDERED TO BE PART OF HIS CONTRACT FEE.
14. THE ELECTRICAL CONTRACTOR SHALL FULLY GUARANTEE THE INSTALLATION FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE BY THE OWNER AGAINST IMPERFECT WORKMANSHIP AND MALFUNCTION OF EQUIPMENT. ANY WORK FOUND TO BE DEFECTIVE WITHIN THIS PERIOD SHALL BE REPAIRED OR REPLACED PROMPTLY AT NO ADDITIONAL COST TO THE OWNER.
15. DRAWINGS ARE DIAGRAMMATIC IN NATURE AND CANNOT SHOW EVERY CONNECTION, JUNCTION BOX, WIRE, CONDUIT, ETC. THE EXACT LOCATION AND ARRANGEMENT OF ALL PARTS SHALL BE DETERMINED AS THE WORK PROGRESSES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM.
16. ALL SERVICE EQUIPMENT SHALL BE U.L. LISTED..
17. ELECTRICAL CONTRACTOR TO VERIFY AND PROVIDE EQUIPMENT GROUNDING CONDUCTOR AS PER NEC 250. ALL EXPOSED METAL PARTS ARE TO BE BONDED TO THE GROUND SYSTEM.

### KEYED NOTES

- ⑦ THE ENCLOSURE SHALL BE NEMA 4X POLE MOUNTED, RIGIDLY ATTACHED TO THE POLE FACE. THE ENCLOSURE DOOR SHALL BE LOCKABLE BY PADLOCK AND FOUR KEYS PROVIDED. NO SCREWS TO BE USED TO ATTACH DOOR.
- ⑧ SPD SHALL BE WIRED INSIDE THE ENCLOSURE. PROVIDE SQUARE D SDSA1175 OR APPROVED EQUIVALENT. CONNECT PER MANUFACTURER INSTRUCTIONS.
- ⑨ MODIFY EMBEDMENT DEPTH AS REQUIRED BY FIELD CONDITIONS.
- ⑩ BOND RGS CONDUIT TO GROUNDING ELECTRODE CONDUCTOR AT BOTH ENDS.
- ⑪ NEW SIGN WITH TWO MESSAGE BOARDS (ONE ON EACH SIDE). ALPHA ECLIPSE STREET SMART 48X64 AMBER, 17MM, WITH CELLULAR RADIO.
- ⑫ THE CONTRACTOR SHALL FURNISH ARC FLASH PROTECTION LABEL ON THE MESSAGE BOARD SERVICE DISCONNECTING MEANS. THE LABEL SHALL BE BASED OFF THE AVAILABLE FAULT CURRENT PROVIDED BY THE ELECTRIC UTILITY AND FURNISHED EQUIPMENT. THE LABEL SHALL INCLUDED INCIDENT ENERGY, ARCH FLASH PROTECTION BOUNDARIES AND PERSONAL PROTECTIVE EQUIPMENT (PPE).



TYPICAL SERVICE POINT DETAILS  
N.T.S.

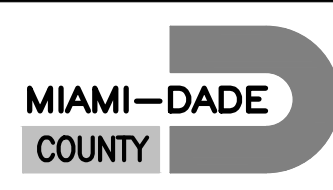
| <u>DESCRIPTION</u>      | <u>VA</u> |
|-------------------------|-----------|
| MESSAGE BOARD SIDE 1    | 626.4     |
| MESSAGE BOARD SIDE 2    | 626.4     |
| 25% OF CONTINUOUS LOADS | 313.2     |
| TOTAL LOAD              | 1,566.0   |
| AMPS@120V=13A           |           |

## SERVICE 1 LOAD CALCULATION

[illegible]

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| CHECKED<br>BY  | JN   |           | CHECKED<br>BY |      |      |
| SUPERVISED BY: |      |           |               |      |      |



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MIAMI, FLORIDA 33128

## SERVICE POINT DETAIL FOR MESSAGE BOARD







| Circuit Number | Source  | Servicing | Feeder Voltage (V) | Power Factor | Segment Length (ft) | Wire Size (AWG or kcmil) | Conductor Material | Conduit Material | Parallel Sets | Load (VA) | Total Load (VA) | Total Amperage (A) | Conductor Impedance ZC (Ω/1000ft) | Segment Voltage Drop (V) | Total Voltage Drop (%) |
|----------------|---------|-----------|--------------------|--------------|---------------------|--------------------------|--------------------|------------------|---------------|-----------|-----------------|--------------------|-----------------------------------|--------------------------|------------------------|
| 3              | LC-A    | POLE 37   | 480V, 1Ø           | 0.9          | 229                 | 6                        | Cu                 | PVC              | 1             | 92        | 1752            | 3.65               | 0.4632                            | 0.77                     | 0.25%                  |
|                | POLE 37 | POLE 35   | 480V, 1Ø           | 0.9          | 220                 | 6                        | Cu                 | PVC              | 1             | 92        | 1660            | 3.46               | 0.4632                            | 0.70                     | 0.40%                  |
|                | POLE 35 | POLE 33   | 480V, 1Ø           | 0.9          | 220                 | 6                        | Cu                 | PVC              | 1             | 92        | 1568            | 3.27               | 0.4632                            | 0.67                     | 0.54%                  |
|                | POLE 33 | POLE 31   | 480V, 1Ø           | 0.9          | 228                 | 6                        | Cu                 | PVC              | 1             | 92        | 1476            | 3.07               | 0.4632                            | 0.65                     | 0.68%                  |
|                | POLE 31 | POLE 29   | 480V, 1Ø           | 0.9          | 189                 | 6                        | Cu                 | PVC              | 1             | 92        | 1383            | 2.88               | 0.4632                            | 0.50                     | 0.78%                  |
|                | POLE 29 | POLE 27   | 480V, 1Ø           | 0.9          | 201                 | 6                        | Cu                 | PVC              | 1             | 92        | 1291            | 2.69               | 0.4632                            | 0.50                     | 0.89%                  |
|                | POLE 27 | POLE 25   | 480V, 1Ø           | 0.9          | 220                 | 6                        | Cu                 | PVC              | 1             | 92        | 1199            | 2.50               | 0.4632                            | 0.51                     | 0.99%                  |
|                | POLE 25 | POLE 23   | 480V, 1Ø           | 0.9          | 215                 | 6                        | Cu                 | PVC              | 1             | 92        | 1107            | 2.31               | 0.4632                            | 0.46                     | 1.09%                  |
|                | POLE 23 | POLE 21   | 480V, 1Ø           | 0.9          | 200                 | 6                        | Cu                 | PVC              | 1             | 92        | 1014            | 2.11               | 0.4632                            | 0.39                     | 1.17%                  |
|                | POLE 21 | POLE 19   | 480V, 1Ø           | 0.9          | 195                 | 6                        | Cu                 | PVC              | 1             | 92        | 922             | 1.92               | 0.4632                            | 0.35                     | 1.24%                  |
|                | POLE 19 | POLE 15   | 480V, 1Ø           | 0.9          | 276                 | 6                        | Cu                 | PVC              | 1             | 92        | 830             | 1.73               | 0.4632                            | 0.44                     | 1.33%                  |
|                | POLE 15 | POLE 13   | 480V, 1Ø           | 0.9          | 95                  | 6                        | Cu                 | PVC              | 1             | 92        | 738             | 1.54               | 0.4632                            | 0.14                     | 1.36%                  |
| 4              | POLE 13 | POLE 11   | 480V, 1Ø           | 0.9          | 143                 | 6                        | Cu                 | PVC              | 1             | 92        | 646             | 1.34               | 0.4632                            | 0.18                     | 1.40%                  |
|                | POLE 11 | POLE 9    | 480V, 1Ø           | 0.9          | 158                 | 6                        | Cu                 | PVC              | 1             | 92        | 553             | 1.15               | 0.4632                            | 0.17                     | 1.43%                  |
|                | POLE 9  | POLE 7    | 480V, 1Ø           | 0.9          | 193                 | 6                        | Cu                 | PVC              | 1             | 92        | 461             | 0.96               | 0.4632                            | 0.17                     | 1.47%                  |
|                | POLE 7  | POLE 5    | 480V, 1Ø           | 0.9          | 196                 | 6                        | Cu                 | PVC              | 1             | 92        | 369             | 0.77               | 0.4632                            | 0.14                     | 1.50%                  |
|                | POLE 5  | POLE 3    | 480V, 1Ø           | 0.9          | 181                 | 6                        | Cu                 | PVC              | 1             | 92        | 277             | 0.58               | 0.4632                            | 0.10                     | 1.52%                  |
|                | POLE 3  | POLE 2    | 480V, 1Ø           | 0.9          | 108                 | 6                        | Cu                 | PVC              | 1             | 92        | 184             | 0.38               | 0.4632                            | 0.04                     | 1.53%                  |
|                | POLE 2  | POLE 1    | 480V, 1Ø           | 0.9          | 113                 | 6                        | Cu                 | PVC              | 1             | 92        | 92              | 0.19               | 0.4632                            | 0.02                     | 1.53%                  |
|                | LC-A    | POLE 41   | 480V, 1Ø           | 0.9          | 278                 | 6                        | Cu                 | PVC              | 1             | 92        | 2184            | 4.55               | 0.4632                            | 1.17                     | 0.34%                  |
|                | POLE 41 | POLE 43   | 480V, 1Ø           | 0.9          | 187                 | 6                        | Cu                 | PVC              | 1             | 92        | 2092            | 4.36               | 0.4632                            | 0.76                     | 0.50%                  |
|                | POLE 43 | POLE 45   | 480V, 1Ø           | 0.9          | 224                 | 6                        | Cu                 | PVC              | 1             | 92        | 2000            | 4.17               | 0.4632                            | 0.86                     | 0.68%                  |
|                | POLE 45 | POLE 47   | 480V, 1Ø           | 0.9          | 185                 | 6                        | Cu                 | PVC              | 1             | 92        | 1907            | 3.97               | 0.4632                            | 0.68                     | 0.82%                  |
|                | POLE 47 | POLE 49   | 480V, 1Ø           | 0.9          | 199                 | 6                        | Cu                 | PVC              | 1             | 92        | 1815            | 3.78               | 0.4632                            | 0.70                     | 0.96%                  |
|                | POLE 49 | POLE 51   | 480V, 1Ø           | 0.9          | 204                 | 6                        | Cu                 | PVC              | 1             | 92        | 1723            | 3.59               | 0.4632                            | 0.68                     | 1.10%                  |
|                | POLE 51 | POLE 53   | 480V, 1Ø           | 0.9          | 180                 | 6                        | Cu                 | PVC              | 1             | 92        | 1631            | 3.40               | 0.4632                            | 0.57                     | 1.22%                  |
|                | POLE 53 | POLE 54   | 480V, 1Ø           | 0.9          | 132                 | 6                        | Cu                 | PVC              | 1             | 92        | 1539            | 3.21               | 0.4632                            | 0.39                     | 1.30%                  |
|                | POLE 54 | POLE 56   | 480V, 1Ø           | 0.9          | 200                 | 6                        | Cu                 | PVC              | 1             | 92        | 1446            | 3.01               | 0.4632                            | 0.56                     | 1.42%                  |
|                | POLE 56 | POLE 58   | 480V, 1Ø           | 0.9          | 186                 | 6                        | Cu                 | PVC              | 1             | 92        | 1354            | 2.82               | 0.4632                            | 0.49                     | 1.52%                  |
|                | POLE 58 | POLE 60   | 480V, 1Ø           | 0.9          | 200                 | 6                        | Cu                 | PVC              | 1             | 92        | 1262            | 2.63               | 0.4632                            | 0.49                     | 1.62%                  |
|                | POLE 60 | POLE 62   | 480V, 1Ø           | 0.9          | 214                 | 6                        | Cu                 | PVC              | 1             | 92        | 1170            | 2.44               | 0.4632                            | 0.48                     | 1.72%                  |
|                | POLE 62 | POLE 64   | 480V, 1Ø           | 0.9          | 197                 | 6                        | Cu                 | PVC              | 1             | 92        | 1077            | 2.24               | 0.4632                            | 0.41                     | 1.81%                  |
|                | POLE 64 | POLE 66   | 480V, 1Ø           | 0.9          | 203                 | 6                        | Cu                 | PVC              | 1             | 92        | 985             | 2.05               | 0.4632                            | 0.39                     | 1.89%                  |
|                | POLE 66 | POLE 68   | 480V, 1Ø           | 0.9          | 95                  | 6                        | Cu                 | PVC              | 1             | 92        | 893             | 1.86               | 0.4632                            | 0.16                     | 1.92%                  |
|                | POLE 68 | POLE 69   | 480V, 1Ø           | 0.9          | 49                  | 6                        | Cu                 | PVC              | 1             | 92        | 801             | 1.67               | 0.4632                            | 0.08                     | 1.94%                  |
|                | POLE 69 | POLE 71   | 480V, 1Ø           | 0.9          | 112                 | 6                        | Cu                 | PVC              | 1             | 92        | 709             | 1.48               | 0.4632                            | 0.15                     | 1.97%                  |
|                | POLE 71 | POLE 72   | 480V, 1Ø           | 0.9          | 64                  | 6                        | Cu                 | PVC              | 1             | 92        | 616             | 1.28               | 0.4632                            | 0.08                     | 1.99%                  |
|                | POLE 72 | POLE 74   | 480V, 1Ø           | 0.9          | 183                 | 6                        | Cu                 | PVC              | 1             | 92        | 524             | 1.09               | 0.4632                            | 0.19                     | 2.03%                  |
|                | POLE 74 | POLE 75   | 480V, 1Ø           | 0.9          | 90                  | 6                        | Cu                 | PVC              | 1             | 92        | 432             | 0.90               | 0.4632                            | 0.08                     | 2.04%                  |
|                | POLE 75 | POLE 88   | 480V, 1Ø           | 0.9          | 1251                | 6                        | Cu                 | PVC              | 1             | 63        | 340             | 0.71               | 0.4632                            | 0.82                     | 2.21%                  |
|                | POLE 88 | POLE 89   | 480V, 1Ø           | 0.9          | 32                  | 6                        | Cu                 | PVC              | 1             | 92        | 277             | 0.58               | 0.4632                            | 0.02                     | 2.22%                  |
|                | POLE 89 | POLE 91   | 480V, 1Ø           | 0.9          | 172                 | 6                        | Cu                 | PVC              | 1             | 92        | 184             | 0.38               | 0.4632                            | 0.06                     | 2.23%                  |
|                | POLE 91 | POLE 93   | 480V, 1Ø           | 0.9          | 212                 | 6                        | Cu                 | PVC              | 1             | 92        | 92              | 0.19               | 0.4632                            | 0.04                     | 2.24%                  |

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REVISIONS

DATE: 2022-10-07BY: DESCRIPTION: DATE: 2022-10-07BY: DESCRIPTION: DATE: 2022-10-07BY: DESCRIPTION: DATE: 2022-10-07BY: DESCRIPTION:

DESIGNED: BB BY: 3/24/2021

DRAWN: BB BY: 3/24/2021

CHECKED: BB BY: 3/24/2021

CHECKED: BB BY: 3/24/2021

SUPERVISED: BB BY: 3/24/2021



stantec

90 Pine Street, Suite 900  
Coral Gables, Florida 33134  
www.stantec.com

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DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
HIGHWAY DIVISION  
STEPHEN F. DADE CENTER  
MIAMI, FLORIDA 33128



MIAMI-DADE COUNTY

VOLTAGE DROP CALCULATIONS 2

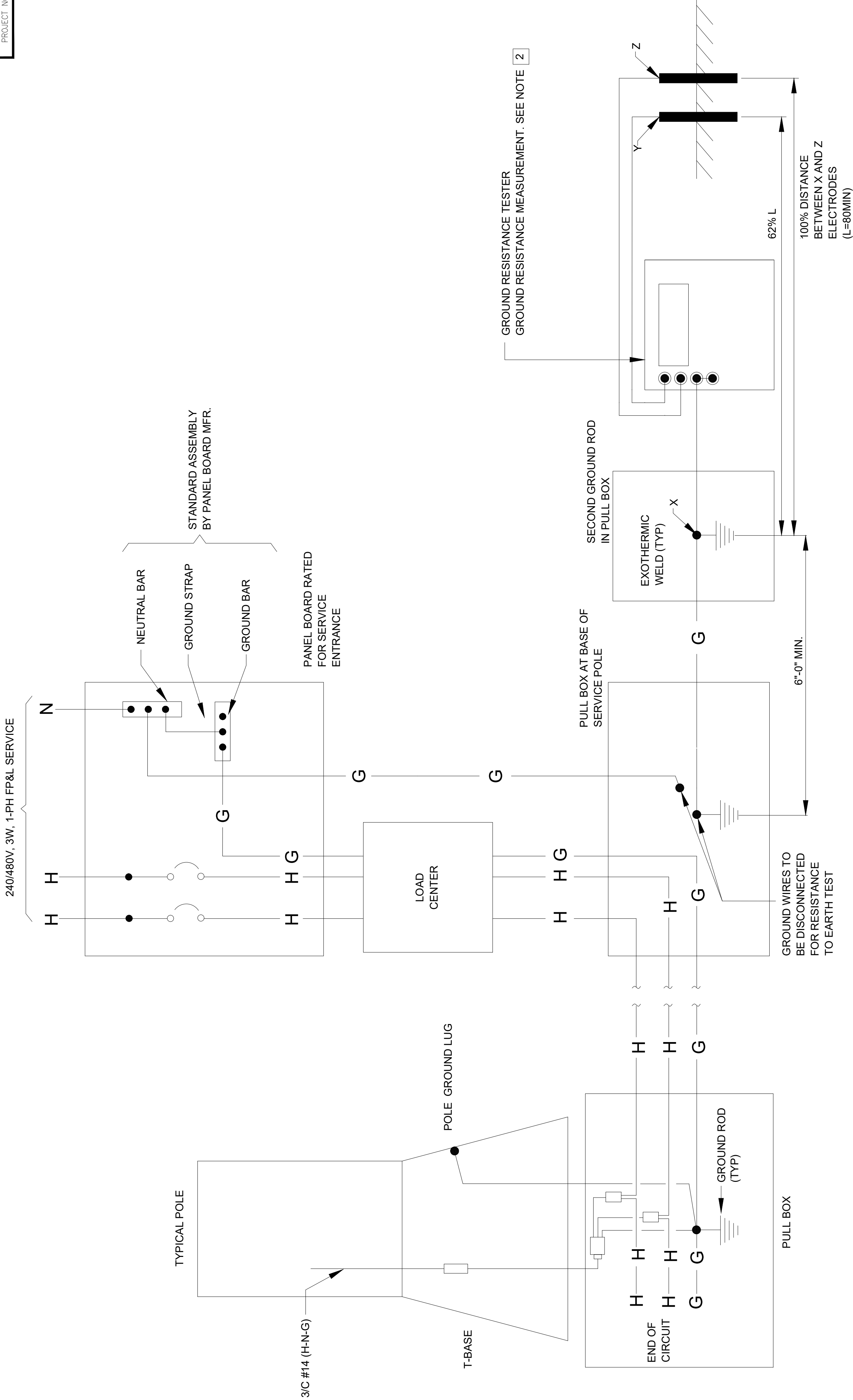
ITB #23-10

Franjo Road Roadway Improvements Project

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PLOTTED BY: LNZR, FRANKLIN DATE: 12/12/2022 2:46 PM  
CREATED: 2022-10-07 - \\US0231-PPSS01\WORK\BOP\2156\ACTIVE\215615952\ELECTRICAL\DRW\N0107-018\JOINT-BOP-CALC.DWG





RESISTANCE TO EARTH (FALL OF POTENTIAL TEST (62% METHOD))  
& CONTINUITY TESTS SCHEMATIC

GROUND TEST NOTES

1

THE INTENTION OF THIS TEST IS TO DETERMINE THE RESISTANCE TO EARTH OF THE SERVICE POINT. THIS IS MORE ACCURATE THAN THE "CLAMP-ON" METHOD AND THEREFORE IT IS THE METHOD THAT SHALL BE USED UNLESS THERE IS A LACK OF SUFFICIENT REAL ESTATE.

2

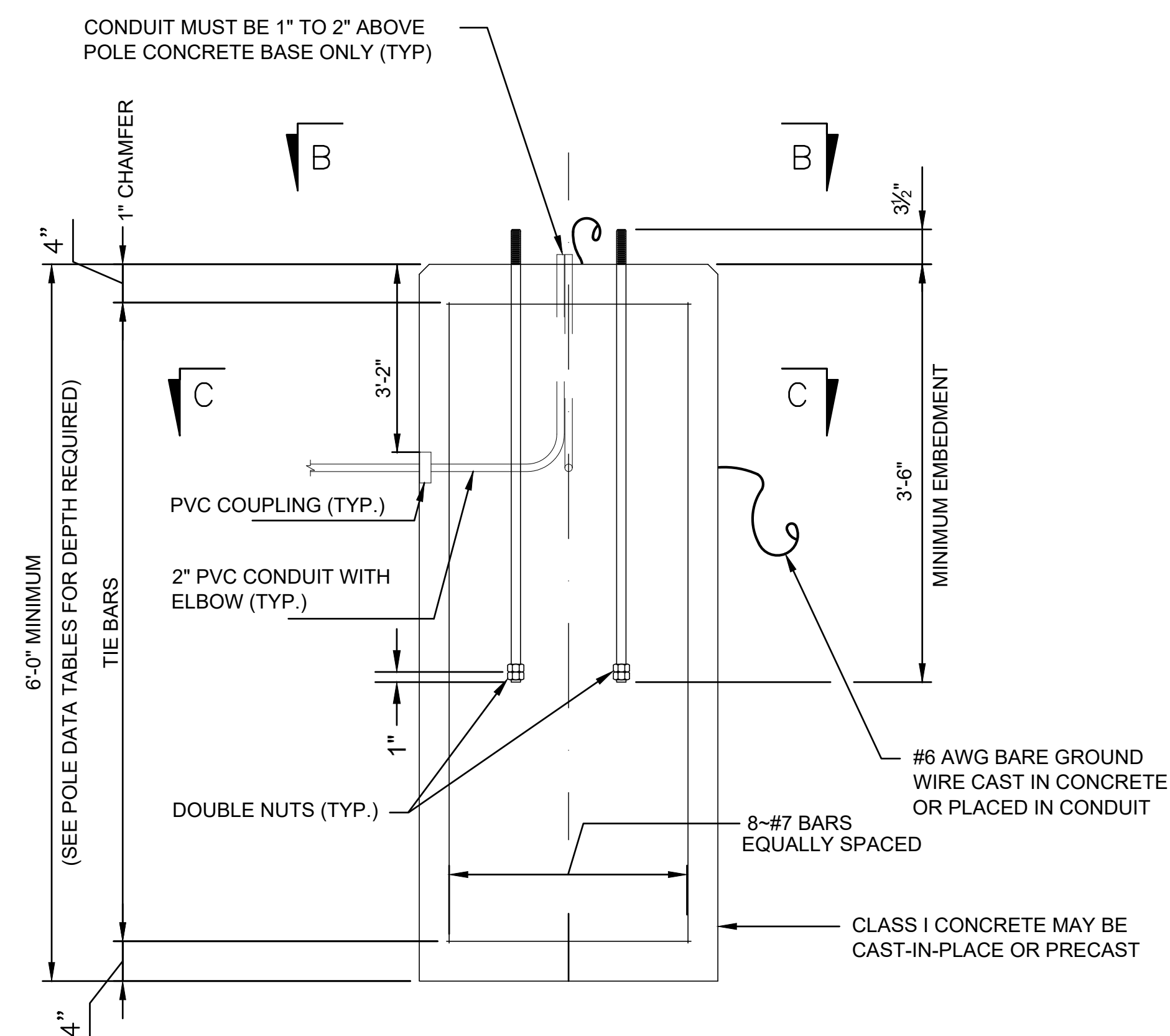
USE GROUND RESISTANCE TESTER, AEMC MODEL 4620, 4630 OR APPROVED EQUAL. CALIBRATED WITHIN THE PAST 180 DAYS. RESISTANCE-TO-GROUND MEASUREMENT ABOVE 25 OHMS SHALL BE CONSIDERED INADEQUATE.

3

ELECTRICAL CONTRACTOR SHALL SUBMIT CERTIFICATION LETTER CONFIRMING 1,2 & 3 INCLUDING READING, CALCULATION AND RESULTS.

| R E V I S I O N S |    |             |      | DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS<br>HIGHWAY DIVISION<br>STEPHEN F. DADE CENTER<br>MIAMI, FLORIDA 33128 |             |      |    | GROUND TEST 62% METHOD |  |  |  |
|-------------------|----|-------------|------|---------------------------------------------------------------------------------------------------------------------|-------------|------|----|------------------------|--|--|--|
| DATE              | BY | DESCRIPTION | DATE | BY                                                                                                                  | DESCRIPTION | DATE | BY | DESCRIPTION            |  |  |  |
|                   |    |             |      |                                                                                                                     |             |      |    |                        |  |  |  |

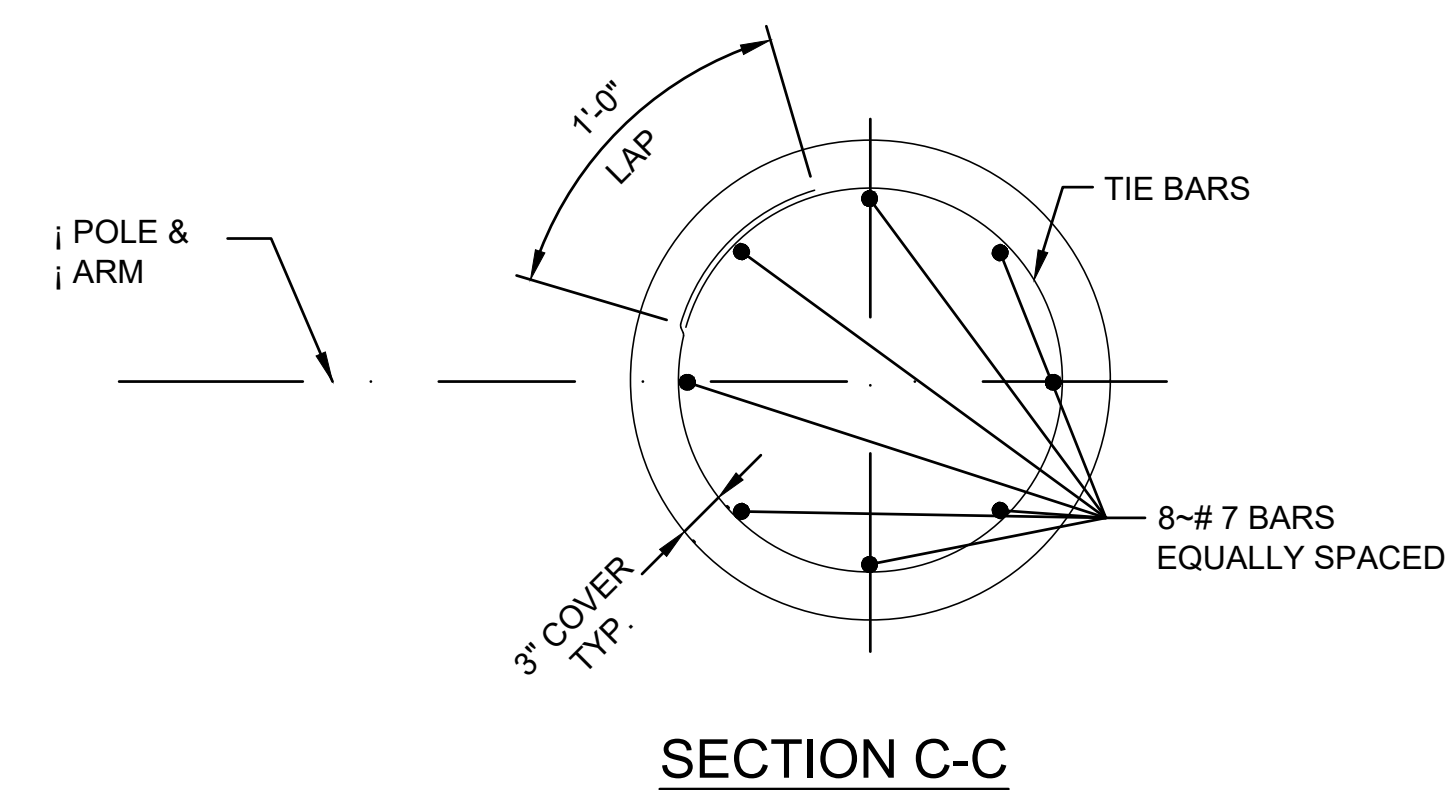
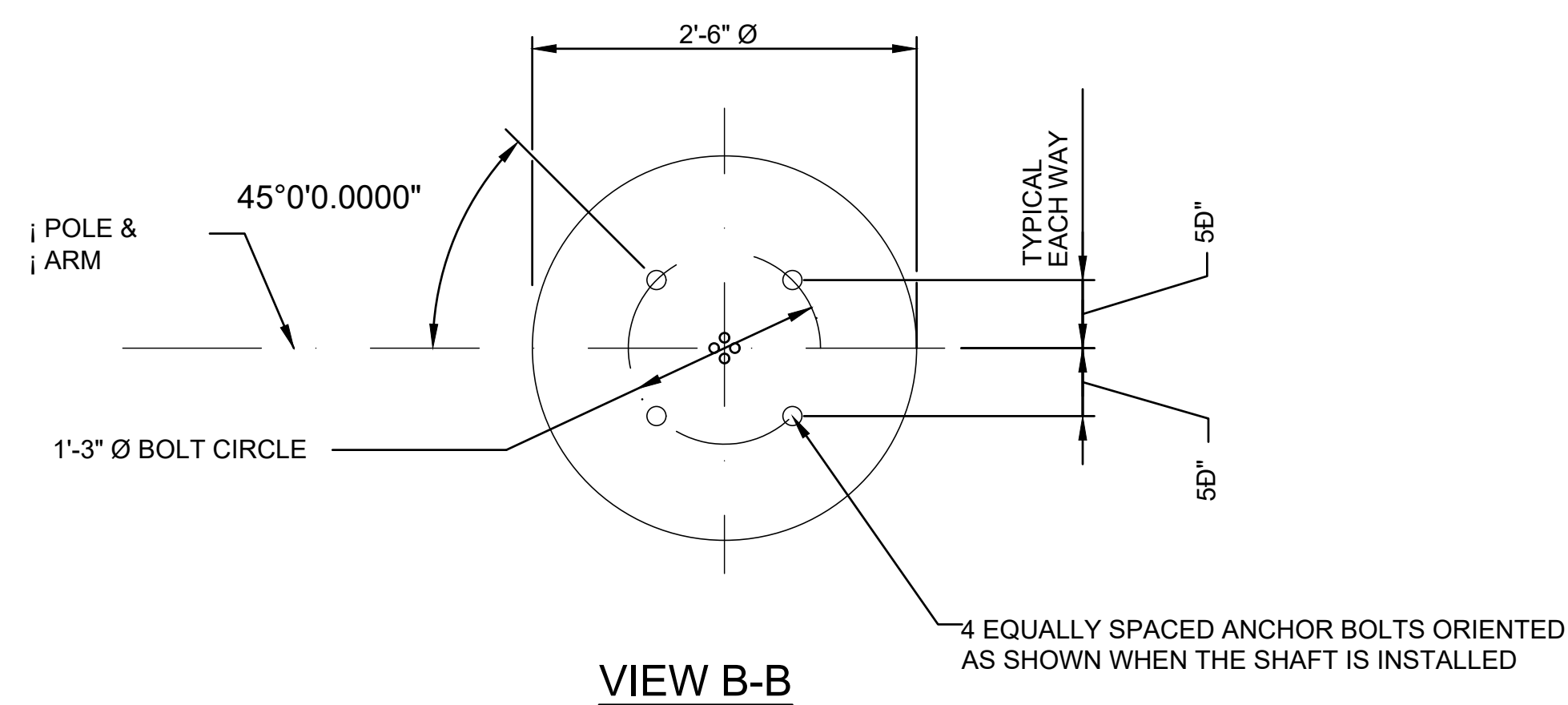




## FOUNDATION

### DRILLED SHAFT FOUNDATION DETAILS

#4 TIE BARS @ 12" CENTERS (MAX.) OR D10 (OR W10) SPIRAL @ 6" PITCH, 3 FLAT TURNS TOP AND 1 FLAT TURN BOTTOM.



| FOUNDATION TABLE W/ARM |                                   |                        |
|------------------------|-----------------------------------|------------------------|
| WIND<br>SPEED<br>(MPH) | DESIGN<br>MOUNTING<br>HEIGHT (FT) | TOTAL<br>DEPTH<br>(FT) |
| 160                    | 15                                | *                      |
| 160                    | 40                                | *                      |

\*THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, WITH DETAILS AND CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE LIGHT POLES AND FOUNDATIONS SHALL MEET FLORIDA BUILDING CODE REQUIREMENTS AND THE WIND LOAD REQUIREMENTS PROVIDED HEREIN.

[illegible]

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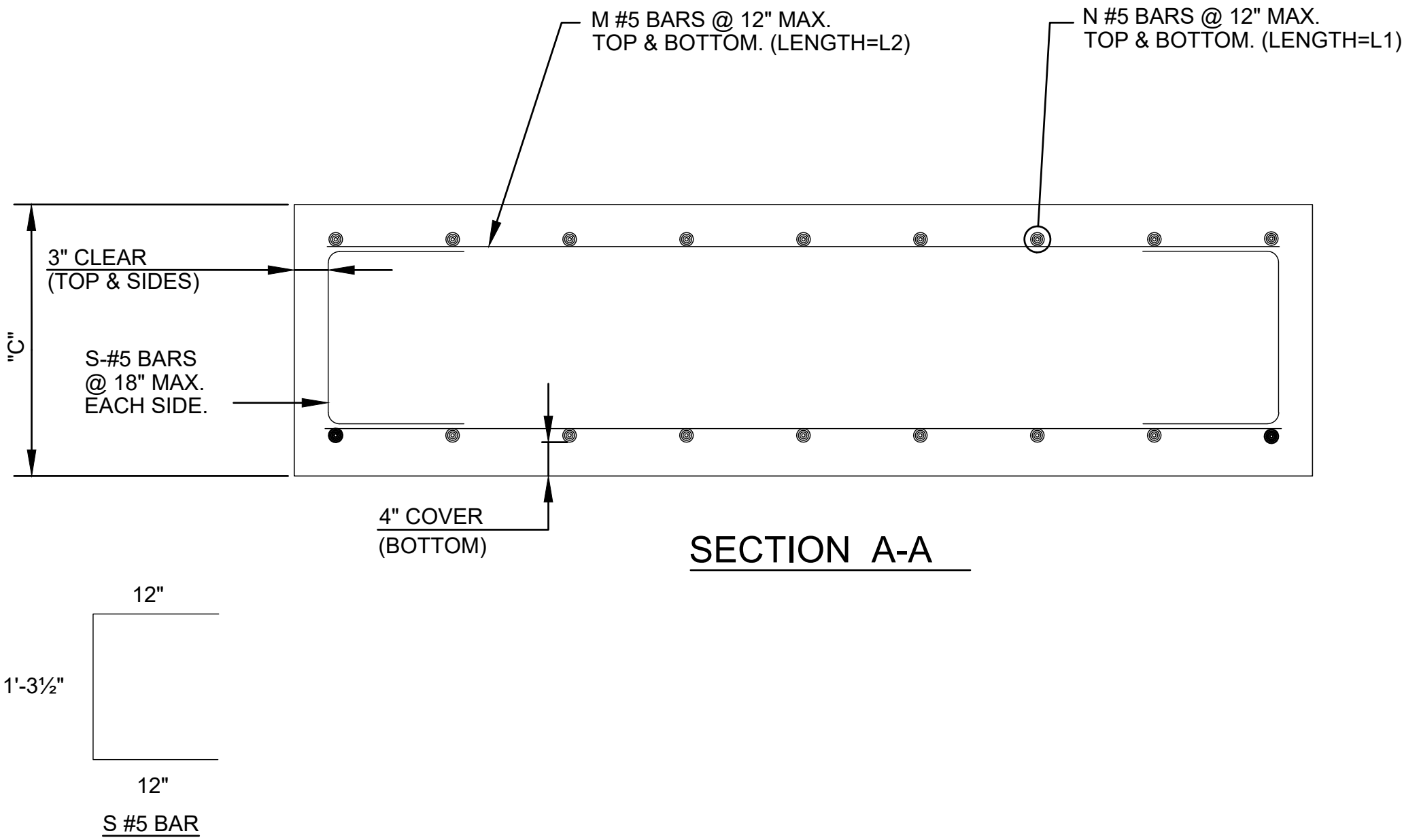
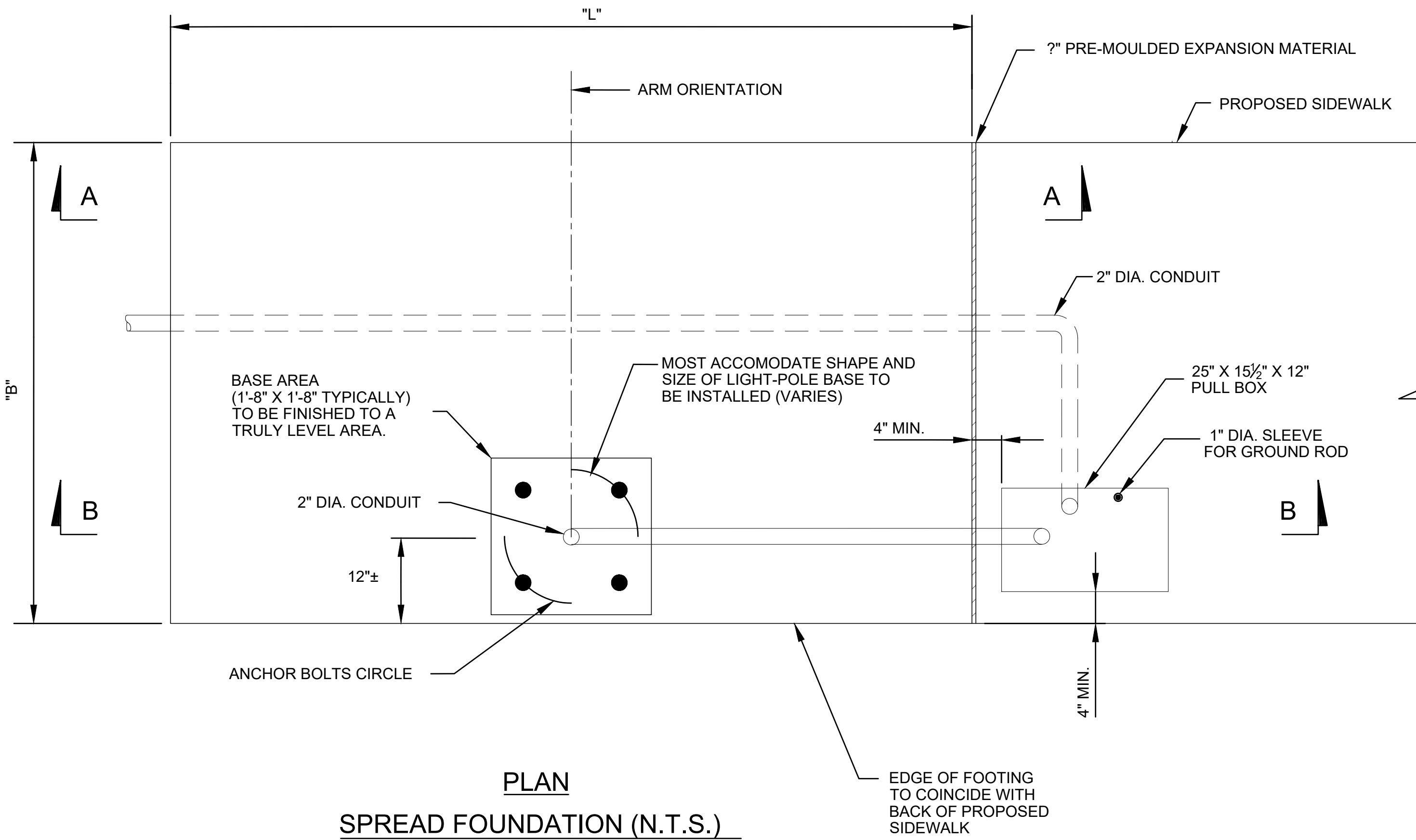
|                |      |           |            |      |      |
|----------------|------|-----------|------------|------|------|
|                | NAME | DATE      |            | NAME | DATE |
| DESIGNED BY    | BB   | 3/26/2021 | DRAWN BY   |      |      |
| CHECKED BY     | JN   |           | CHECKED BY |      |      |
| SUPERVISOR BY: |      |           |            |      |      |



## FOUNDATION DETAIL



NOTE:  
 SPREAD FOUNDATION SHALL BE ENGRAVED WITH THIS WARNING:  
 "FOUNDATION".



SOIL DESIGN PARAMETERS:  
 FRICTION ANGLE : \*  
 SOIL DRY UNIT WEIGHT : \*  
 SOIL SUBMERGED UNIT WEIGHT : \*  
 ALLOWABLE BEARING CAPACITY : \*  
 ULTIMATE BEARING CAPACITY : \*  
 PERFORMANCE FACTOR : \*  
 \* TO BE PROVIDED BY GEOTECHNICAL ENGINEER

TABLE OF SPREAD FOOTING PARAMETERS

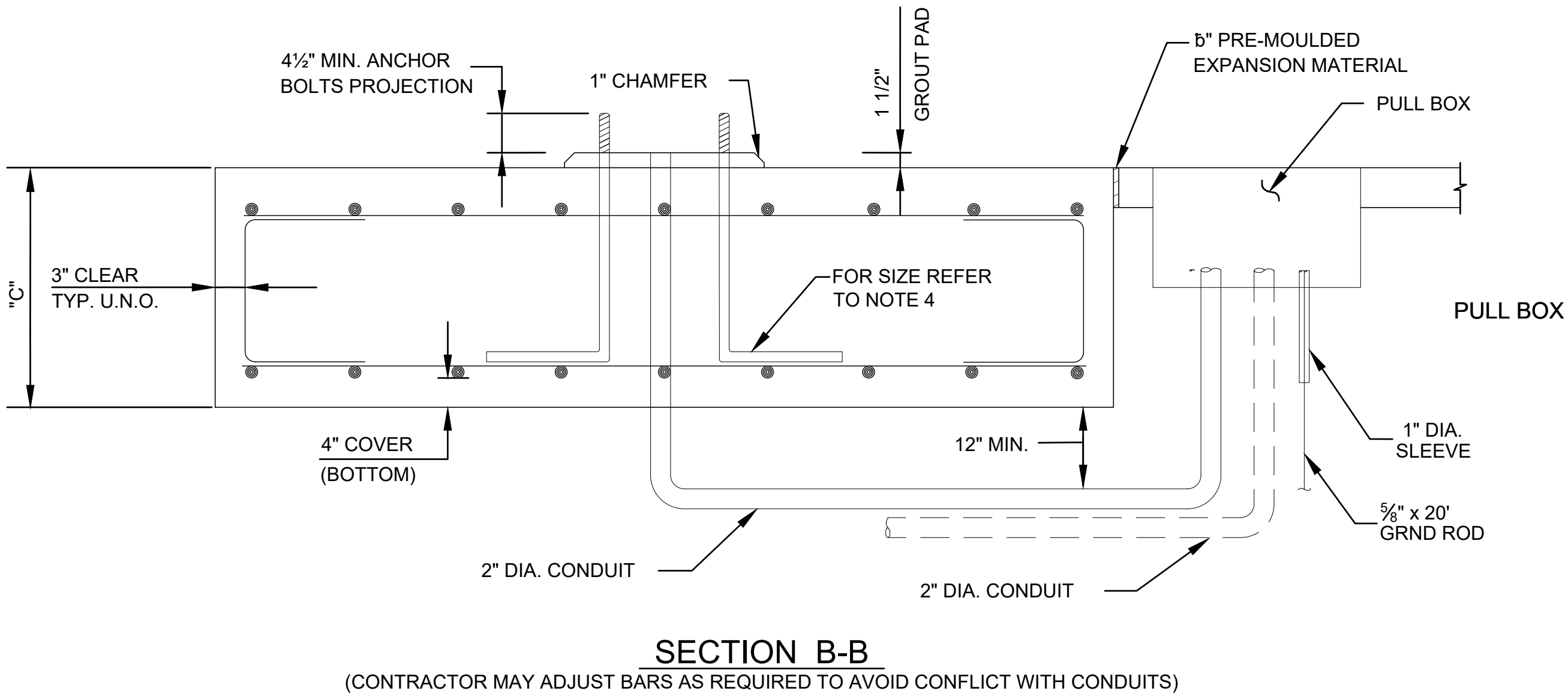
| POLE NO. | STATION | FOOTING TYPE | DIM. L | DIM. B | DIM. C | N | M | L1 | L2 | S |
|----------|---------|--------------|--------|--------|--------|---|---|----|----|---|
| 10-X     | 10      | 1            | *      | *      | *      | * | * | *  | *  | * |

NOTE: N & M INCLUDE TOP AND BOTTOM STEEL MATS

\* THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, WITH DETAILS AND CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. THE LIGHT POLES AND FOUNDATIONS SHALL MEET FLORIDA BUILDING CODE REQUIREMENTS AND THE WIND LOAD REQUIREMENTS PROVIDED HEREIN.

NOTES:

- USE SPREAD FOUNDATION ONLY IF/WHERE REQUIRED TO AVOID CONFLICTS WITH EXISTING UNDERGROUND UTILITIES.
- DESIGN SPECIFICATIONS:
  - 160 MPH WIND SPEED
  - FDOT STRUCTURES MANUAL, JANUARY 2023
  - AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS (6TH ED)
  - WITH INTERIM REVISIONS AND AS MODIFIED BY FDOT
- CONCRETE: CLASS II CONCRETE F'C=3400 PSI 28 DAYS MINIMUM COMP. STRENGTH.
- SOIL SHALL BE CAPABLE OF WITHSTANDING BEARING PRESSURE.
- ALL CONDUITS SHALL BE P.V.C. SCHEDULE 40.
- WORK THIS SHEET IN CONJUNCTION WITH LIGHTING PLANS.
- CONDUIT SHALL NOT BE EMBEDDED IN FOOTING EXCEPT AS SHOWN IN SECTION B-B.



| REVISIONS |    |             |      |    |             |  |
|-----------|----|-------------|------|----|-------------|--|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |  |
|           |    |             |      |    |             |  |

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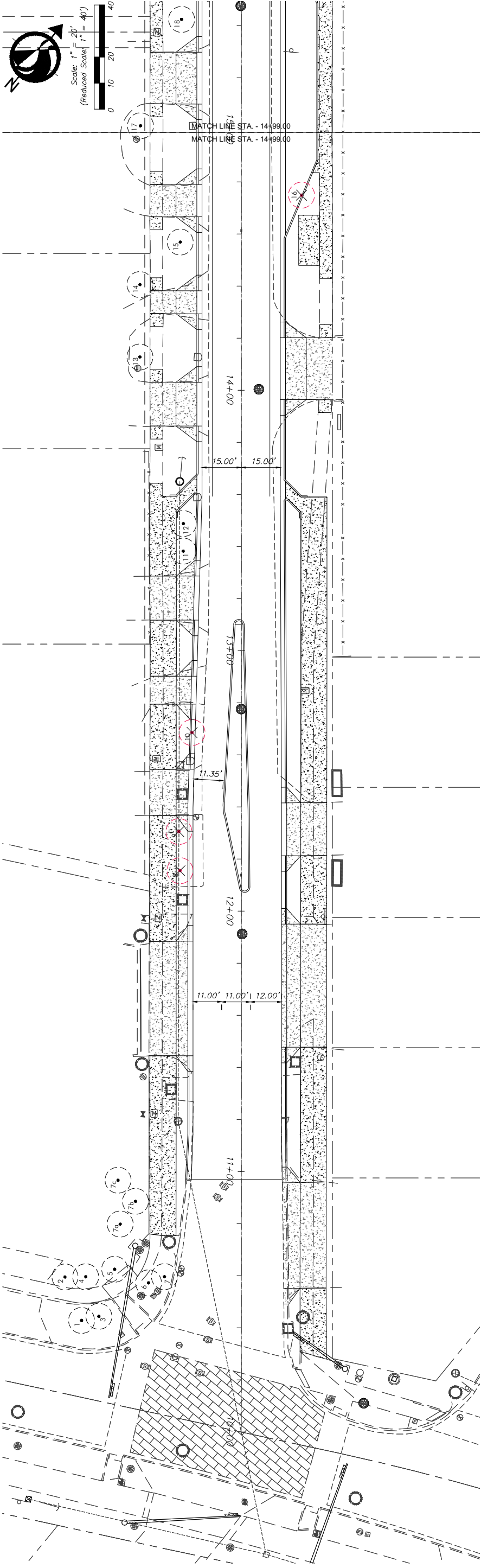
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| DESIGNED BY    | NAME | DATE      | DRAWN BY   | NAME | DATE |
|----------------|------|-----------|------------|------|------|
| BB             | BB   | 3/26/2021 |            |      |      |
| CHECKED BY     | JN   |           | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
 HIGHWAY DIVISION  
 STEPHEN P. CLARK, CENTER  
 11 NW 1 ST  
 MIAMI, FLORIDA 33128

SPREAD FOUNDATION





| EXISTING TREE DISPOSITION LIST |                             |             |                                 |                              |         |                         |
|--------------------------------|-----------------------------|-------------|---------------------------------|------------------------------|---------|-------------------------|
| KEY                            | BOTANICAL NAME              | COMMON NAME | SIZE<br>HT (H SPD) IN DBH (in.) | DISPOSITION<br>REMAIN/REMOVE | TRANSP. | MITIGATION<br>5% CANOPY |
| 1                              | <i>Atropa incognita</i>     | Atropa      | 6                               | 2                            | X       |                         |
| 2                              | <i>Juniperus procumbens</i> | Juniper     | 6                               | 3                            | X       |                         |
| 3                              | <i>Sabal palmetto</i>       | Sabal Palm  | 10                              | 10                           | X       |                         |
| 4                              | <i>Sabal palmetto</i>       | Sabal Palm  | 15                              | 10                           | X       |                         |
| 5                              | <i>Sabal palmetto</i>       | Sabal Palm  | 15                              | 10                           | 10      | X                       |
| 6                              | <i>Sabal palmetto</i>       | Sabal Palm  | 6                               | 2                            | X       |                         |
| 7                              | <i>Juniperus procumbens</i> | Juniper     | 10                              | 10                           | X       |                         |
| 8                              | <i>Juniperus procumbens</i> | Juniper     | 10                              | 10                           | X       |                         |
| 9                              | <i>Juniperus procumbens</i> | Juniper     | 10                              | 10                           | X       |                         |
| 10                             | <i>Juniperus procumbens</i> | Juniper     | 10                              | 10                           | X       | N/A                     |
| 11                             | <i>Juniperus procumbens</i> | Juniper     | 15                              | 10                           | 10      | X                       |
| 12                             | <i>Juniperus procumbens</i> | Juniper     | 15                              | 10                           | 10      | X                       |
| 13                             | <i>Juniperus procumbens</i> | Juniper     | 10                              | 8                            | 4       | X                       |
| 14                             | <i>Juniperus procumbens</i> | Juniper     | 10                              | 8                            | 4       | X                       |
| 15                             | <i>Juniperus procumbens</i> | Juniper     | 12                              | 12                           | Mult    | N/A                     |
| 16                             | <i>Juniperus procumbens</i> | Juniper     | 15                              | 10                           | 10      | X                       |
| 17                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 18                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 19                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 20                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 21                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 22                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 23                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 24                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 25                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 26                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 27                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 28                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 29                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 30                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 31                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 32                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 33                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 34                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 35                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 36                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 37                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 38                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 39                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 40                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 41                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 42                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 43                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 44                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 45                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 46                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 47                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 48                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 49                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 50                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 51                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 52                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 53                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 54                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 55                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 56                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 57                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 58                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 59                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 60                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 61                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 62                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 63                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 64                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 65                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 66                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 67                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 68                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 69                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 70                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 71                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 72                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 73                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 74                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 75                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 76                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 77                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 78                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 79                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 80                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 81                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 82                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 83                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 84                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 85                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 86                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 87                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 88                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 89                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 90                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 91                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 92                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 93                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 94                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 95                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 96                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 97                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 98                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 99                             | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |
| 100                            | <i>Juniperus procumbens</i> | Juniper     | 20                              | 10                           | 10      | X                       |

**LEGEND**

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE TRANSPLANTED
- NEW LOCATION OF TRANSPLANTED TREE

| R E V I S I O N S |    |             |      |  <b>Stantec</b><br><small>901 Ponce de Leon Blvd., Suite 900<br/>           Coral Gables, Florida 33134<br/>           www.stantec.com</small> |             |      |    | <small>Not for Construction. Not valid, and not responsible for all dimensions, DO NOT use for construction. The copyright to all design and drawings is retained by Stantec. No part of this drawing may be reproduced or used for any purpose other than that authorized by Stantec Corporation.</small> |      |    |             |
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|                   |    |             |      |                                                                                                                                                                                                                                   |             |      |    |                                                                                                                                                                                                                                                                                                            |      |    |             |

**EXISTING TREE DISPOSITION PLAN**  
**-FRANJO ROAD - 100% CDS-**

**PUBLIC WORKS AND WASTE**  
**MANAGEMENT DEPARTMENT**  
**HIGHWAY DIVISION**  
**STREET LIGHTING CENTER**  
**111 NW 1<sup>ST</sup>**  
**MIAMI, FLORIDA 33128**

**MIAMI-DADE**

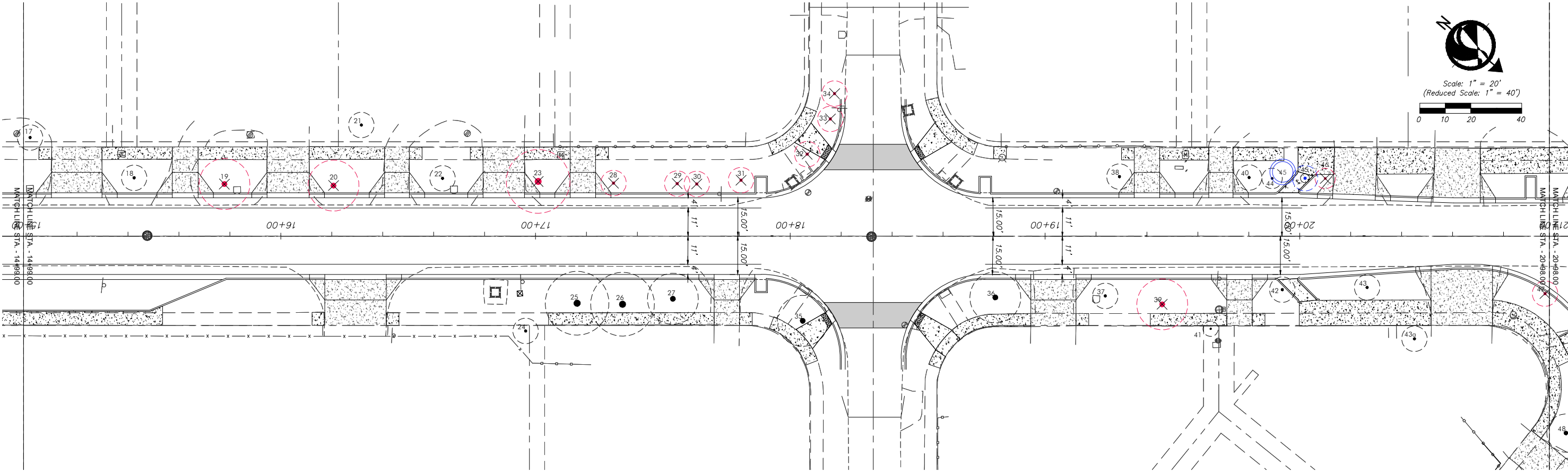
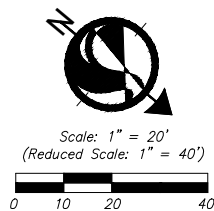
**DATE** **NAME** **DATE**

DESIGNED C.G. 2-10-2022 DRAWN

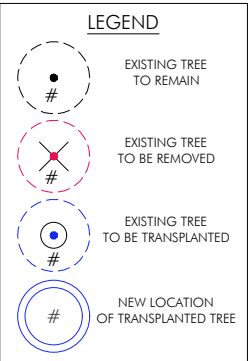
CHECKED K.S. 2-10-2022 CHECKED BY

SUPERVISED BY





| EXISTING TREE DISPOSITION LIST |                        |                    |           |            |            |             |        |          |            |
|--------------------------------|------------------------|--------------------|-----------|------------|------------|-------------|--------|----------|------------|
| KEY                            | BOTANICAL NAME         | COMMON NAME        | HT. (ft.) | SIZE       |            | DISPOSITION |        |          | MITIGATION |
|                                |                        |                    |           | SPD. (ft.) | DBH. (in.) | REMAIN      | REMOVE | TRANSPL. |            |
| 17                             | Adonidia merrillii     | Christmas Palm     | 8         | 10         | Multi      | X           |        |          |            |
| 18                             | Ravenea regina         | Royal Palm         | 35        | 10         | 10         | X           |        |          |            |
| 19                             | Burkea buceras         | Black Olive        | 30        | 20         | 31         |             | X      |          | 628        |
| 20                             | Silvernia mahagoni     | Mahogany           | 30        | 20         | 32         |             | X      |          | 628        |
| 21                             | Phoenix carolinensis   | Cannal Date Palm   | 8         | 10         | 10         | X           |        |          |            |
| 22                             | Cocos nucifera         | Coconut Palm       | 35        | 10         | 10         | X           |        |          |            |
| 23                             | Silvernia mahagoni     | Mahogany           | 25        | 25         | 25.2       |             | X      |          | 982        |
| 24                             | Filicium decipiens     | Japanese Fern Tree | 20        | 15         | Multi      | X           |        |          |            |
| 25                             | Silvernia mahagoni     | Mahogany           | 30        | 30         | 29         | X           |        |          |            |
| 26                             | Silvernia mahagoni     | Mahogany           | 30        | 25         | 26.5       | X           |        |          |            |
| 27                             | Silvernia mahagoni     | Mahogany           | 20        | 20         | 20+1.8     | X           |        |          |            |
| 28                             | Gracilis romanzoffiana | Queen Palm         | 20        | 10         | 10         |             | X      |          | N/A        |
| 29                             | Gracilis romanzoffiana | Queen Palm         | 12        | 10         | 10         |             | X      |          | N/A        |
| 30                             | Gracilis romanzoffiana | Queen Palm         | 10        | 10         | 10         |             | X      |          | N/A        |
| 31                             | Gracilis romanzoffiana | Queen Palm         | 15        | 10         | 10         |             | X      |          | N/A        |
| 32                             | Gracilis romanzoffiana | Queen Palm         | 12        | 10         | 10         |             | X      |          | N/A        |
| 33                             | Gracilis romanzoffiana | Queen Palm         | 8         | 10         | 10         |             | X      |          | N/A        |
| 34                             | Gracilis romanzoffiana | Queen Palm         | 15        | 10         | 10         |             | X      |          | N/A        |
| 35                             | Silvernia mahagoni     | Mahogany           | 30        | 20         | 26.5       |             | X      |          |            |
| 36                             | Silvernia mahagoni     | Mahogany           | 30        | 20         | 26         |             | X      |          |            |
| 37                             | Ravenea regina         | Royal Palm         | 35        | 10         | 10         |             | X      |          |            |
| 38                             | Ravenea regina         | Royal Palm         | 35        | 10         | 10         |             | X      |          |            |
| 39                             | Scutellaria bicolorata | Many Bony Orchid   | 30        | 25         | 25+21+21   |             | X      |          | N/A        |
| 40                             | Ravenea regina         | Royal Palm         | 40        | 10         | 10         |             | X      |          |            |
| 41                             | Bursera simaruba       | Gumbo Limbo        | 12        | 6          | 6          |             | X      |          |            |
| 42                             | Psychosperma elegans   | Saltwater Palm     | 12        | 10         | Multi      |             | X      |          |            |
| 43                             | Psychosperma elegans   | Saltwater Palm     | 12        | 10         | 10         |             | X      |          |            |
| 43A                            | Cocos nucifera         | Coconut Palm       | 20        | 10         | 10         |             | X      |          |            |
| 44                             | Coccoloba uvifera      | Sea Grape          | 10        | 4          | Multi      |             | X      |          |            |
| 45                             | Flumeria speciosa      | Frangipani         | 12        | 6          | Multi      |             |        | X        | 20         |
| 46                             | Coccoloba uvifera      | Sea Grape          | 10        | 5          | Multi      |             | X      |          |            |
| 47                             | Ravenea regina         | Royal Palm         | 40        | 10         | 10         |             | X      |          | 79         |



ITB #23-10  
Franjo Road Roadway Improvements Project  
Page 458 of 608

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| REVISIONS |    |             |      |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |      |    |             |



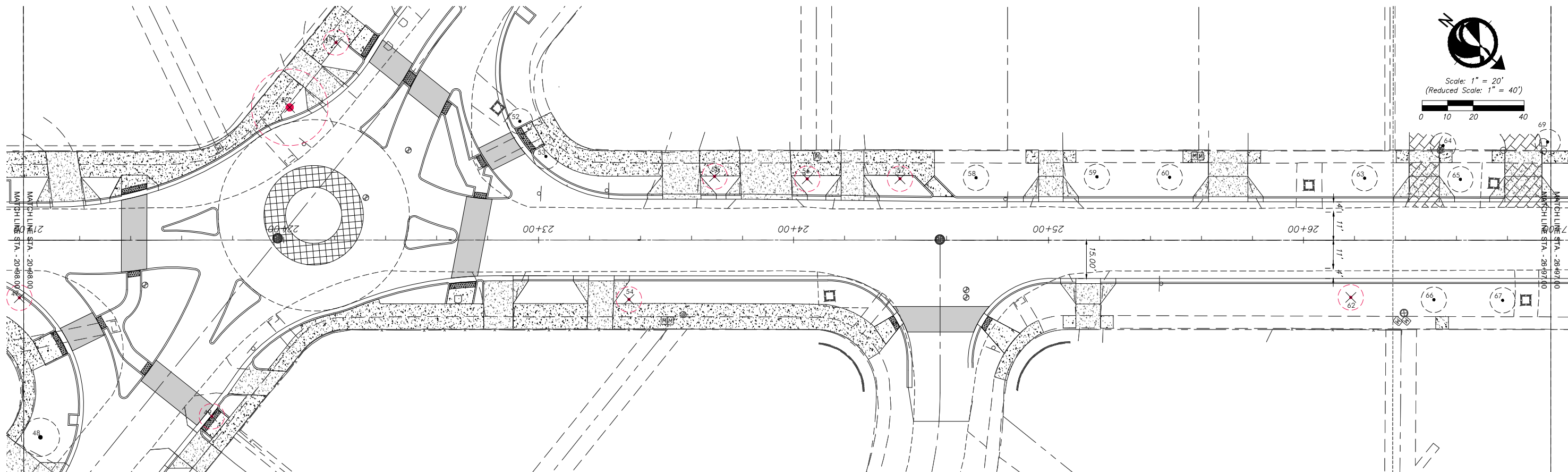
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|----------------|------|-----------|------------|------|------|
| DESIGNED BY    | NAME | DATE      | DRAWN BY   | NAME | DATE |
| CHECKED BY     | C.G. | 2-10-2022 | CHECKED BY |      |      |
|                | K.S. | 2-10-2022 |            |      |      |
| SUPERVISED BY: |      |           |            |      |      |

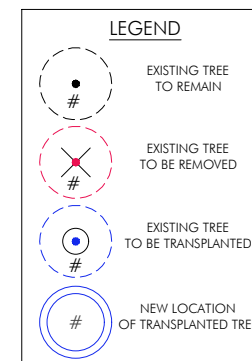


PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1<sup>ST</sup> STREET  
MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-



| EXISTING TREE DISPOSITION LIST |                       |                         |           |           |            |             |        |                           |
|--------------------------------|-----------------------|-------------------------|-----------|-----------|------------|-------------|--------|---------------------------|
| KEY                            | BOTANICAL NAME        | COMMON NAME             | SIZE      |           |            | DISPOSITION |        | MITIGATION<br>S.F. CANOPY |
|                                |                       |                         | HT. (ft.) | SPD (in.) | DBH. (in.) | REMAIN      | REMOVE |                           |
| 48                             | Ficus benjamina       | Benjamin Fig            | 25        | 15        | 4 1/2      |             | X      |                           |
| 49                             | Davallia decora       | Triangle Palm           | 15        | 10        | 10         |             |        | 79                        |
| 50                             | Sorrelia la mahagoni  | Mahogany                | 35        | 35        | 25         |             | X      | 1924                      |
| 51                             | Sorrelia la mahagoni  | Mahogany                | 20        | 8         | 6          |             | X      | 50                        |
| 52                             | Cocos nucifera        | Coconut Palm            | 15        | 10        | 10         |             | X      |                           |
| 53                             | Cocos nucifera        | Coconut Palm            | 15        | 10        | 10         |             | X      |                           |
| 54                             | Ravisonia regia       | Royal Palm              | 35        | 10        | 10         |             | X      | 79                        |
| 55                             | Pisonia carolinensis  | Carlin Island Date Palm | 10        | 15        | 14         |             | X      | 177                       |
| 56                             | Ravisonia regia       | Royal Palm              | 35        | 10        | 10         |             | X      | 79                        |
| 57                             | Ravisonia regia       | Royal Palm              | 35        | 10        | 10         |             | X      | 79                        |
| 58                             | Ravisonia regia       | Royal Palm              | 35        | 10        | 10         |             | X      |                           |
| 59                             | Ravisonia regia       | Royal Palm              | 30        | 10        | 10         |             | X      |                           |
| 60                             | Ravisonia regia       | Royal Palm              | 40        | 10        | 10         |             | X      |                           |
| 61                             | Intentionally omitted |                         |           |           |            |             |        |                           |
| 62                             | Ficus benjamina       | Benjamin Fig            | 25        | 15        | 4 1/2      |             | X      | 144                       |
| 63                             | Ravisonia regia       | Royal Palm              | 35        | 10        | 10         |             | X      |                           |
| 64                             | Adonis la mentilli    | Christmas Palm          | 10        | 10        | 3          |             | X      |                           |
| 65                             | Ravisonia regia       | Royal Palm              | 30        | 10        | 10         |             | X      |                           |
| 66                             | Ravisonia regia       | Royal Palm              | 45        | 10        | 10         |             | X      |                           |
| 67                             | Ravisonia regia       | Royal Palm              | 50        | 10        | 10         |             | X      |                           |
| 68                             | Intentionally omitted |                         |           |           |            |             |        |                           |
| 69                             | Adonis la mentilli    | Christmas Palm          | 10        | 10        | 3          |             | X      |                           |

[illegible]

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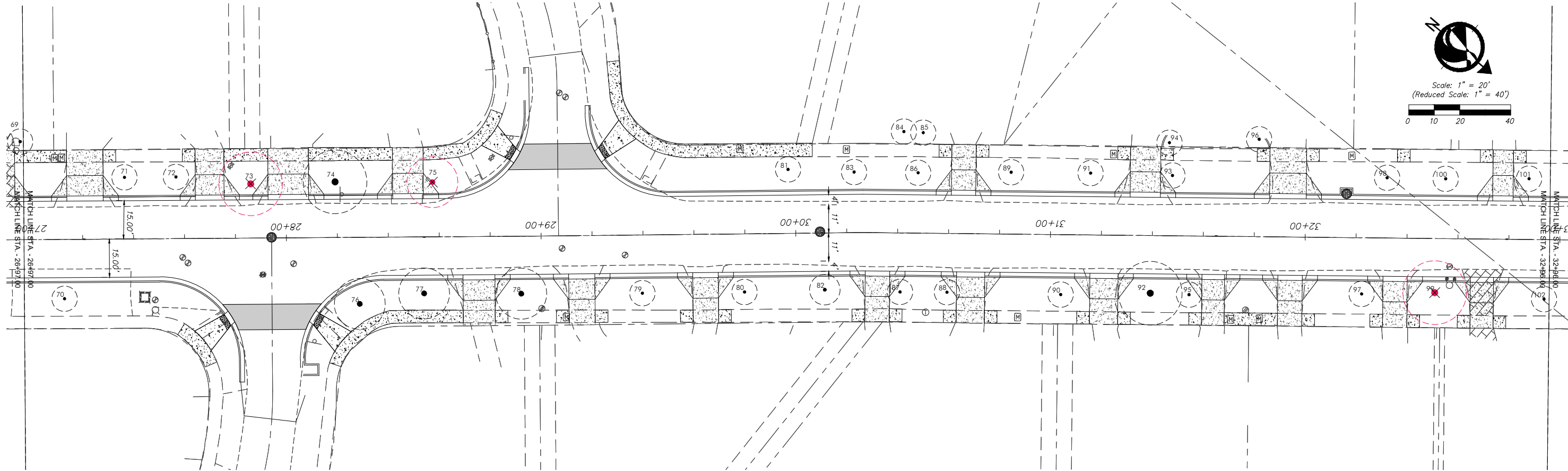
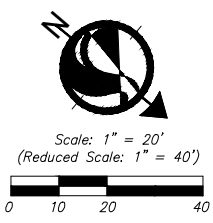
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|                |      | NAME      | DATE          |  | NAME | DATE |
| DESIGNED<br>BY | C.G. | 2-10-2022 | DRAWN<br>BY   |  |      |      |
| CHECKED<br>BY  | K.S. | 2-10-2022 | CHECKED<br>BY |  |      |      |
| SUPERVISED BY: |      |           |               |  |      |      |



PUBLIC WORKS AND WASTE  
MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-





| EXISTING TREE DISPOSITION LIST |                     |                |           |            |            |             |        |          |            |
|--------------------------------|---------------------|----------------|-----------|------------|------------|-------------|--------|----------|------------|
| KEY                            | BOTANICAL NAME      | COMMON NAME    | HT. (ft.) | SIZE       |            | DISPOSITION |        |          | MITIGATION |
|                                |                     |                |           | SPD. (ft.) | DBH. (in.) | REMAIN      | REMOVE | TRANSPL. |            |
| 70                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 71                             | Rapanea regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |
| 72                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 73                             | Bucida buxifolia    | Black Olive    | 25        | 30         | 22         |             | X      |          | 1414       |
| 74                             | Bucida buxifolia    | Black Olive    | 25        | 30         | 21.6       | X           |        |          |            |
| 75                             | Bucida buxifolia    | Black Olive    | 25        | 25         | 18         |             | X      |          | 982        |
| 76                             | Bucida buxifolia    | Black Olive    | 30        | 20         | 27         | X           |        |          |            |
| 77                             | Bucida buxifolia    | Black Olive    | 25        | 20         | 20+16+7    | X           |        |          |            |
| 78                             | Bucida buxifolia    | Black Olive    | 25        | 20         | 26         | X           |        |          |            |
| 79                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 80                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 81                             | Rapanea regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |
| 82                             | Pandanus americanus | Avicado        | 12        | 10         | 14         | X           |        |          |            |
| 83                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 84                             | Sapota rumicordata  | Queen Palm     | 12        | 10         | 10         | X           |        |          |            |
| 85                             | Sapota rumicordata  | Queen Palm     | 12        | 10         | 10         | X           |        |          |            |
| 86                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 87                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 88                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 89                             | Rapanea regia       | Royal Palm     | 40        | 10         | 10         | X           |        |          |            |
| 90                             | Rapanea regia       | Royal Palm     | 40        | 10         | 10         | X           |        |          |            |
| 91                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 92                             | Delonix regia       | Royal Palm     | 20        | 25         | 20         | X           |        |          |            |
| 93                             | Rapanea regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 94                             | Adonidia merrillii  | Christmas Palm | 12        | 10         | Multi      | X           |        |          |            |
| 95                             | Rapanea regia       | Royal Palm     | 25        | 10         | 10         | X           |        |          |            |
| 96                             | Adonidia merrillii  | Christmas Palm | 15        | 10         | Multi      | X           |        |          |            |
| 97                             | Coccothrinax        | Coconut Palm   | 25        | 10         | 10         | X           |        |          |            |
| 98                             | Rapanea regia       | Royal Palm     | 25        | 10         | 10         | X           |        |          |            |
| 99                             | Quercus virginiana  | Live Oak       | 30        | 25         | 22         |             | X      |          | 982        |
| 100                            | Rapanea regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |
| 101                            | Rapanea regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |
| 102                            | Rapanea regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |

LEGEND

#

EXISTING TREE TO REMAIN

#

EXISTING TREE TO BE REMOVED

#

EXISTING TREE TO BE TRANSPLANTED

#

NEW LOCATION OF TRANSPLANTED TREE

| REVISIONS |    |             |      |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |      |    |             |

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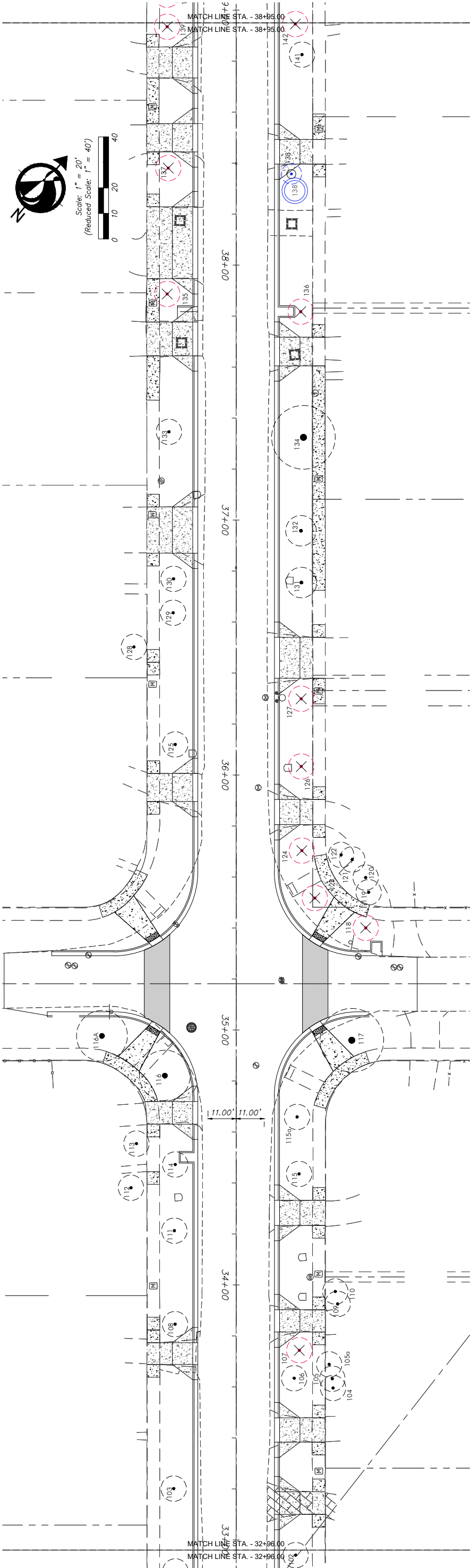
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|----------------|------|-----------|------------|------|-----------|
| DESIGNED BY    | NAME | DATE      | DRAWN BY   | NAME | DATE      |
| CHECKED BY     | C.G. | 2-10-2022 | CHECKED BY | K.S. | 2-10-2022 |
| SUPERVISED BY: |      |           |            |      |           |

MIAMI-DADE

PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1<sup>ST</sup> STREET  
MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-

MIAMI-DADE COUNTY PUBLIC WORKS DEPT.  
HIGHWAY DIVISION  
FRANJO ROAD  
FROM OLD OUTLER ROAD TO SW 184TH STREET  
PROJECT NO. 215615952  
SHEET LA-5 OF 35



LEGEND

#

EXISTING TREE  
TO REMAIN

#

EXISTING TREE  
TO BE REMOVED

#

EXISTING TREE  
TO BE TRANSPLANTED

#

NEW LOCATION  
OF TRANSPLANTED TREE

| EXISTING TREE DISPOSITION LIST |                        |                     |                                          |             |                |                           |
|--------------------------------|------------------------|---------------------|------------------------------------------|-------------|----------------|---------------------------|
| KEY                            | BOTANICAL NAME         | COMMON NAME         | SIZE<br>HT. (ft.) / SP. (ft) / DBH (in.) | DISPOSITION |                | MITIGATION<br>S.F. CANOPY |
|                                |                        |                     |                                          | REMAIN      | REMOVE/TRANSPL |                           |
| 103                            | Roystonea regia        | Royal Palm          | 30' 10' 10"                              | X           |                |                           |
| 104                            | Wrightia glabra subsp. | Wrightia Palm       | 4' 10' 10"                               | X           |                |                           |
| 105                            | Phoenix rostrata       | Caribbean Date Palm | 20' 10' 10"                              | X           |                |                           |
| 106                            | Phoenix rostrata       | Caribbean Date Palm | 20' 10' 10"                              | X           |                |                           |
| 107                            | Roystonea regia        | Royal Palm          | 8' 10' 10"                               |             | X              | N/A                       |
| 108                            | Roystonea regia        | Royal Palm          | 28' 10' 10"                              | X           |                |                           |
| 109                            | Dasylirion             | Arrow Palm          | 20' 10' 10"                              | X           |                |                           |
| 110                            | Dasylirion             | Arrow Palm          | 20' 10' 10"                              | X           |                |                           |
| 111                            | Roystonea regia        | Royal Palm          | 40' 10' 10"                              | X           |                |                           |
| 112                            | Coccothrinax           | Coconut Palm        | 40' 10' 10"                              | X           |                |                           |
| 113                            | Coccothrinax           | Coconut Palm        | 40' 10' 10"                              | X           |                |                           |
| 114                            | Roystonea regia        | Royal Palm          | 10' 10' 10"                              | X           |                |                           |
| 115                            | Roystonea regia        | Royal Palm          | 12' 10' 10"                              | X           |                |                           |
| 116                            | Coccothrinax           | Coconut Palm        | 10' 10' 10"                              | X           |                |                           |
| 117                            | Guarea vogeliana       | Live Oak            | 20' 20' 12"                              | X           |                |                           |
| 118                            | Guarea vogeliana       | Royal Palm          | 25' 25' 27"                              | X           |                | N/A                       |
| 119                            | Roystonea regia        | Queen Palm          | 20' 10' 10"                              | X           |                |                           |
| 120                            | Sabal palmetto         | Sabal Palm          | 40' 10' 10"                              | X           |                |                           |
| 121                            | Sabal palmetto         | Sabal Palm          | 12' 10' 10"                              | X           |                |                           |
| 122                            | Sabal palmetto         | Sabal Palm          | 12' 10' 10"                              | X           |                |                           |
| 123                            | Sabal palmetto         | Sabal Palm          | 12' 10' 10"                              | X           |                |                           |
| 124                            | Roystonea regia        | Queen Palm          | 15' 10' 10"                              | X           |                | N/A                       |
| 125                            | Roystonea regia        | Queen Palm          | 15' 10' 10"                              | X           |                | N/A                       |
| 126                            | Roystonea regia        | Queen Palm          | 45' 10' 10"                              | X           |                |                           |
| 127                            | Roystonea regia        | Queen Palm          | 12' 10' 10"                              | X           |                | N/A                       |
| 128                            | Roystonea regia        | Queen Palm          | 40' 10' 10"                              | X           |                |                           |
| 129                            | Tournefortia bicolor   | Fla. Tournefortia   | 20' 10' 13.5"                            | X           |                |                           |
| 130                            | Tournefortia bicolor   | Fla. Tournefortia   | 15' 10' 12"                              | X           |                |                           |
| 131                            | Guarea vogeliana       | Live Oak            | 15' 12' 14.5"                            | X           |                |                           |
| 132                            | Guarea vogeliana       | Live Oak            | 15' 12' 14.5"                            | X           |                |                           |
| 133                            | Sabal palmetto         | Sabal Palm          | 15' 10' 10"                              | X           |                |                           |
| 134                            | Banksia laevis         | Gumbo Limbo         | 15' 30' 10"                              | X           |                | N/A                       |
| 135                            | Roystonea regia        | Queen Palm          | 15' 10' 10"                              | X           |                | N/A                       |
| 136                            | Roystonea regia        | Queen Palm          | 15' 10' 10"                              | X           |                |                           |
| 137                            | Roystonea regia        | Queen Palm          | 15' 10' 10"                              | X           |                | N/A                       |
| 138                            | Banksia laevis         | Gumbo Limbo         | 6' 2'-2'-3'-3'-4'                        | X           |                |                           |
| 139                            | Roystonea regia        | Queen Palm          | 20' 10' 10"                              | X           |                | N/A                       |
| 140                            | Roystonea regia        | Queen Palm          | 20' 10' 10"                              | X           |                |                           |
| 141                            | Roystonea regia        | Queen Palm          | 12' 10' 10"                              | X           |                | N/A                       |
| 142                            | Roystonea regia        | Queen Palm          | 20' 10' 10"                              | X           |                | N/A                       |

DATE

BY

DESCRIPTION

DATE

BY

DESCRIPTION

DATE

BY

DESCRIPTION

DATE

BY

DESCRIPTION

Stantec

401 Ponce de Leon Blvd, Suite 900  
Coral Gables, Florida 33134  
www.stantec.com

Public Works and Waste Management Department  
Highway Division  
STEPHEN J. GARCIA, CHIEF  
MIAMI-DADE  
FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDS-

DATE

NAME

DATE

NAME

DATE

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NAME

DESIGNED

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C.C.

K.S.

C.C.

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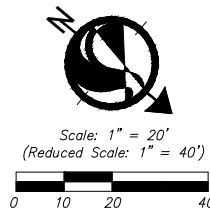
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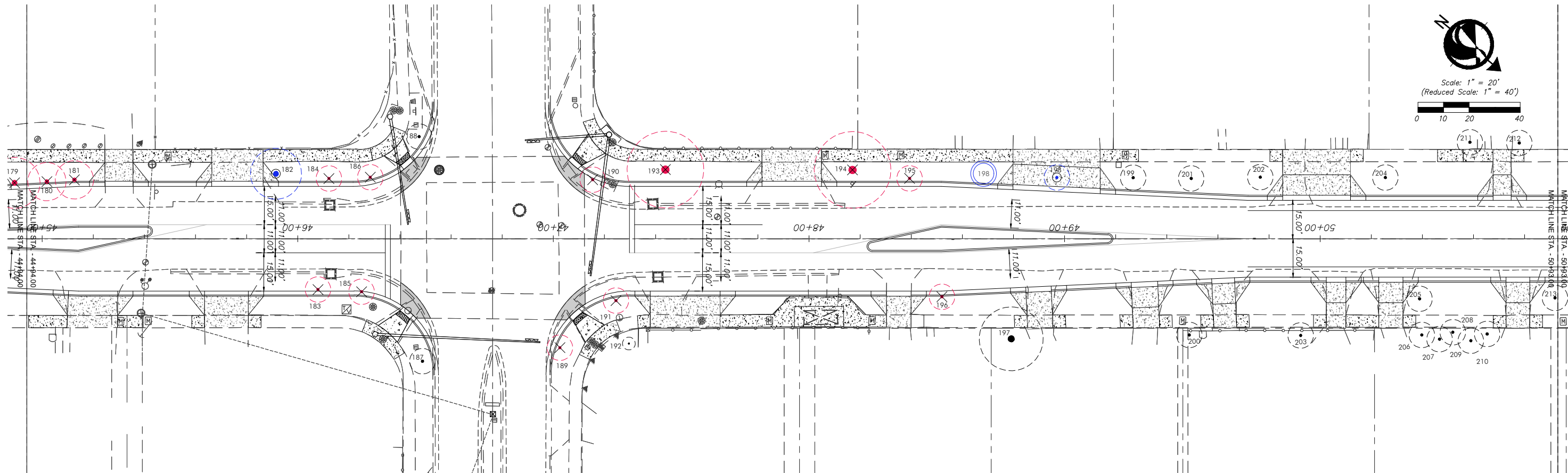




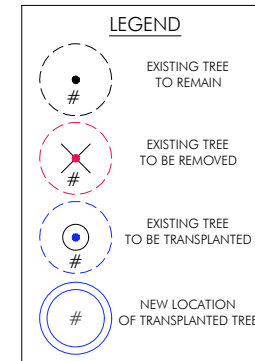
**LEGEND**

|                                                                                       |                                              |
|---------------------------------------------------------------------------------------|----------------------------------------------|
|  | <p>EXISTING TREE<br/>TO REMAIN</p>           |
|  | <p>EXISTING TREE<br/>TO BE REMOVED</p>       |
|  | <p>EXISTING TREE<br/>TO BE TRANSPLANTED</p>  |
|  | <p>NEW LOCATION<br/>OF TRANSPLANTED TREE</p> |

|                                                                    |
|--------------------------------------------------------------------|
| <p>EXISTING TREE DISPOSITION PLAN<br/>-FRANJO ROAD - 100% CDs-</p> |
|--------------------------------------------------------------------|



| KEY | BOTANICAL NAME            | COMMON NAME       | SIZE      |           |            | DISPOSITION   |          | MITIGATION<br>S.F. CANOPY |
|-----|---------------------------|-------------------|-----------|-----------|------------|---------------|----------|---------------------------|
|     |                           |                   | HT. (ft.) | SPD (ft.) | DBH. (in.) | REMAIN/REMOVE | TRANSPL. |                           |
| 180 | Marilagia zapota          | Sapodilla         | 15        | 12        | 8          | X             |          | 113                       |
| 181 | Sweetia mahagoni          | Mahogany          | 20        | 15        | 14.4       | X             |          | 177                       |
| 182 | Sweetia mahagoni          | Mahogany          | 20        | 20        | 10         |               | X        |                           |
| 183 | Livistonia chi-nensis     | Chinese Fan Palm  | 12        | 10        | 10         | X             |          | 79                        |
| 184 | Livistonia chi-nensis     | Chinese Fan Palm  | 12        | 10        | 10         | X             |          | 79                        |
| 185 | Livistonia chi-nensis     | Chinese Fan Palm  | 15        | 10        | 10         | X             |          | 79                        |
| 186 | Livistonia chi-nensis     | Chinese Fan Palm  | 10        | 10        | 10         |               | X        | 79                        |
| 187 | Livistonia chi-nensis     | Chinese Fan Palm  | 7         | 10        | 10         | X             |          |                           |
| 188 | Livistonia chi-nensis     | Chinese Fan Palm  | 12        | 10        | 10         | X             |          |                           |
| 189 | Livistonia chi-nensis     | Chinese Fan Palm  | 12        | 10        | 10         | X             |          | 79                        |
| 190 | Livistonia chi-nensis     | Chinese Fan Palm  | 15        | 10        | 10         | X             |          | 79                        |
| 191 | Livistonia chi-nensis     | Chinese Fan Palm  | 15        | 10        | 10         | X             |          | 79                        |
| 192 | Canacarpus erectus        | Silver Buttonwood | 8         | 4         | 2          | X             |          |                           |
| 193 | Sweetia mahagoni          | Mahogany          | 30        | 35        | 14=20=55   | X             |          | 1924                      |
| 194 | Sweetia mahagoni          | Mahogany          | 30        | 30        | 35         |               | X        | 1414                      |
| 195 | Roystonia regia           | Royal Palm        | 40        | 10        | 10         | X             |          | 79                        |
| 196 | Roystonia regia           | Royal Palm        | 40        | 10        | 10         | X             |          | 79                        |
| 197 | Phthalocladum unguis-cati | Cats Claw         | 30        | 25        | 25=20      | X             |          |                           |
| 198 | Roystonia regia           | Royal Palm        | 35        | 10        | 10         |               | X        |                           |
| 199 | Roystonia regia           | Royal Palm        | 35        | 10        | 10         | X             |          |                           |
| 200 | Adoniscentia Merrillii    | Christmas Palm    | 15        | 10        | Multit     | X             |          |                           |
| 201 | Roystonia regia           | Royal Palm        | 40        | 10        | 10         | X             |          |                           |
| 202 | Roystonia regia           | Royal Palm        | 40        | 10        | 10         | X             |          |                           |
| 203 | Roystonia regia           | Royal Palm        | 35        | 10        | 10         | X             |          |                           |
| 204 | Roystonia regia           | Royal Palm        | 35        | 10        | 10         | X             |          |                           |
| 205 | Roystonia regia           | Royal Palm        | 35        | 10        | 10         | X             |          |                           |
| 206 | Gynerium romanzoffiana    | Queen Palm        | 15        | 10        | 10         | X             |          |                           |
| 207 | Gynerium romanzoffiana    | Queen Palm        | 15        | 10        | 10         | X             |          |                           |
| 208 | Gynerium romanzoffiana    | Queen Palm        | 15        | 10        | 10         | X             |          |                           |
| 209 | Gynerium romanzoffiana    | Queen Palm        | 15        | 10        | 10         | X             |          |                           |
| 210 | Gynerium romanzoffiana    | Queen Palm        | 15        | 10        | 10         | X             |          |                           |
| 211 | Adoniscentia Merrillii    | Christmas Palm    | 15        | 10        | Multit     | X             |          |                           |
| 212 | Adoniscentia Merrillii    | Christmas Palm    | 12        | 10        | Multit     | X             |          |                           |
| 213 | Roystonia regia           | Royal Palm        | 35        | 10        | 10         | X             |          |                           |

[illegible]

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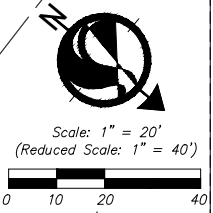
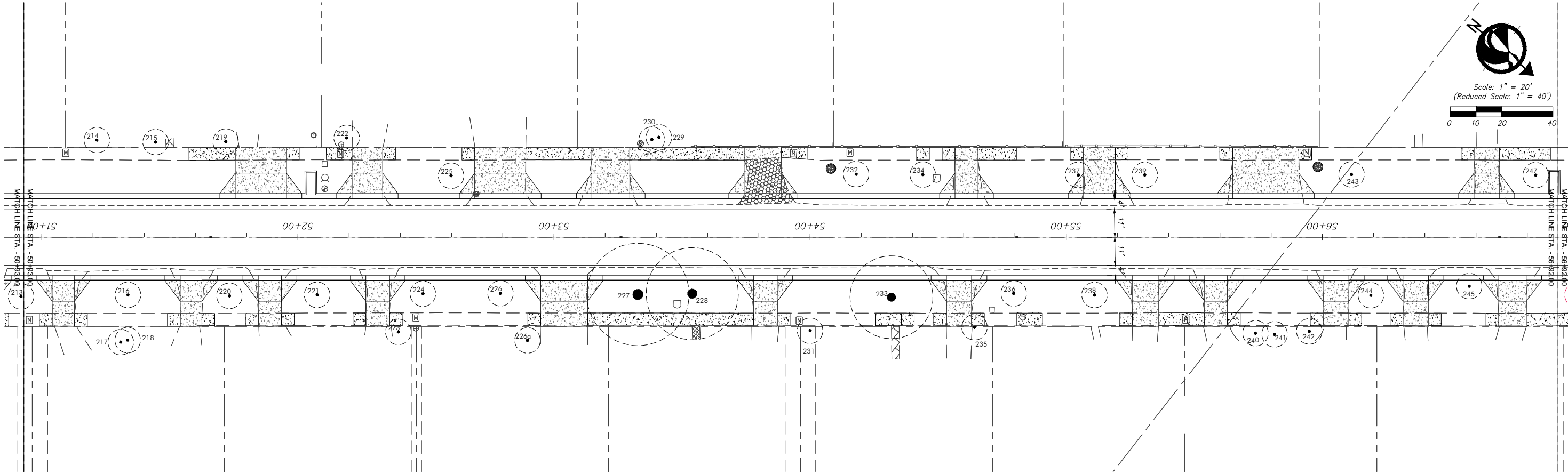
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|----------------|------|-----------|------------|------|------|
|                | NAME | DATE      |            | NAME | DATE |
| DESIGNED BY    | C.G. | 2-10-2022 | DRAWN BY   |      |      |
| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |



PUBLIC WORKS AND WASTE  
MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-





| EXISTING TREE DISPOSITION LIST |                      |                        |           |            |             |        |          |
|--------------------------------|----------------------|------------------------|-----------|------------|-------------|--------|----------|
| KEY                            | BOTANICAL NAME       | COMMON NAME            | SIZE      |            | DISPOSITION |        |          |
|                                |                      |                        | HT. (ft.) | SPD. (ft.) | REMAIN      | REMOVE | TRANSPL. |
| 214                            | Cocos nucifera       | Coconut Palm           | 12        | 10         |             | X      |          |
| 215                            | Ravastonea regia     | Royal Palm             | 30        | 10         |             | X      |          |
| 216                            | Cocos nucifera       | Coconut Palm           | 20        | 10         |             | X      |          |
| 217                            | Cocos nucifera       | Coconut Palm           | 15        | 10         |             | X      |          |
| 218                            | Cocos nucifera       | Coconut Palm           | 15        | 10         |             | X      |          |
| 219                            | Adonidia merrillii   | Christmas Palm         | 20        | 10         |             | X      |          |
| 220                            | Ravastonea regia     | Royal Palm             | 32        | 10         |             | X      |          |
| 221                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |
| 222                            | Adonidia merrillii   | Christmas Palm         | 40        | 10         |             | X      |          |
| 223                            | Cocos nucifera       | Coconut Palm           | 15        | 10         |             | X      |          |
| 224                            | Cocos nucifera       | Coconut Palm           | 35        | 10         |             | X      |          |
| 225                            | Ravastonea regia     | Royal Palm             | 40        | 10         |             | X      |          |
| 226                            | Ravastonea regia     | Royal Palm             | 30        | 10         |             | X      |          |
| 226A                           | Cocos nucifera       | Coconut Palm           | 12        | 10         |             | X      |          |
| 227                            | Bucida buceras       | Black Olive            | 30        | 40         |             | X      |          |
| 228                            | Bucida buceras       | Black Olive            | 35        | 40         |             | X      |          |
| 229                            | Phycospermum elegans | Galapagos Palm         | 10        | 10         |             | X      |          |
| 230                            | Bucida buceras       | Black Olive            | 20        | 18         |             | X      |          |
| 231                            | Cocos nucifera       | Coconut Palm           | 15        | 10         |             | X      |          |
| 232                            | Ravastonea regia     | Royal Palm             | 30        | 10         |             | X      |          |
| 233                            | Bucida buceras       | Black Olive            | 28        | 36         |             | X      |          |
| 234                            | Ravastonea regia     | Royal Palm             | 30        | 10         |             | X      |          |
| 235                            | Cocos nucifera       | Coconut Palm           | 15        | 10         |             | X      |          |
| 236                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |
| 237                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |
| 238                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |
| 239                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |
| 240                            | Adonidia merrillii   | Christmas Palm         | 12        | 10         |             | X      |          |
| 241                            | Adonidia merrillii   | Christmas Palm         | 12        | 10         |             | X      |          |
| 242                            | Strelitzia reginae   | White Bird of Paradise | 12        | 10         |             | X      |          |
| 243                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |
| 244                            | Ravastonea regia     | Royal Palm             | 40        | 10         |             | X      |          |
| 245                            | Ravastonea regia     | Royal Palm             | 40        | 10         |             | X      |          |
| 246                            | Ravastonea regia     | Royal Palm             | 30        | 10         |             | X      |          |
| 247                            | Ravastonea regia     | Royal Palm             | 35        | 10         |             | X      |          |

LEGEND

#

EXISTING TREE TO REMAIN

#

EXISTING TREE TO BE REMOVED

#

EXISTING TREE TO BE TRANSPLANTED

#

NEW LOCATION OF TRANSPLANTED TREE

| REVISIONS |    |             |      |    |             |      |    |
|-----------|----|-------------|------|----|-------------|------|----|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|           |    |             |      |    |             |      |    |

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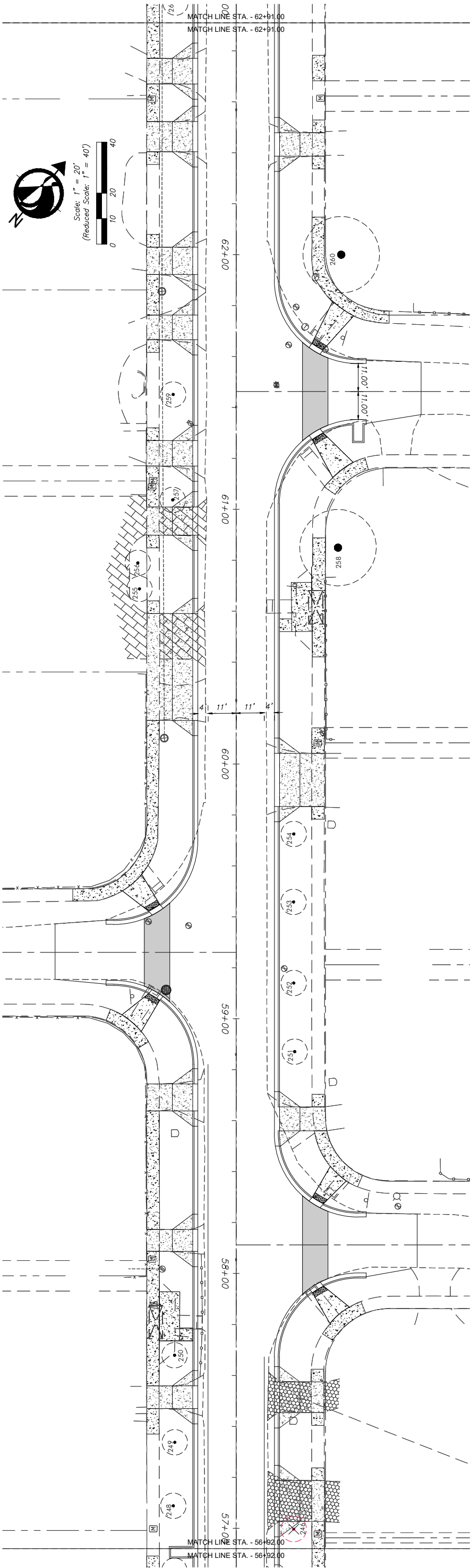
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|---------------|------|------|-----------|
| DESIGNED BY   | C.G. | DATE | 2-10-2022 |
| CHECKED BY    | K.S. | DATE | 2-10-2022 |
| SUPERVISED BY |      |      |           |

|          |      |      |           |            |  |      |  |
|----------|------|------|-----------|------------|--|------|--|
| NAME     | C.G. | DATE | 2-10-2022 | NAME       |  | DATE |  |
| DRAWN BY |      |      |           | CHECKED BY |  |      |  |

PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN

-FRANJO ROAD - 100% CDs-



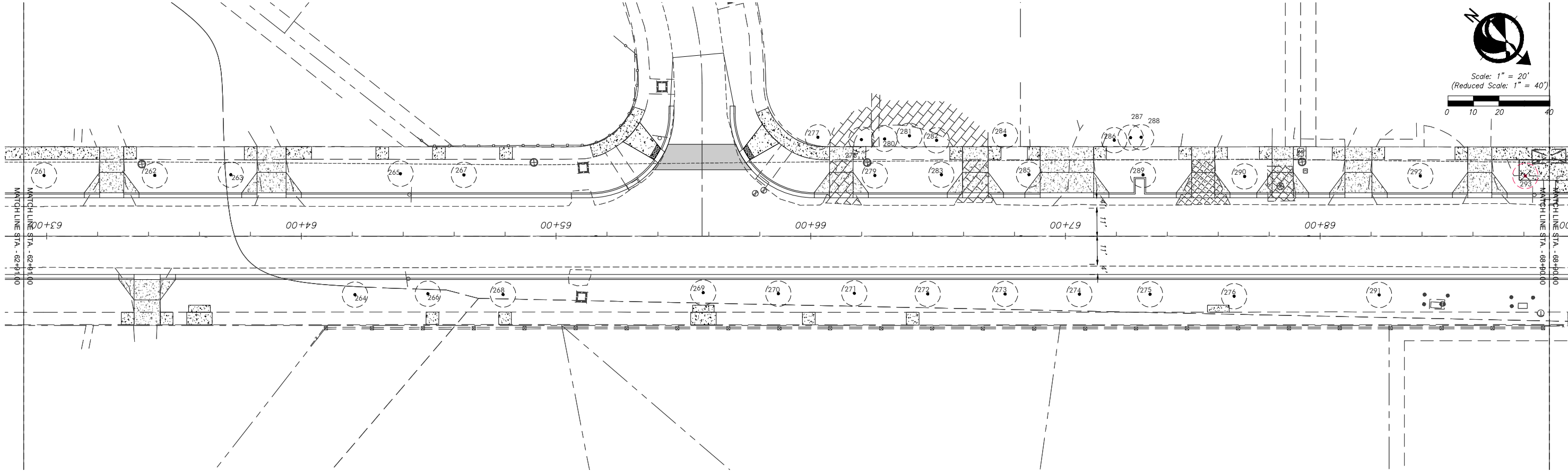
| EXISTING TREE DISPOSITION LIST |                                |                          |           |                       |             |        |                           |
|--------------------------------|--------------------------------|--------------------------|-----------|-----------------------|-------------|--------|---------------------------|
| KEY                            | BOTANICAL NAME                 | COMMON NAME              | SIZE      |                       | DISPOSITION |        | MITIGATION<br>S.F. CANOPY |
|                                |                                |                          | HT. (ft.) | SFD. IN. (DBH. (in.)) | REMAIN      | REMOVE |                           |
| 24B                            | <i>Euonymus alatus</i>         | Royal Palm               | 30        | 10                    | 10          | X      |                           |
| 24C                            | <i>Euonymus alatus</i>         | Royal Palm               | 30        | 10                    | 10          | X      |                           |
| 24D                            | <i>Euonymus alatus</i>         | Royal Palm               | 30        | 10                    | 10          | X      |                           |
| 25A                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25B                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25C                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25D                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25E                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25F                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25G                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25H                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25I                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25J                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25K                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25L                            | <i>Euonymus alatus</i>         | Royal Palm               | 30        | 10                    | 10          | X      |                           |
| 25M                            | <i>Freycinetia concolorata</i> | Coconut Island Date Palm | 12        | 10                    | 10          | X      |                           |
| 25N                            | <i>Freycinetia concolorata</i> | Coconut Island Date Palm | 12        | 10                    | 10          | X      |                           |
| 25O                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25P                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25Q                            | <i>Euonymus alatus</i>         | Royal Palm               | 35        | 10                    | 10          | X      |                           |
| 25R                            | <i>Euonymus alatus</i>         | Royal Palm               | 30        | 30                    | 31          | X      |                           |
| 25S                            | <i>Euonymus alatus</i>         | Royal Palm               | 30        | 30                    | 31          | X      |                           |
| 25T                            | <i>Euonymus alatus</i>         | Shamgar Fig              | 30        | 30                    | 50          | X      |                           |

**LEGEND**

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE TRANSPLANTED
- NEW LOCATION OF TRANSPLANTED TREE

[illegible]





| EXISTING TREE DISPOSITION LIST |                       |                |           |            |            |             |        |          |            |
|--------------------------------|-----------------------|----------------|-----------|------------|------------|-------------|--------|----------|------------|
| KEY                            | BOTANICAL NAME        | COMMON NAME    | HT. (ft.) | SIZE       |            | DISPOSITION |        |          | MITIGATION |
|                                |                       |                |           | SPD. (ft.) | DBH. (in.) | REMAIN      | REMOVE | TRANSPL. |            |
| 261                            | Ravsteneo regia       | Royal Palm     | 40        | 10         | 10         | X           |        |          |            |
| 262                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 263                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 264                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 265                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 266                            | Ravsteneo regia       | Royal Palm     | 40        | 10         | 10         | X           |        |          |            |
| 267                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 268                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 269                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 270                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 271                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 272                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 273                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 274                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 275                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 276                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 277                            | Syagrus romanzoffiana | Queen Palm     | 20        | 10         | 10         | X           |        |          |            |
| 278                            | Phoenix roebelenii    | Pagoda Palm    | 15        | 10         | 10         | X           |        |          |            |
| 279                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 280                            | Phoenix roebelenii    | Pagoda Palm    | 35        | 10         | 10         | X           |        |          |            |
| 281                            | Veitchia merrillii    | Christmas Palm | 18        | 12         | double     | X           |        |          |            |
| 282                            | Phoenix roebelenii    | Pagoda Palm    | 15        | 10         | Multi      | X           |        |          |            |
| 283                            | Ravsteneo regia       | Royal Palm     | 35        | 10         | 10         | X           |        |          |            |
| 284                            | Syagrus romanzoffiana | Queen Palm     | 25        | 10         | 10         | X           |        |          |            |
| 285                            | Ravsteneo regia       | Royal Palm     | 25        | 10         | 10         | X           |        |          |            |
| 286                            | Veitchia merrillii    | Christmas Palm | 15        | 10         | 10         | X           |        |          |            |
| 287                            | Dypsis lutescens      | Areca Palm     | 12        | 10         | 10         | X           |        |          |            |
| 288                            | Veitchia merrillii    | Christmas Palm | 15        | 10         | 10         | X           |        |          |            |
| 289                            | Ravsteneo regia       | Royal Palm     | 25        | 10         | 10         | X           |        |          |            |
| 290                            | Ravsteneo regia       | Royal Palm     | 25        | 10         | 10         | X           |        |          |            |
| 291                            | Ravsteneo regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |
| 292                            | Ravsteneo regia       | Royal Palm     | 30        | 10         | 10         | X           |        |          |            |
| 293                            | Ravsteneo regia       | Royal Palm     | 30        | 10         | 10         |             | X      |          | 79         |

LEGEND

#

EXISTING TREE  
TO REMAIN

#

EXISTING TREE  
TO BE REMOVED

#

EXISTING TREE  
TO BE TRANSPLANTED

#

NEW LOCATION  
OF TRANSPLANTED TREE

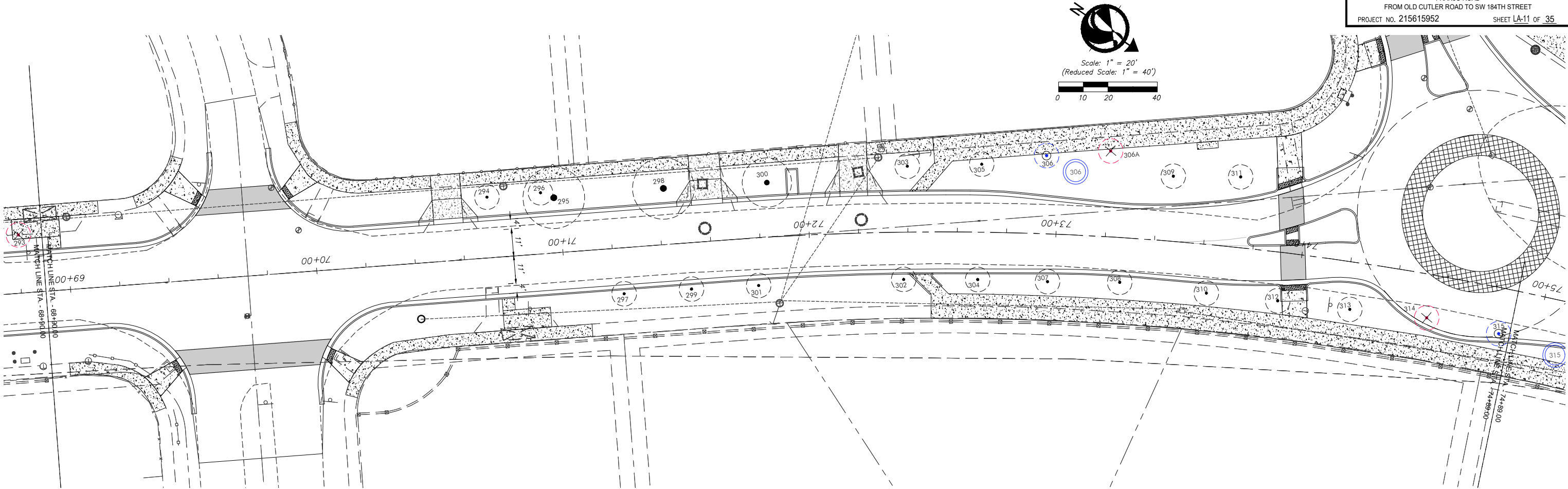
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| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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|                | K.S. | 2-10-2022 |            |      |      |
| SUPERVISED BY: |      |           |            |      |      |

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111 NW 1<sup>ST</sup>  
MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-



| EXISTING TREE DISPOSITION LIST |                               |                     |           |            |            |             |        |          |            |
|--------------------------------|-------------------------------|---------------------|-----------|------------|------------|-------------|--------|----------|------------|
| KEY                            | BOTANICAL NAME                | COMMON NAME         | SIZE      |            |            | DISPOSITION |        |          | MITIGATION |
|                                |                               |                     | HT. (ft.) | SPD. (ft.) | DBH. (in.) | REMAIN      | REMOVE | TRANSPL. |            |
| 294                            | Ravenea regia                 | Royal Palm          | 40        | 10         | 10         | X           |        |          |            |
| 295                            | Siveteria mahagoni            | Mahogany            | 35        | 35         | 30         | X           |        |          |            |
| 296                            | Sabal palmetto                | Sabal Palm          | 35        | 10         | 10         | X           |        |          |            |
| 297                            | Ravenea regia                 | Royal Palm          | 35        | 10         | 10         | X           |        |          |            |
| 298                            | Siveteria mahagoni            | Mahogany            | 25        | 25         | 14         | X           |        |          |            |
| 299                            | Ravenea regia                 | Royal Palm          | 35        | 10         | 10         | X           |        |          |            |
| 300                            | Siveteria mahagoni            | Mahogany            | 20        | 20         | 28         | X           |        |          |            |
| 301                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         | X           |        |          |            |
| 302                            | Ravenea regia                 | Royal Palm          | 35        | 10         | 10         | X           |        |          |            |
| 303                            | Sabal palmetto                | Sabal Palm          | 15        | 10         | 10         | X           |        |          |            |
| 304                            | Ravenea regia                 | Royal Palm          | 35        | 10         | 10         | X           |        |          |            |
| 305                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         | X           |        |          |            |
| 306                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         |             | X      | X        | 113        |
| 306A                           | Sabal palmetto/Schaffera spp. | Sabal/Umbrella Tree | 20        | 12         | 10         | X           |        |          |            |
| 307                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         | X           |        |          |            |
| 308                            | Ravenea regia                 | Royal Palm          | 35        | 10         | 10         | X           |        |          |            |
| 309                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         | X           |        |          |            |
| 310                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         | X           |        |          |            |
| 312                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         | X           |        |          |            |
| 313                            | Ravenea regia                 | Royal Palm          | 25        | 10         | 10         | X           |        |          |            |
| 314                            | Ravenea regia                 | Royal Palm          | 30        | 10         | 10         |             | X      | X        | 79         |
| 315                            | Ravenea regia                 | Royal Palm          | 25        | 10         | 10         |             |        | X        |            |

LEGEND

#

EXISTING TREE  
TO REMAIN

#

EXISTING TREE  
TO BE REMOVED

#

EXISTING TREE  
TO BE TRANSPLANTED

#

NEW LOCATION  
OF TRANSPLANTED TREE

| REVISIONS |    |             |      |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |      |    |             |

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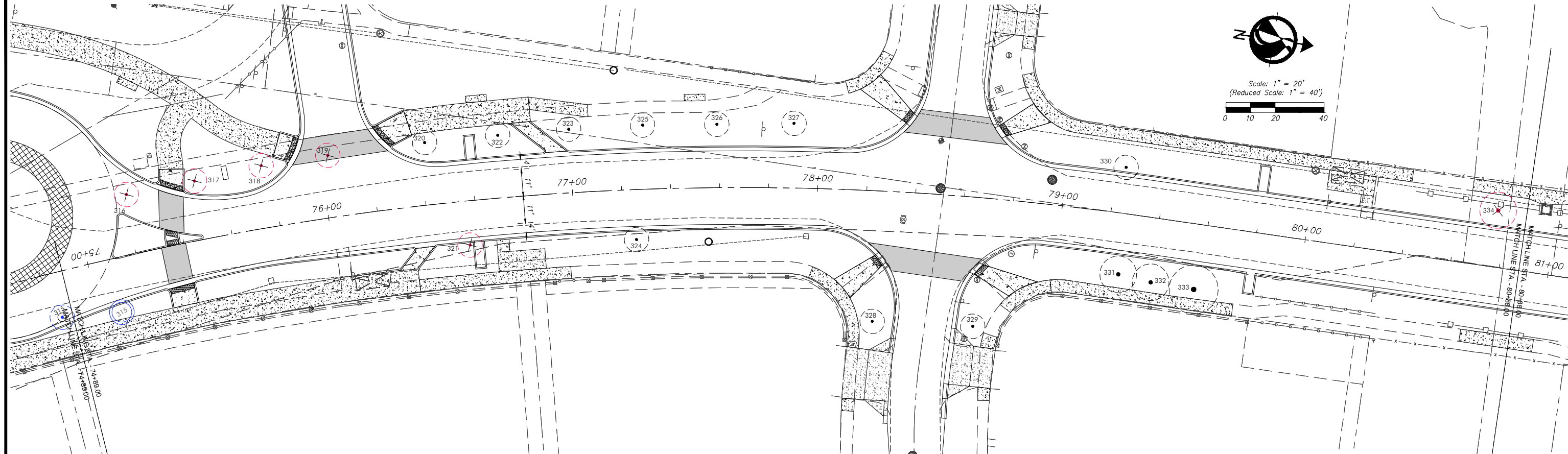
| DESIGNED BY    | NAME | DATE      | DRAWN BY   | NAME | DATE |
|----------------|------|-----------|------------|------|------|
| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |



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EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-





| EXISTING TREE DISPOSITION LIST |                       |                  |          |           |             |        |        |                           |
|--------------------------------|-----------------------|------------------|----------|-----------|-------------|--------|--------|---------------------------|
| KEY                            | BOTANICAL NAME        | COMMON NAME      | SIZE     |           | DISPOSITION |        |        | MITIGATION<br>S.F. CANOPY |
|                                |                       |                  | HT.(ft.) | SPD.(ft.) | DBH.(in.)   | REMAIN | REMOVE |                           |
| 316                            | Raytonoea regis       | Royal Palm       | 30       | 10        | X           |        |        | 79                        |
| 317                            | Raytonoea regis       | Royal Palm       | 30       | 10        |             | X      |        | 79                        |
| 318                            | Raytonoea regis       | Royal Palm       | 30       | 10        |             | X      |        | 79                        |
| 319                            | Raytonoea regis       | Royal Palm       | 25       | 10        |             | X      |        | 79                        |
| 320                            | Raytonoea regis       | Royal Palm       | 35       | 10        |             | X      |        |                           |
| 321                            | Raytonoea regis       | Royal Palm       | 35       | 10        |             | X      |        | 79                        |
| 322                            | Raytonoea regis       | Royal Palm       | 19       | 10        |             | X      |        |                           |
| 323                            | Raytonoea regis       | Royal Palm       | 40       | 10        |             | X      |        |                           |
| 324                            | Raytonoea regis       | Royal Palm       | 35       | 10        |             | X      |        |                           |
| 325                            | Raytonoea regis       | Royal Palm       | 35       | 10        |             | X      |        |                           |
| 326                            | Raytonoea regis       | Royal Palm       | 25       | 10        |             | X      |        |                           |
| 327                            | Raytonoea regis       | Royal Palm       | 25       | 10        |             | X      |        |                           |
| 328                            | Phoenix roebelenii    | Pinyin Date Palm | 12       | 10        | Multi       | X      |        |                           |
| 329                            | Phoenix roebelenii    | Pinyin Date Palm | 12       | 10        | Multi       | X      |        |                           |
| 330                            | Raytonoea regis       | Royal Palm       | 35       | 10        |             | X      |        |                           |
| 331                            | Callistemon viminalis | Bottle Bush      | 15       | 15        |             | X      |        |                           |
| 332                            | Callistemon viminalis | Bottle Bush      | 15       | 15        |             | X      |        |                           |
| 333                            | Callistemon viminalis | Bottle Bush      | 15       | 20        | 38.8        | X      |        |                           |
| 334                            | Bauhinia blakeana     | Hong Kong Orchid | 20       | 15        | Multi       |        | X      | N/A                       |

**LEGEND**

- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE TRANSPLANTED
- NEW LOCATION OF TRANSPLANTED TREE

[illegible]

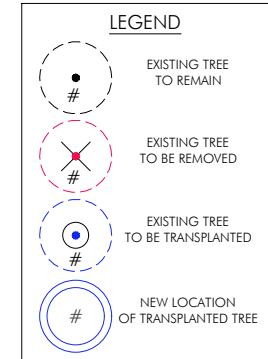
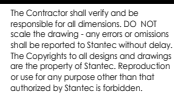
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|----------------|------|-----------|------------|------|------|
|                | NAME | DATE      |            | NAME | DATE |
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| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |



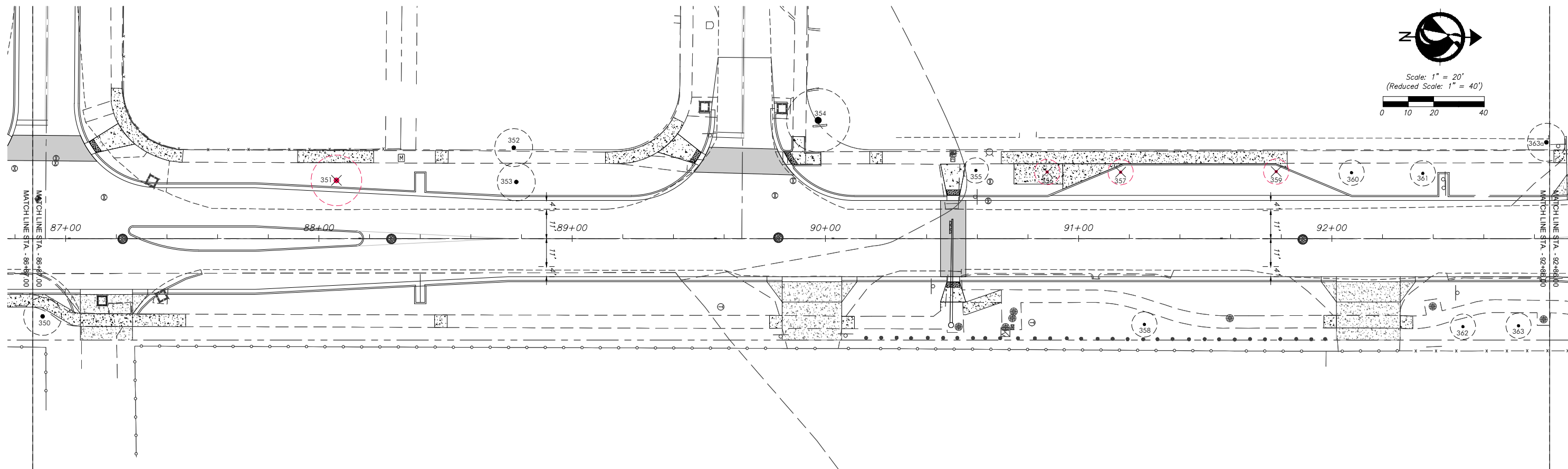
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EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-

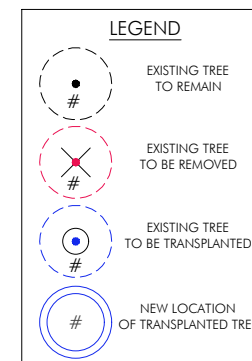
[illegible]MIAMI-DADE

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-





| EXISTING TREE DISPOSITION LIST |                    |             |           |            |            |             |        |          |            |
|--------------------------------|--------------------|-------------|-----------|------------|------------|-------------|--------|----------|------------|
| KEY                            | BOTANICAL NAME     | COMMON NAME | SIZE      |            |            | DISPOSITION |        |          | MITIGATION |
|                                |                    |             | HT. (ft.) | SPD. (ft.) | DBH. (in.) | REMAIN      | REMOVE | TRANSPL. |            |
| 350                            | Quercus virginiana | Live Oak    | 25        | 25         | 18         | X           |        |          |            |
| 351                            | Bursera simaruba   | Gumbo Limbo | 20        | 20         | Multi      |             | X      |          | Site       |
| 352                            | Bursera simaruba   | Gumbo Limbo | 25        | 15         | 15+13      | X           |        |          |            |
| 353                            | Bursera simaruba   | Gumbo Limbo | 25        | 15         | Multi      | X           |        |          |            |
| 354                            | Bucida buxifolia   | Black Olive | 35        | 25         | 24-3       | X           |        |          |            |
| 355                            | Roystonia regia    | Royal Palm  | 20        | 10         | 10         | X           |        |          |            |
| 356                            | Roystonia regia    | Royal Palm  | 30        | 10         | 10         |             | X      |          | 79         |
| 357                            | Roystonia regia    | Royal Palm  | 35        | 10         | 10         |             | X      |          | 79         |
| 358                            | Roystonia regia    | Royal Palm  | 25        | 10         | 10         | X           |        |          |            |
| 359                            | Roystonia regia    | Royal Palm  | 40        | 10         | 10         |             | X      |          | 79         |
| 360                            | Roystonia regia    | Royal Palm  | 25        | 10         | 10         | X           |        |          |            |
| 361                            | Roystonia regia    | Royal Palm  | 35        | 10         | 10         | X           |        |          |            |
| 362                            | Roystonia regia    | Royal Palm  | 20        | 10         | 10         | X           |        |          |            |
| 363                            | Roystonia regia    | Royal Palm  | 35        | 10         | 10         | X           |        |          |            |
| 363a                           | Bucida buxifolia   | Black Olive | 25        | 20         | 18.8       | X           |        |          |            |

[illegible]

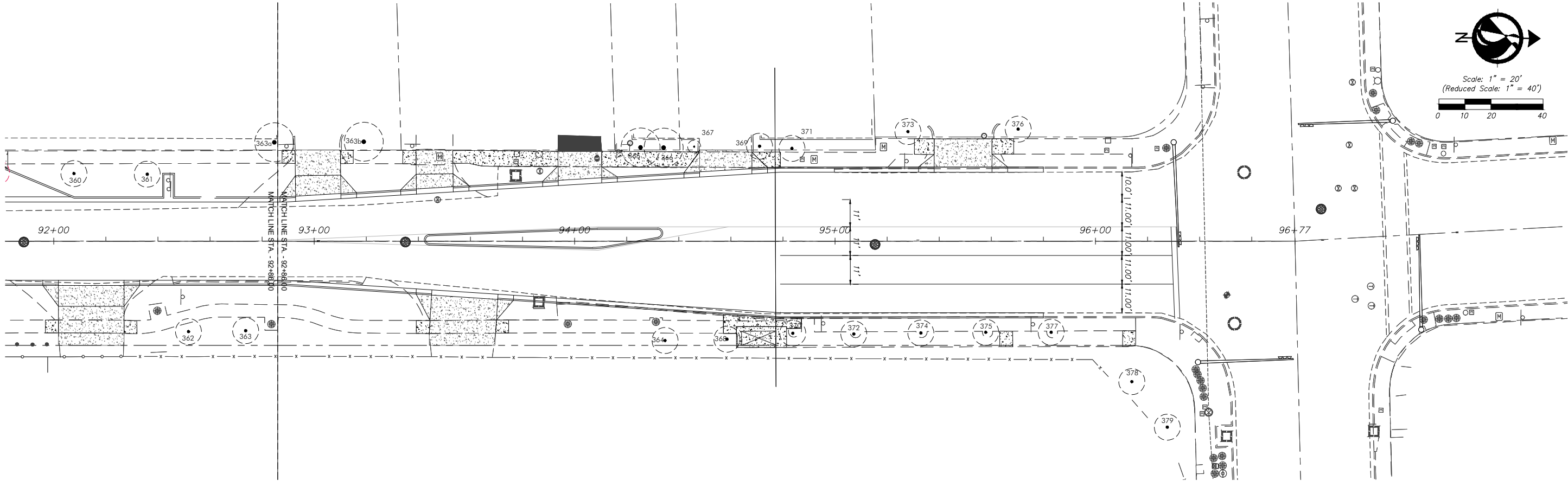
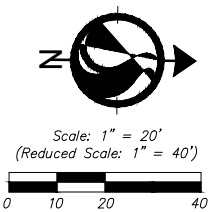
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|---------------|------|-----------|------------|------|------|
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| CHECKED BY    | K.S. | 2-10-2022 | CHECKED BY |      |      |
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EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-



| EXISTING TREE DISPOSITION LIST |                     |                         |           |            |            |             |        |          |            |
|--------------------------------|---------------------|-------------------------|-----------|------------|------------|-------------|--------|----------|------------|
| KEY                            | BOTANICAL NAME      | COMMON NAME             | SIZE      |            |            | DISPOSITION |        |          | MITIGATION |
|                                |                     |                         | HT. (ft.) | SPD. (ft.) | DBH. (in.) | REMAIN      | REMOVE | TRANSPL. |            |
| 363b                           | Bursera bursera     | Black Olive             | 30        | 25         | 22.8       | X           |        |          |            |
| 364                            | Ravenea regia       | Royal Palm              | 30        | 10         | 10         | X           |        |          |            |
| 365                            | Quercus virginiana  | Live Oak                | 15        | 15         | 11         | X           |        |          |            |
| 366                            | Quercus virginiana  | Live Oak                | 15        | 15         | 10         | X           |        |          |            |
| 367                            | Quercus virginiana  | Live Oak                | 15        | 5          | 3+2        | X           |        |          |            |
| 368                            | Ravenea regia       | Royal Palm              | 35        | 10         | 10         | X           |        |          |            |
| 369                            | Quercus virginiana  | Live Oak                | 15        | 8          | 5.5        | X           |        |          |            |
| 370                            | Ravenea regia       | Royal Palm              | 22        | 10         | 10         | X           |        |          |            |
| 371                            | Quercus virginiana  | Live Oak                | 15        | 10         | 6          | X           |        |          |            |
| 372                            | Ravenea regia       | Royal Palm              | 20        | 10         | 10         | X           |        |          |            |
| 373                            | Phycosperma elegans | Solitaire Palm          | 15        | 10         | Multi      | X           |        |          |            |
| 374                            | Ravenea regia       | Royal Palm              | 35        | 10         | 10         | X           |        |          |            |
| 375                            | Ravenea regia       | Royal Palm              | 30        | 10         | 10         | X           |        |          |            |
| 376                            | Phycosperma elegans | Solitaire Palm          | 15        | 10         | Multi      | X           |        |          |            |
| 377                            | Ravenea regia       | Royal Palm              | 20        | 10         | 10         | X           |        |          |            |
| 378                            | Phoenix canariensis | Canary Island Date Palm | 16        | 10         | 10         | X           |        |          |            |
| 379                            | Phoenix canariensis | Canary Island Date Palm | 16        | 10         | 10         | X           |        |          |            |

LEGEND

#

EXISTING TREE TO REMAIN

#

EXISTING TREE TO BE REMOVED

#

EXISTING TREE TO BE TRANSPLANTED

#

NEW LOCATION OF TRANSPLANTED TREE

| REVISIONS |    |             |      |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |      |    |             |

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| SUPERVISED BY: |      |           |            |      |           |

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MIAMI, FLORIDA 33128

EXISTING TREE DISPOSITION PLAN  
-FRANJO ROAD - 100% CDs-



|                                                    |      |                       |                         |
|----------------------------------------------------|------|-----------------------|-------------------------|
| TOTAL CANOPY S.F. TO BE REPLACED                   |      |                       | 15,099                  |
| *Mitigation provided (see plant list for species): |      |                       |                         |
| MITIGATION TYPE                                    | QTY. | MITIGATION EA. (S.F.) | TOTAL MITIGATION (S.F.) |
| Shade Tree 1                                       | 201  | 500                   | 100500                  |
| Shade Tree 2                                       | 107  | 300                   | 32100                   |
| Palm Tree 1                                        | 0    | 300                   | 0                       |
| Palm Tree 2                                        | 187  | 100                   | 18700                   |
| Small Tree                                         | 0    | 200                   | 0                       |
| GRAND TOTAL S.F. MITIGATION CANOPY PROVIDED*       |      |                       | 151300                  |

[illegible]

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|----------------|------|-----------|------------|------|------|
|                | NAME | DATE      |            | NAME | DATE |
| DESIGNED BY    | C.G. | 2-10-2022 | DRAWN BY   |      |      |
| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
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## MITIGATION CALCULATIONS

### -FRANJO ROAD - 100% CDs-

TREE TRANSPLANTING SPECIFICATIONS

- 1.01 Root Pruning, Watering Before Transplanting

A. Prior to root pruning and before excavating holes for transplanted trees, check with all local utilities to locate existing underground utilities. If any unknown utilities or sprinkler pipes are in advertently broken, do not cover them up. Immediately notify the utility and/or the Client, and take all necessary steps to repair the break.

B. Root prune trees a minimum of eight (8) weeks prior to moving them. It is not necessary to root prune palms prior to transplanting unless specifically instructed to do so by the Landscape Architect. Prior to root pruning, thoroughly water the root zone with at least 2"-3" of water.

C. Root pruning shall be accomplished by digging a trench two-thirds (2/3) of the way around the tree at a minimum of twenty four (24) inches deep. Root prune only with a mechanical root-pruning saw or a trencher with a maximum trench width of 8 inches. This trench shall form a rootball of the minimum following sizes:

Up to 5" caliper5' diameter

6"-8" caliper6'-7" diameter

9"-12" caliper9'-10' diameter

Over 12" caliper12' diameter

D. All exposed roots shall be cut off smoothly, with sharp instruments. Backfill trenches with soil consisting of 30% silica sand and 70% mulch. Water them thoroughly immediately after root pruning, and once weekly during the root regeneration period. Every 2 weeks add a soluble fertilizer that has a 20.20.20 analysis at manufacturer's recommended rate, to the watering mix.

E. It may be necessary to remove curbing and/or paving to complete the root pruning operation. Where this is required, the Contractor shall first cut cleanly with a concrete saw, any section of curb or pavement before cutting the roots. This material shall be removed from the site by the Contractor and the area of pavement cut and removed by the root pruning shall be filled to flush with adjacent pavement.
- 1.02 Top Pruning and Thinning

A. The amount of general pruning and thinning shall be limited to the minimum necessary to remove dead or injured twigs or branches and to compensate for the loss of roots as a result of transplanting operations. Approximately 1/3 of the mass of the canopy shall be removed unless otherwise instructed by the Landscape Architect. Pruning and thinning shall be done in such a manner as not to change the natural habit or shape of a plant. For very large trees that must be transported on public R.O.W.'s or where obstacles require it, additional pruning may be allowed at time of transport; cut back trees to the maximum size which can be transported after limbs are tied in as much as possible. The Landscape Architect shall be contacted prior to performing any major pruning or thinning.
- 1.03 Bracing and Guying of Trees After Root Pruning

A. Bracing and Guying shall be provided to assure the trees' stability during the root regeneration period, if required by the Landscape Architect.
- 1.04 Balling and Burlapping

A. Plant material which is in a soil of a loose texture, which does not readily adhere to the root system, especially in the case of large plants or trees, shall have the rootball wrapped in burlap and then wire, if directed by the Landscape Architect.
- 1.05 Transplanting Plant Material

A. Movement of plants on public R.O.W.'s shall comply with all ordinances, codes and safety requirements, etc.

B. Transport materials on vehicles large enough to allow plants to not be crowded and damaged. Plants shall be covered to prevent wind damage during transit.

C. Protect plant material during transporting to prevent damage to the root system and desiccation of leaves. Trees shall be protected by tying in the branches and covering all exposed branches as necessary. Do not bend or bind-tie plant material in such a manner as to damage bark, break branches or alter the natural shape.

D. The Contractor shall exercise care in handling, loading, unloading, storing, and transporting material to prevent damage. The Contractor shall assume full responsibility for protection and safekeeping of materials stored.

E. Transplanting must be done within 24 hours after being dug. Store plants in shade and keep the root ball and canopy moist.
- 1.06 Installation

A. Excavation of Holes: Plant holes shall be roughly cylindrical in shape with sides approximately vertical. The depth of the hole shall be equal to the rootball depth plus 12" unless further depth is required to provide adequate drainage. The diameter of the hole shall be a minimum of 24" larger than the rootball diameter.

B. Setting of Plants

1) Plant material shall be planted at their natural and original planting level prior to their placement on this project or job. When lowered into the hole, the plants shall rest on the prepared hole bottom such that the surface roots at the top of the rootball are level or slightly above the level of the top of the hole. Create a saucer, approximately 6" deep to help hold water. The practice of plunging, burying or planting and plant material such that the surface roots at the top of the rootball are below the level of the surrounding final grade will not be permitted unless it is indicated otherwise in these specifications. The plants shall be set straight or plumb or normal to the relationship of their growth prior to transplanting. The Landscape Architect reserves the right to realign any plant material after it has been set.

C. Backfilling

1) Use planting soil consisting of 40% silica sand, 40% muck, and 20% well-rotted compost derived from yard wastes.

2) Backfill the bottom two-thirds of the planting hole and firmly tamp and settle by watering as backfilling progresses. After having tamped and settled the bottom two-thirds of the hole, thoroughly puddle with water and fill remaining one-third of the hole with planting soil, tamping and watering to eliminate air pockets.

3) Add Diehard™ transplant innoculant supplied by Horticultural Alliance, Inc. (800-628-6373) or equal. Mix into top 8-10 inches of planting hole, making sure it is contact with the root ball. Add at a rate of one (1) 8oz. bag per 2 inches of trunk caliper.

- 1.07 Watering Transplanted Trees:

A. Once trees have been relocated and well-watered in during the transplanting, provide water for a period of 60 days after transplanting.

B. Rootball Watering: Maintain a soil moisture in the root zone at an optimum level for growth, by deep watering of the entire rootball area according to the following schedule:

| When            | Frequency       | Amount      |
|-----------------|-----------------|-------------|
| first week      | once daily      | 3" per tree |
| second week     | every other day | 2" per tree |
| following month | twice a week    | 1" per tree |
| last 2 weeks    | once per week   | 1" per tree |

C. In addition to the rootball watering, the canopy of the large shade trees (over 12” caliper) shall be watered with an automatic irrigation system spraying the canopy. Spray heads shall be installed near the top of the canopy and spaced so that the entire canopy shall be sprayed. This system shall remain in place until directed by the Landscape Architect to be removed.

D. If there is no source for water available at the project, such as a hose bib(s) or fire hydrants(s) if approved for use, then the Contractor shall be responsible for supplying water by means of a truck or tank. It is the Contractor's responsibility to pay any fees for water use.
- 1.08 Mulching of Plant Saucer

A. Spread 3" thick layer of shredded Eucalyptus or Melaleuca mulch over entire area of the rootball.
- 1.09 Application of Fertilizer

A. At time of watering root-pruned trees prior to transplanting, drench rootball once per week during the course of watering with a soluble fertilizer that has a 20.20.20 analysis at manufacturer's recommended rate.

B. Three (3) weeks after transplanting, and after mulching, apply on the surface, evenly spread over the area of the entire rootball, FEC (Florida East Coast Fertilizer Co) #5231 (12-6-8) or equal at the rate of one (1) pound per inch of trunk diameter.
- 1.10 Staking Trees

A. Stake all trees and palms at the new site with new timbers with a minimum 2" x 4" dimension as per the details enclosed, or in the case of obstacle, in another manner which will support the trees.
- 1.11 Clean-Up

A. Disposal of Waste: All waste and other objectionable material created through planting operations and landscape construction shall be removed completely on a daily basis from the job or as directed by the Landscape Architect. Any paved areas, including curbs and sidewalks which have been strewn with soil, sod waste, fertilizer or other waste shall be thoroughly swept. The Client is not required to supply areas or facilities for storage or removal of waste on-site.

B. The Contractor shall remove and dispose of stakes and battens and untie any tied-up canopies when it is determined by the Landscape Architect that sufficient time has elapsed for the plants to root stabilizing the plant. This shall be done even if the project has been completed and given final acceptance.

C. Backfilling shall be done immediately after tree removal, or suitable barricades shall be provided to prevent injuries. The Contractor shall backfill holes with clean fill to a level flush with adjacent grade.
- 1.12 Maintenance of Traffic

A. During all transplanting operations, the Contractor is responsible to maintain the safe flow of vehicular and pedestrian traffic around hazardous areas. The Contractor shall provide barricades, cones, signal boards, etc. as necessary to adequately warn traffic and maintain flow of traffic around or through construction zones. Work shall be performed in such a manner that minimizes the amount of time traffic is impeded by construction activities. Coordinate with Landscape Architect.
- 1.13 Guarantee and Replacement

A. Plant material which is on the site and scheduled to be transplanted is not covered by the guarantee, except in the case of Contractor's negligence or work that has been done in an unworkmanlike manner. If it is determined by the Landscape Architect that the Contractor's negligence or unworkmanlike operations has severely damaged or poses a threat to the health of material to be transplanted or already transplanted, then the Contractor shall be required to replace the tree at a size equal to the transplanted tree, at his cost, and water it as per 1.07.

| R E V I S I O N S |    |             |      |    |             |      |    |             |  |  |  |
|-------------------|----|-------------|------|----|-------------|------|----|-------------|--|--|--|
| DATE              | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |  |  |  |
|                   |    |             |      |    |             |      |    |             |  |  |  |



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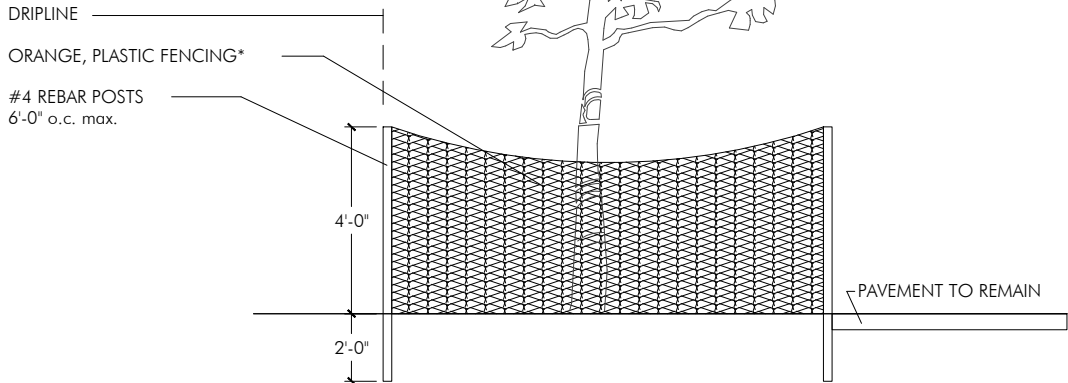
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|----------------|------|-----------|------------|------|------|
| DESIGNED BY    | NAME | DATE      | DRAWN BY   | NAME | DATE |
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|                | K.S. | 2-10-2022 |            |      |      |
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STEPHEN P. CLARK CENTER  
111 NW 1<sup>ST</sup> ST  
MIAMI, FLORIDA 33128

TREE TRANSPLANT SPECS  
-FRANJO ROAD - 100% CDs-





\*LIMITS OF TREE PROTECTION ARE TO BE ESTABLISHED BASED ON ANSI A300 ROOT MANAGEMENT STANDARDS. AS A GENERAL RULE THE TREE PROTECTION ZONE MUST EXTEND 10" PER 1" OF TREE DBH. -PLACE ORANGE, PLASTIC FENCING (BY TENSAR OR OTHER APPROVED EQUAL) AROUND INDIVIDUAL TREES AND TREE CLUMPS TO REMAIN ON SITE IN ANY AREAS WITHIN THE LIMITS OF CONSTRUCTION. BARRIER SHALL BE MAINTAINED IN AN UPRIGHT POSITION AT ALL TIMES.

## TREE PROTECTION DETAIL

N.T.S.

[illegible]

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| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
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TREE PROTECTION DETAIL  
-FRANJO ROAD - 100% CDs-

| PLANT LIST              |                                                                                  |         |      |                                                                 |
|-------------------------|----------------------------------------------------------------------------------|---------|------|-----------------------------------------------------------------|
| TREES                   |                                                                                  |         |      |                                                                 |
| KEY                     | PLANT NAME                                                                       | QTY.    | UT.  | SIZE                                                            |
| BUAR                    | Bulnesia arborea<br>...Verawood                                                  | 25      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| BUSI                    | Bursera simaruba<br>...Gumbo Limbo                                               | 30      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| CESP                    | Ceiba speciosa<br>...Silf Floss Tree                                             | 1       | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"<br>...Silver Buttonwood                            | 18      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| ILCA                    | Ilex cassine<br>...Dahoon Holly                                                  | 73      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee"<br>...Crepe Myrtle                               | 20      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum<br>...Wild Tamarind                                        | 79      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| QUVI                    | Quercus virginiana<br>...Live Oak                                                | 68      | ea.  | 12' tall x 5' spread, 2 1/2" cal.,<br>4' CT min                 |
| PALMS                   |                                                                                  |         |      |                                                                 |
| KEY                     | PLANT NAME                                                                       | QTY.    | UT.  | SIZE                                                            |
| PSSA                    | Pseudophoenix sargentii<br>...Buccaneer Palm                                     | 27      | ea.  | 4' CW                                                           |
| SAPA                    | Sabal palmetto<br>...Sabal Palm                                                  | 79      | ea.  | 22' tall OA, smooth trunks,<br>hurricane cut                    |
| THRA                    | Thrinax radiata<br>...Thatch Palm                                                | 86      | ea.  | 7' tall OA                                                      |
| SHRUBS AND GROUNDCOVERS |                                                                                  |         |      |                                                                 |
| KEY                     | PLANT NAME                                                                       | QTY.    | UT.  | SIZE                                                            |
| AEBL                    | Aechmea blanchetiana "Orange Form"<br>...Orange Bromeliad                        | 60      | ea.  | 24"x18", install 24" o.c.                                       |
| CHIH                    | Chrysobalanus icaco "Horizontalis"<br>...Horizontal Cocoplum                     | 1943    | ea.  | 12"x18", install 24" o.c.                                       |
| FIGI                    | Ficus microcarpa "Green Island"<br>...Green Island Ficus                         | 2688    | ea.  | 18"x18", install 24" o.c.                                       |
| LADE                    | Lantana depressa<br>...Pineland Lantana                                          | 152     | ea.  | 18"x18", install 18" o.c.                                       |
| LOCH                    | Loropetalum chinensis "Rubrum"<br>...Fringeflower                                | 486     | ea.  | 18"x18", install 24" o.c.                                       |
| MUCA                    | Muhlenbergia cappilaris<br>...Muhly Grass                                        | 2653    | ea.  | 3 gal cans, full, install 24" o.c.                              |
| RHIN                    | Rhaphiolepis indica<br>...Indian Hawthorne                                       | 1115    | ea.  | 18"x18", install 24" o.c.                                       |
| ZAPU                    | Zamia pumila<br>...Coontie                                                       | 1265    | ea.  | 18"x18", install 24" o.c.                                       |
| MISCELLANEOUS           |                                                                                  |         |      |                                                                 |
| sod                     | St. Augustine "Citrablue"                                                        | as req. | s.f. | solid sod, patch as required                                    |
|                         | Planting Soil<br>70% Silica Sand<br>20% Everglades Muck<br>10% Shredded Pinebark | as req. | c.y. | excavate and backfill 12" in all<br>shrub beds                  |
|                         | Shredded Melaleuca Mulch                                                         | as req. | c.y. | 2" layer in all shrub beds                                      |

| R E V I S I O N S |    |             |      |    |             |      |    |
|-------------------|----|-------------|------|----|-------------|------|----|
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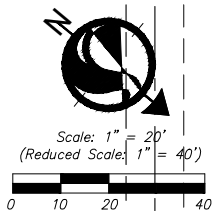
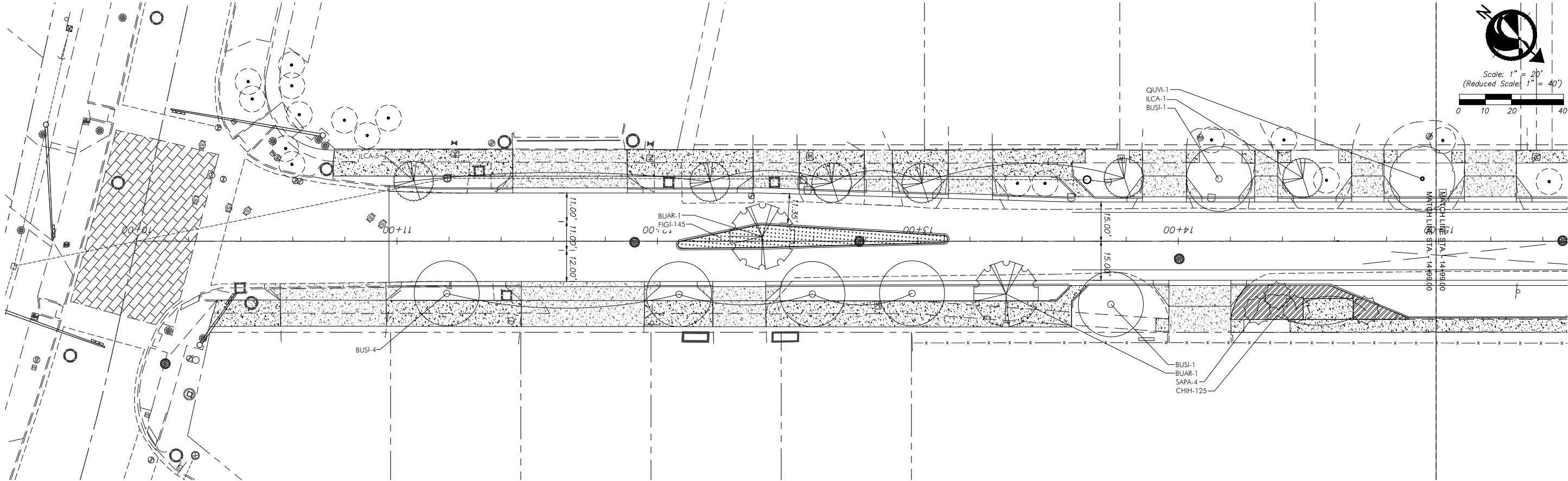
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|                | K.S. | 2-10-2022 |            |      |      |
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PROPOSED PLANT LIST  
-FRANJO ROAD - 100% CDs-





| PLANT LIST              |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| TREES                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine                       | ...Dahoon Holly        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee"    | ...Crepe Myrtle        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum              | ...Wild Tamarind       | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUMI                    | Quercus virginiana                 | ...Live Oak            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii            | ...Buccaneer Palm      | 4' CW                                                        |
| SAPA                    | Sabal palmetto                     | ...Sabal Palm          | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata                    | ...Thatch Palm         | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" | ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" | ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island"    | ...Green Island Ficus  | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND

#

EXISTING TREE  
TO REMAIN

| REVISIONS |    |             |      |    |             |      |    |
|-----------|----|-------------|------|----|-------------|------|----|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
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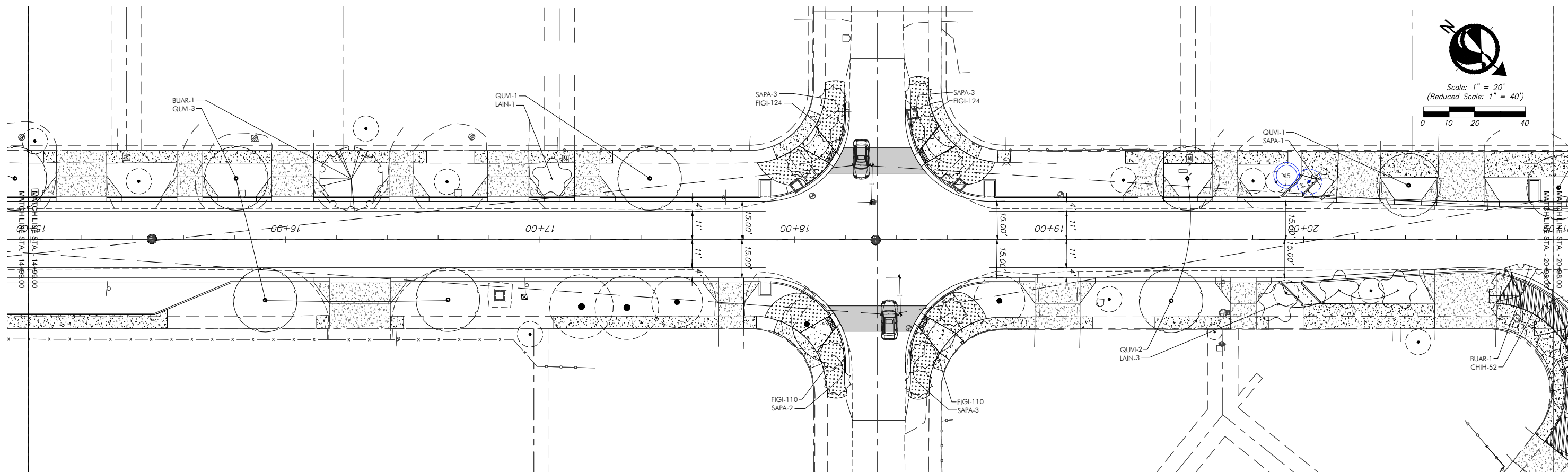
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PLANTING PLAN  
-FRANJO ROAD - 100% CDs-



### LEGEND



EXISTING TREE  
TO REMAIN

| PLANT LIST              |                                                           |                                                              |
|-------------------------|-----------------------------------------------------------|--------------------------------------------------------------|
| TREES                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| BUAR                    | Bulnesia arborea ...Verawood                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba ...Gumbo Limbo                           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa ...Silf Floss Tree                         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus" ...Silver Buttonwood        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine ...Dahoon Holly                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIn                    | Lagerstroemia indica "Muscogee" ...Crepe Myrtle           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latifolium ...Wild Tamarind                      | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUM                     | Quercus virginiana ...Live Oak                            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii ...Buccaneer Palm                 | 4' CW                                                        |
| SAPA                    | Sabal palmetto ...Sabal Palm                              | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata ...Thatch Palm                            | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| AEBl                    | Aechmea blanchetiana "Orange Form" ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island" ...Green Island Ficus     | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa ...Pineland Lantana                      | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum" ...Fringeflower            | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia capillaris ...Muhly Grass                    | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica ...Indian Hawthorne                   | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila ...Coontie                                   | 18"x18", install 24" o.c.                                    |

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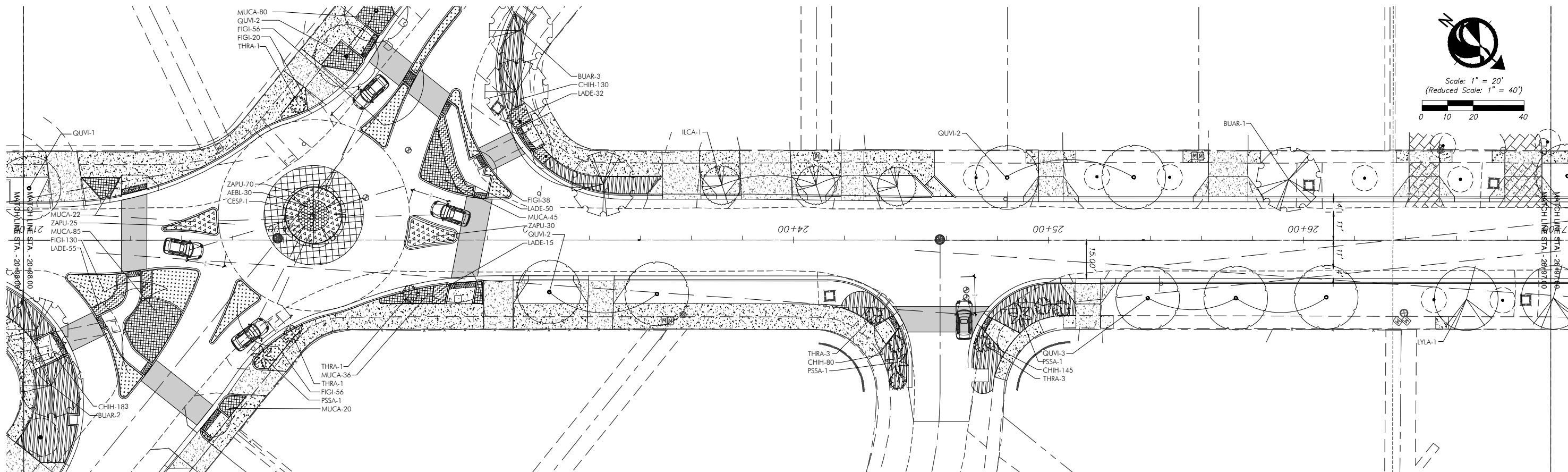
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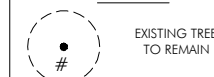
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PLANTING PLAN  
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LEGEND



## REVISIONS

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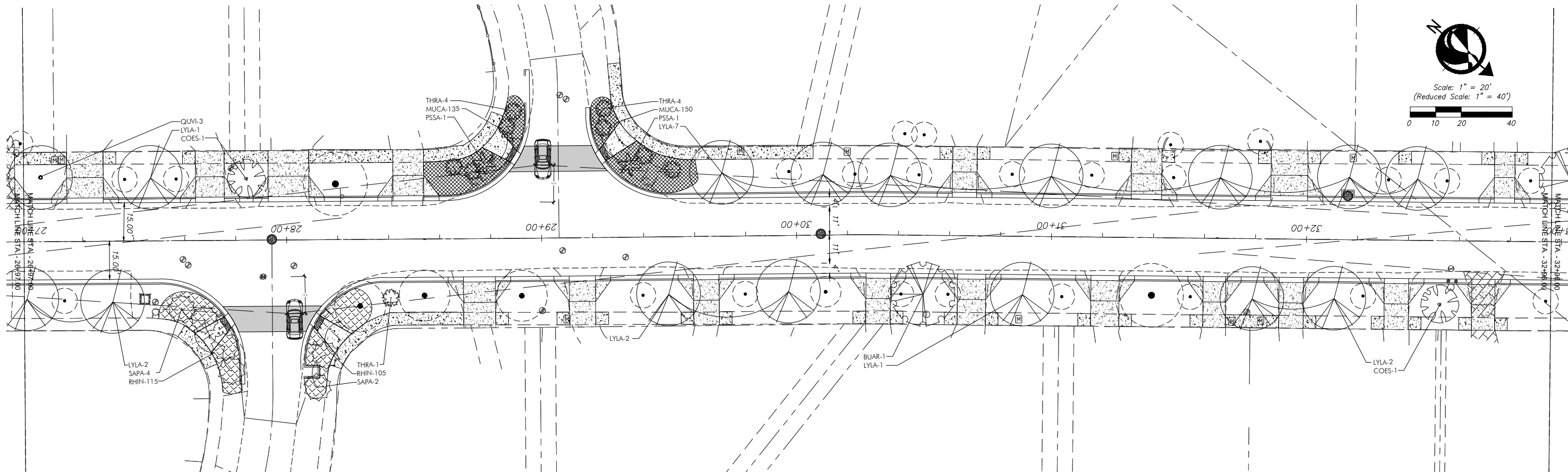
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PLANTING PLAN  
-FRANJO ROAD - 100% CDs-



### LEGEND



EXISTING TREE  
TO REMAIN

TREES

| KEY   | PLANT NAME                                         | SIZE                                                         |
|-------|----------------------------------------------------|--------------------------------------------------------------|
| BUAR  | Bulnesia arborea ...Verawood                       | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |
| BUSI  | Bursera simaruba ...Gumbo Limbo                    | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |
| CESP  | Ceiba speciosa ...Silf Floss Tree                  | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |
| COES  | Conocarpus erectus "Sericeus" ...Silver Buttonwood | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |
| ILCA  | Ilex cassine ...Dahoon Holly                       | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |
| LA IN | Lagerstroemia indica "Muscogee" ...Crepe Myrtle    | 12' tall x 5' spread, 2 1/2" cal., 4" CT min, Purple Flowers |
| LYLA  | Lysiloma latisiliquum ...Wild Tamarind             | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |
| QUM   | Quercus virginiana ...Live Oak                     | 12' tall x 5' spread, 2 1/2" cal., 4" CT min                 |

## PALMS

| KEY  | PLANT NAME                                       | SIZE                                      |
|------|--------------------------------------------------|-------------------------------------------|
| PSSA | <i>Pseudophoenix sargentii</i> ...Buccaneer Palm | 4' CW                                     |
| SAPA | <i>Sabal palmetto</i> ...Sabal Palm              | 22' tall OA, smooth trunks, hurricane cut |
| THRA | <i>Thrinax radiata</i> ...Thatch Palm            | 7' tall OA                                |

## SHRUBS AND GROUNDCOVERS

| KEY  | PLANT NAME                                                | SIZE                               |
|------|-----------------------------------------------------------|------------------------------------|
| AEBL | Aechmea blanchetiana "Orange Form" ...Orange Bromeliad    | 24"x18", install 24" o.c.          |
| CHIH | Chrysobalanus icaco "Horizontalis" ...Horizontal Cocoplum | 12"x18", install 24" o.c.          |
| FIGI | Ficus microcarpa "Green Island" ...Green Island Ficus     | 18"x18", install 24" o.c.          |
| LADE | Lantana depressa ...Pineland Lantana                      | 18"x18", install 18" o.c.          |
| LOCH | Loropetalum chinensis "Rubrum" ...Fringeflower            | 18"x18", install 24" o.c.          |
| MUCH | Muhlenbergia capillaris ...Muhly Grass                    | 3 gal cans, full, install 24" o.c. |
| RHIN | Raphiaepis indica ...Indian Hawthorne                     | 18"x18", install 24" o.c.          |
| ZAPU | Zamia pumila ...Coontie                                   | 18"x18", install 24" o.c.          |

[illegible]

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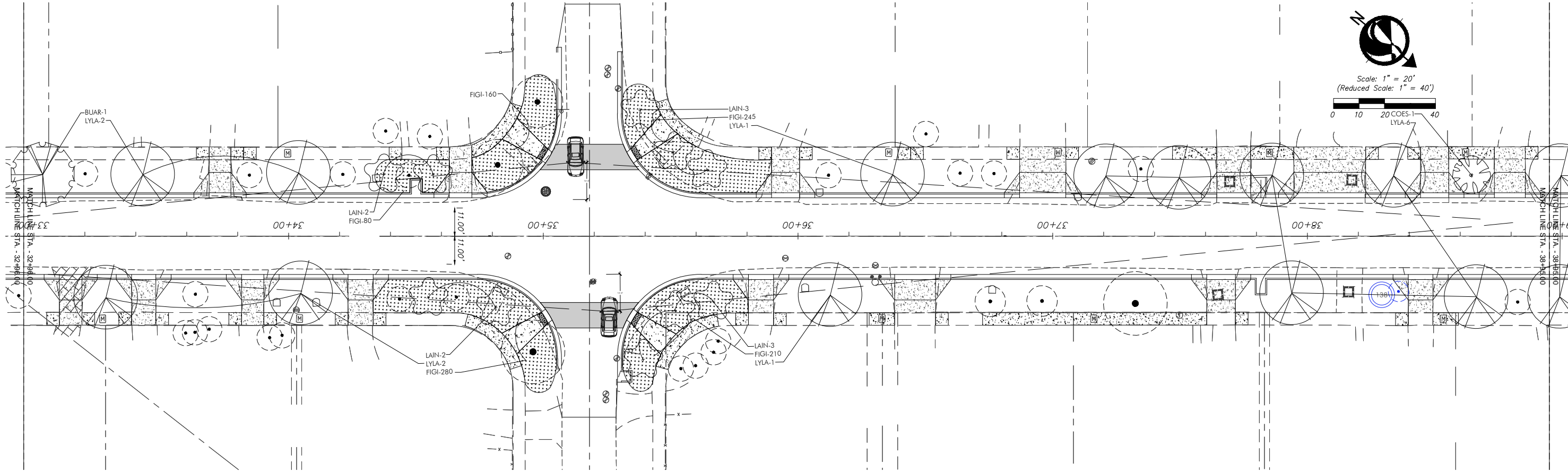
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|                | NAME | DATE      |            | NAME | DATE |
| DESIGNED BY    | C.G. | 2-10-2022 | DRAWN BY   |      |      |
| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |



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PLANTING PLAN  
-FRANJO ROAD - 100% CDs-





PLANT LIST

| TREES                   |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine                       | ...Dahoon Holly        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee"    | ...Crepe Myrtle        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum              | ...Wild Tamarind       | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUM                     | Quercus virginiana                 | ...Live Oak            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii            | ...Buccaneer Palm      | 4' CW                                                        |
| SAPA                    | Sabal palmetto                     | ...Sabal Palm          | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata                    | ...Thatch Palm         | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" | ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" | ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island"    | ...Green Island Ficus  | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND

EXISTING TREE TO REMAIN

| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |

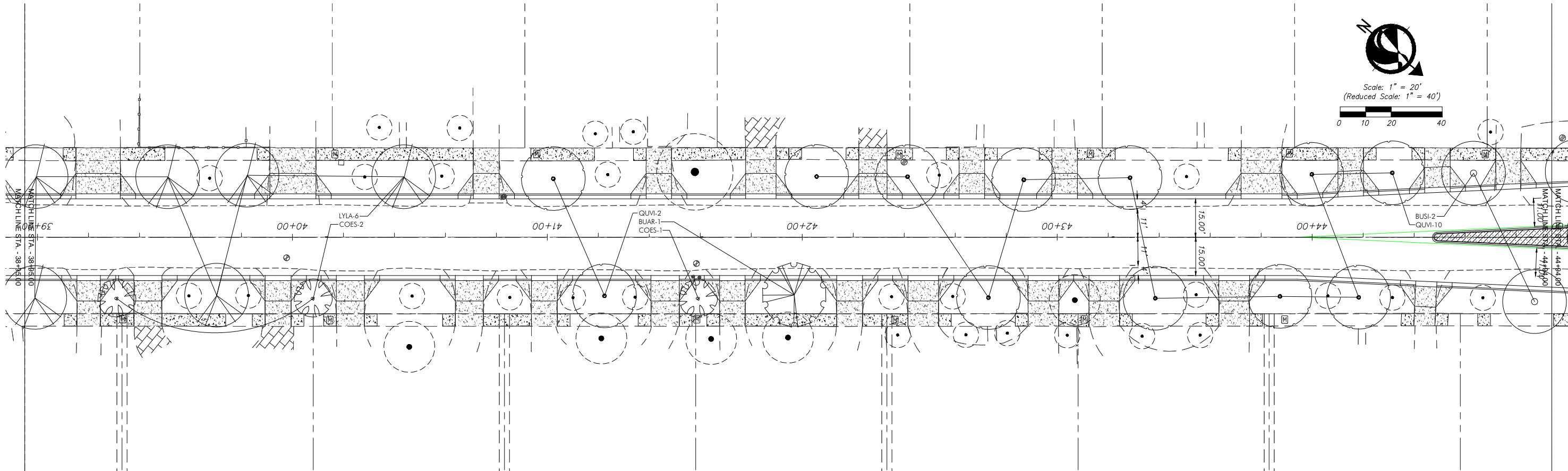
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PLANTING PLAN  
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**LEGEND**

 EXISTING TREE  
TO REMAIN

| PLANT LIST              |                                                           |                                                              |
|-------------------------|-----------------------------------------------------------|--------------------------------------------------------------|
| TREES                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| BUAR                    | Bulnesia arborea ...Verawood                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba ...Gumbo Limbo                           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa ...Silf Floss Tree                         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus" ...Silver Buttonwood        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine ...Dahoon Holly                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee" ...Crepe Myrtle           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum ...Wild Tamarind                    | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUVI                    | Quercus virginiana ...Live Oak                            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii ...Buccaneer Palm                 | 4' CW                                                        |
| SAPA                    | Sabal palmetto ...Sabal Palm                              | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata ...Thatch Palm                            | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island" ...Green Island Ficus     | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa ...Pineland Lantana                      | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum" ...Fringeflower            | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia capillaris ...Muhly Grass                    | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica ...Indian Hawthorne                   | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila ...Coontie                                   | 18"x18", install 24" o.c.                                    |

[illegible]

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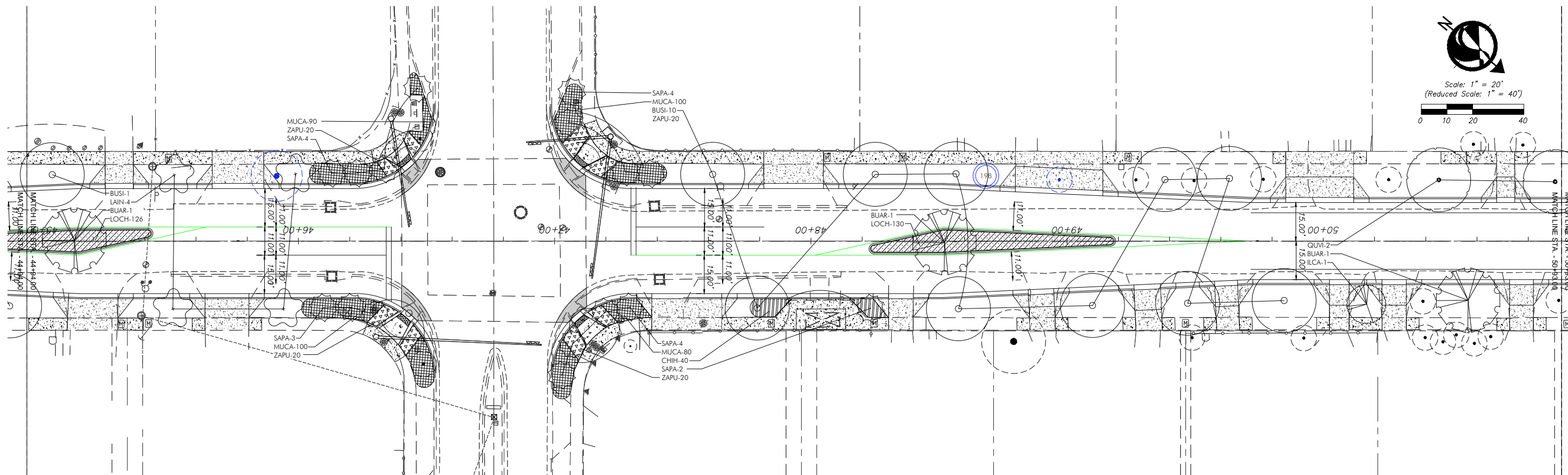
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|                | NAME | DATE      |            | NAME | DATE |
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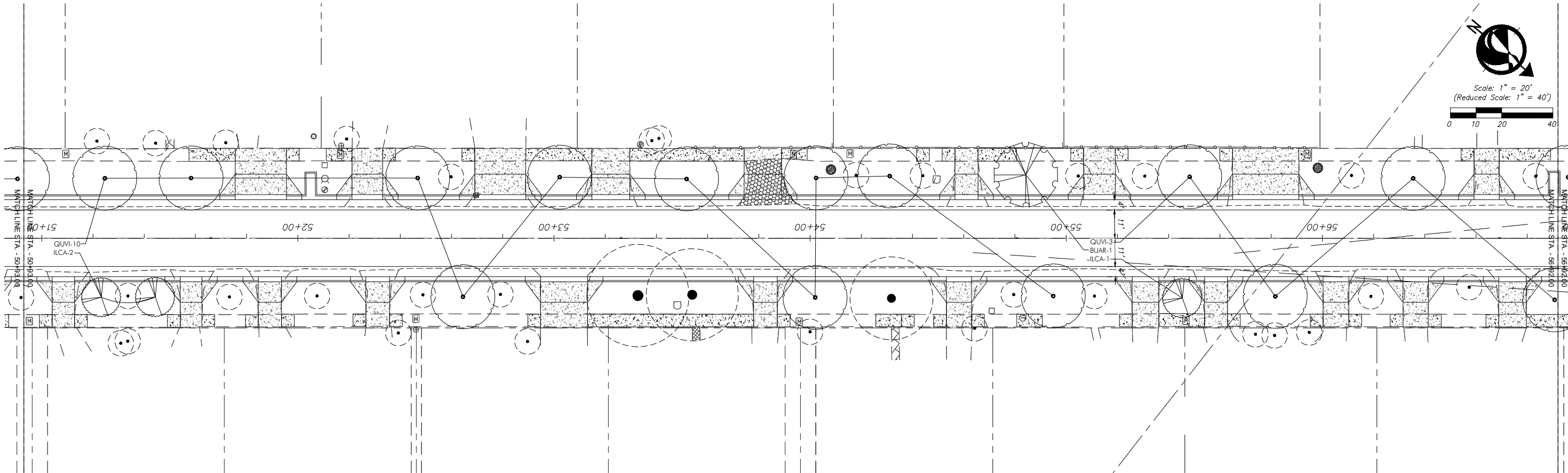
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|----------------|------|-----------|------------|------|------|
|                | NAME | DATE      |            | NAME | DATE |
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| PLANT LIST              |                                                           |                                                              |
|-------------------------|-----------------------------------------------------------|--------------------------------------------------------------|
| TREES                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| BUAR                    | Bulnesia arborea ...Verawood                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba ...Gumbo Limbo                           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa ...Silf Floss Tree                         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus" ...Silver Buttonwood        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine ...Dahoon Holly                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee" ...Crepe Myrtle           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum ...Wild Tamarind                    | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUVI                    | Quercus virginiana ...Live Oak                            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii ...Buccaneer Palm                 | 4' CW                                                        |
| SAPA                    | Sabal palmetto ...Sabal Palm                              | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata ...Thatch Palm                            | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island" ...Green Island Ficus     | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa ...Pineland Lantana                      | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum" ...Fringeflower            | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia capillaris ...Muhly Grass                    | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica ...Indian Hawthorne                   | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila ...Coontie                                   | 18"x18", install 24" o.c.                                    |

LEGEND

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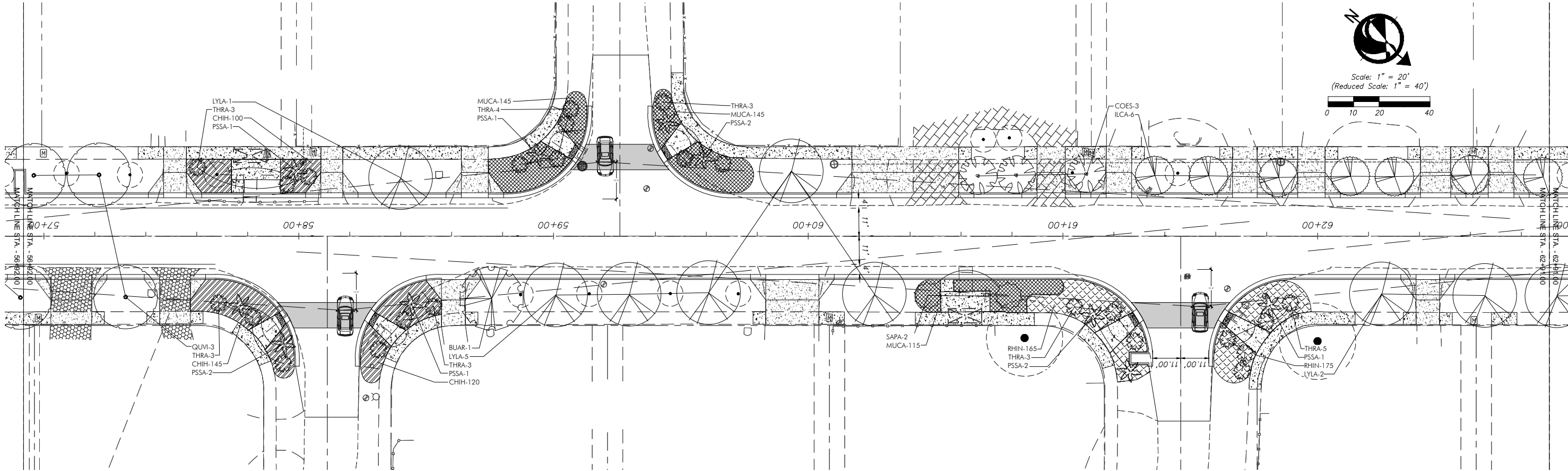
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|                | NAME | DATE      |            | NAME | DATE |
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| PLANT LIST              |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| TREES                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine                       | ...Dahoon Holly        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIR                    | Lagerstroemia indica "Muscopee"    | ...Crepe Myrtle        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latifolium                | ...Wild Tamarind       | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUM                     | Quercus virginiana                 | ...Live Oak            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii            | ...Buccaneer Palm      | 4' CW                                                        |
| SAPA                    | Sabal palmetto                     | ...Sabal Palm          | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata                    | ...Thatch Palm         | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" | ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" | ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island"    | ...Green Island Ficus  | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND

#

EXISTING TREE  
TO REMAIN

ITB #23-10  
Franjo Road Roadway Improvements Project  
Page 484 of 608

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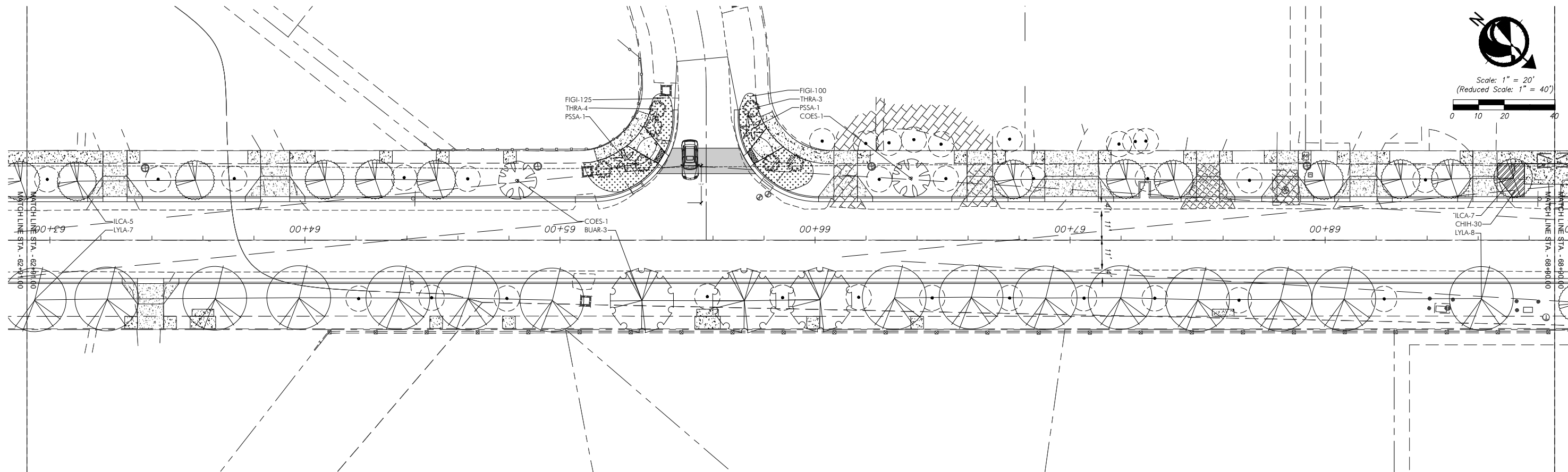
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| DESIGNED BY   | NAME | DATE      | DRAWN BY   | NAME | DATE |
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| SUPERVISED BY | K.S. | 2-10-2022 |            |      |      |

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| PLANT LIST              |                                                           |                                                              |
|-------------------------|-----------------------------------------------------------|--------------------------------------------------------------|
| TREES                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| BUAR                    | Bulnesia arborea ...Verawood                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba ...Gumbo Limbo                           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa ...Silf Floss Tree                         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus" ...Silver Buttonwood        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine ...Dahoon Holly                              | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee" ...Crepe Myrtle           | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum ...Wild Tamarind                    | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUVI                    | Quercus virginiana ...Live Oak                            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii ...Buccaneer Palm                 | 4' CW                                                        |
| SAPA                    | Sabal palmetto ...Sabal Palm                              | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata ...Thatch Palm                            | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                                           |                                                              |
| KEY                     | PLANT NAME                                                | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island" ...Green Island Ficus     | 18"x18", install 24" o.c.                                    |
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| RHIN                    | Rhaphiolepis indica ...Indian Hawthorne                   | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila ...Coontie                                   | 18"x18", install 24" o.c.                                    |

LEGEND

 EXISTING TREE  
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| CHECKED BY     | K.S. | 2-10-2022 | CHECKED BY |      |      |
| SUPERVISED BY: |      |           |            |      |      |



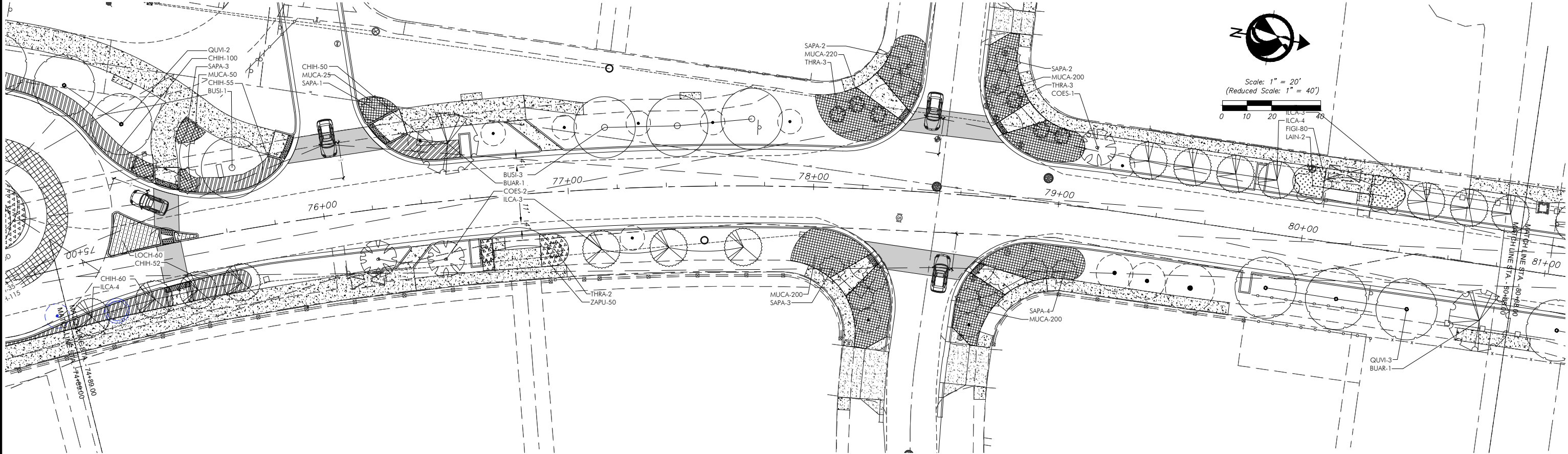
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PLANT LIST

| TREES                   |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine                       | ...Dahoon Holly        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee"    | ...Crepe Myrtle        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum              | ...Wild Tamarind       | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUVI                    | Quercus virginiana                 | ...Live Oak            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii            | ...Buccaneer Palm      | 4' CW                                                        |
| SAPA                    | Sabal palmetto                     | ...Sabal Palm          | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata                    | ...Thatch Palm         | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" | ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" | ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island"    | ...Green Island Ficus  | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND



| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
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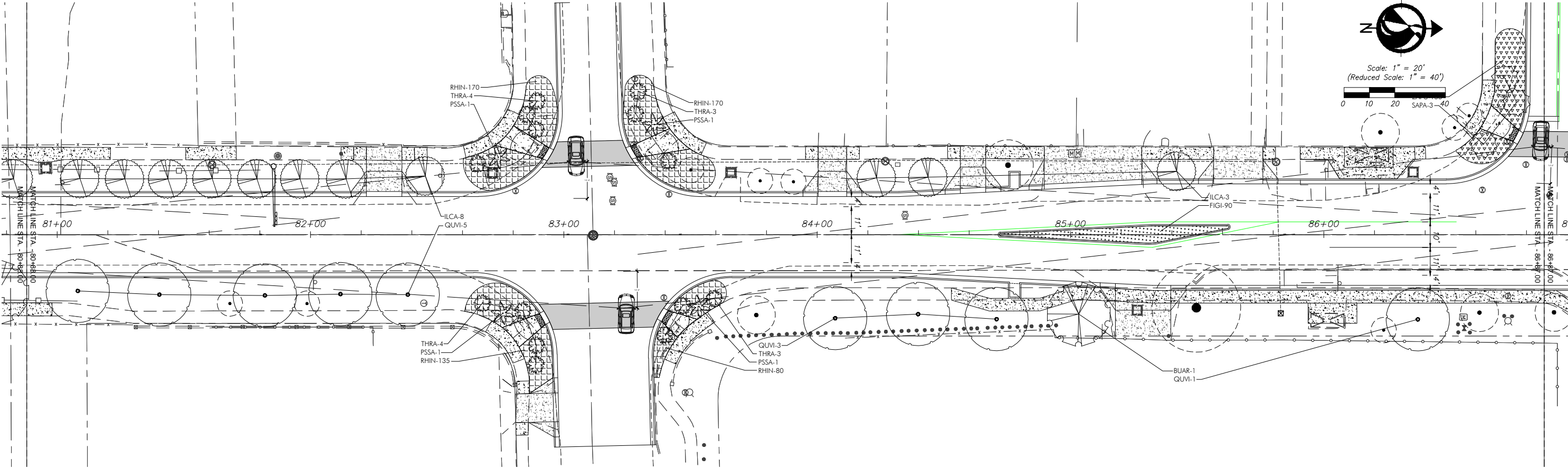
| DESIGNED BY    | NAME | DATE      | DRAWN BY   | NAME | DATE      |
|----------------|------|-----------|------------|------|-----------|
| CHECKED BY     | C.G. | 2-10-2022 | CHECKED BY | K.S. | 2-10-2022 |
| SUPERVISED BY: |      |           |            |      |           |



PUBLIC WORKS AND WASTE  
MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1<sup>ST</sup> ST  
MIAMI, FLORIDA 33128

PLANTING PLAN  
-FRANJO ROAD - 100% CDs-





| PLANT LIST              |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| TREES                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine                       | ...Dahoon Holly        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIR                    | Lagerstroemia indica "Muscopee"    | ...Crepe Myrtle        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum              | ...Wild Tamarind       | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUVI                    | Quercus virginiana                 | ...Live Oak            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii            | ...Buccaneer Palm      | 4' CW                                                        |
| SAPA                    | Sabal palmetto                     | ...Sabal Palm          | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata                    | ...Thatch Palm         | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" | ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" | ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island"    | ...Green Island Ficus  | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND

#

EXISTING TREE  
TO REMAIN

| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |

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C.G.

NAME  
C.G.

DATE  
2-10-2022

CHECKED BY  
K.S.

NAME  
K.S.

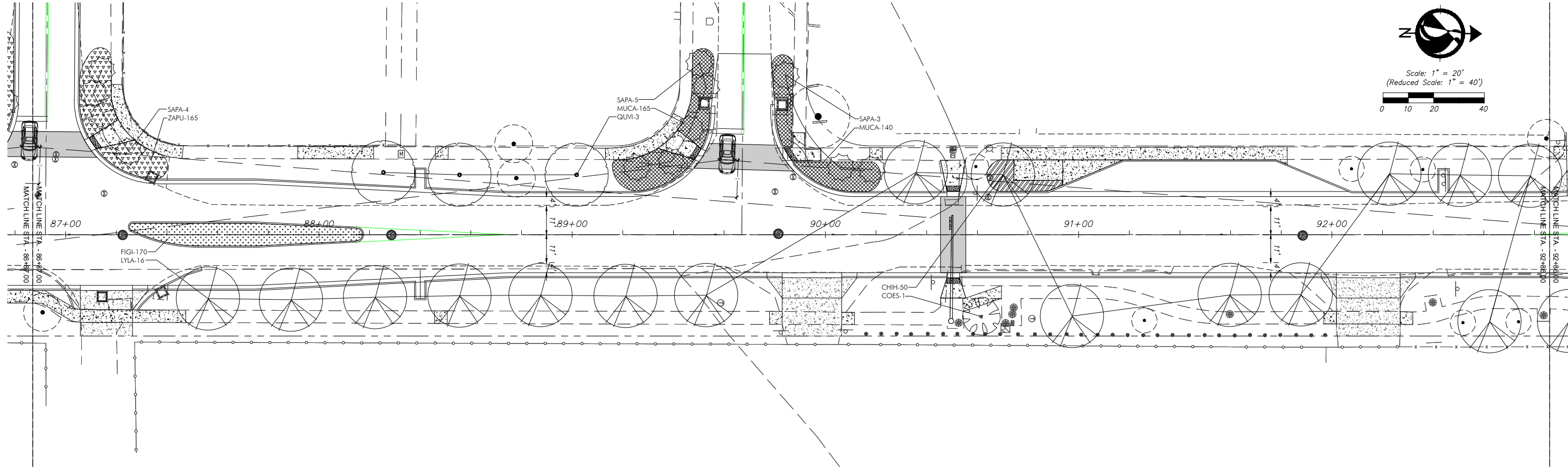
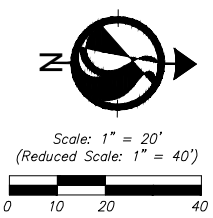
DATE  
2-10-2022

SUPERVISED BY:

| NAME | DATE      | NAME | DATE |
|------|-----------|------|------|
| C.G. | 2-10-2022 |      |      |
| K.S. | 2-10-2022 |      |      |

PUBLIC WORKS AND WASTE  
MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33128

PLANTING PLAN  
-FRANJO ROAD - 100% CDs-



| PLANT LIST              |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| TREES                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| ILCA                    | Ilex cassine                       | ...Dahoon Holly        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| LAIN                    | Lagerstroemia indica "Muscogee"    | ...Crepe Myrtle        | 12' tall x 5' spread, 2 1/2" cal., 4' CT min, Purple Flowers |
| LYLA                    | Lysiloma latisiliquum              | ...Wild Tamarind       | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| QUM                     | Quercus virginiana                 | ...Live Oak            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| PSSA                    | Pseudophoenix sargentii            | ...Buccaneer Palm      | 4' CW                                                        |
| SAPA                    | Sabal palmetto                     | ...Sabal Palm          | 22' tall OA, smooth trunks, hurricane cut                    |
| THRA                    | Thrinax radiata                    | ...Thatch Palm         | 7' tall OA                                                   |
| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| AEBL                    | Aechmea blanchetiana "Orange Form" | ...Orange Bromeliad    | 24"x18", install 24" o.c.                                    |
| CHIH                    | Chrysobalanus icaco "Horizontalis" | ...Horizontal Cocoplum | 12"x18", install 24" o.c.                                    |
| FIGI                    | Ficus microcarpa "Green Island"    | ...Green Island Ficus  | 18"x18", install 24" o.c.                                    |
| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND



EXISTING TREE  
TO REMAIN

| REVISIONS |    |             |      |    |             |      |    |
|-----------|----|-------------|------|----|-------------|------|----|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|           |    |             |      |    |             |      |    |



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| SUPERVISED BY: |      |           |            |      |           |

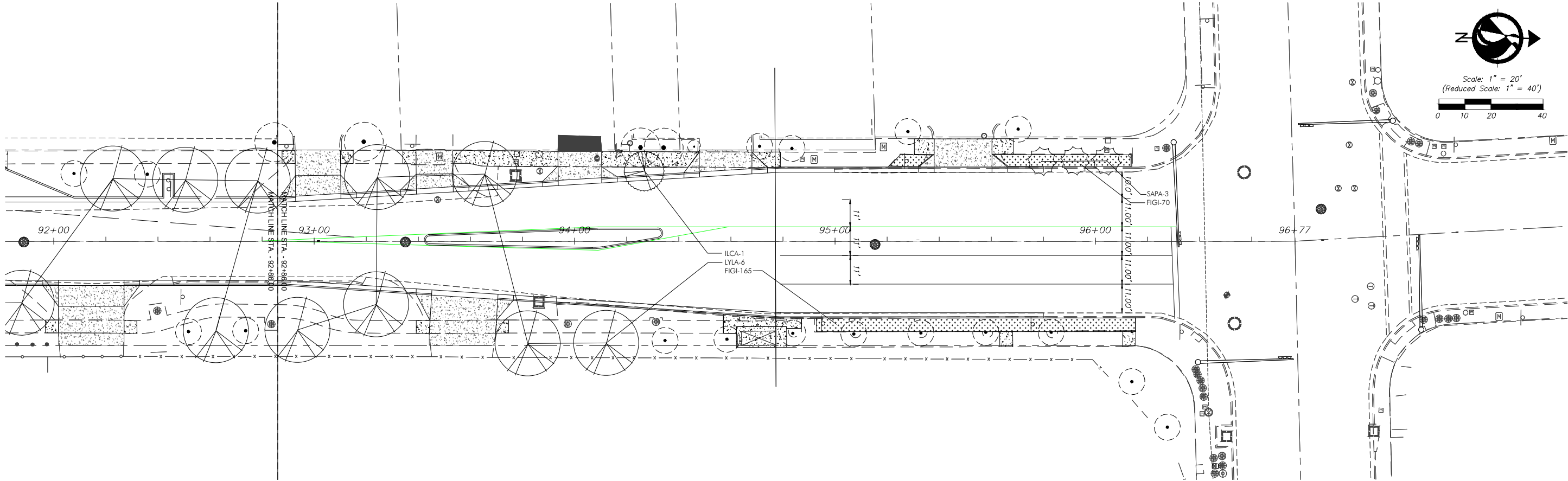
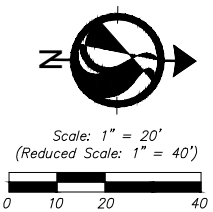
MIAMI-DADE



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HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1<sup>ST</sup>  
MIAMI, FLORIDA 33128

PLANTING PLAN  
-FRANJO ROAD - 100% CDs-





PLANT LIST

| TREES                   |                                    |                        |                                                              |
|-------------------------|------------------------------------|------------------------|--------------------------------------------------------------|
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
| BUAR                    | Bulnesia arborea                   | ...Verawood            | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| BUSI                    | Bursera simaruba                   | ...Gumbo Limbo         | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| CESP                    | Ceiba speciosa                     | ...Silf Floss Tree     | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
| COES                    | Conocarpus erectus "Sericeus"      | ...Silver Buttonwood   | 12' tall x 5' spread, 2 1/2" cal., 4' CT min                 |
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| PALMS                   |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
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| SHRUBS AND GROUNDCOVERS |                                    |                        |                                                              |
| KEY                     | PLANT NAME                         |                        | SIZE                                                         |
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| LADE                    | Lantana depressa                   | ...Pineland Lantana    | 18"x18", install 18" o.c.                                    |
| LOCH                    | Loropetalum chinensis "Rubrum"     | ...Fringeflower        | 18"x18", install 24" o.c.                                    |
| MUCA                    | Muhlenbergia cappilaris            | ...Muhly Grass         | 3 gal cans, full, install 24" o.c.                           |
| RHIN                    | Rhaphiolepis indica                | ...Indian Hawthorne    | 18"x18", install 24" o.c.                                    |
| ZAPU                    | Zamia pumila                       | ...Coontie             | 18"x18", install 24" o.c.                                    |

LEGEND

EXISTING TREE TO REMAIN

| REVISIONS |    |             |      |    |             |      |    |
|-----------|----|-------------|------|----|-------------|------|----|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
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PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1<sup>ST</sup> ST  
MIAMI, FLORIDA 33128

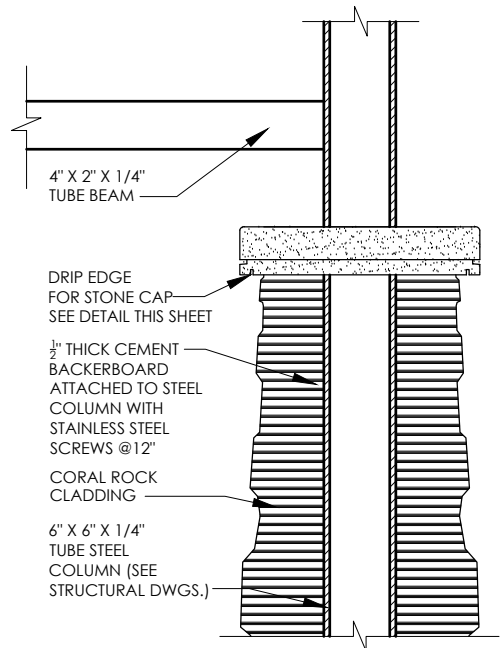
PLANTING PLAN  
-FRANJO ROAD - 100% CDs-

PLANTING SPECS & DETAILS  
-FRANJO ROAD - 100% CDs-

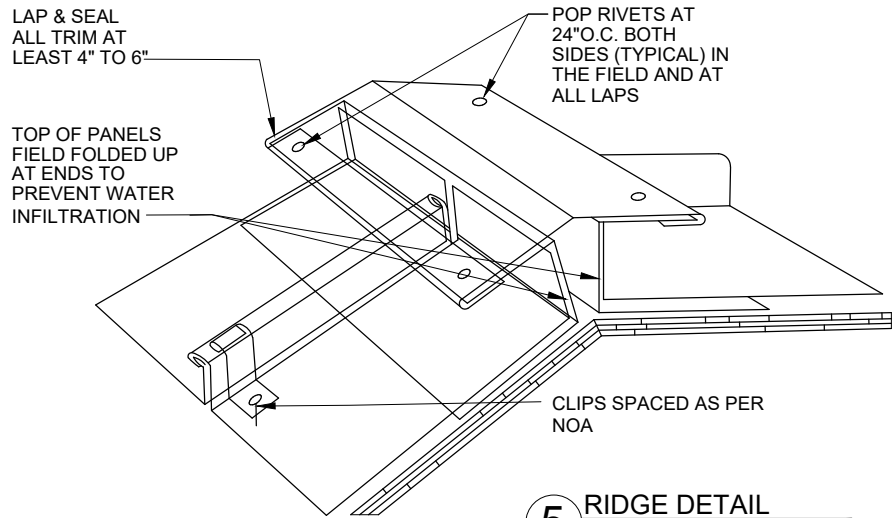




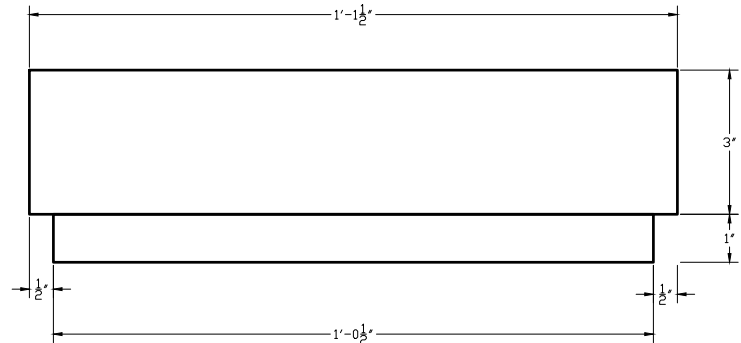
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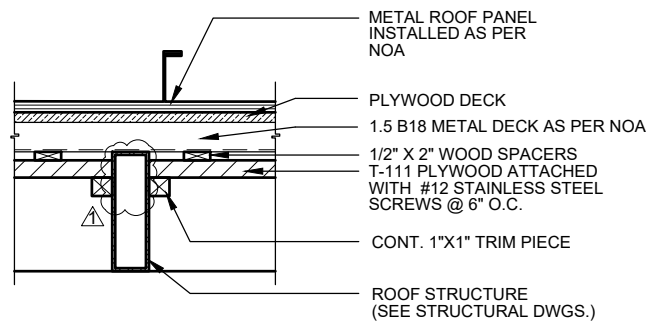
1 COLUMN DETAIL  
1 1/2" = 1'-0"



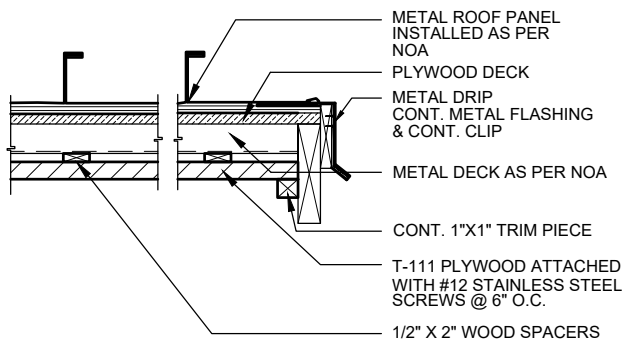
5 RIDGE DETAIL  
NTS



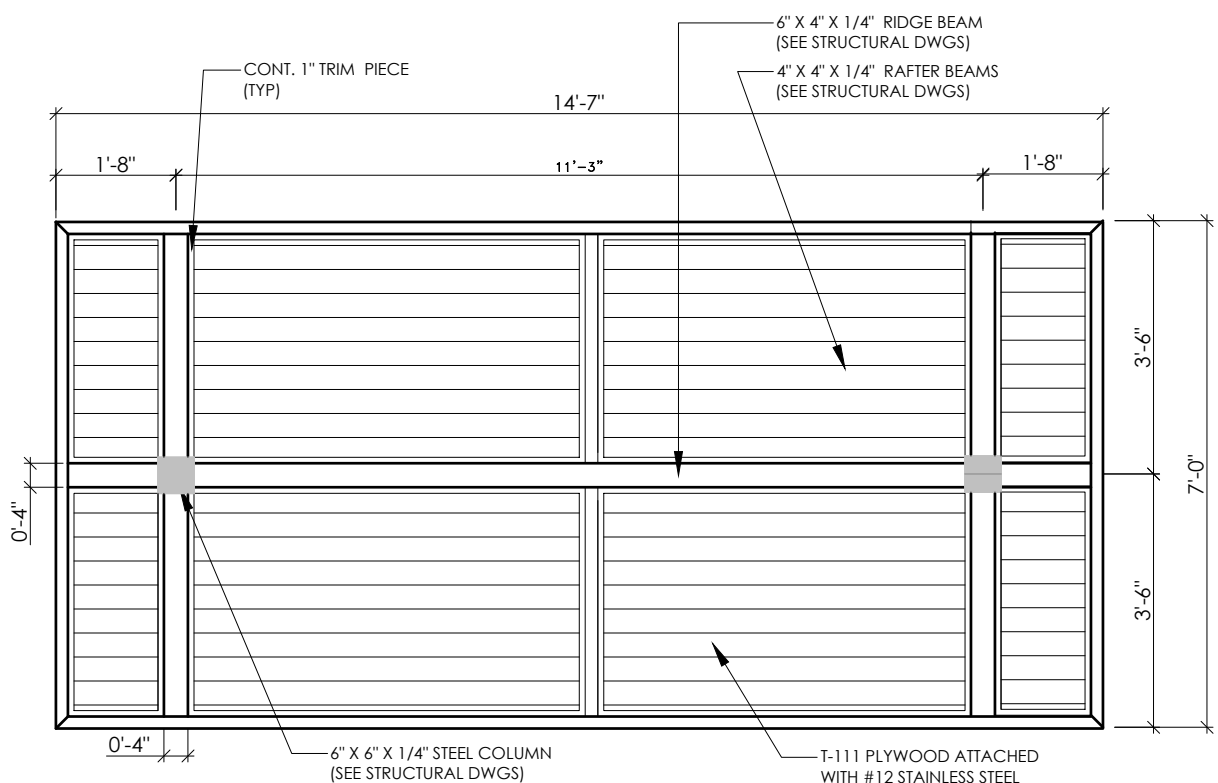
6 STONE CAP DETAIL  
NTS



2 ROOF DETAIL  
1/2" = 1'-0"



4 ROOF EDGE DETAIL  
1/2" = 1'-0"



3 FRAMING PLAN  
3/4" = 1'-0"

ITB #23-10  
Frango Road Roadway Improvements Project  
Page 493 of 608

| MDCPS COMMENTS |    |             |  | REVISIONS |    |             |  |
|----------------|----|-------------|--|-----------|----|-------------|--|
| DATE           | BY | DESCRIPTION |  | DATE      | BY | DESCRIPTION |  |
|                |    |             |  |           |    |             |  |



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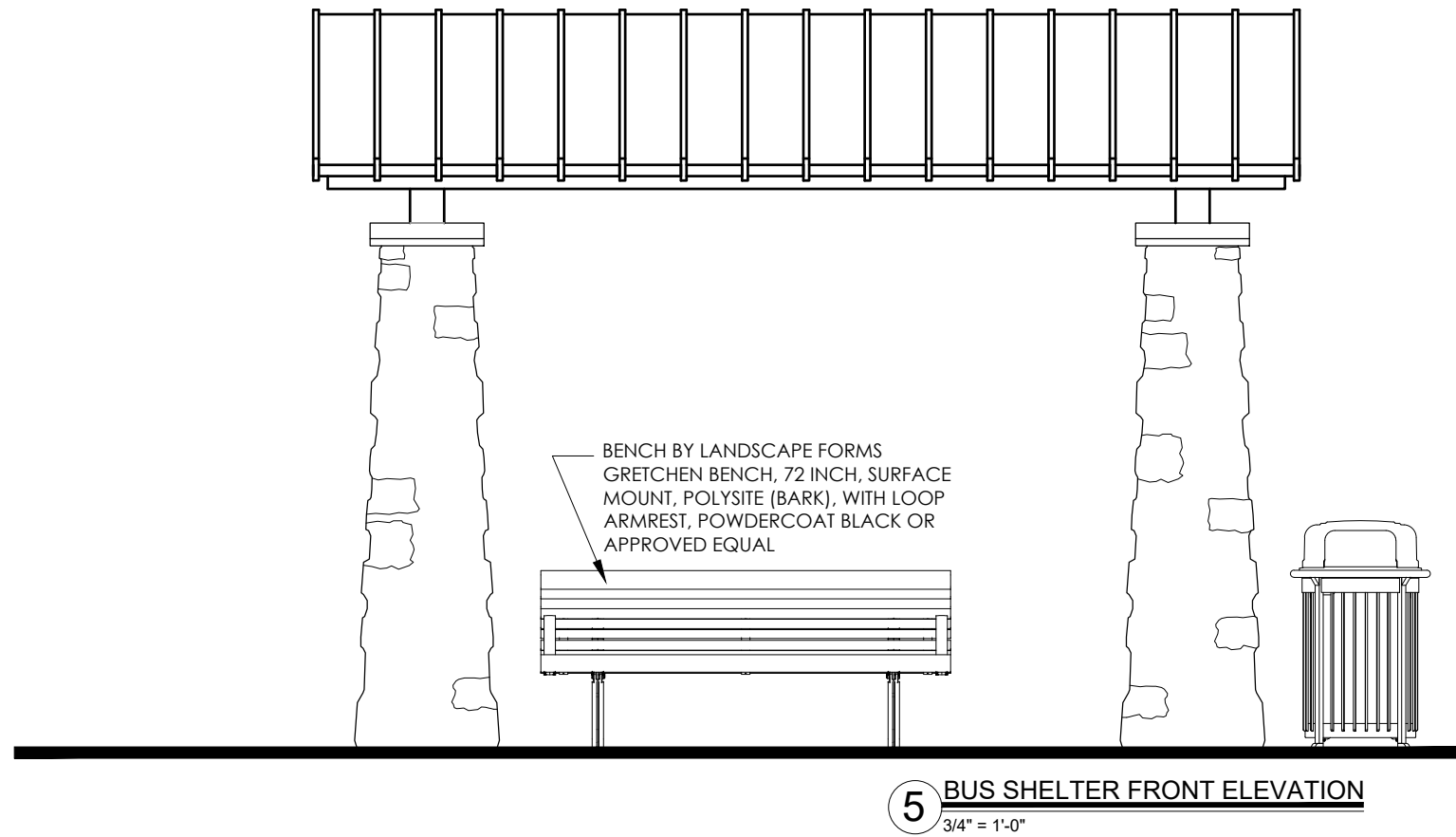
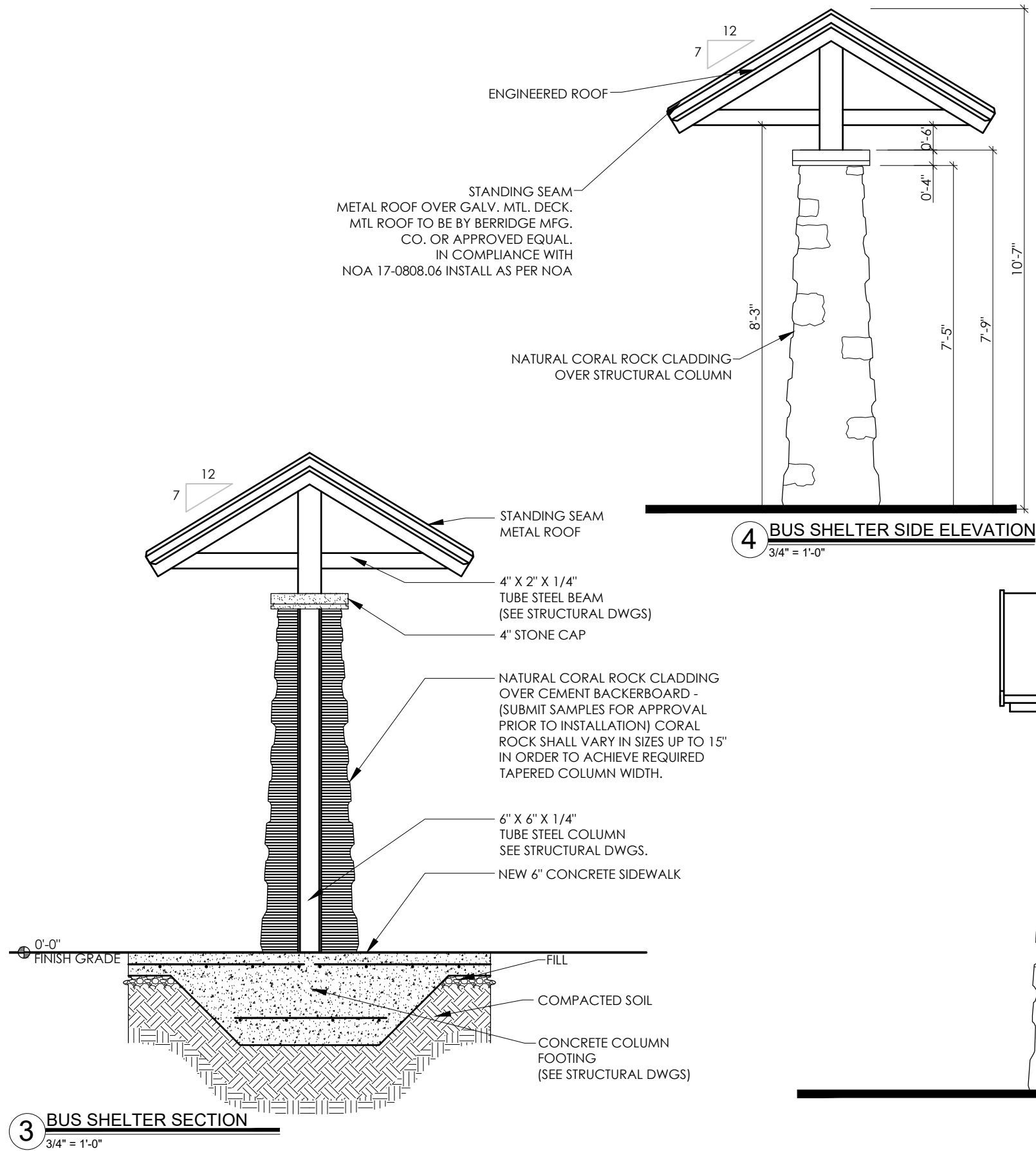
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| CHECKED BY     |      |      | CHECKED BY |      |      |
| SUPERVISED BY: |      |      |            |      |      |

MIAMI-DADE COUNTY

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33128

ARCHITECTURAL DETAILS





| REVISIONS |    |             |      |    |             |      |    |
|-----------|----|-------------|------|----|-------------|------|----|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|           |    |             |      |    |             |      |    |



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|                |      |      |            |      |      |
| CHECKED BY     |      |      | CHECKED BY |      |      |
|                |      |      |            |      |      |
| SUPERVISED BY: |      |      |            |      |      |

MIAMI-DADE COUNTY

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
HIGHWAY DIVISION  
STEPHEN P. CLARK, CENTER  
111 NW 1 ST  
MIAMI, FLORIDA 33120

GENERAL NOTES

- 1.THE GOVERNING CODE FOR THIS PROJECT IS THE **FLORIDA BUILDING CODE, 2020 EDITION**. THIS CODE PRESCRIBES WHICH EDITION OF EACH REFERENCED STANDARD APPLIES TO THIS PROJECT.
- 2.TO THE BEST OF OUR KNOWLEDGE, THE STRUCTURAL DRAWINGS COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE GOVERNING BUILDING CODE.
- 3.CONSTRUCTION IS TO COMPLY WITH THE REQUIREMENTS OF THE GOVERNING BUILDING CODE AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL CODES, STANDARDS, REGULATIONS AND LAWS.
- 4.THE STRUCTURAL DOCUMENTS ARE TO BE USED IN CONJUNCTION WITH THE CIVIL DOCUMENTS. IF A CONFLICT EXISTS, THE MORE STRINGENT GOVERNS.
5. DETAILS LABELED "TYPICAL" APPLY TO ALL SITUATIONS THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY REFERENCED, WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION. QUESTIONS REGARDING THE APPLICABILITY OF TYPICAL DETAILS SHALL BE RESOLVED BY THE ENGINEER.
- 6.CONTRACTORS WHO DISCOVER DISCREPANCIES, OMISSIONS OR VARIATIONS IN THE CONTRACT DOCUMENTS DURING BIDDING SHALL IMMEDIATELY NOTIFY THE ENGINEER. THE ENGINEER WILL RESOLVE THE CONDITION AND ISSUE A WRITTEN CLARIFICATION.
- 7.THE GENERAL CONTRACTOR SHALL COORDINATE ALL CONTRACT DOCUMENTS WITH FIELD CONDITIONS AND DIMENSIONS AND PROJECT SHOP DRAWINGS PRIOR TO CONSTRUCTION. DO NOT SCALE DRAWINGS; USE ONLY PRINTED DIMENSIONS. REPORT ANY DISCREPANCIES IN WRITING TO THE ENGINEER PRIOR TO PROCEEDING WITH WORK. DO NOT CHANGE SIZE OR LOCATION OF STRUCTURAL MEMBERS WITHOUT WRITTEN INSTRUCTIONS FROM THE STRUCTURAL ENGINEER OF RECORD.
- 8.THE CONTRACTOR SHALL PROTECT ADJACENT PROPERTY, HIS OWN WORK AND THE PUBLIC FROM HARM. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS AND METHODS, AND JOBSITE SAFETY INCLUDING ALL OSHA REQUIREMENTS.
- 9.THE STRUCTURE IS DESIGNED TO BE STRUCTURALLY SOUND WHEN COMPLETED. PRIOR TO COMPLETION, THE CONTRACTOR IS RESPONSIBLE FOR STABILITY AND TEMPORARY BRACING, INCLUDING, BUT NOT LIMITED TO, MASONRY WALLS. WHEREVER THE CONTRACTOR IS UNSURE OF THESE REQUIREMENTS, THE CONTRACTOR SHALL RETAIN AN ENGINEER LICENSED IN THE STATE WHERE THIS PROJECT IS LOCATED TO DESIGN AND INSPECT THE TEMPORARY BRACING AND STABILITY OF THE STRUCTURE.

10. DESIGN WIND LOADS

|                               |                                       |
|-------------------------------|---------------------------------------|
| a. GOVERNING CODE             | ASCE 7-16                             |
| b. BUILDING RISK CATEGORY     | II                                    |
| c. ULTIMATE DESIGN WIND SPEED | VULT = <b>175 MPH</b> (3 SECOND GUST) |
| d. NOMINAL DESIGN WIND SPEED  | VASD = <b>136 MPH</b> (3 SECOND GUST) |
| e. MEAN ROOF HEIGHT           | 5 FEET                                |
| f. DIRECTIONALITY FACTOR      | KD = <b>0.85</b>                      |
| g. TOPOGRAPHIC FACTOR         | KZT = <b>1.0</b>                      |
| h. EXPOSURE                   | <b>C</b>                              |
| i. ENCLOSURE CLASSIFICATION   | <b>OPEN</b>                           |
| INTERNAL PRESSURE COEFFICIENT | GCPI = <b>0</b>                       |

SHOP DRAWINGS

- 1.TWENTY WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR EOR'S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE ARCHITECT. THE EOR SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE EOR. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE EOR WILL RETURN THE SHOP DRAWING ITEMS WITHIN **TEN** WORKING DAYS, UNLESS OTHERWISE NEGOTIATED BETWEEN STANTEC AND THE CLIENT, AFTER HAVING RECEIVED THE ELECTRONIC SHOP DRAWING.
- 2.SUBMIT SPECIFIC COMPONENTS, SUCH AS COLUMNS, FOOTINGS, ETC., IN A SINGLE PACKAGE. SUBMIT SIMILAR FLOORS TOGETHER.
- 3.ON FIRST SUBMITTAL, CLEARLY FLAG AND CLOUD ALL DIFFERENCES FROM THE CONTRACT DOCUMENTS. ON RESUBMITTALS, FLAG AND CLOUD ALL CHANGES AND ADDITIONS TO PREVIOUS SUBMITTAL; ONLY CLOUDED ITEMS WILL BE REVIEWED.
- 4.THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING DIMENSIONS AT THE JOB SITES, FOR TOLERANCES, CLEARANCES, QUANTITIES, FABRICATION PROCESSES AND TECHNIQUES OF CONSTRUCTION, COORDINATION OF THE WORK WITH OTHER TRADES AND FULL COMPLIANCE WITH THE CONTRACT DOCUMENTS.
- 5.THE GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL REVIEW AND APPROVE SUBMITTALS AND SHALL SIGN AND DATE EACH DRAWING PRIOR TO SUBMITTING TO THE ARCHITECT. THIS APPROVAL IS TO CONFIRM THAT THE SUBMITTAL IS COMPLETE, COMPLIES WITH THE SUBMITTAL REQUIREMENTS AND IS COORDINATED WITH FIELD DIMENSIONS, OTHER TRADES, ERECTION SEQUENCING AND CONSTRUCTABILITY.
- 6.THE STRUCTURAL ENGINEER REVIEWS SUBMITTALS TO CONFIRM THAT THE SUBMITTAL IS IN GENERAL CONFORMANCE WITH THE DESIGN CONCEPT PRESENTED IN THE CONTRACT DOCUMENTS. QUANTITIES AND DIMENSIONS ARE NOT CHECKED. NOTATIONS ON SUBMITTALS DO NOT AUTHORIZE CHANGES TO THE CONTRACT SUM. CHECKING OF THE SUBMITTAL BY THE STRUCTURAL ENGINEER SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS FROM THE CONTRACT DOCUMENTS AND FROM ERRORS OR OMISSIONS IN THE SUBMITTAL.
- A.THE CONTRACTOR MAY REQUEST CAD FILES OF THE STRUCTURAL DRAWINGS, WHICH MAY BE PROVIDED - AT THE STRUCTURAL ENGINEER'S DISCRETION - UPON A WRITTEN AGREEMENT BETWEEN THE STRUCTURAL ENGINEER AND THE GENERAL CONTRACTOR.
- 8.THE FOLLOWING ITEMS ARE SHOP DRAWINGS THAT SHALL BE SUBMITTED FOR REVIEW:
- a. REINFORCING STEEL  
b. CONCRETE/GROUT MIXES  
c. COMPACTION REPORTS  
d. PRODUCT DATA/ACCESSORIES  
e. EMBEDDED ITEMS  
f. UTILITY PENETRATIONS THROUGH STRUCTURAL MEMBERS  
g. EMBEDDED UTILITIES IN STRUCTURAL MEMBERS

SHALLOW FOUNDATIONS

- 1.FOOTING SIZES AND REINFORCING ARE BASES ON AN ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF **2,000 PSF**. ALL FOOTINGS SHALL BEAR ON NATURAL SOIL OR ROCK COMPACTED TO 98% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR ASTM D-1557.
- 2.SUBGRADE PREPARATION SHALL BE FIELD CONTROLLED AND TESTED. PROVIDE COMPACTION REPORTS TO THE ENGINEER FOR RECORD.
- 3.CENTER ALL FOOTINGS UNDER THEIR RESPECTIVE COLUMNS OR WALLS, UNO.
- EXCAVATION, BACKFILL AND DEWATERING**
- 1.THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL EXCAVATION PROCEDURES INCLUDING LAGGING, SHORING, AND PROTECTION OF ADJACENT PROPERTY, STRUCTURES, STREETS AND UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL BUILDING DEPARTMENT AND OSHA REGULATIONS. DO NOT EXCAVATE WITHIN ONE FOOT OF THE ANGLE OF REPOSE OF ANY SOIL BEARING FOUNDATION UNLESS THE FOUNDATION IS PROPERLY AGAINST SETTLEMENT.
- 2.DO NOT BACKFILL AGAINST WALLS UNTIL 7 DAYS AFTER THE WALLS ARE BRACED BY THE STRUCTURE OR ARE TEMPORARY BRACED. DO NOT BACKFILL CANTILEVERED RETAINING WALLS UNTIL CONCRETE IS 3 DAYS OLD. DO NOT BACKFILL UNTIL AFTER COMPLETION AND INSPECTION OF ANY WATERPROOFING.
- 3.THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF ALL ACCUMULATED WATER IN A MANNER THAT DOES NOT INCONVENIENCE OR DAMAGE THE WORK.

REINFORCED CONCRETE

- 1.COMPLY WITH ACI 301 AND 318.
- 2.PROVIDE STRUCTURAL CONCRETE WITH A MINIMUM ULTIMATE COMPRESSIVE DESIGN STRENGTH OF 4000 PSI IN 28 DAYS.
- 3.USE NORMAL WEIGHT CONCRETE FOR ALL STRUCTURAL MEMBERS UNO.
- 4.THE USE OF CALCIUM CHLORIDE AND/OR OTHER CHLORIDE CONTAINING AGENTS IN CONCRETE IS PROHIBITED.
- 5.CONCRETE MIXES SHALL USE LARGEST COARSE AGGREGATE PRACTICAL FOR MEMBERS BEING CAST.
- 6.PROVIDE ASTM A-615 GRADE 60 REINFORCING STEEL. REINFORCING SHALL BE ACCURATELY PLACED, RIGIDLY SUPPORTED AND FIRMLY TIED IN PLACE, WITH APPROPRIATE BAR SUPPORTS AND SPACERS. LAP CONTINUOUS REINFORCING 48 BAR DIA. PROVIDE COVER OVER REINFORCING AS FOLLOWS:

| ELEMENT                  | BOTTOM | TOP    | SIDES  |
|--------------------------|--------|--------|--------|
| FOOTINGS AND PILE CAPS   | 3"     | 2"     | 3"     |
| BEAMS ABOVE GRADE        | 1 1/2" | 1 1/2" | 1 1/2" |
| COLUMNS                  | -      | -      | 1 1/2" |
| SLABS ON GRADE           | 2"     | 1"     | 2"     |
| SLABS ABOVE GRADE        | 3/4"   | 3/4"   | 1"     |
| SLABS EXPOSED TO WEATHER | 1 1/2" | 1 1/2" | 1 1/2" |
| WALLS RETAINING FILL     | -      | -      | 2"     |
| WALLS EXPOSED TO WEATHER | -      | -      | 1 1/2" |
| WALLS - ALL OTHERS       | -      | -      | 1"     |

7.UTILITIES SHALL NOT PENETRATE BEAMS OR COLUMNS BUT MAY PASS THROUGH SLABS AND WALLS INDIVIDUALLY. UNO. FOR OPENINGS 24" LONG OR LESS, CUT REINFORCING AND REPLACE ALONGSIDE OPENING WITH SPLICE BARS OF EQUIVALENT AREA WITH 48 BAR DIA. LAP. PREPARE AND SUBMIT SHOP DRAWINGS FOR OPENINGS LONGER THAN 24". FOR RECTANGULAR OPENINGS 12" LONG OR LONGER, ADD 1#6 X 6" MID DEPTH DIAGONAL AT ALL 4 CORNERS.

8.WHERE REINFORCING STEEL CONGESTION PERMITS, CONDUIT AND PIPES UP TO 1" DIAMETER MAY BE EMBEDDED IN CONCRETE PER ACI 318, SECTIONS 20.7 AND 26.8. SPACE AT 3 DIAMETERS O/C. PLACE BETWEEN OUTER LAYERS OF REINFORCING. IF CONDUITS ARE SIGNIFICANTLY CONGESTED, ADDITIONAL REINFORCING PERPENDICULAR TO PIPING MAY BE REQUIRED. REQUESTS TO EMBED LARGER PIPES SHOULD BE ACCOMPANIED BY A DETAILED DESCRIPTION AND BE SUBMITTED TO THE ARCHITECT FOR EVALUATION.

9.PROVIDE 3/4" CHAMFER FOR ALL EXPOSED CORNERS.

10. PROVIDE REINFORCING STEEL PLACER WITH A SET OF STRUCTURAL DRAWINGS FOR FIELD REFERENCE. INSPECT REINFORCING STEEL PLACING FROM STRUCTURAL DRAWINGS.

11. SUBMIT SHOP DRAWINGS FOR ALL CONCRETE MIXES INDICATING CONCRETE STRENGTH, SPECIFICATIONS FOR ADMIXTURES, PROPOSED LOCATIONS OF USE AND AMOUNTS OF MIXING WATER TO BE WITHHELD FOR LATER ADDITION AT PROJECT SITE. DO NOT ADD AIR ENTRAINING ADMIXTURES FOR SLABS ON GRADE.

12. SUBMIT STEEL REINFORCEMENT SHOP DRAWINGS THAT DETAIL FABRICATION, BENDING AND PLACEMENT. INCLUDE BAR SIZES, LENGTHS, SPACING, MATERIAL GRADE, BAR SCHEDULES, BENT BAR DIAGRAMS, BAR ARRANGEMENT, SPLICES AND LAPS, MECHANICAL CONNECTIONS AND SUPPORTS FOR CONCRETE REINFORCEMENT.

13. TEST COMPOSITE SAMPLES OF FRESH CONCRETE OBTAINED ACCORDING TO ASTM C172:

- a. OBTAIN AT LEAST ONE COMPOSITE SAMPLE FOR EACH 100 CU. YD. OR FRACTION THEREOF OF EACH CONCRETE MIXTURE PLACED EACH DAY.
- b. OBTAIN ONE SLUMP TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIXTURE. COMPLY WITH ASTM C143.
- c. CAST AND LABORATORY CURE TWO SETS OF TWO STANDARD SPECIMENS FOR EACH COMPOSITE SAMPLE.
- d. CAST AND FIELD CURE TWO SETS OF TWO STANDARD CYLINDER SPECIMENS FOR EACH COMPOSITE SAMPLE.
- e. TEST ONE LABORATORY-CURED SPECIMEN AT 7 DAYS AND THREE AT 28 DAYS. IF ONE OF THE FIRST TWO 28 DAY TESTS FALLS BELOW SPECIFIED STRENGTH, TEST THE REMAINING SPECIMEN AT 56 DAYS.
- f. WHEN STRENGTH OF FIELD-CURED CYLINDERS IS LESS THAN 85 PERCENT OF COMPANION LABORATORY-CURED CYLINDERS, CONTRACTOR SHALL EVALUATE OPERATIONS AND PROVIDE CORRECTIVE PROCEDURES FOR PROTECTING AND CURING IN-PLACE CONCRETE.
- g. TEST RESULTS SHALL BE REPORTED IN WRITING TO ARCHITECT, CONCRETE MANUFACTURER, AND CONTRACTOR WITHIN 48 HOURS OF TESTING.

| R E V I S I O N S |    |             |      |    |             |      |    |
|-------------------|----|-------------|------|----|-------------|------|----|
| DATE              | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|                   |    |             |      |    |             |      |    |



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|                | NAME | DATE     |            | NAME | DATE     |
|----------------|------|----------|------------|------|----------|
| DESIGNED BY    | PG   | 09/27/21 | DRAWN BY   | SB   | 09/27/21 |
| CHECKED BY     | PG   | 09/27/21 | CHECKED BY | PG   | 09/27/21 |
| SUPERVISED BY: | PG   |          |            |      |          |

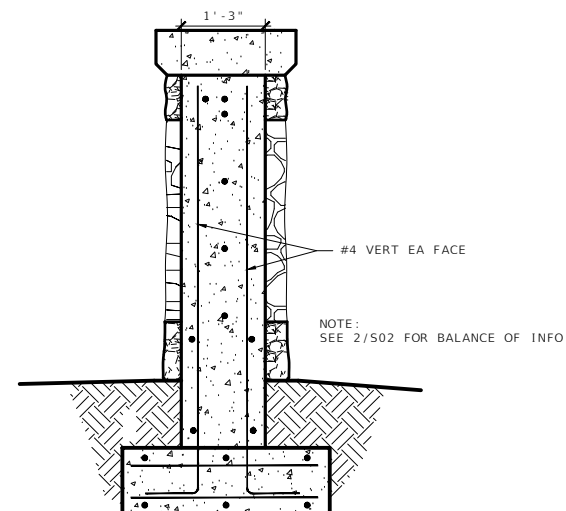
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|----------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------|
| MIAMI-DADE<br>COUNTY |  | DEPARTMENT OF TRANSPORTATION<br>AND PUBLIC WORKS<br>HIGHWAY DIVISION<br>STEPHEN P. CLARK CENTER<br>111 NW 1 ST.<br>MIAMI, FLORIDA 33128 |
|                      |  |                                                                                                                                         |

STRUCTURAL DETAILS





- NOTES:
1. THICKNESS OF MORTAR VARIES DUE TO SIZE OF ROCKS. MORTAR SHOULD BE STRUCK AND SHALL BE NO MORE THAN 1" AND NO LESS THAN 1/2".
  2. ROCK SIZES SHALL VARY AND BE NO MORE THAN 18" AND NO LESS THAN 4" (MAXIMUM DIMENSIONS).
  3. CONTRACTOR TO COORDINATE THIS WORK WITH ELECTRICAL & TELEPHONE PROVISIONS AS SHOWN ON ELECTRICAL LIGHTING PLANS.



3 MESSAGE BOARD SECTION AT ENDS  
SCALE: 3/4" = 1'-0"

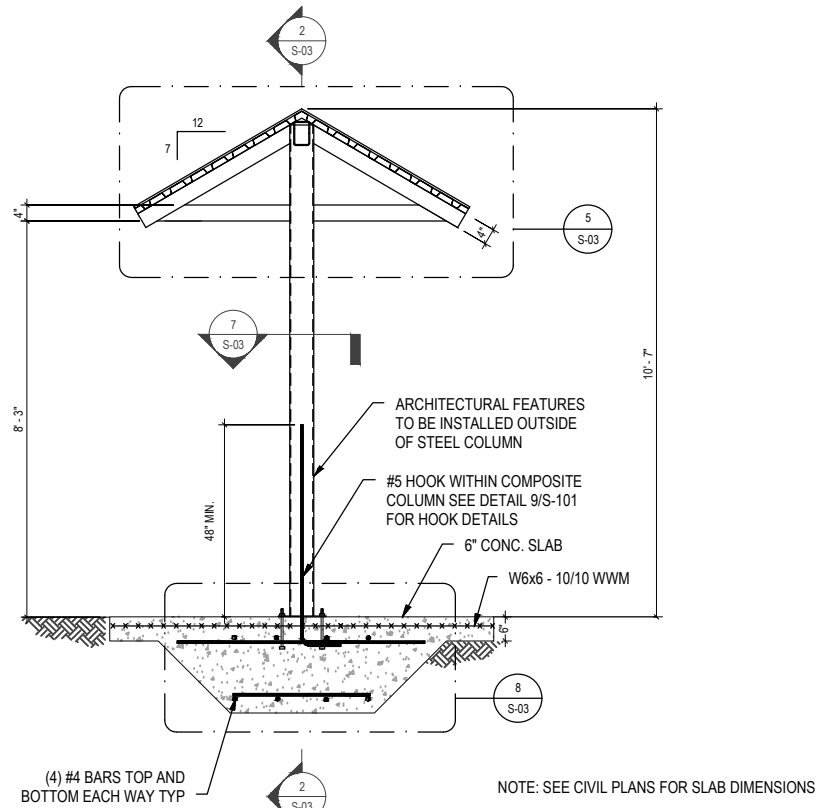
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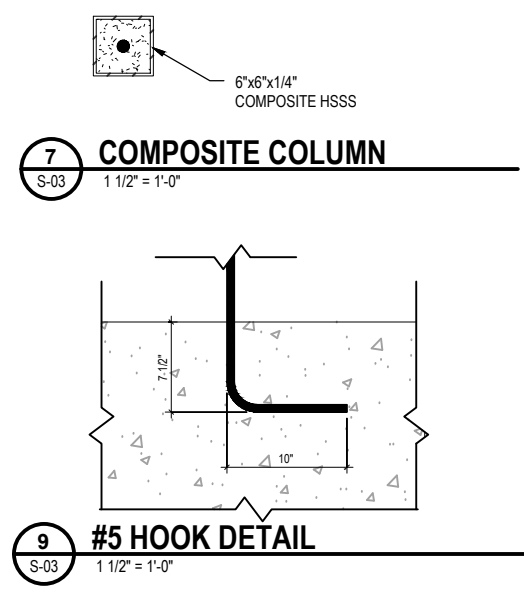
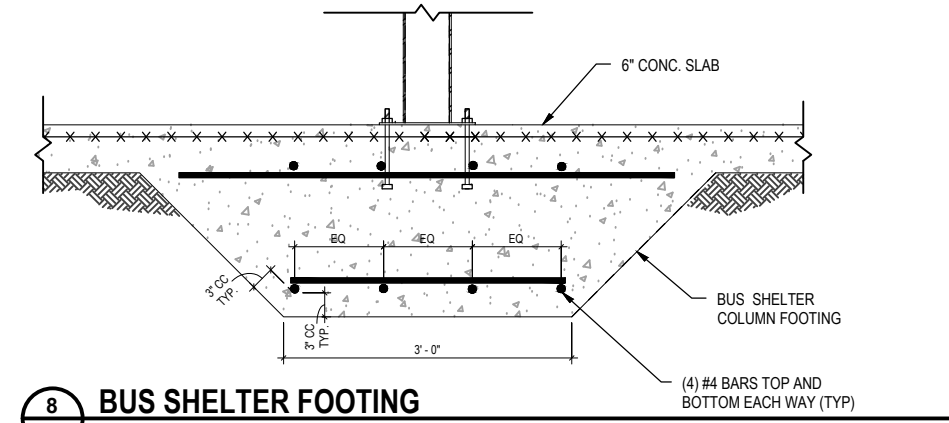
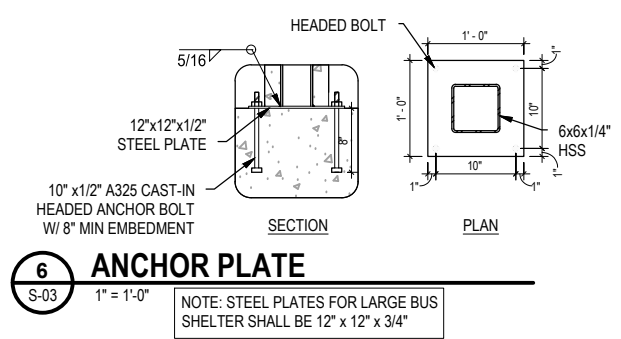
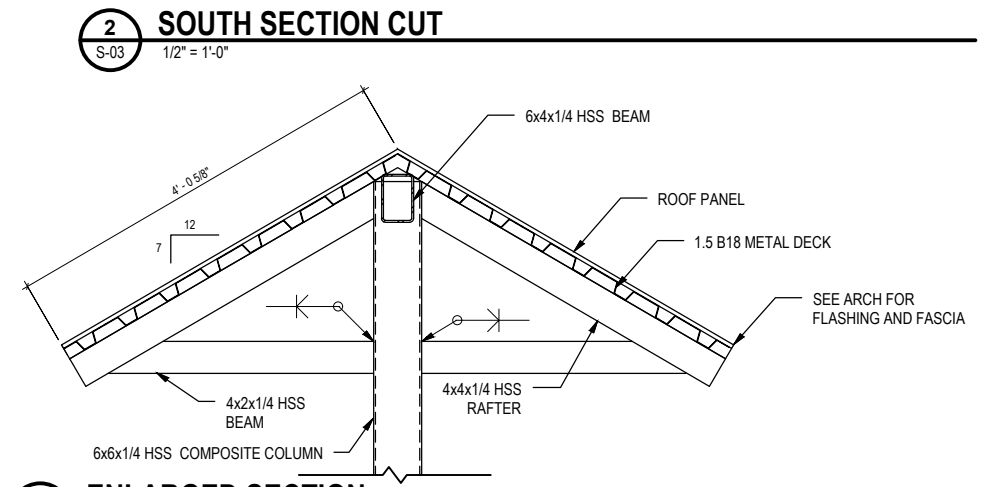
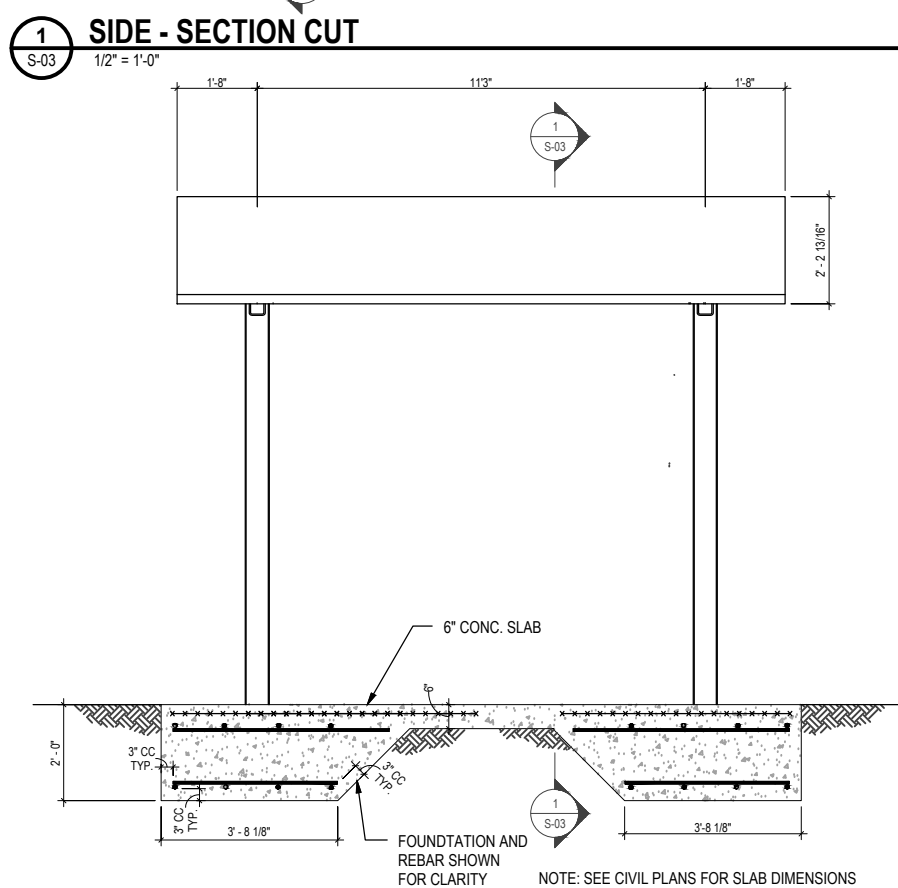
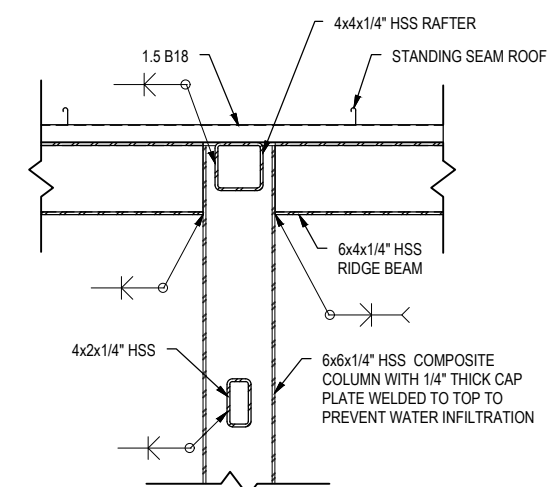
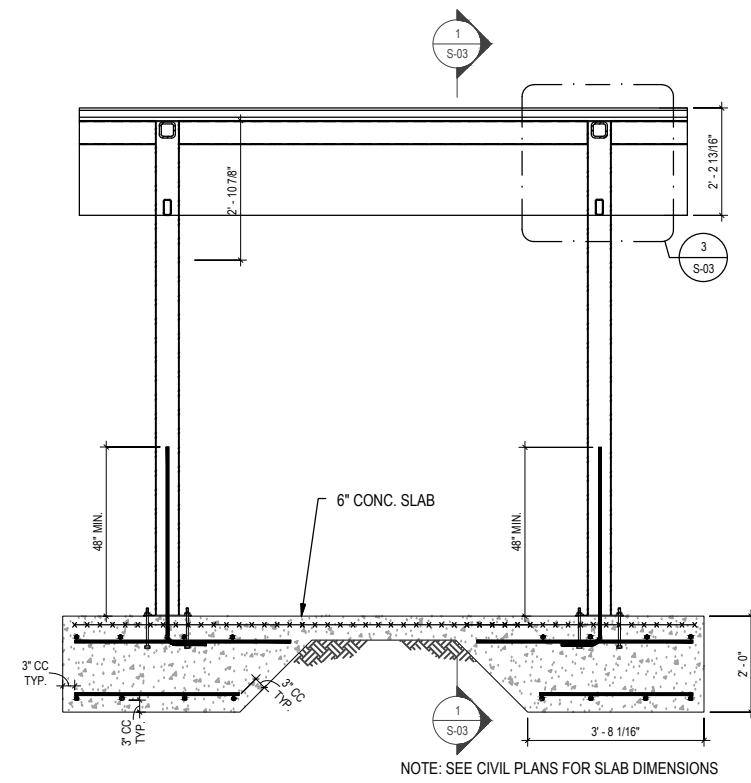
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|-------------------|------|----------|------------|------|----------|
|                   | NAME | DATE     |            | NAME | DATE     |
| DESIGNED BY       | PG   | 09/27/21 | DRAWN BY   | SB   | 09/27/21 |
| CHECKED BY        | PG   | 09/27/21 | CHECKED BY | PG   | 09/27/21 |
| SUPERVISED BY: PG |      |          |            |      |          |



## STRUCTURAL DETAILS



NOTE: CONCRETE SLAB / SIDEWALK  
AND FOOTING SHALL BE POURED  
MONOLITHICALLY



| REVISIONS |    |             |      |    |             |      |    |
|-----------|----|-------------|------|----|-------------|------|----|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|           |    |             |      |    |             |      |    |



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| DESIGNED BY | CHECKED BY | NAME | DATE | DRAWN BY | CHECKED BY | NAME | DATE |
|-------------|------------|------|------|----------|------------|------|------|
|             |            |      |      |          |            |      |      |



STRUCTURAL DETAILS

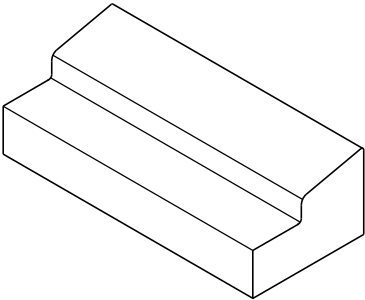


GENERAL NOTES:

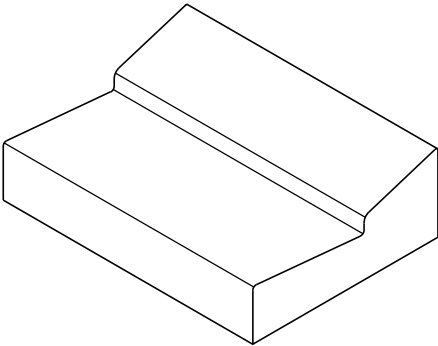
1. For curb, gutter and curb & gutter provide 1/8" - 1/4" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers.
2. Locate expansion joints for curb, gutter and curb & gutter in accordance with Specification 520.

TABLE OF CONTENTS:

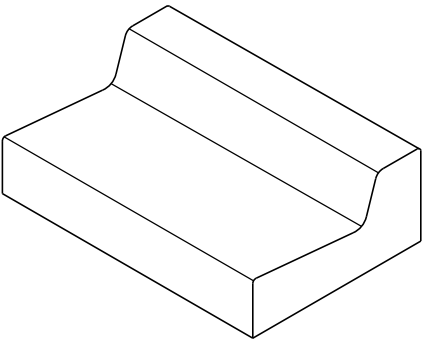
| Sheet | Description                                                                            |
|-------|----------------------------------------------------------------------------------------|
| 1     | General Notes and Contents                                                             |
| 2     | Concrete Curb and Gutter                                                               |
| 3     | Curb and Gutter Joints and Endings, Concrete Bumper Guard, and Asphaltic Concrete Curb |



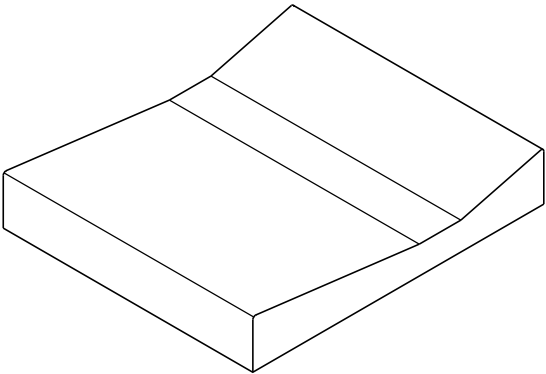
TYPE A



TYPE E

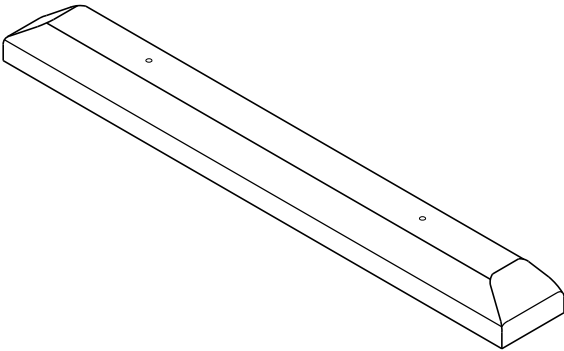


TYPE F



SHOULDER GUTTER

===== TYPE A, TYPE E, TYPE F, AND SHOULDER GUTTER =====  
(Other Types Similar)



===== CONCRETE BUMPER GUARD =====

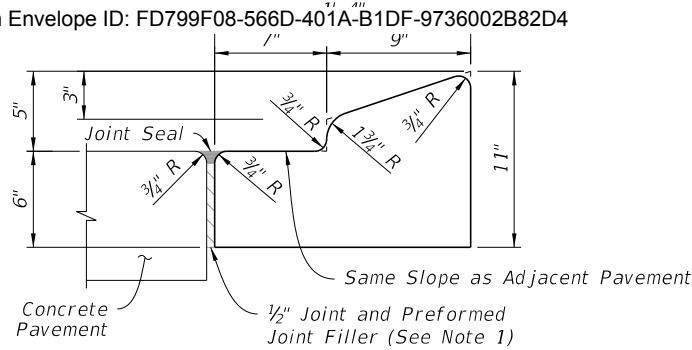


FY 2022-23  
STANDARD PLANS

CURB AND GUTTER

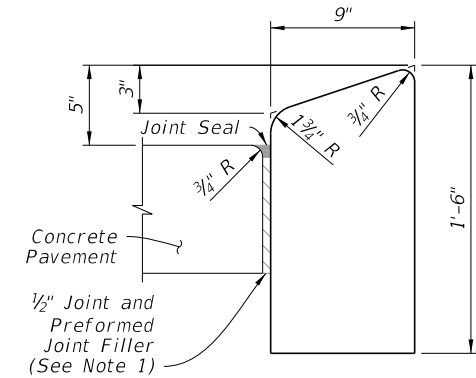
INDEX  
520-001

SHEET  
1 of 3



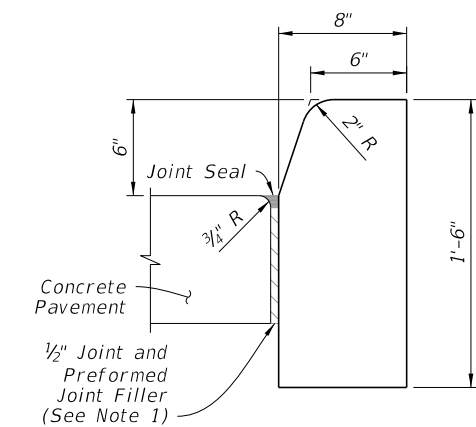
NOTE: For use adjacent to concrete or flexible pavement, concrete shown (See Note 4).

TYPE A



NOTE: For use adjacent to concrete or flexible pavement, concrete shown.

TYPE B

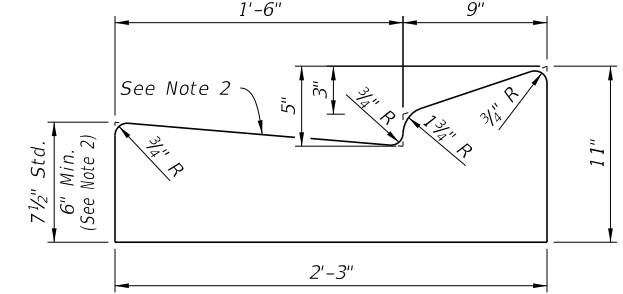


NOTE: For use adjacent to concrete or flexible pavement, concrete shown.

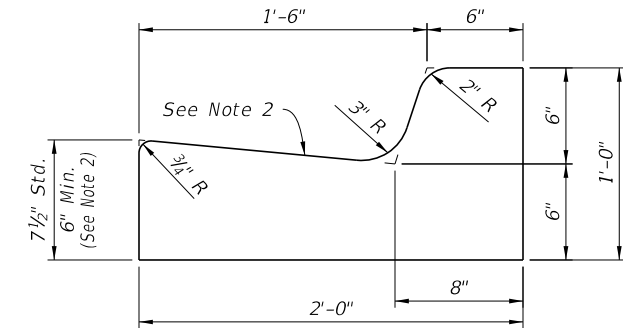
TYPE D

NOTES:

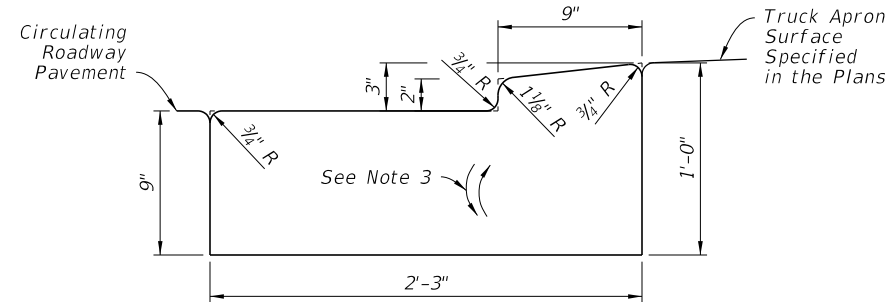
1. For Type A, Type B, and Type D Curb: Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 3.
2. For Type E, Type F, Drop Curb, and Valley Gutter: When used on high side of roadways, match the cross slope of the gutter to the cross slope of the adjacent pavement. The thickness of the lip is 6", unless otherwise shown on Plans.
3. For Type RA, rotate entire section so that gutter cross slope matches slope of adjacent circulating roadway pavement.
4. For details depicting usage of Type A Curb adjacent to flexible pavement see Sheet 3.



TYPE E

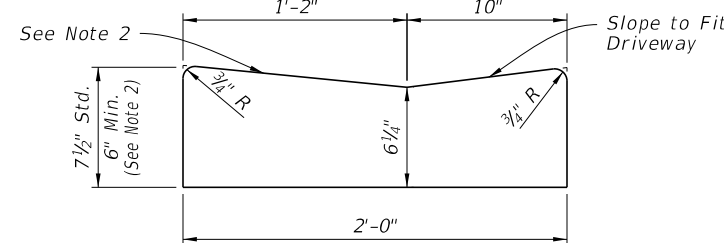


TYPE F

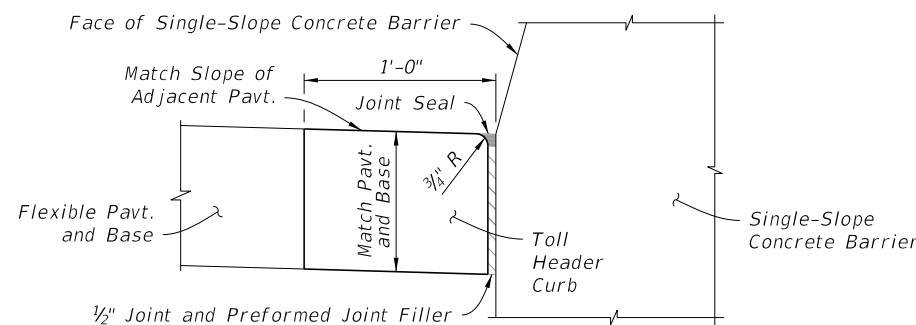


NOTE: Traffic Bearing Sections for use in Roundabout Central Island Construction.

TYPE RA

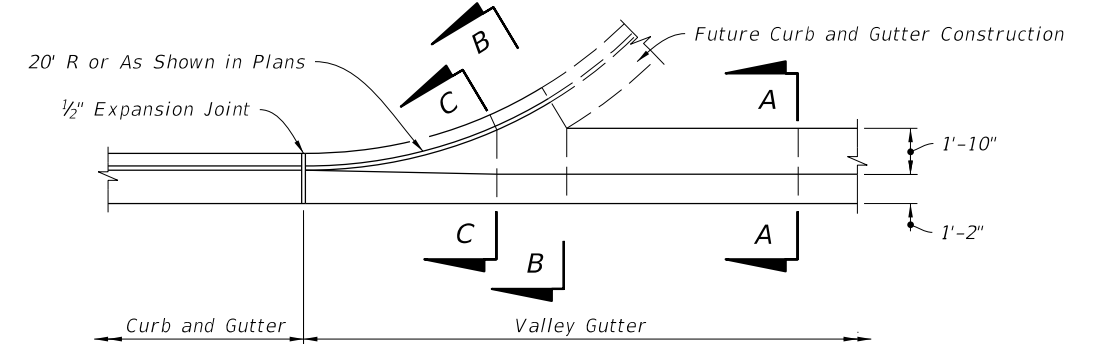


DROP CURB

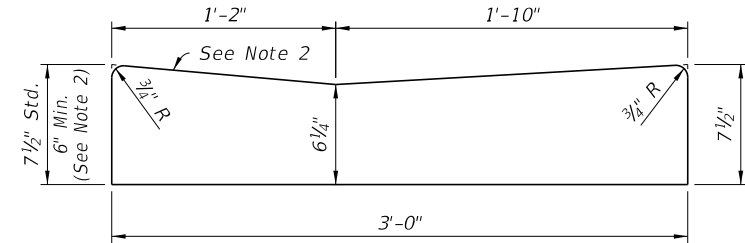


NOTE: See the toll site details for conduit requirements.

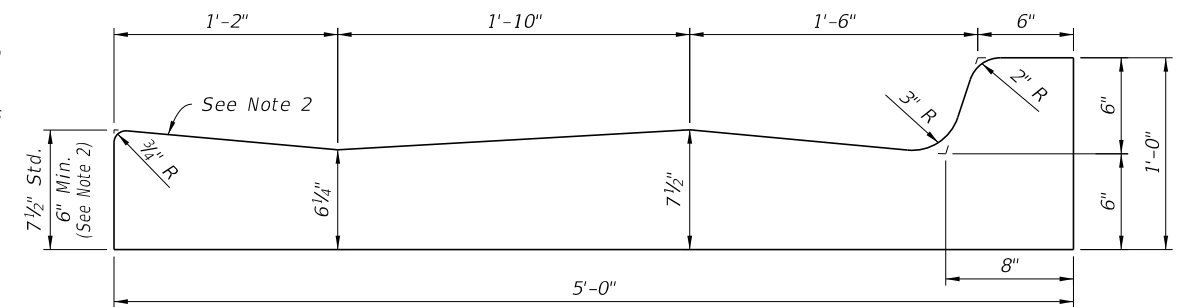
TOLL HEADER CURB



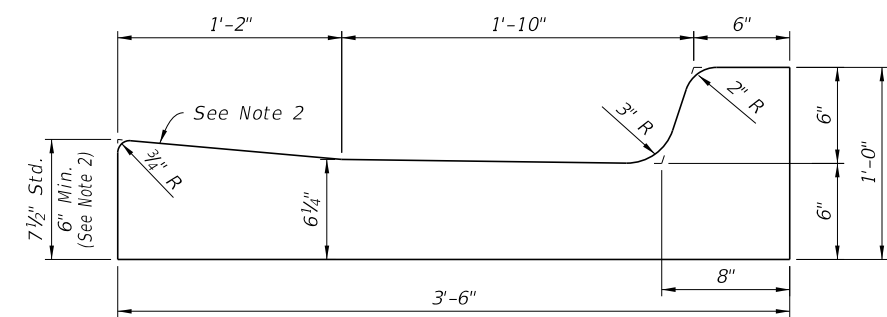
PLAN VIEW



SECTION A-A

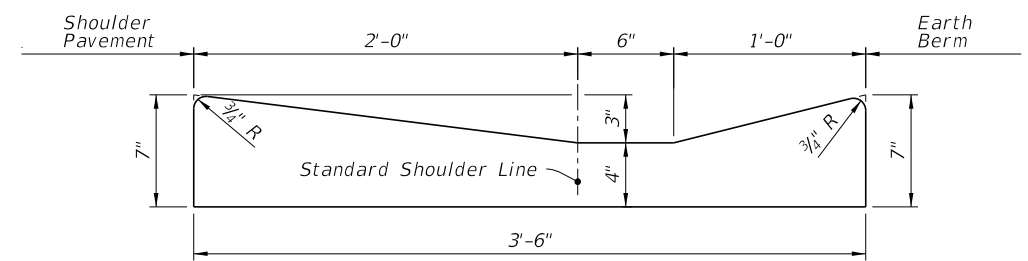


SECTION B-B



SECTION C-C

VALLEY GUTTER



SHOULDER GUTTER

CONCRETE CURB AND GUTTER



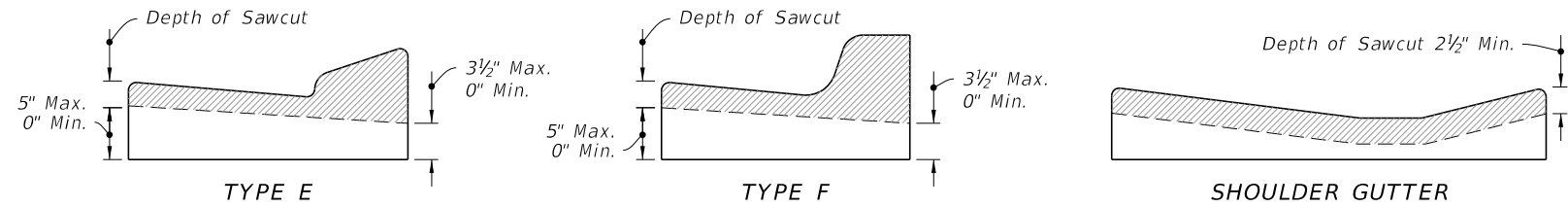
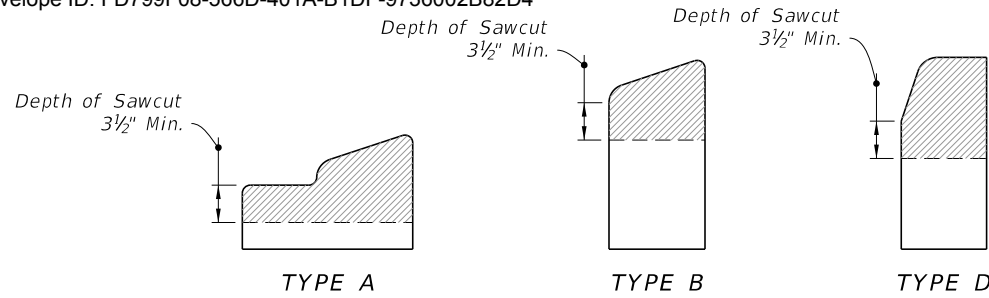
FY 2022-23  
STANDARD PLANS

CURB AND GUTTER

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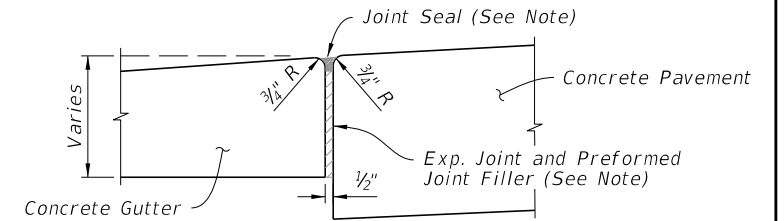
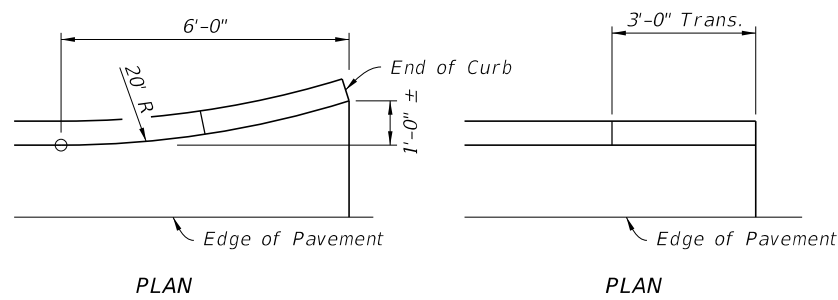
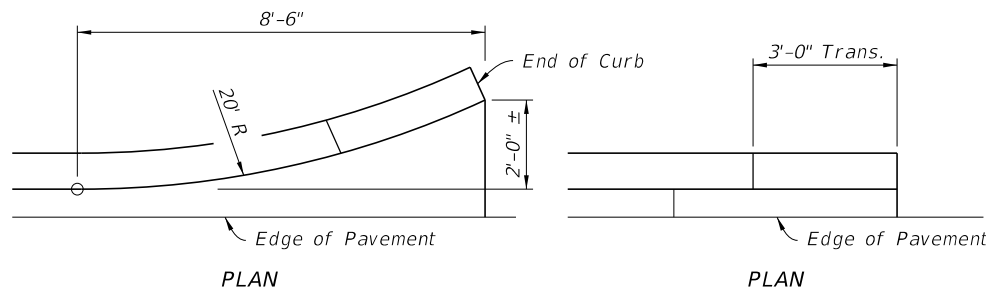




NOTE: Sawcuts should be avoided within valley gutter and within curb and gutter endings.

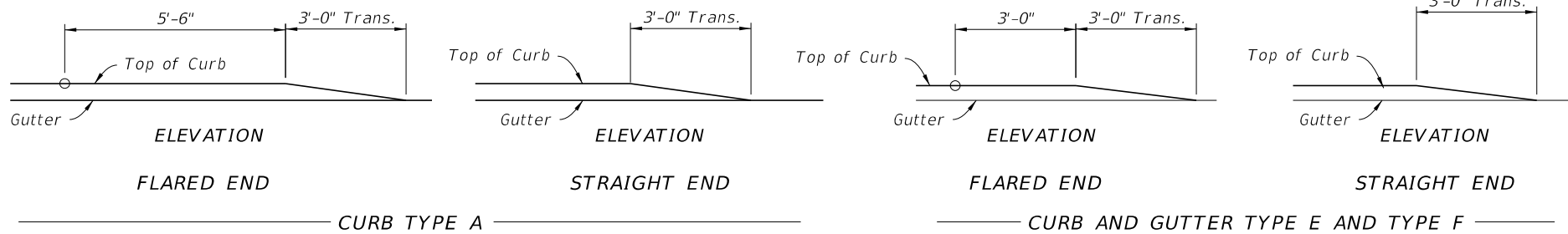
CONTRACTION JOINTS IN CURB

CONTRACTION JOINTS IN CURB & GUTTER



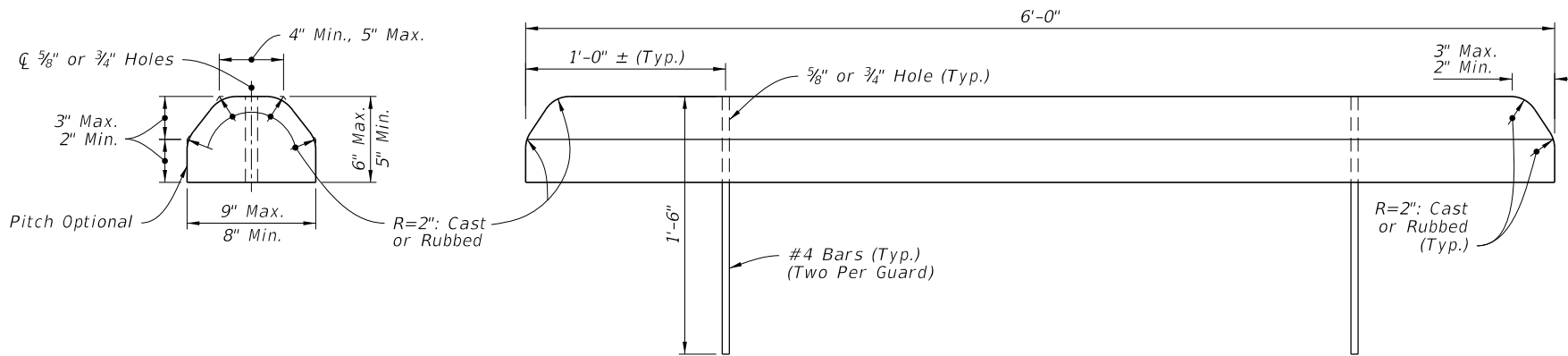
NOTE: Joint Seal application applies to both high and low sides of pavement, low side shown.

EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT

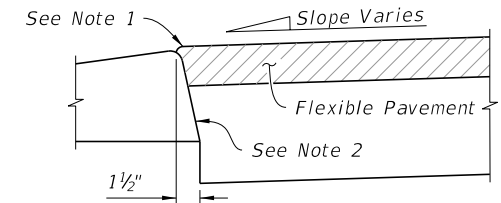


NOTE: Ends of Type B and D Curb transition from full to zero heights in 3 ft.

CURB AND CURB & GUTTER ENDINGS



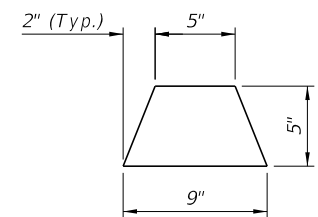
CONCRETE BUMPER GUARD



NOTES:

1. Surface on Low Side of Pavement to be 1/4" Above Lip of Gutter. Surface on High Side to be Flush With Lip of Curb or Curb & Gutter.
2. Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT



ASPHALTIC CONCRETE CURB

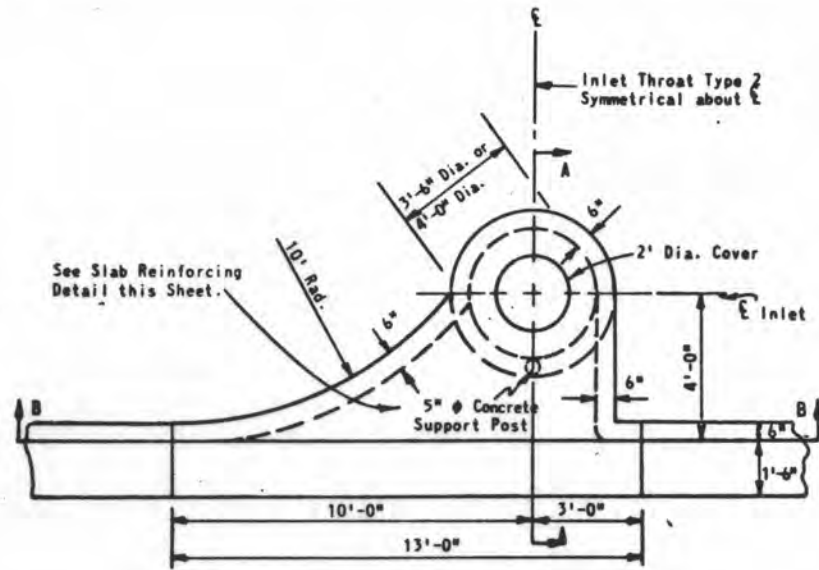
CURB AND GUTTER JOINTS AND ENDINGS, CONCRETE BUMPER GUARD, AND ASPHALTIC CONCRETE CURB

| LAST REVISION | DESCRIPTION: | FY 2022-23 STANDARD PLANS | CURB AND GUTTER | INDEX   | SHEET  |
|---------------|--------------|---------------------------|-----------------|---------|--------|
| 11/01/21      |              |                           |                 | 520-001 | 3 of 3 |

|          |      |             |             |           |
|----------|------|-------------|-------------|-----------|
| FILE NO. | DATE | PROJECT NO. | FISCAL YEAR | SHEET NO. |
| B        | PLA. |             |             |           |

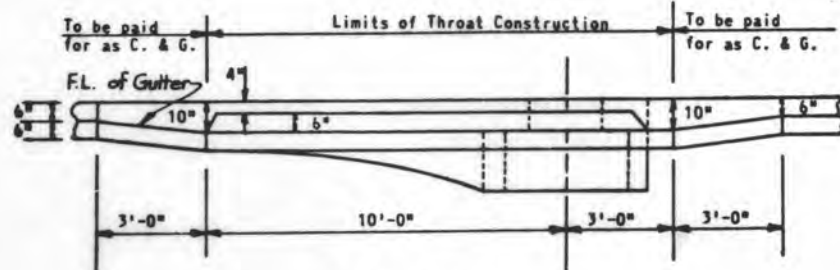
GENERAL NOTES

1. The finished grade and slope of the inlet tops are to conform with the finished cross slope and grade of the proposed sidewalk and/or parkway.
2. When inlets are to be constructed on a curve, refer to the plans to determine the radius and, where necessary, modify the inlet details accordingly. Bend steel when necessary.
3. All steel in throats shall have 1 1/4" minimum cover unless otherwise shown. Inlet throats shall be either cast-in-place or precast concrete.
4. The rear wall portion of throat Types 1, 2, 3 & 4 may be constructed with brick. Dowels to top slab required.
5. Only round concrete support post will be acceptable.
6. For supplemental details see index no. DSD-01.
7. These inlet throats were designed for use with std. curb & gutter and Type E curb. Locate outside of pedestrian cross traffic if possible.
8. For 5' sidewalks the contractor must utilize a 3'-6", See modifications and dimensions listed below.

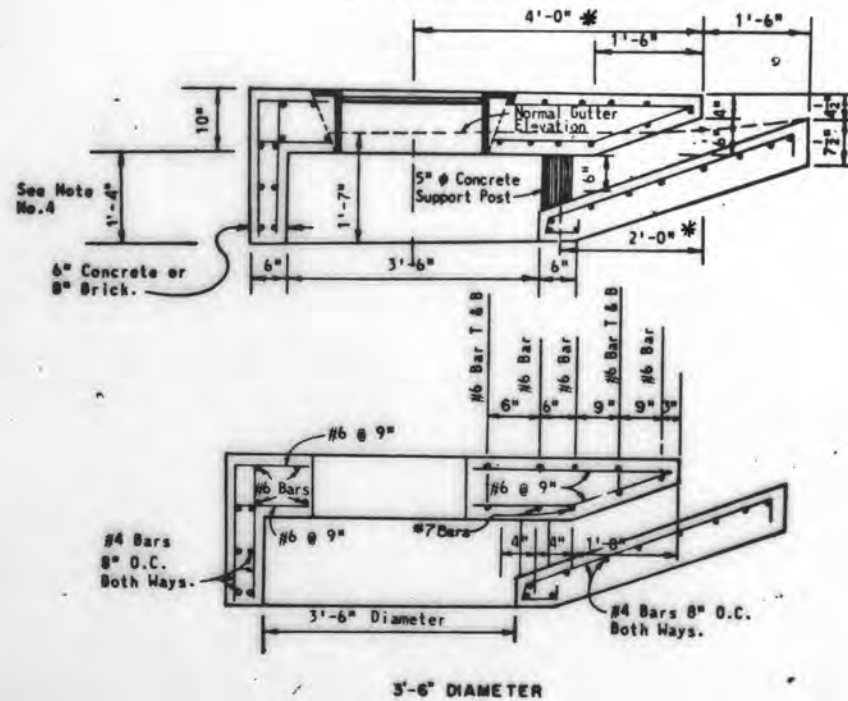


INLET THROAT TYPE 1

Inlet Throat Type 2  
Symmetrical about E

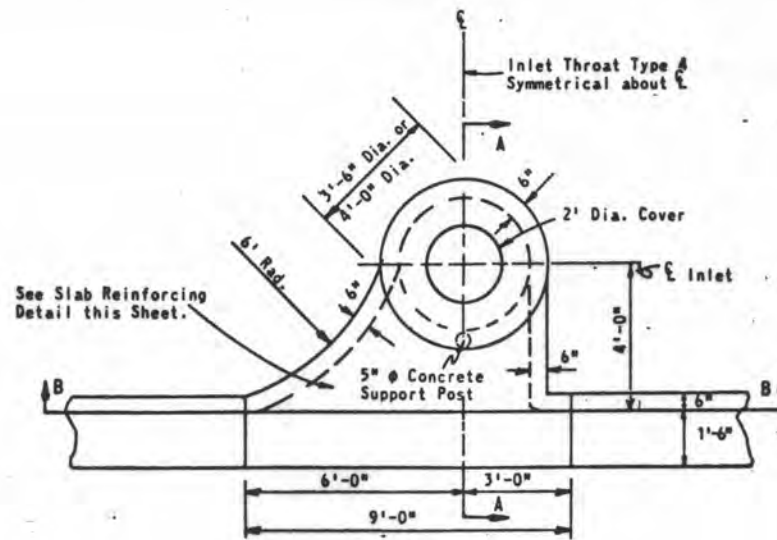


SECTION B-B



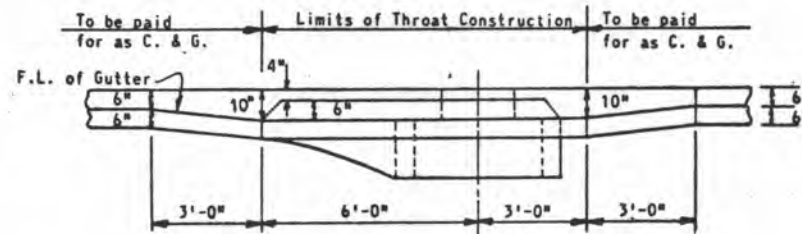
3'-6" DIAMETER

\* For 5' Sidewalks change 4'-0" to 3'-3" and 2'-0" to 1'-3"

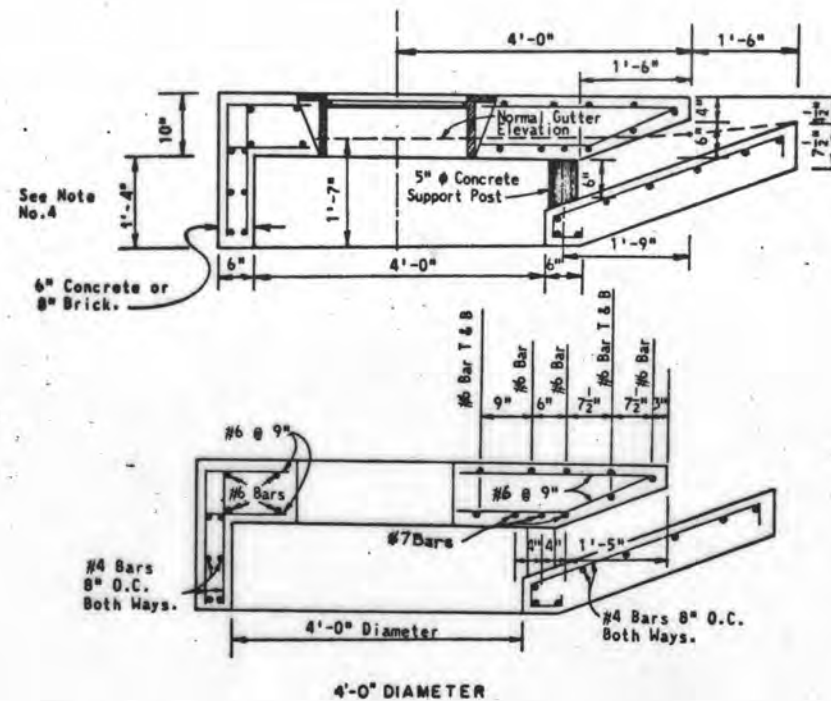


INLET THROAT TYPE 3

Inlet Throat Type 3  
Symmetrical about E

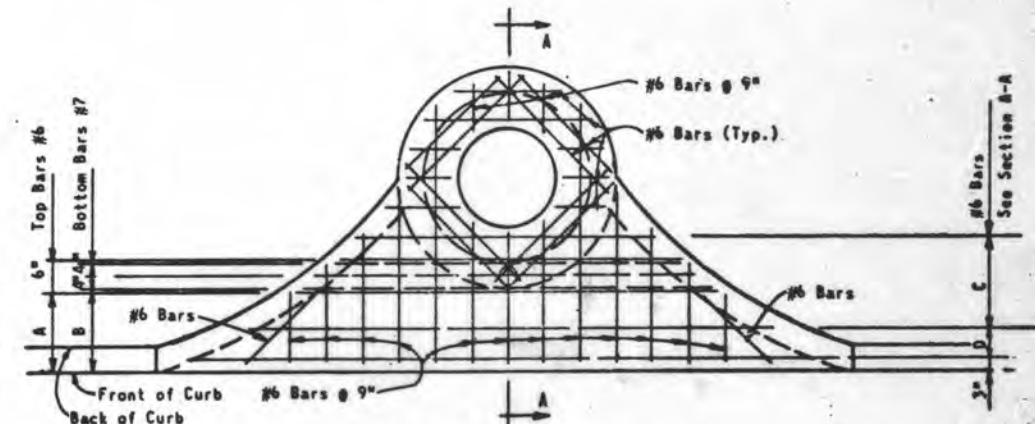
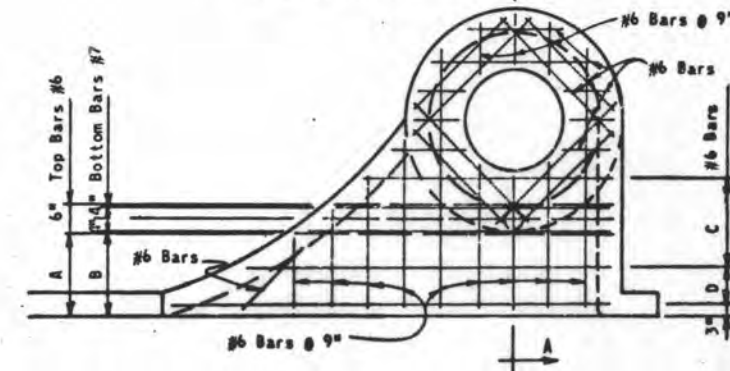


SECTION B-B



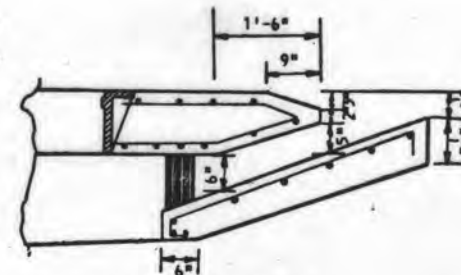
4'-0" DIAMETER

SECTION A-A FOR INLETS TYPE 1, 2, 3 & 4



| TABLE OF VARIABLE DIMENSIONS |       |            |
|------------------------------|-------|------------|
| DIMENSION                    | 3'-6" | 4'-0"      |
| A                            | 1'-9" | 1'-6"      |
| B                            | 1'-8" | 1'-5"      |
| C                            | 1'-8" | 1'-10 1/2" |
| D                            | 9"    | 7 1/2"     |

SLAB REINFORCING DETAILS  
INLETS 1, 2, 3 & 4



INLET TOP MODIFICATION  
FOR TYPE "E" CURB

FHWA Approved: 5-1-75

DADE COUNTY PUBLIC WORKS DEPARTMENT  
HIGHWAY DIVISION

DCI-01

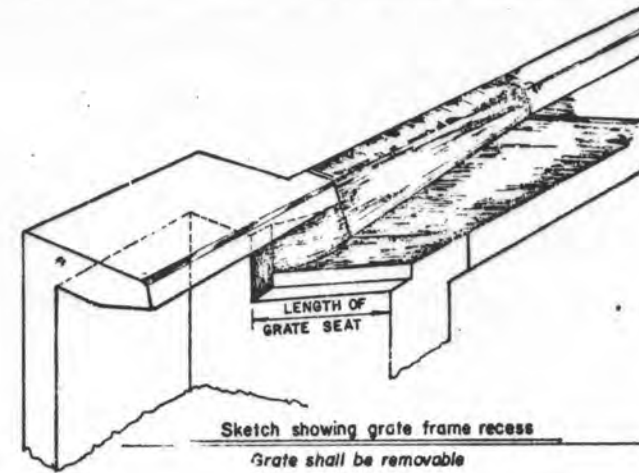
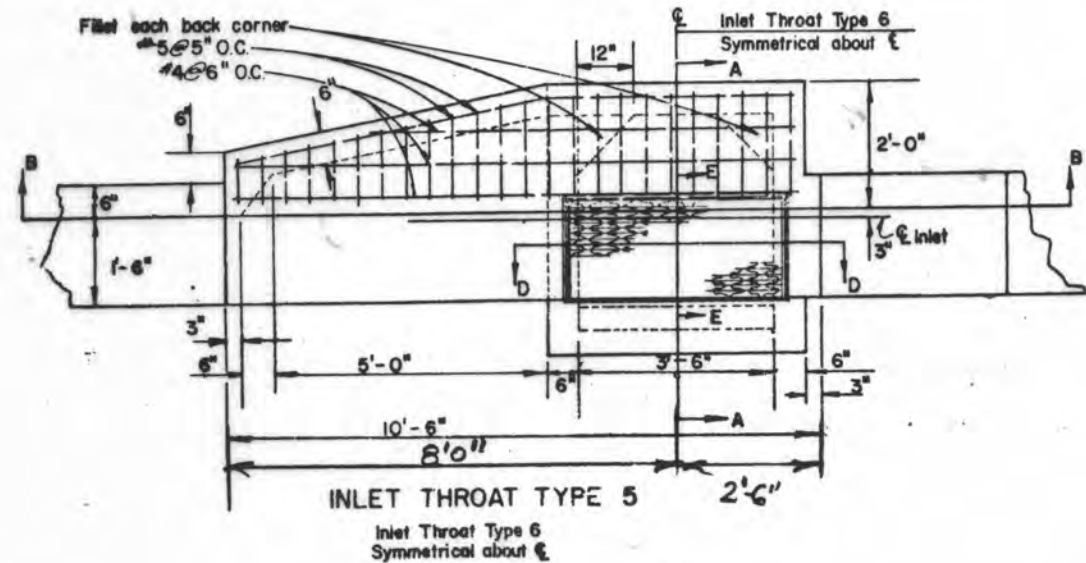
CURB INLET  
TYPES 1, 2, 3 & 4

REVISIONS

| Date | Description             |
|------|-------------------------|
| 5-74 | Redrawn-Clg's Index 601 |

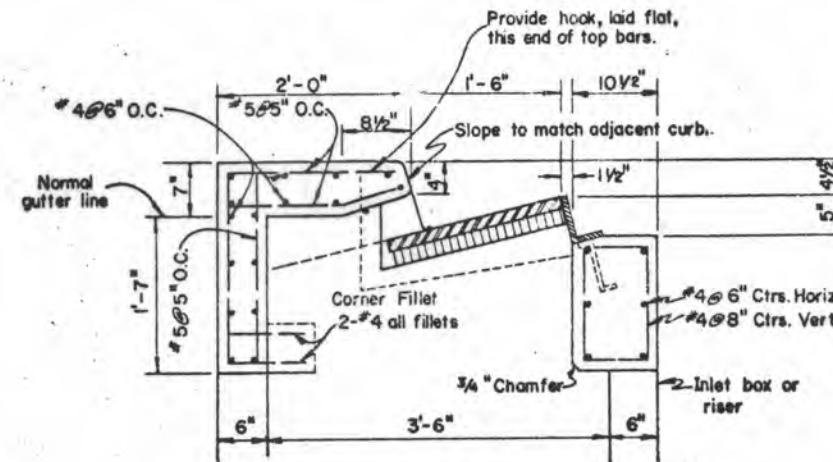
| DESIGN | DRAWN | CHECK | PROPOSED | SUBMITTED | RECOMMENDED | APPROVED |
|--------|-------|-------|----------|-----------|-------------|----------|
|        |       |       |          |           |             |          |
| DATE   | PROJ  | ENG   | ENGR     | DIR       |             |          |



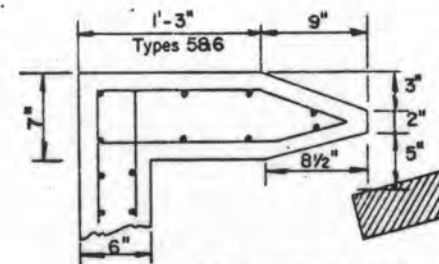


GENERAL NOTES:

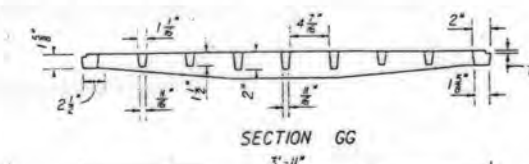
1. The finished grade and slope of the inlet tops are to conform with the finished cross slope and grade of the proposed sidewalk and/or parkway.
2. When inlets are to be constructed on a curve, refer to the plans to determine the radius and, where necessary, modify the inlet details accordingly. Bend steel when necessary.
3. All steel in throats shall have 1/4" minimum cover unless otherwise shown. Inlet throats shall be either cast-in-place or precast concrete.
4. The corner fillets shown for rectangular throats (Type 5&6) are necessary only when throats are to be used in conjunction with circular inlet boxes or when used on skew with rectangular inlet boxes.
5. See Index DSD-A for means of locking grate or cover to inlet.
6. These inlet throats were designed for use with std. curb & gutter and Type E curb. Locate outside of pedestrian cross traffic if possible.



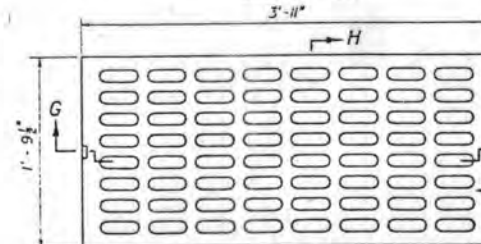
SECTION "A-A"



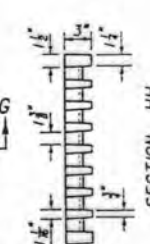
INLET TOP MODIFICATION FOR TYPE "E" CURB



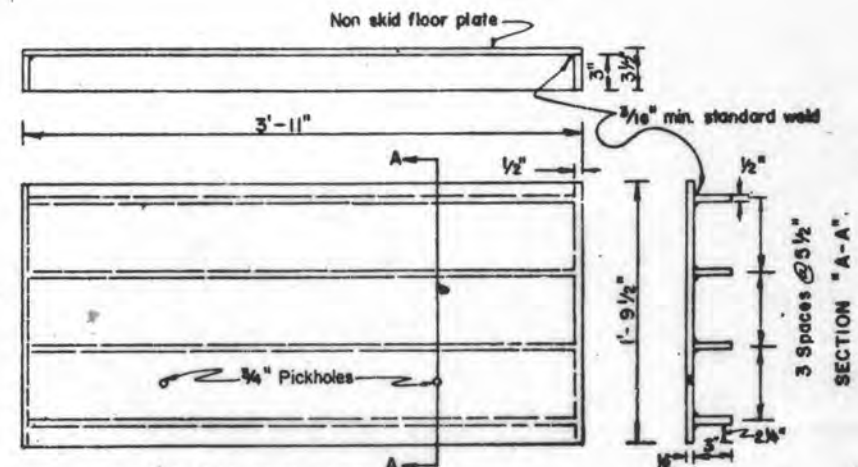
SECTION GG



TOP VIEW



SECTION HH

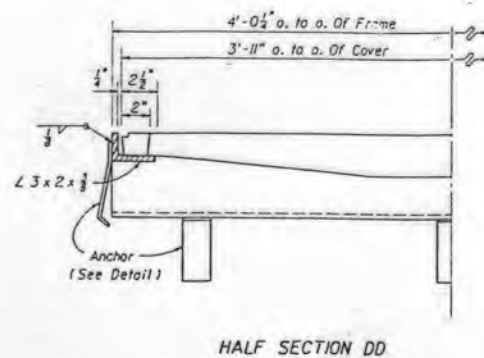
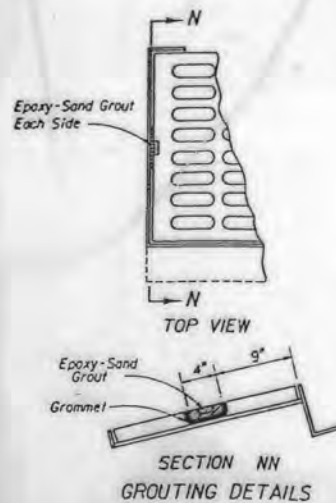


Alternate "G" - Solid, galvanized steel cover for Type 5&6 inlets. Cover to be hot dip galvanized after fabrication. To be used where specified on the plans.

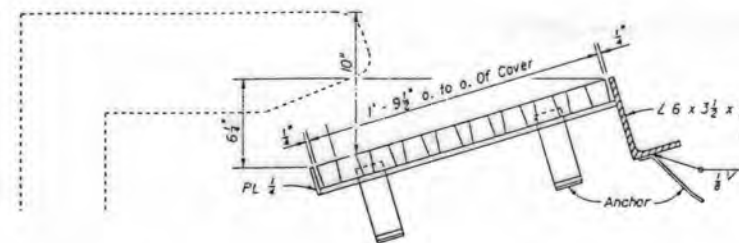
Franjo Road Roadway Improvements Project

ITB #23-10

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HALF SECTION DD



SECTION EE

CAST IRON COVER

FHWA Approved: 5-1-75

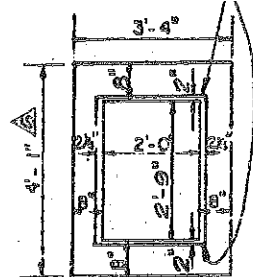
DADE COUNTY PUBLIC WORKS DEPARTMENT  
HIGHWAY DIVISION

DESIGN  
DRAWN  
CHECK  
PROPOSED  
DCI - 02  
CURB INLET  
TYPES "5" & "6"

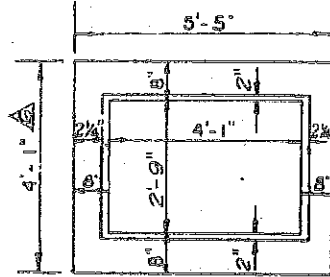
REVISIONS

| Date | Description              |
|------|--------------------------|
| 5-74 | Redrawn - Check Index NA |

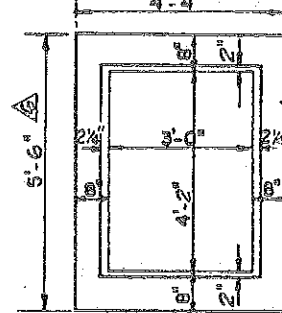
| SUBMITTED | RECOMMENDED | APPROVED     |
|-----------|-------------|--------------|
| DATE      | PROJ.       | SHEET 1 OF 1 |



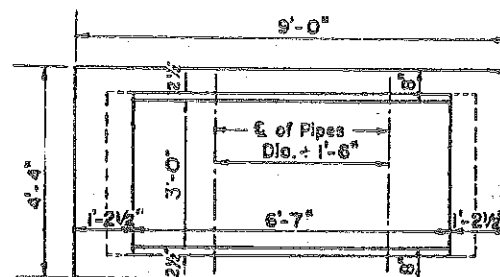
PLAN



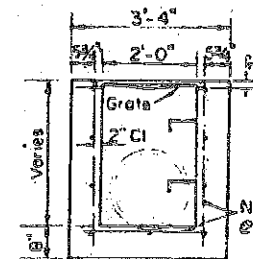
PLAN



PLAN

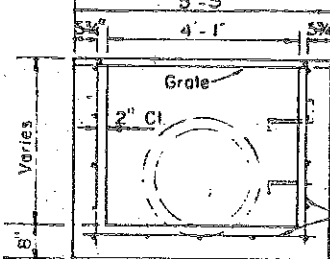


PLAN



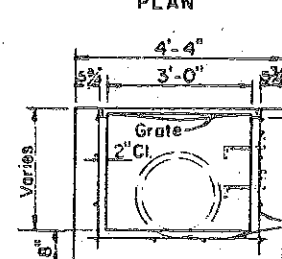
SECTION

2'-0" X 2'-9" TYPE C



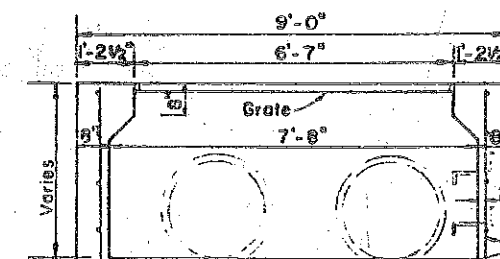
SECTION

4'-1" X 2'-9" TYPE D



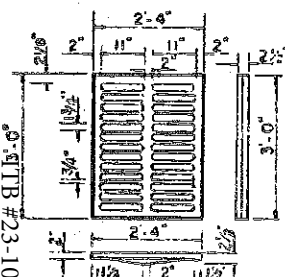
SECTION

3'-0" X 4'-2" TYPE E



SECTION

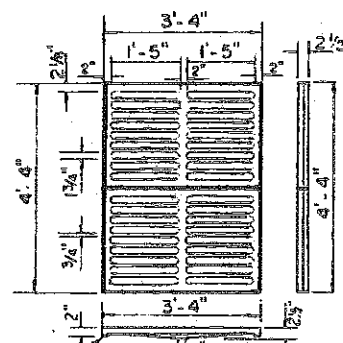
3'-0" X 7'-8" TYPE H



TYPE C

Approx. Weight 235 Lbs

NOTE  
Type D Inlet to be used only when openings are required in wide side of Inlet. Cast iron Grate not permitted.

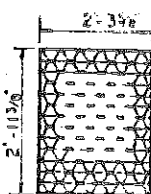


TYPE E

Approx. Weight 465 Lbs.

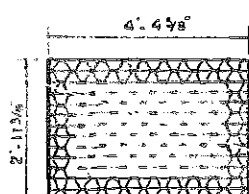
For detail of Grate see lower right

### DETAILS OF CAST IRON GRATING



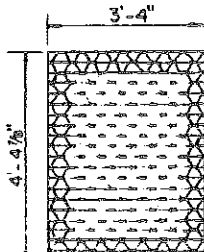
TYPE C

Straight Bars 2" X 3/16"  
Reticuline Bars 1 1/4" X 3/16"  
Approx. Weight 100 Lbs



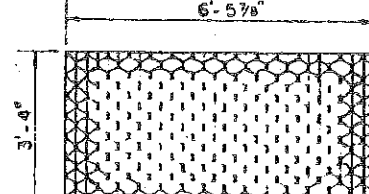
TYPE D

Straight Bars 2" X 3/16"  
Reticuline Bars 1 1/4" X 3/16"  
Approx. Weight 180 Lbs



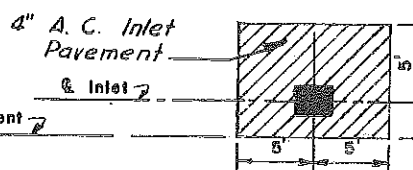
TYPE E

Straight Bars 2" X 3/16"  
Reticuline Bars 1 1/4" X 3/16"  
Approx. Weight 215 Lbs



TYPE H

Straight Bars 2" X 3/16"  
Reticuline Bars 1 1/4" X 3/16"  
Approx. Weight 315 Lbs

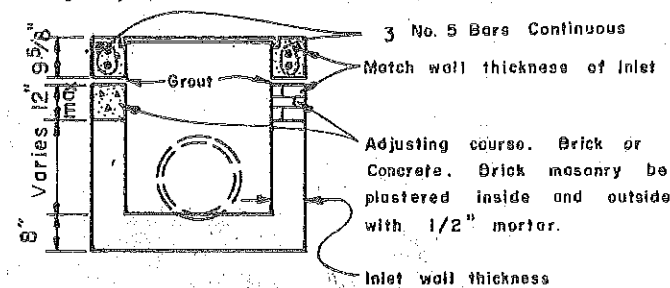


DETAILS OF INLET PAVING

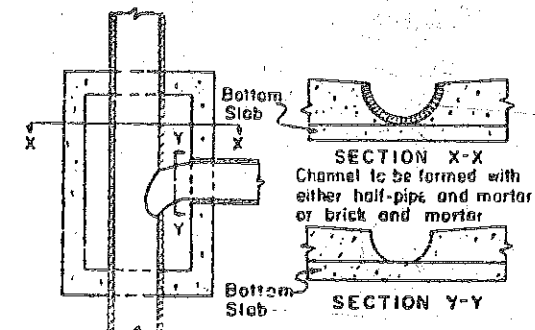
All Inlet Pavement to 11 S.Y. unless otherwise noted in plan.

NOTE: The Contractor has the option of using this collar detail in constructing any of the inlets shown on this sheet.

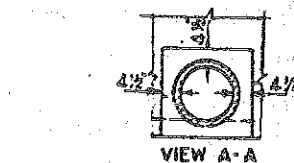
SHEET 64 OF 100



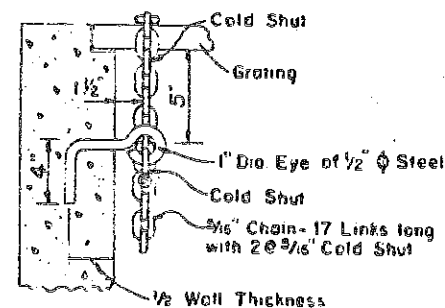
DETAIL OF INLET COLLAR



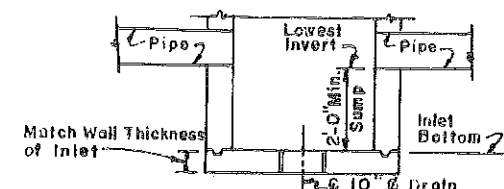
DETAIL OF BOTTOM CONSTRUCTION WHEN INLET SERVES AS MANHOLE



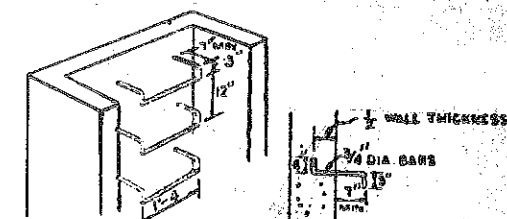
DETAIL PIPE COLLAR FOR USE WHEN PIPE MEETS BOX AT ANGLE



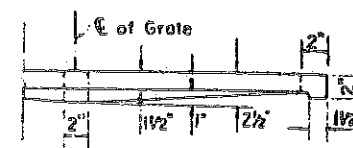
DETAIL OF EYE BOLT AND CHAIN FOR LOCKING GRATES TO INLETS



DETAIL OF SUMP MODIFICATION Use only when specified on Plans



DETAIL OF LADDER BARS Use for box heights over 4'-0"



HALF SECTION DETAIL OF CAST IRON GRATES

NOTE: Cast iron grates shall be used unless otherwise noted and shall be chain locked to inlet.

### DETAILS OF STEEL GRATING

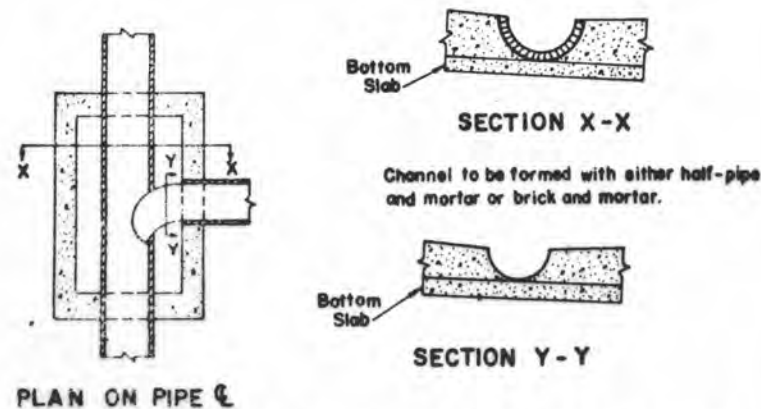
### GENERAL NOTES:

BEVELED EDGES: All exposed corners and edges to be chamfered 3/4"  
FOUNDATION MATERIAL: Where material unsatisfactory for foundation is encountered at FL. EL. cut floor and carry walls down to satisfactory foundation. Backfill to FL. with clear sand.  
CAST IRON: In accordance with Florida State Road Department Specifications  
STEEL DECKING: Manufactured by Borden, Florida Steel, Irving, Reliance, Groulich, (or Equal).

| REVISION | DATE | DESCRIPTION | BY | REVISION | DATE | DESCRIPTION | BY |
|----------|------|-------------|----|----------|------|-------------|----|
|          |      |             |    |          |      |             |    |
|          |      |             |    |          |      |             |    |
|          |      |             |    |          |      |             |    |
|          |      |             |    |          |      |             |    |

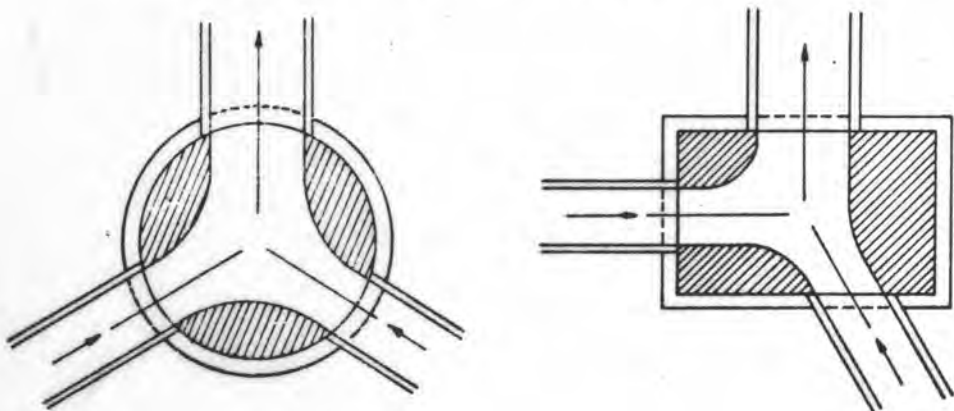
|                                     |                                                    |
|-------------------------------------|----------------------------------------------------|
| DADE COUNTY PUBLIC WORKS DEPARTMENT |                                                    |
| HIGHWAY DIVISION 20                 |                                                    |
| DESIGN<br>S.R.D.                    | STANDARD DITCH BOTTOM<br>INLETS, TYPE C, D, E, & H |
| DRAWN                               |                                                    |
| CHECK                               |                                                    |
| APPROVED                            |                                                    |
| DDI - 03                            |                                                    |
| DATE 3-66                           |                                                    |
| SHEET 64 OF 100                     |                                                    |





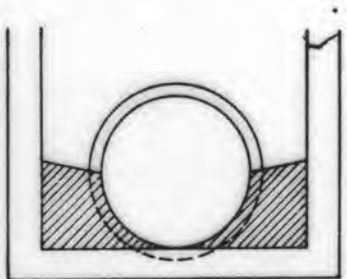
DETAIL OF BOTTOM CONSTRUCTION  
WHEN INLET SERVES AS MANHOLE

GENERAL NOTE:  
Mortar used to seal the pipe into the walls of precast units will be of such a mix that shrinkage will not cause leakage into or out of the units. Maximum opening for pipe shall be the O.D. of the pipe required plus 6".

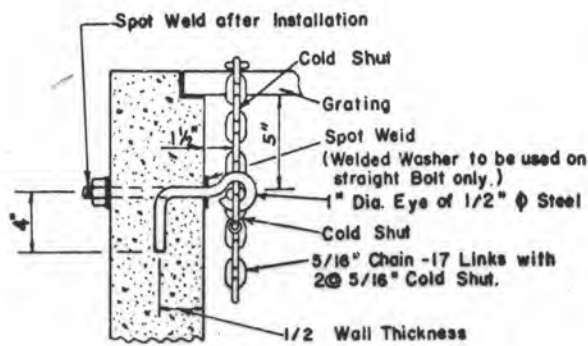


DETAIL OF CHANNELIZATION

Note: Channelization required at all drainage structures with two or more pipes.

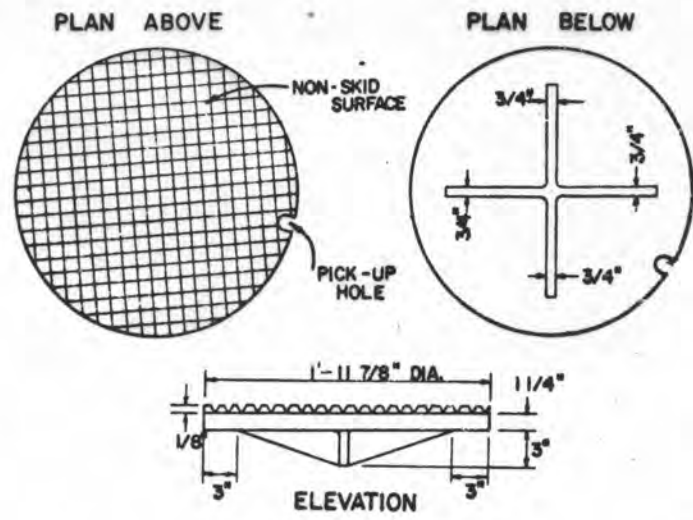


Smooth flow channels composed of concrete, or brick and mortar shall be constructed in the bottoms of all structures to a depth equal to half the diameter of the largest pipe.

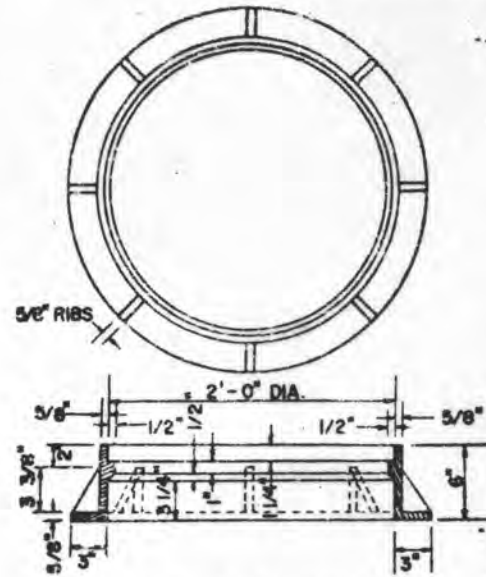


DETAIL OF EYE BOLT AND CHAIN  
FOR LOCKING GRATES TO INLETS

Note: One required per inlet grate.

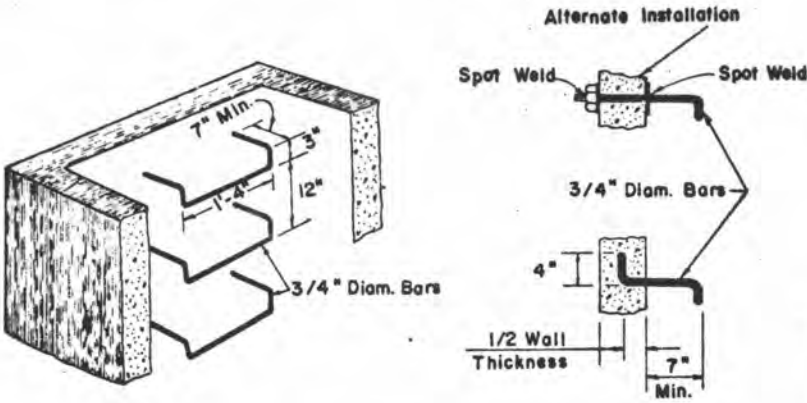
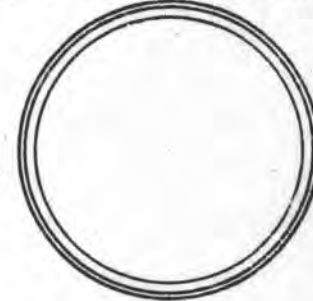


COVER FOR ALL FRAMES  
(WHEEL LOADS H-20)



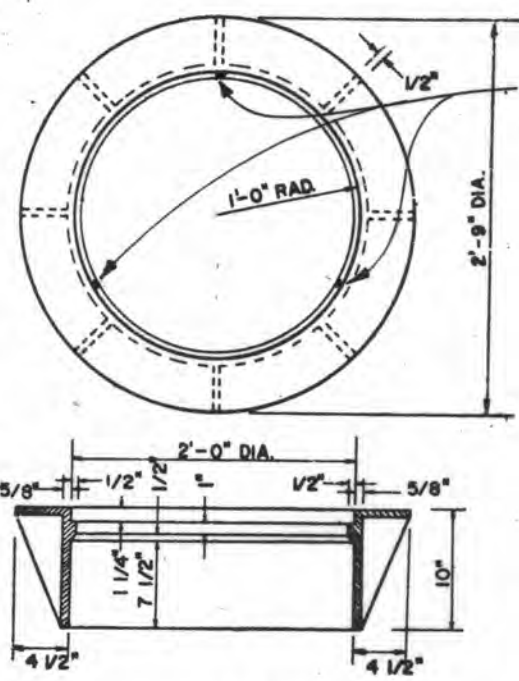
TYPE I FRAME  
FOR MANHOLES  
AS SHOWN ON INDEX DSB-01

PROVIDE 3- 1/4" TACK WELDS ON  
MANHOLE TOPS IN SIDEWALK



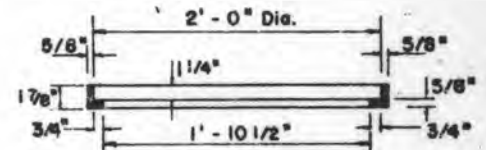
DETAIL OF LADDER BARS

Use for box heights over 10'-0"



TYPE II FRAME  
For Type 1, 2, 3 & 4 Inlets

CAST IRON

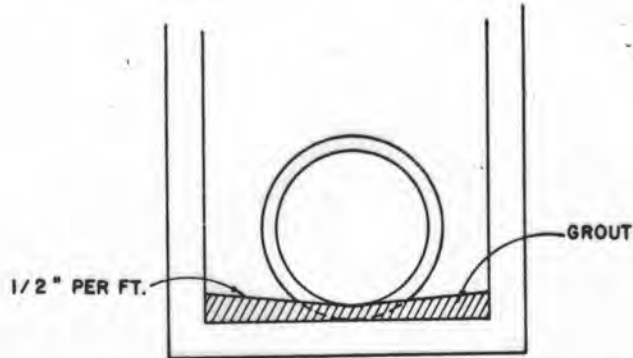


TYPE III FRAME  
For Type 7 & 8 Inlets

FRAME AND COVER DETAILS

Note: Tack Weld all Covers to Frames ( 3 places ) as directed by the Engineer.

ALTERNATE LOCATION OF PIPE IN STRUCTURE  
WHEN PREFABRICATED FLOOR SLAB IS USED



COMPLETE FLOW CHANNEL IS REQUIRED WHEN THERE IS  
FLOW THROUGH THE STRUCTURE

FHWA Approved: 5-1-75

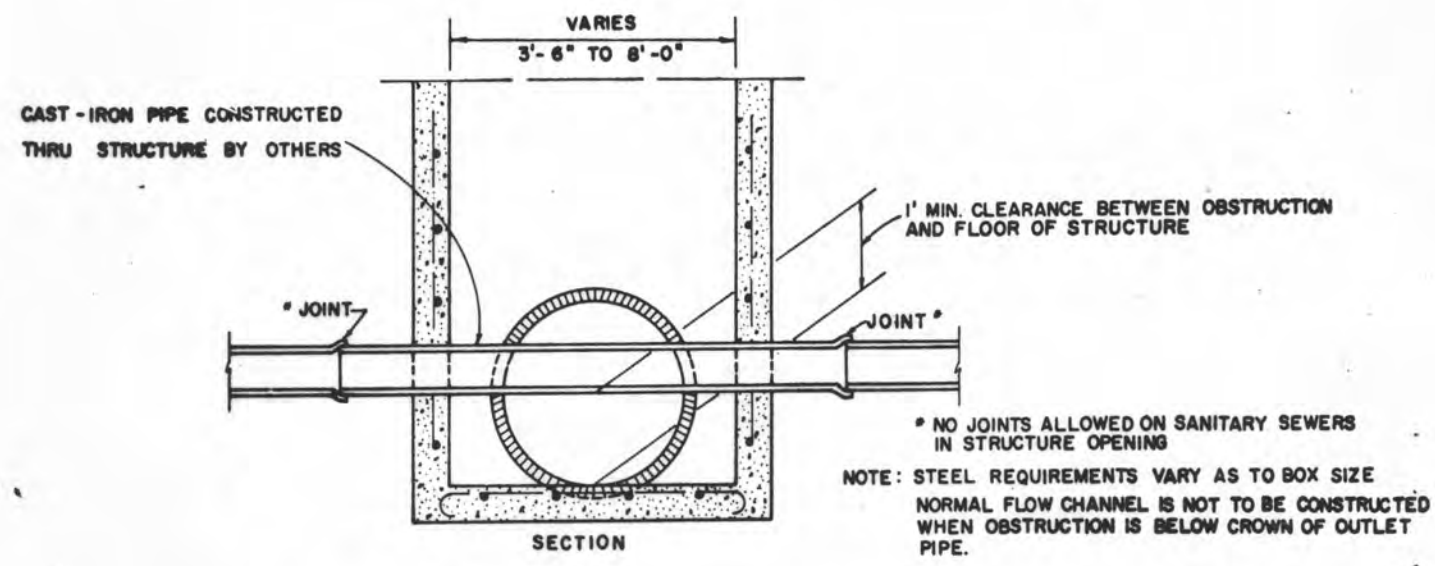
DADE COUNTY PUBLIC WORKS DEPARTMENT  
HIGHWAY DIVISION

DESIGN  
DRAWN  
CHECK  
PROPOSED  
SUBMITTED  
RECOMMENDED  
APPROVED

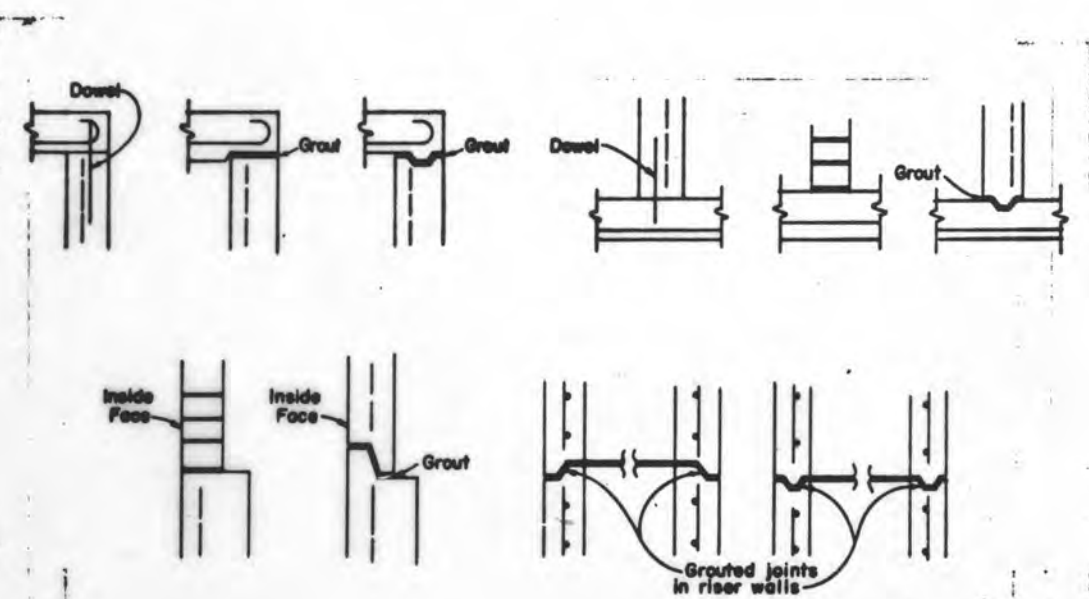
DATE  
PROJ.  
SHEET 1 OF 2

DSD-01  
SUPPLEMENTARY DET. FOR  
MANHOLE & INLET STRUCT.

|        |         |          |      |          |
|--------|---------|----------|------|----------|
| DESIGN | DATE    | REVISION | DATE | REVISION |
| 1      | 11.1.75 |          |      |          |

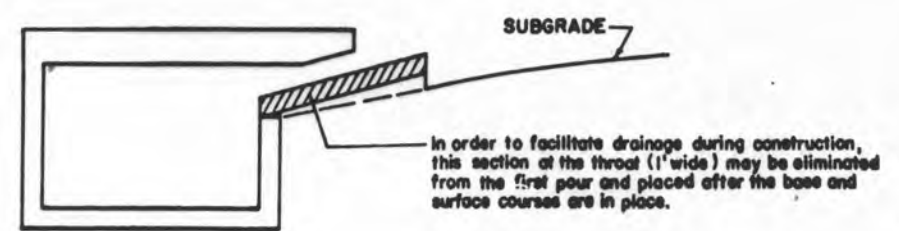


DETAIL SHOWING PIPE CONSTRUCTED THRU STORM SEWER STRUCTURE

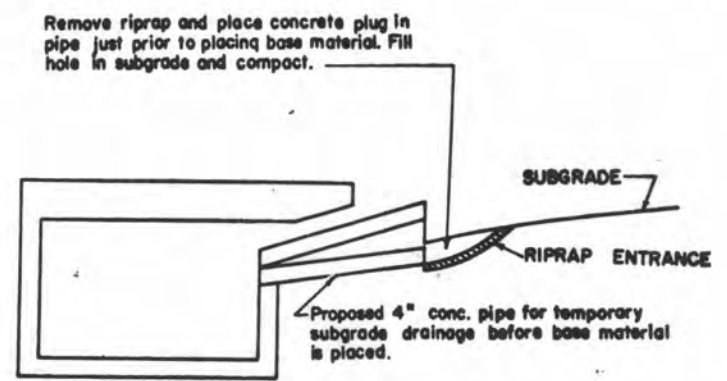


- NOTES -
1. Any type joint may be used in conjunction with any other type joint.
  2. All grouted joints are to have a maximum thickness of 1".
  3. Keyways are to be a minimum of 1 1/2" deep.
  4. Joint dowels are to be #4 bars, 12" long with a minimum of 6 bars per joint evenly spaced.
  5. Minimum cover on reinforcing bars is 1 1/4".

OPTIONAL CONSTRUCTION JOINTS



ALTERNATE A



ALTERNATE B

(Cost to be included in the unit price bid for inlets.)  
DETAIL OF TEMPORARY SUBGRADE DRAINS  
(Optional with Contractor)

NOTE:  
For all manhole, inlet and junction box structures the mortar used to seal the pipe into the walls of the precast units will be of such a mix that shrinkage will not cause leakage into or out of the units. Maximum opening for pipe shall be max. req'd O D + 6.

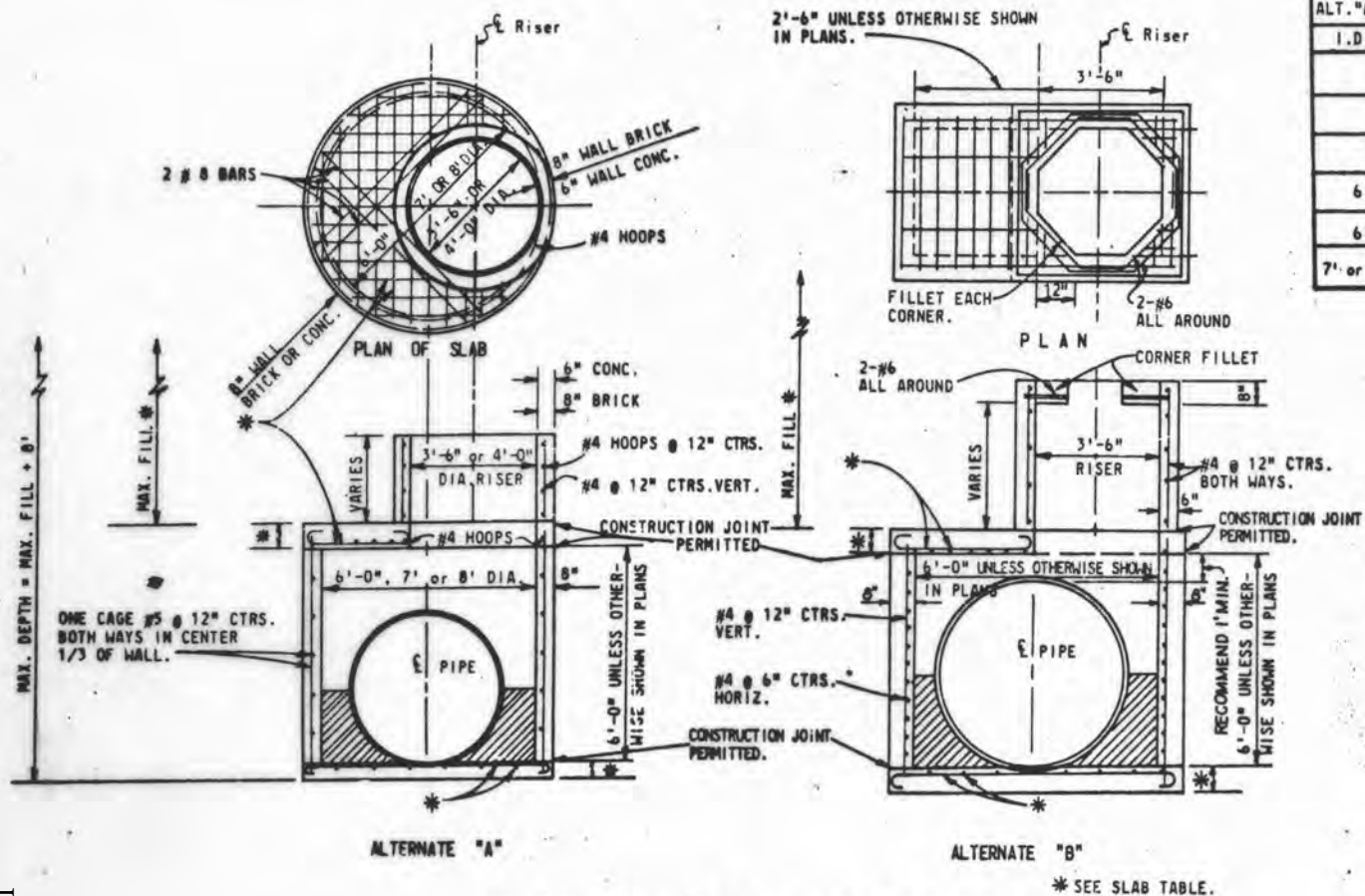
28

FWHA Approved: 5-1-75

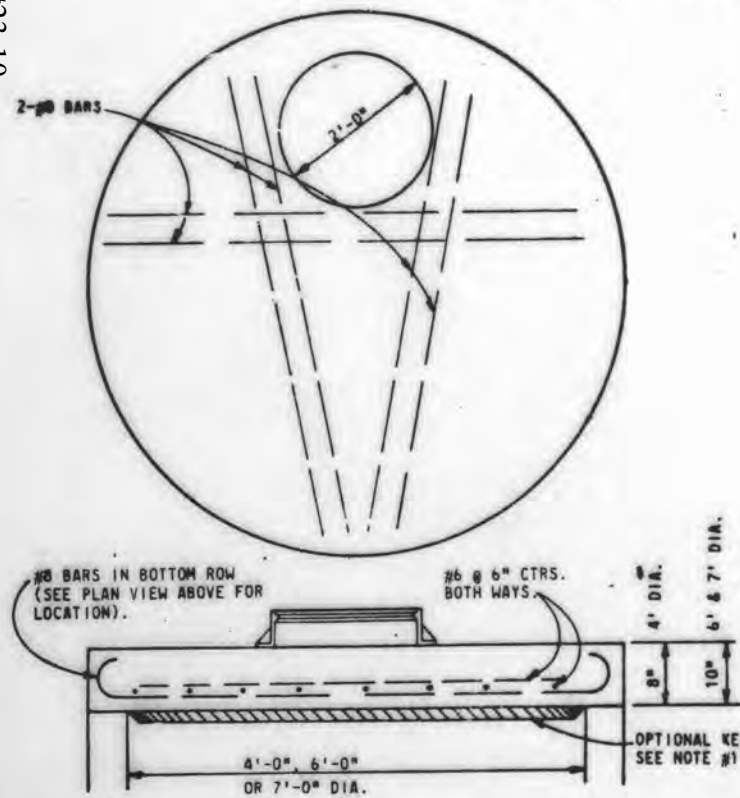
|                                     |                                                   |              |
|-------------------------------------|---------------------------------------------------|--------------|
| DADE COUNTY PUBLIC WORKS DEPARTMENT |                                                   |              |
| HIGHWAY DIVISION                    |                                                   |              |
| DESIGN                              | DSD-01                                            |              |
| DRAWN                               |                                                   |              |
| CHECK                               | SUPPLEMENTARY DET. FOR MANHOLE & INLET STRUCTURES |              |
| PROPOSED                            |                                                   |              |
| SUBMITTED                           | RECOMMENDED                                       | APPROVED     |
| HIGHWAY ENGINEER                    | CHIEF ENGINEER                                    | DIRECTOR     |
| DATE                                | PROJ.                                             | SHEET 2 OF 2 |



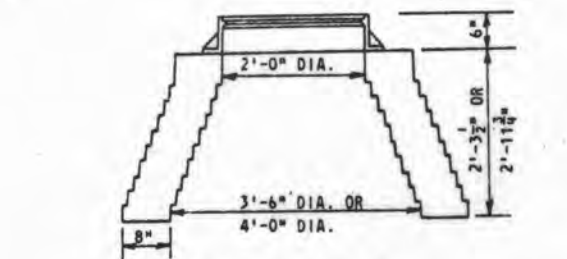
| TOP AND FLOOR SLAB TABLE<br>TYPE "J" |           |                |                              |      |                               |  |
|--------------------------------------|-----------|----------------|------------------------------|------|-------------------------------|--|
| ALT. "A"                             | ALT. "B"  | SLAB THICKNESS | ALLOWABLE FILL OVER TOP SLAB |      | REINFORCING TOP & FLOOR SLABS |  |
| I.D.                                 | BOX WIDTH |                | MIN.                         | MAX. |                               |  |
|                                      | 3'-6"     | 8"             | 2'                           | 29'  | #6 @ 6" CTRS. B.W.            |  |
|                                      | 5'-0"     | 8"             | 2'                           | 25'  | #6 @ 6" CTRS. B.W.            |  |
|                                      | 5'-0"     | 10"            | 2'                           | 27'  | #7 @ 6" CTRS. B.W.            |  |
| 6'                                   | 6'-0"     | 8"             | 2'                           | 20'  | #6 @ 6" CTRS. B.W.            |  |
| 6'                                   | 6'-0"     | 10"            | 2'                           | 25'  | #7 @ 6" CTRS. B.W.            |  |
| 7' or 8'                             | 8'-0"     | 10"            | 2'                           | 11'  | #7 @ 6" CTRS. B.W.            |  |



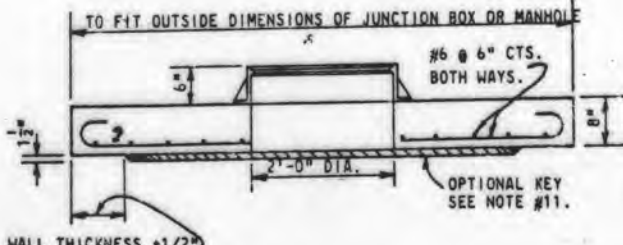
INLET, MANHOLE, JUNCTION BOX TYPE J



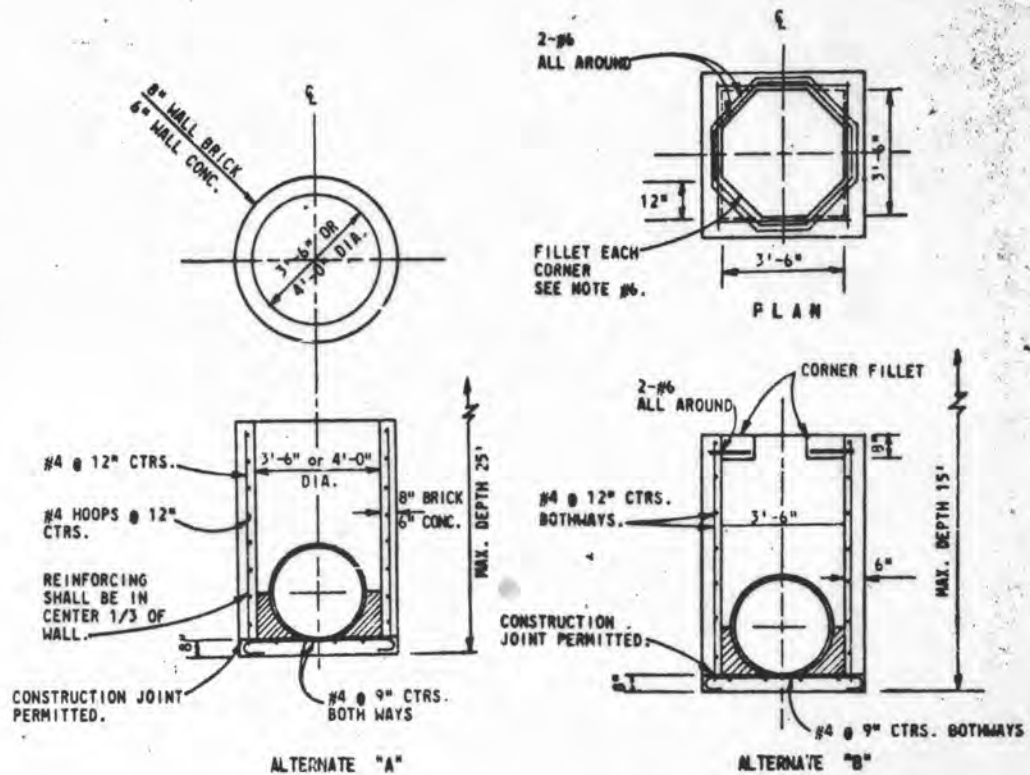
JUNCTION BOX OR MANHOLE TOP TYPE 7-T  
FOR USE WHEN TOP SLAB IS SUBJECTED TO WHEEL LOADS (H-20) (TRAFFIC)



MANHOLE TOP TYPE 8  
NOTE: DETAIL SHOWN IS FOR BRICK CONSTRUCTION.



JUNCTION BOX OR MANHOLE TOP TYPE 7-NT  
FOR USE WHEN TOP SLAB IS NOT SUBJECTED TO WHEEL LOADS (NON-TRAFFIC)



INLET, MANHOLE, JUNCTION BOX TYPE P

GENERAL NOTES

1. WALLS OF CIRCULAR STRUCTURES (ALTERNATE "A") MAY BE CONSTRUCTED OF CONCRETE OR BRICK, BUT RECTANGULAR STRUCTURES (ALTERNATE "B") SHALL BE CONSTRUCTED OF CONCRETE ONLY. THE CONCRETE MAY BE CAST-IN-PLACE OR PRECAST.
2. WALL REINFORCEMENT AND THICKNESS ARE FOR EITHER CAST-IN-PLACE OR PRECAST CONCRETE UNITS EXCEPT THAT THE MANUFACTURER MAY FURNISH PRECAST CIRCULAR UNITS IN ACCORDANCE WITH A.S.T.M. SPECIFICATION C-478 UP TO 72" IN DIA. OR PRECAST CIRCULAR UNITS A.S.T.M. SPECIFICATION C-76, TABLE III, FOR "B" WALL CONCRETE PIPE. TOP AND FLOOR SLAB THICKNESS AND REINFORCEMENT ARE FOR ALL TYPES OF CONSTRUCTION.
3. ELLIPTICAL STEEL, ASTM SPECIFICATION C-76, TABLE III, "B" WALL, IS MODIFIED TO USE A CIRCULAR CAGE OF STEEL AREA EQUAL TO THAT OF THE ELLIPTICAL CAGE AND PLACED IN THE CENTER ONE-THIRD OF THE WALL. THIS MODIFICATION IS FOR PRECAST CIRCULAR UNITS PRODUCED IN ACCORDANCE WITH ASTM C-76.
4. TOP AND FLOOR SLABS FOR TYPE J UNITS AND TYPE 7 MANHOLE TOPS SHALL BE OF CLASS II CONCRETE. CONCRETE AS SPECIFIED IN ASTM C-478 MAY BE USED FOR PRECAST UNITS.
5. ANY INLET, MANHOLE OR JUNCTION BOX MAY BE USED IN CONJUNCTION WITH ANY INLET THROAT OR MANHOLE TOP. FOR EXAMPLE, AN INLET WITH A TYPE J BOX AND A TYPE 2 THROAT WOULD BE CALLED AN INLET TYPE J-2 IN THE PLANS. THE CONTRACTOR MAY AT HIS OPTION USE EITHER ALTERNATE A OR B STRUCTURES, UNLESS OTHERWISE SHOWN IN THE PLANS.
6. RECTANGULAR STRUCTURES MAY BE ROTATED AS DIRECTED BY THE ENGINEER IN ORDER TO FACILITATE CONNECTIONS BETWEEN THE STRUCTURE WALLS AND STORM SEWER PIPES.
7. THE CORNER FILLETS SHOWN FOR RECTANGULAR STRUCTURES ARE NECESSARY ONLY WHEN STRUCTURES ARE USED IN CONJUNCTION WITH CIRCULAR INLET THROATS (TYPES 1, 2, 3 & 4) OR WHEN USED ON SKEW WITH RECTANGULAR INLET THROATS (TYPES 5 & 6).
8. INLET THROATS, RISERS OR MANHOLE TOPS SHALL BE SECURED TO STRUCTURES WITH A MINIMUM OF 6 - NO. 4 BARS 12" LONG OR AS SHOWN ON INDEX NO.DSD-01.
9. STRUCTURES WITH DEPTHS OVER 14' ARE TO BE CHECKED FOR FLOTATION BY DESIGNER OF PROJECT DRAINAGE.
10. ALL STEEL BARS SHALL HAVE 1" MINIMUM COVER UNLESS OTHERWISE SHOWN AND SHALL BE HOOKED WHERE INDICATED. HORIZONTAL STEEL IN RECTANGULAR STRUCTURES SHALL BE LAPPED A MINIMUM OF 24 BAR DIAMETERS AT CORNERS. ON PRECAST UNITS, FLOOR SLABS MAY BE SECURED TO STRUCTURE WALLS BY NO. 4 DOWEL BARS (A MINIMUM OF 6 DOWELS) PUSHED INTO THE WET CONCRETE AFTER THE FLOOR SLAB IS PLACED.
11. TYPE 7 TOP SLABS MAY BE OF CAST-IN-PLACE OR PRECAST CONSTRUCTION. THE OPTIONAL KEY IS FOR PRECAST TOPS AND IS IN LIEU OF DOWELS. FRAME AND SLAB OPENINGS ARE TO BE OMITTED WHEN TOP IS USED OVER A JUNCTION BOX. FRAME CAN BE ADJUSTED WITH FROM ONE TO SIX COURSES OF BRICK.
12. MANHOLE TOP TYPE 8 MAY BE OF CAST-IN-PLACE OR PRECAST CONCRETE CONSTRUCTION OR BRICK CONSTRUCTION. FOR CONCRETE CONSTRUCTION, THE CONCRETE AND STEEL REINFORCEMENT SHALL BE THE SAME AS THE SUPPORTING WALL UNIT. AN ECCENTRIC CONE MAY BE USED.
13. LARGER THAN SPECIFIED STANDARD UNITS MAY BE SUBSTITUTED AT THE CONTRACTOR'S OPTION WHEN THESE UNITS WILL NOT CAUSE OR INCREASE THE SEVERITY OF UTILITY CONFLICTS. SUCH LARGER UNITS SHALL BE FURNISHED AT NO ADDITIONAL COST TO THE DEPARTMENT. LARGER ALTERNATE "A" UNITS CANNOT REPLACE ALTERNATE "B" UNITS WITHOUT APPROVAL OF THE ENGINEER. THIS NOTE APPLIES TO THIS INDEX ONLY.
14. FOR SUPPLEMENTARY DETAILS SEE INDEX NO.DSD-01 AND 3-E OR 3-E-1.

| REVISIONS |                   |
|-----------|-------------------|
| Dates     | Descriptions      |
| 10-78     | Changed Index No. |

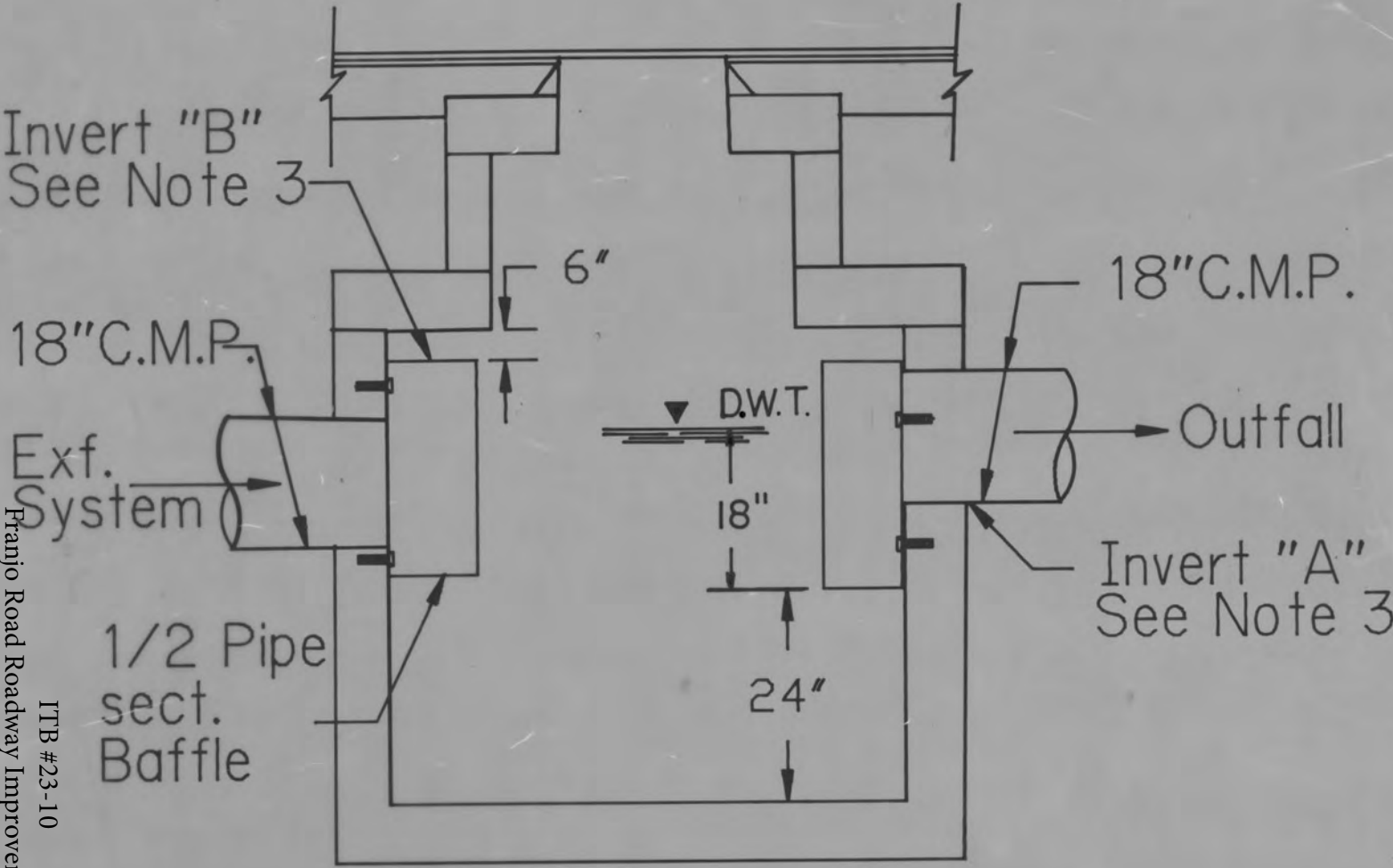
FHWA Approved: 5-1-75

DADE COUNTY PUBLIC WORKS DEPARTMENT  
HIGHWAY DIVISION

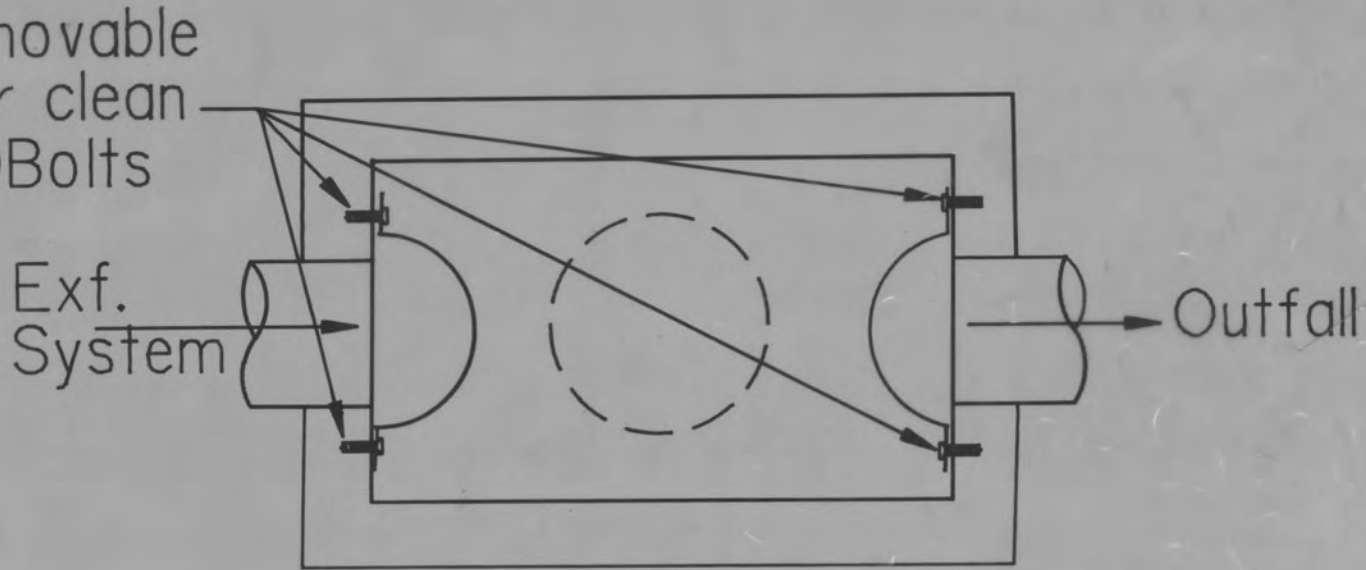
DESIGN: DSB-01  
DRAWN: INLET, MANHOLE, JUNCTION  
CHECK: BOX TYPES J & P  
PROPOSED:

|           |             |              |
|-----------|-------------|--------------|
| SUBMITTED | RECOMMENDED | APPROVED     |
| DATE      | PROJ.       | SHEET 1 OF 1 |

# POLLUTION CONTROL STRUCTURE



SIDE VIEW



TOP VIEW

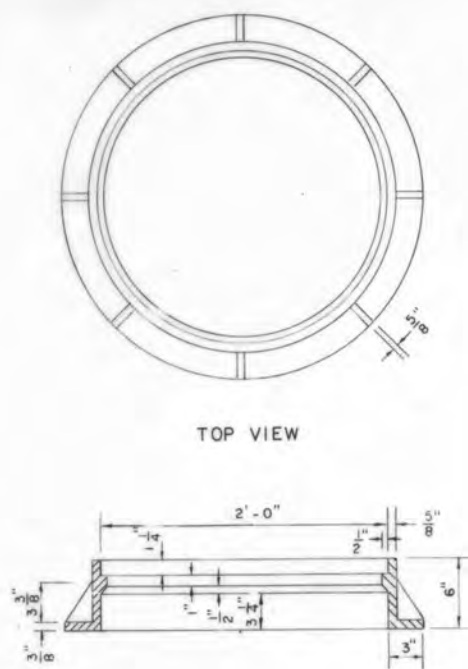
NOTES:

1. All dimensions are minimum.
2. Standard 3'-6" x 6' "J" Box. See Index DSB-01 for details.
3. Invert "A" to be set at weir elevation. Where not possible, invert "B" to be weir elevation with bottom of 1/2 pipe closed. If neither possible, next box into exfiltration system to have weir.
4. There will be a neoprene seal between the structure wall and 1/2 pipe.

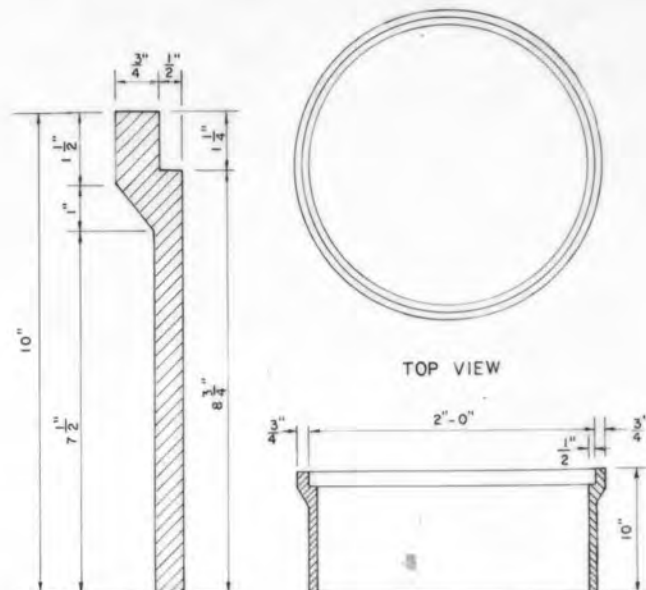
29.2

| DADE COUNTY PUBLIC WORKS DEPARTMENT |              |          |
|-------------------------------------|--------------|----------|
| HIGHWAY DIVISION                    |              |          |
| DESIGN                              | P. C. S. - I |          |
| DRAWN                               |              |          |
| CHECK                               |              |          |
| PROPOSED                            |              |          |
| SUBMITTED                           | RECOMMENDED  | APPROVED |
| DATE                                | July, 1989   | PROJ     |
|                                     |              | SHEET OF |

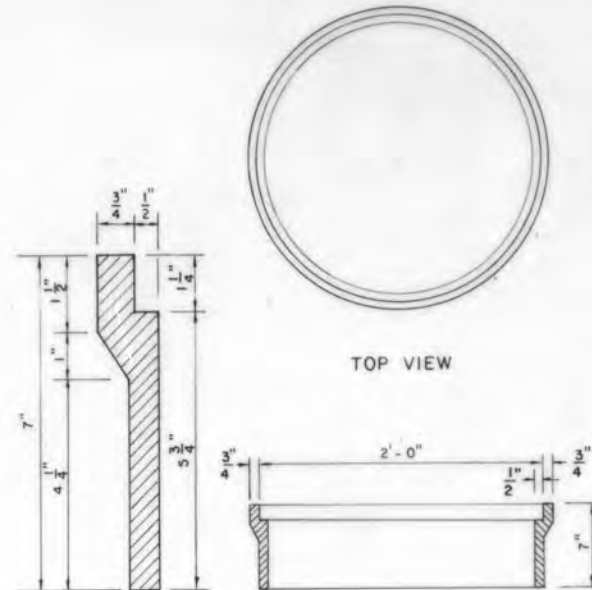




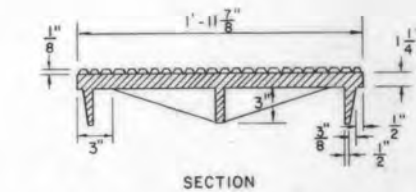
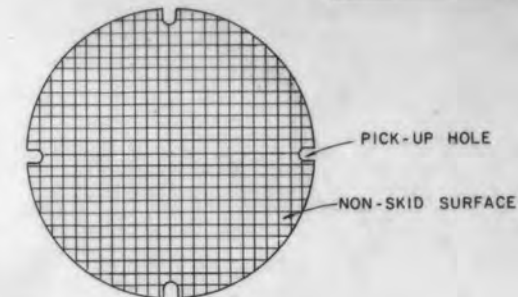
SECTION  
TYPE I  
FOR MANHOLES



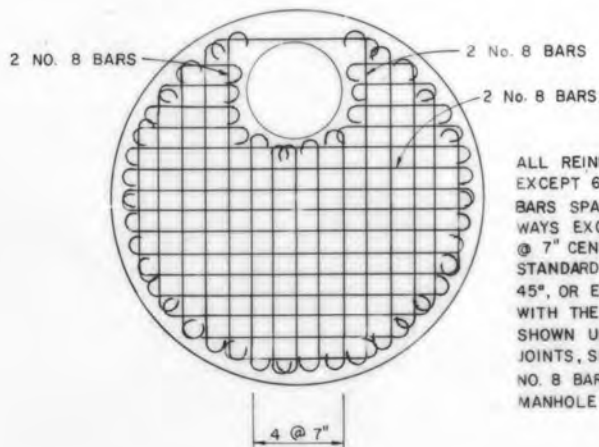
WALL SECTION  
SECTION  
TYPE II  
FOR CURB INLETS TYPES 1, 2, 3, & 4  
CAST IRON FRAMES



WALL SECTION  
SECTION  
TYPE III  
FOR CURB INLETS TYPES 7 & 8

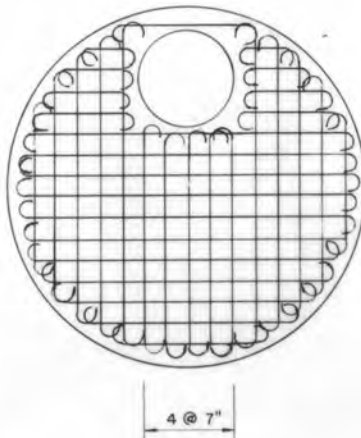


COVER FOR ALL FRAMES



REINFORCEMENT PLAN

ALL REINFORCEMENT NO. 6 BARS EXCEPT 6 NO. 8 BARS SHOWN. BARS SPACED @ 6" CENTERS BOTH WAYS EXCEPT MIDDLE BARS SHOWN @ 7" CENTERS. ALL BARS WITH ACI STANDARD HOOKS CANTED APPROX. 45°, OR EMBEDDED IN ACCORDANCE WITH THE SLAB REINFORCEMENT DETAIL SHOWN UNDER OPTIONAL CONSTRUCTION JOINTS, SHEET NO. 2 OF 12 EXCEPT ALL NO. 8 BARS AND NO. 6 BARS AROUND MANHOLE OPENING SHALL BE HOOKED.



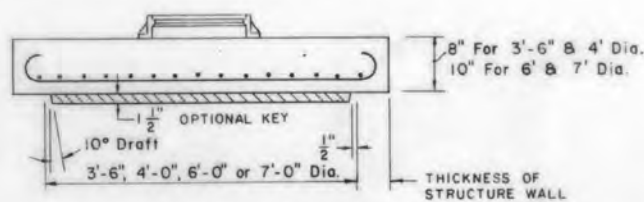
REINFORCEMENT PLAN

REINFORCING BARS @ 6" CENTERS BOTH WAYS EXCEPT MIDDLE BARS SHOWN @ 7" CENTERS. ALL BARS WITH ACI STANDARD HOOKS CANTED APPROX. 45°, OR EMBEDDED IN ACCORDANCE WITH THE SLAB. REINFORCEMENT DETAIL SHOWN UNDER OPTIONAL CONSTRUCTION JOINTS, SHEET 3 OF 3, EXCEPT BARS AROUND MANHOLE OPENING SHALL BE HOOKED.

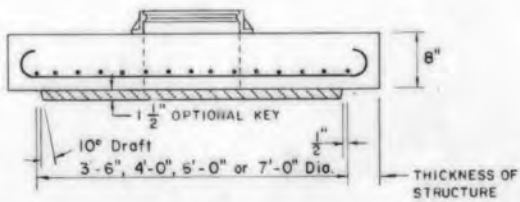
| BAR SIZE | TOP DIAMETER |
|----------|--------------|
| No. 4    | 3'-6" & 4'   |
| No. 5    | 6'           |
| No. 6    | 7'           |

NOTES (TOPS, FRAMES AND COVER):

1. ALL STEEL BARS SHALL BE NEW BARS IN ACCORDANCE WITH ASTM A615, GRADE 60 AND HAVE 1/4" MINIMUM COVER UNLESS OTHERWISE SHOWN AND SHALL BE HOOKED WHERE INDICATED.
2. MANHOLE TOP TYPE 7 SLABS SHALL BE OF CLASS II CONCRETE (f<sub>c</sub>' = 3400 P.S.I.).
3. MANHOLE TOP TYPE 7 SLABS MAY BE OF CAST-IN-PLACE OR PRECAST CONSTRUCTION. THE OPTIONAL KEY IS FOR PRECAST TOPS AND IN LIEU OF DOWELS. FRAME AND SLAB OPENINGS ARE TO BE OMITTED WHEN TOP IS USED OVER A JUNCTION BOX. FRAMES CAN BE ADJUSTED WITH FROM ONE TO SIX COURSES OF BRICK.
4. MANHOLE TOP TYPE 8 MAY BE OF CAST-IN-PLACE OR PRECAST CONCRETE CONSTRUCTION OR BRICK CONSTRUCTION. FOR CONCRETE CONSTRUCTION, THE CONCRETE AND STEEL REINFORCEMENT SHALL BE THE SAME AS THE SUPPORTING WALL UNIT. AN ECCENTRIC CONE MAY BE USED.
5. MANHOLE TOPS SHALL BE SECURED TO STRUCTURES BY OPTIONAL CONSTRUCTION JOINTS AS SHOWN ON SHEET NO. 2 OF THIS DETAIL.
6. ALL COVERS TO BE TACK WELDED TO FRAMES AT THIRD POINTS OR GROUTED AT THIRD POINTS WITH EPOXY (TOTAL ELEVEN (11) OUNCES OF MIXED EPOXY).
7. THE 212 LB. COVER IS THE REPLACEMENT FOR ALL PREVIOUS 1 1/4" DEEP FRAMES (TRAFFIC TYPE). THE 185 LB. COVER IS THE REPLACEMENT FOR ALL PREVIOUS 1/2" DEEP FRAMES (NON-TRAFFIC TYPE).

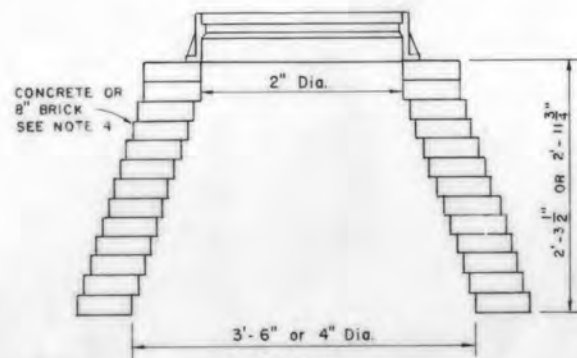


SECTION  
TYPE 7-T (TRAFFIC) (H-20)



SECTION  
TYPE 7-NT (NON-TRAFFIC)

MANHOLES OR JUNCTION BOXES

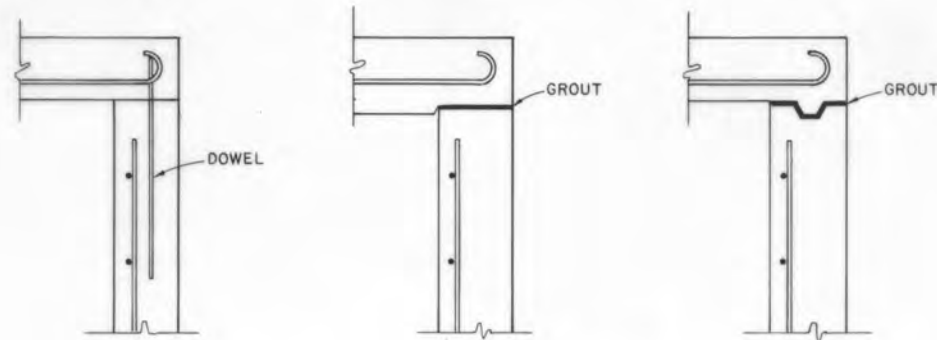


SECTION  
TYPE 8  
MANHOLES

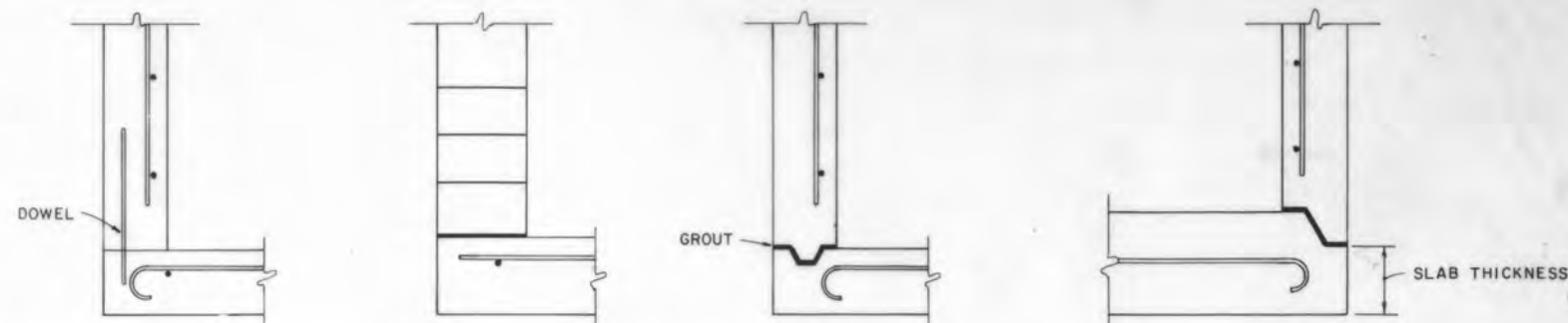
STRUCTURE TOPS

| WEIGHT OF CASTINGS |          |
|--------------------|----------|
| TYPE I             | 126 Lbs. |
| TYPE II            | 134 Lbs. |
| TYPE III           | 98 Lbs.  |
| COVER              | 212 Lbs. |

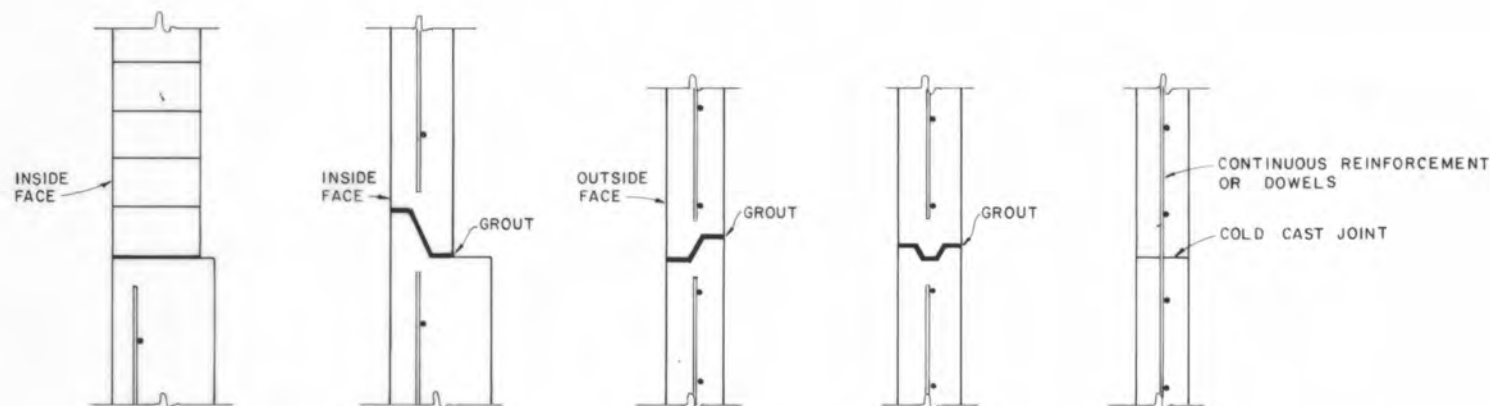
|                                                                                                  |                              |                                  |
|--------------------------------------------------------------------------------------------------|------------------------------|----------------------------------|
| DADE COUNTY PUBLIC WORKS DEPARTMENT<br>HIGHWAY DIVISION                                          |                              |                                  |
| SUPPLEMENTARY DETAILS FOR<br>MANHOLES AND INLETS                                                 |                              |                                  |
| SMI-1                                                                                            |                              |                                  |
| DESIGN<br>S.R.D.<br>DRAWN<br>F.B.<br>CHECK<br>W. Blum<br>PROPOSED<br>SUBMITTED<br>DATE NOV. 1983 | RECOMMENDED<br>DATE<br>PROJ. | APPROVED<br>DATE<br>SHEET 1 OF 2 |



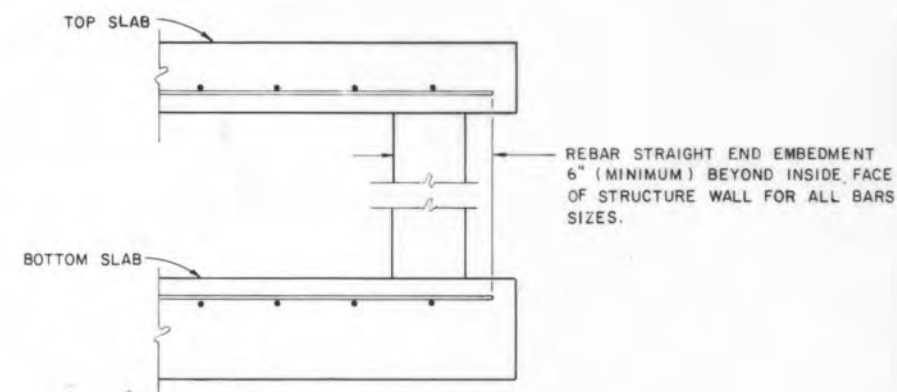
TOP SLABS TO WALLS



BOTTOM SLABS TO WALLS



WALL JOINTS



REBAR STRAIGHT END EMBEDMENT IN LIEU OF ACI STANDARD HOOKS FOR TOP AND BOTTOM SLABS

1. ONE OR MORE TYPES OF JOINTS MAY BE USED IN A SINGLE STRUCTURE, EXCEPT BRICK WALL STRUCTURE. BRICK WALL CONSTRUCTION IS PERMITTED ON CIRCULAR UNITS ONLY.
2. ALL GROUTED JOINTS ARE TO HAVE A MAXIMUM THICKNESS OF 1"
3. KEYWAYS ARE TO BE A MINIMUM OF  $1\frac{1}{2}$ " DEEP.
4. JOINT DOWELS ARE TO BE #4 BARS, 12" LONG WITH A MINIMUM OF 6 BARS PER JOINT, APPROXIMATELY EVENLY SPACED.
5. MINIMUM COVER ON REINFORCING BARS IS  $1\frac{1}{4}$ ".
6. REBAR STRAIGHT AND EMBEDMENT MAY BE USED IN LIEU OF ACI STANDARD HOOKS FOR TOP AND BOTTOM SLABS EXCEPT WHEN HOOKS ARE SPECIFICALLY CALLED FOR IN PLANS OR STANDARD DRAWINGS.

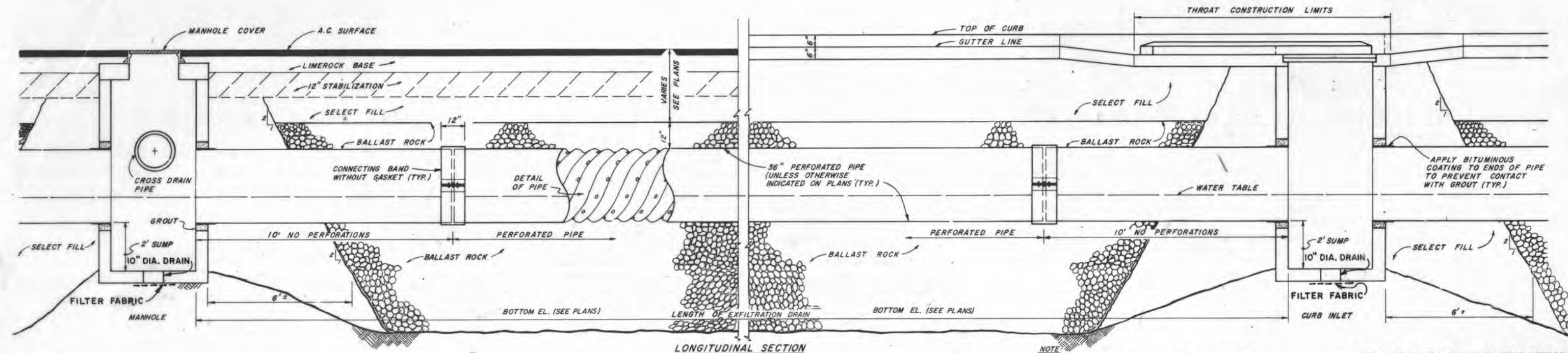
OPTIONAL CONSTRUCTION JOINTS

### GENERAL NOTES

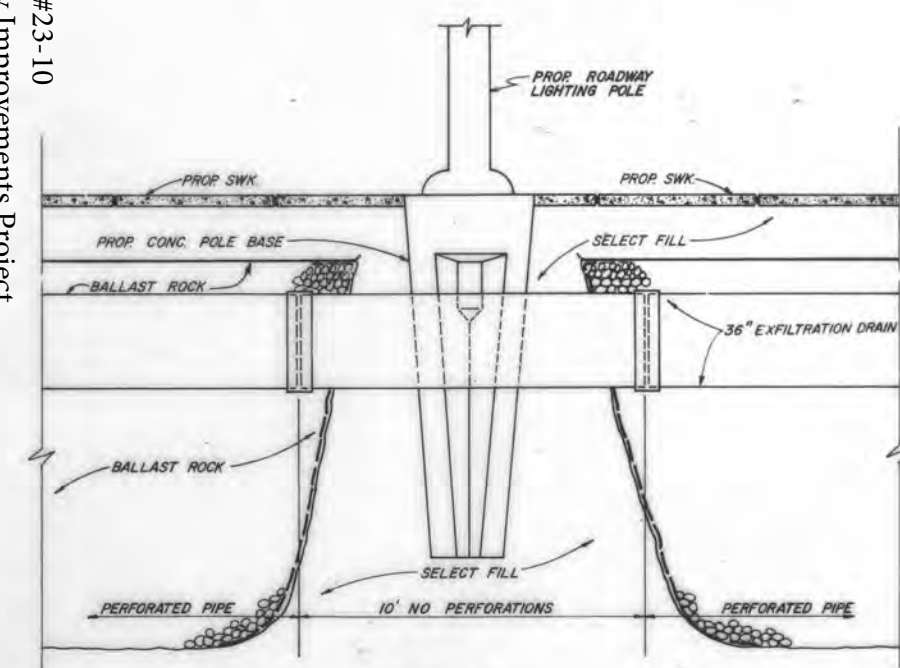
1. FOR SQUARE OR RECTANGULAR PRECAST DRAINAGE STRUCTURES EITHER DEFORMED OR SMOOTH WELDED WIRE FABRIC MAY BE USED BASED ON SUBSTITUTION OF EQUAL STEEL AREAS PROVIDED:
  - a) THE SMOOTH WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A-185, AND DEFORMED WELDED WIRE FABRIC SHALL COMPLY WITH ASTM A-497.
  - b) WIDTH AND LENGTH OF THE UNIT IS FOUR TIMES THE SPACING OF THE CROSS WIRES.
  - c) WIRE FABRIC SHALL BE CONTINUOUS AROUND THE BOX, SPLICED AT QUARTER POINT (S) WITH OVERLAP OF NOT LESS THAN THE SPACING OF CROSS WIRES PLUS TWO INCHES.
2. WELDING OF SPLICES AND LAPS IS PERMITTED. THE REQUIREMENTS AND RESTRICTIONS PLACED ON WELDING IN AASHTO M-259 SHALL APPLY.
3. HORIZONTAL STEEL IN RECTANGULAR STRUCTURES SHALL BE LAPPED A MINIMUM OF 24 BAR DIAMETER AT CORNERS.

|                                                         |             |              |
|---------------------------------------------------------|-------------|--------------|
| DADE COUNTY PUBLIC WORKS DEPARTMENT<br>HIGHWAY DIVISION |             |              |
| SUPPLEMENTARY DETAILS FOR<br>MANHOLES AND INLETS        |             |              |
| SMI-02                                                  |             |              |
| DESIGN<br>S.R.D.                                        | RECOMMENDED | APPROVED     |
| DRAWN<br>F.B.                                           |             |              |
| CHECK<br>W. Williams                                    |             |              |
| PROPOSED<br>W. Williams                                 |             |              |
| DATE NOV. 1983                                          | PROJ.       | SHEET 2 OF 2 |

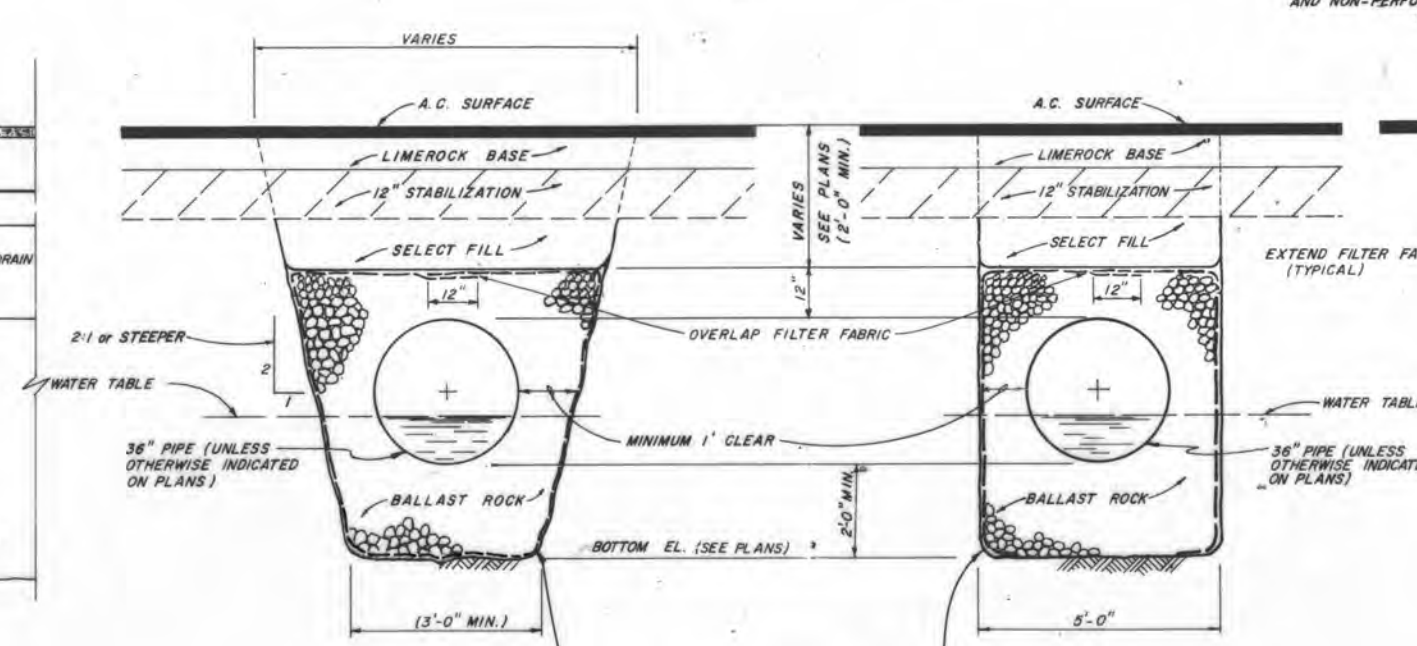




NOTE:  
1. SEE SPECIAL PROVISIONS FOR DESCRIPTION OF SELECT FILL, BALLAST ROCK, PERFORATED PIPE AND POLYPROPYLENE FILTER FABRIC.  
2. THE COST OF CONSTRUCTION OF THE EXFILTRATION DRAIN (ITEM NO. 443-70, PER LINEAR FOOT) SHALL INCLUDE THE COST OF EXCAVATION, BOTH PERFORATED AND NON-PERFORATED PIPE, BALLAST ROCK, AND BACKFILLING WITH SELECT FILL.  
3. WHERE TRENCH WALL WILL NOT STAND VERTICAL OR WHERE CAVE-IN BELOW THE WATER TABLE IS LIKELY, ALTERNATE SECTION IS TO BE USED AT THE DISCRETION OF THE ENGINEER. THERE WILL BE NO ADDITIONAL PAYMENT FOR THIS CROSS SECTION.

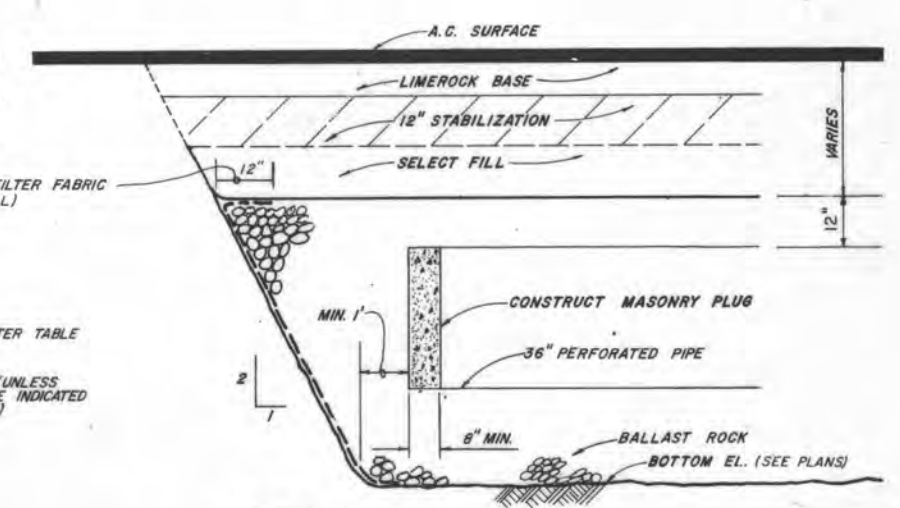


**DETAIL**  
**CONSTRUCTION OF EXFILTRATION DRAIN ADJACENT TO PROPOSED ROADWAY LIGHTING POLES**  
(FOR USE WHEN  $\phi$  PIPE IS 7 FT. OR LESS FROM  $\phi$  OF POLE BASE)



**TRANSVERSE SECTION**

**ALTERNATE CROSS-SECTION FOR SANDY SOIL CONDITION**



**DETAIL**  
**FOR ENDING EXFILTRATION DRAIN WITHOUT A DRAINAGE STRUCTURE**

36

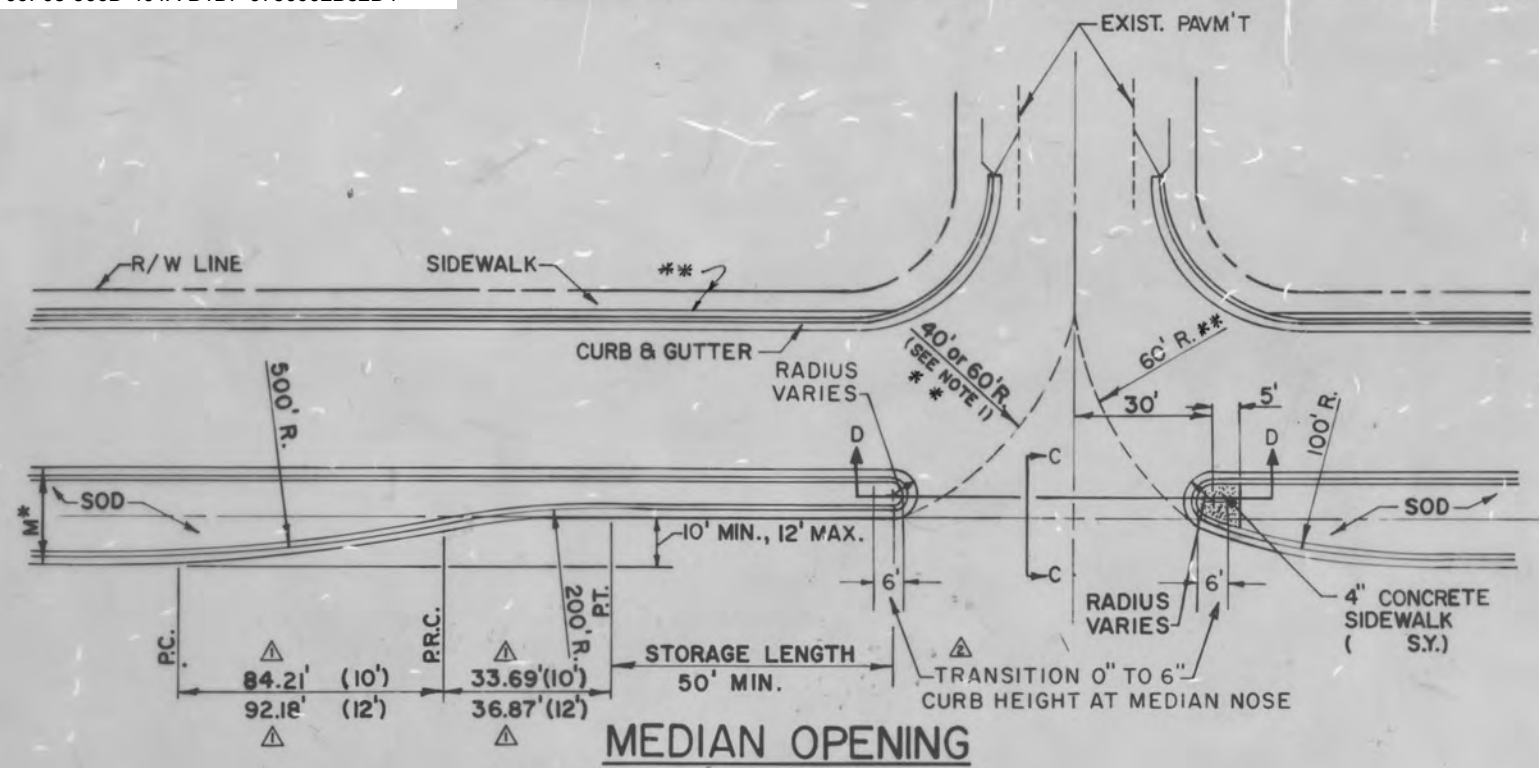
3-E

DETAIL OF EXFILTRATION DRAIN WITH PERFORATED PIPE

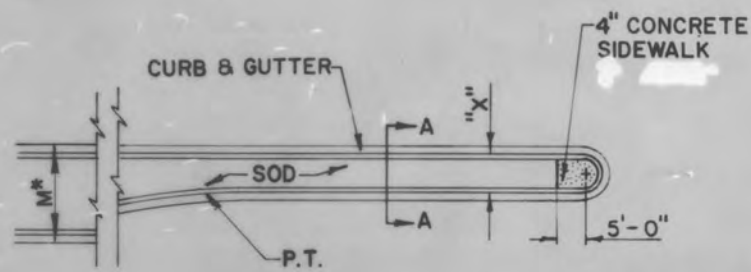
|          |            |      |
|----------|------------|------|
| G.M.     | J.D.L.     | 1-79 |
| DRAWN BY | CHECKED BY | DATE |

ITB #23-10  
Franjo Road Roadway Improvements Project  
Page 510 of 608

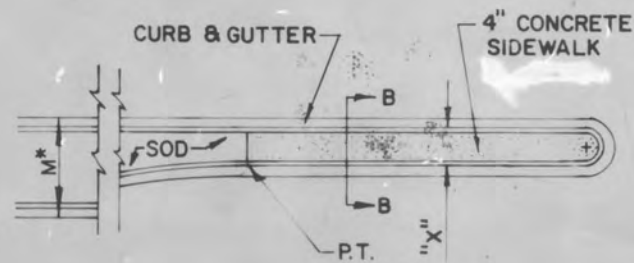
REV. 11/89



**MEDIAN OPENING**



**DETAIL 'A'**



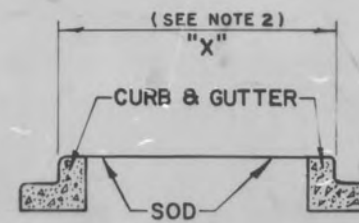
**DETAIL 'B'**

**NOTES:**

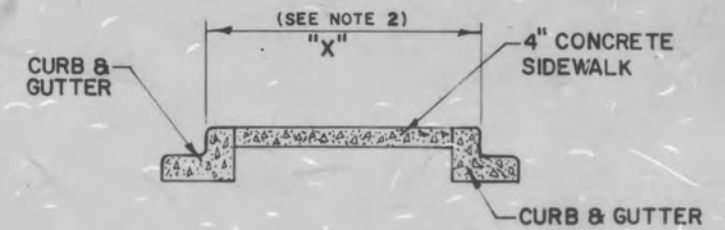
1. MINOR INTERSECTIONS 40' R. (LOCAL STREETS)  
MAJOR INTERSECTIONS 60' R. (ARTERIAL STREETS)
2. WHEN DIMENSION "X" IS MORE THAN 6'-0"  
USE DETAIL A; WHEN LESS THAN 6'-0" USE DETAIL B

\* M=TOTAL EFFECTIVE MEDIAN WIDTH

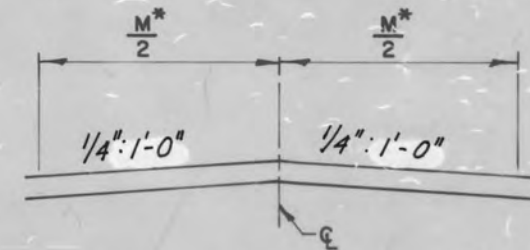
\*\* THESE ITEMS MAY NOT BE TYPICAL,  
SEE CONSTRUCTION PLANS FOR PROPER  
DETAILING.



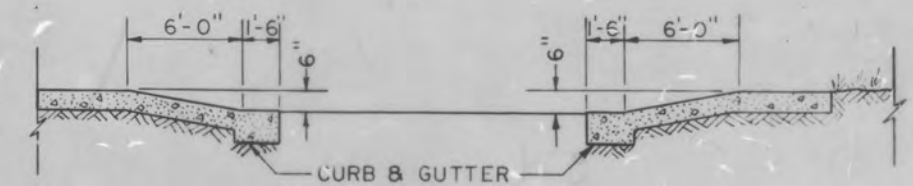
**SECTION A-A**



**SECTION B-B**



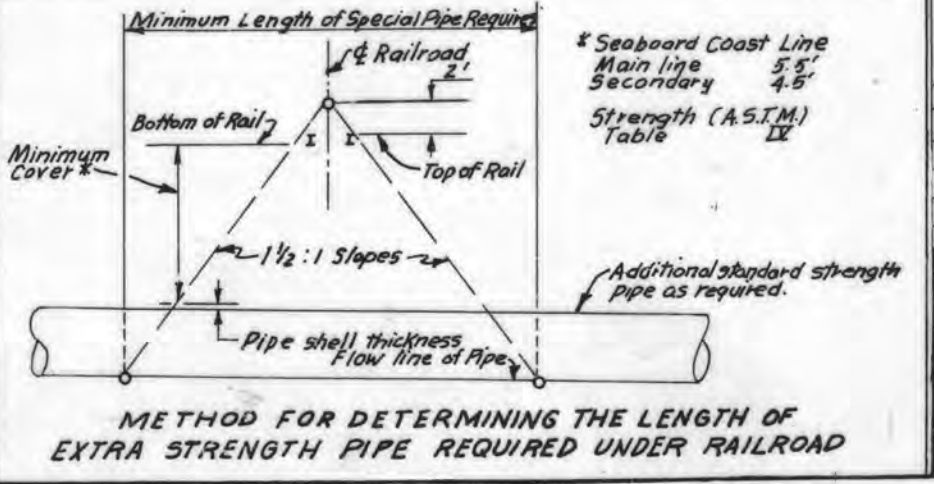
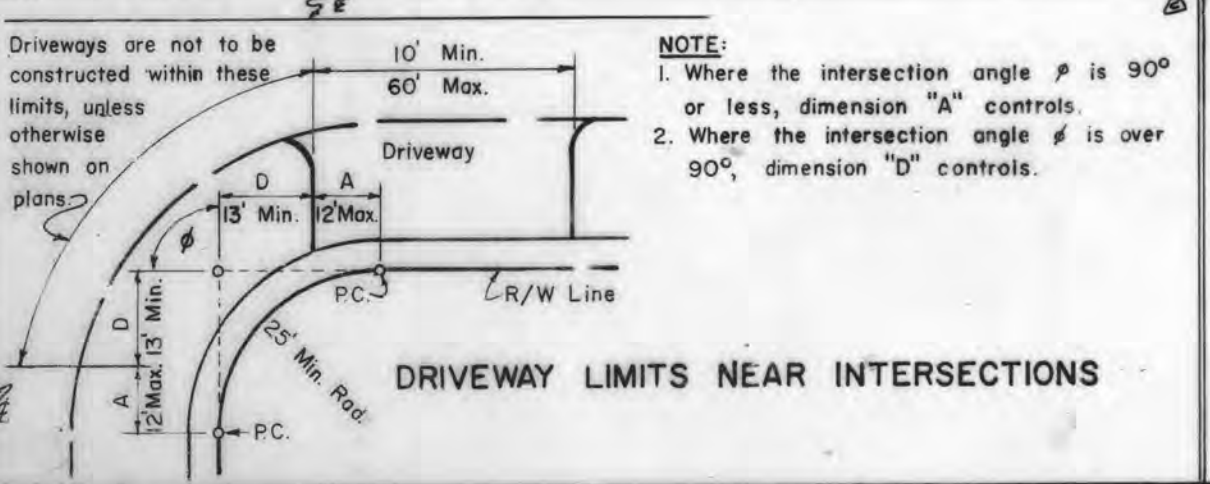
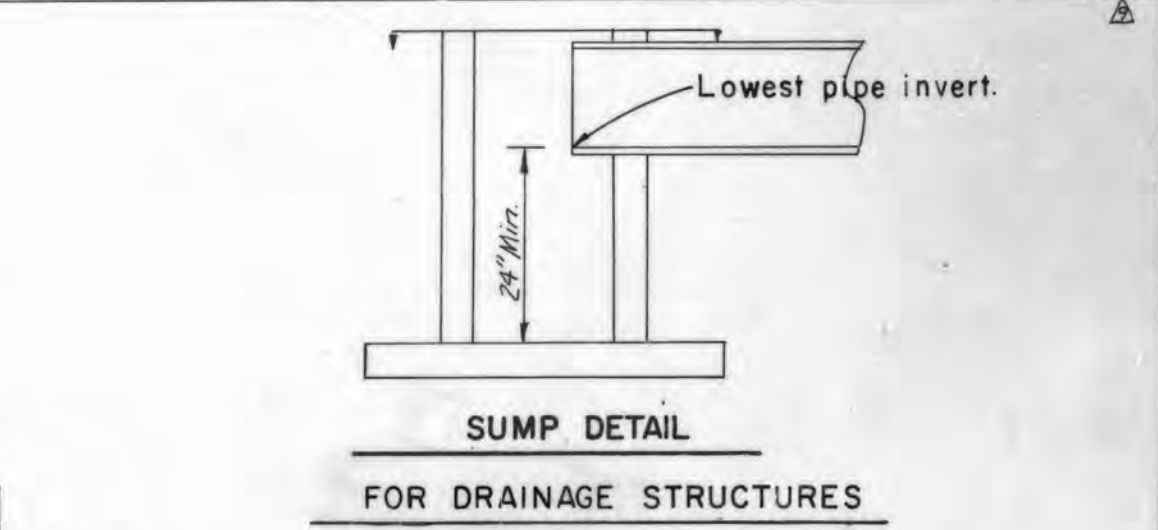
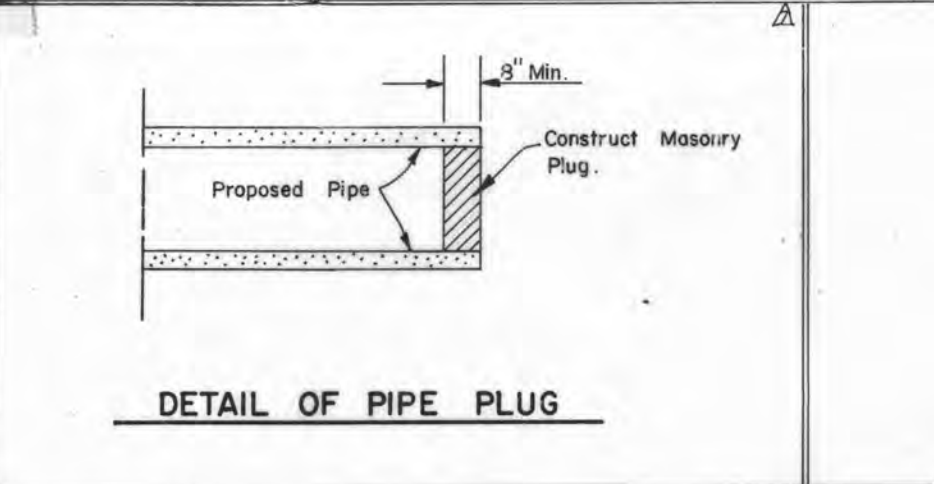
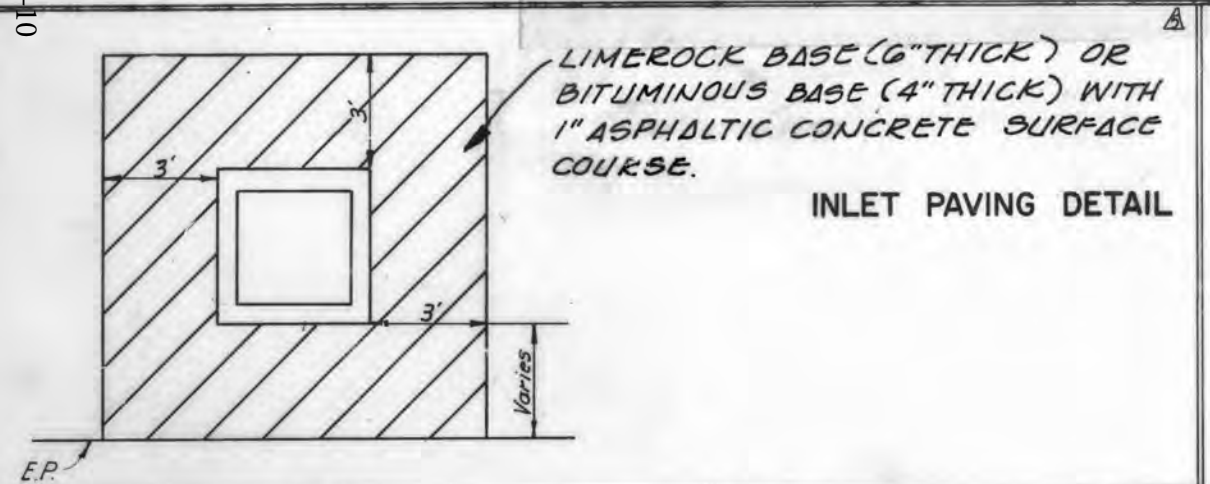
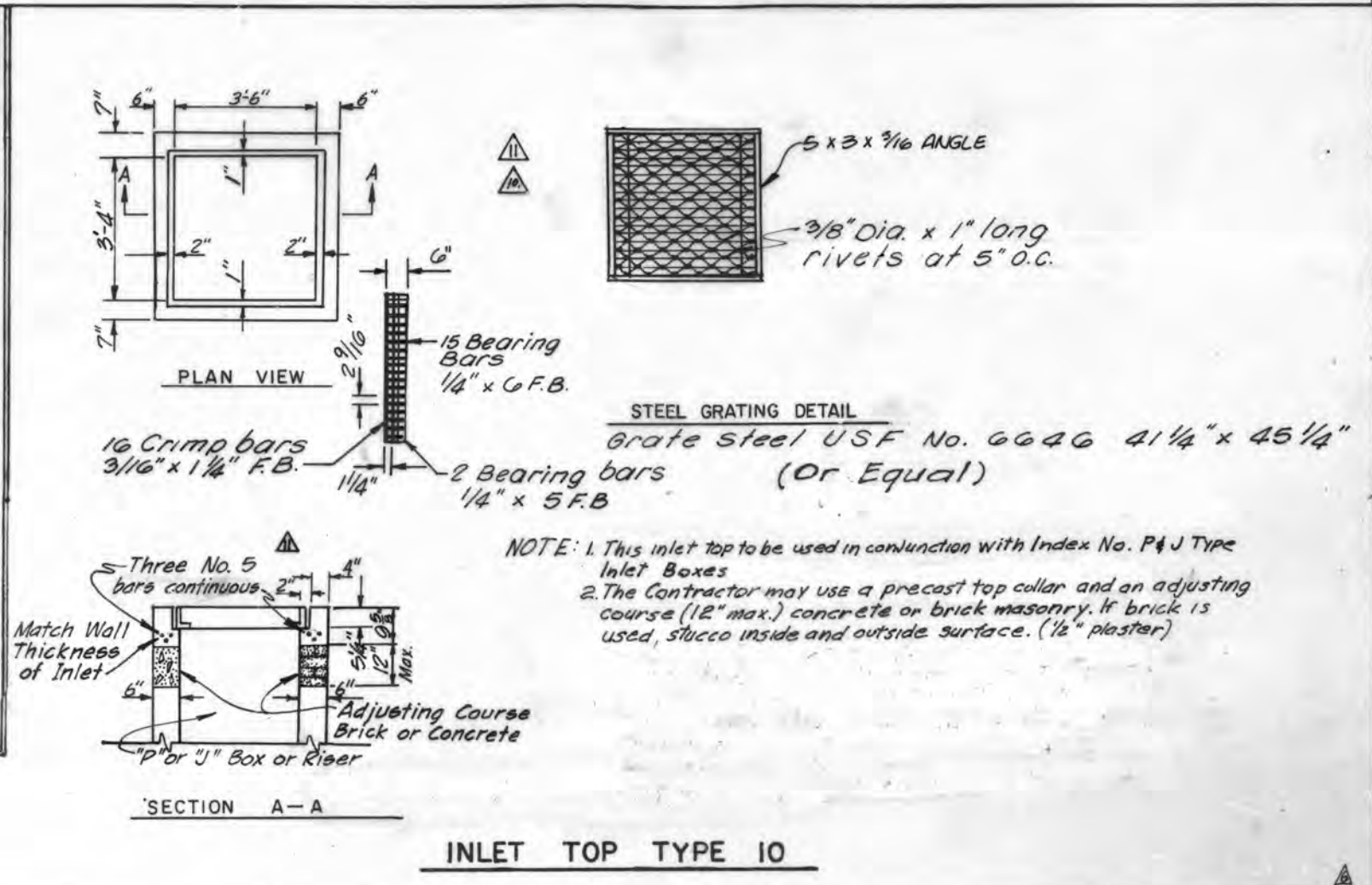
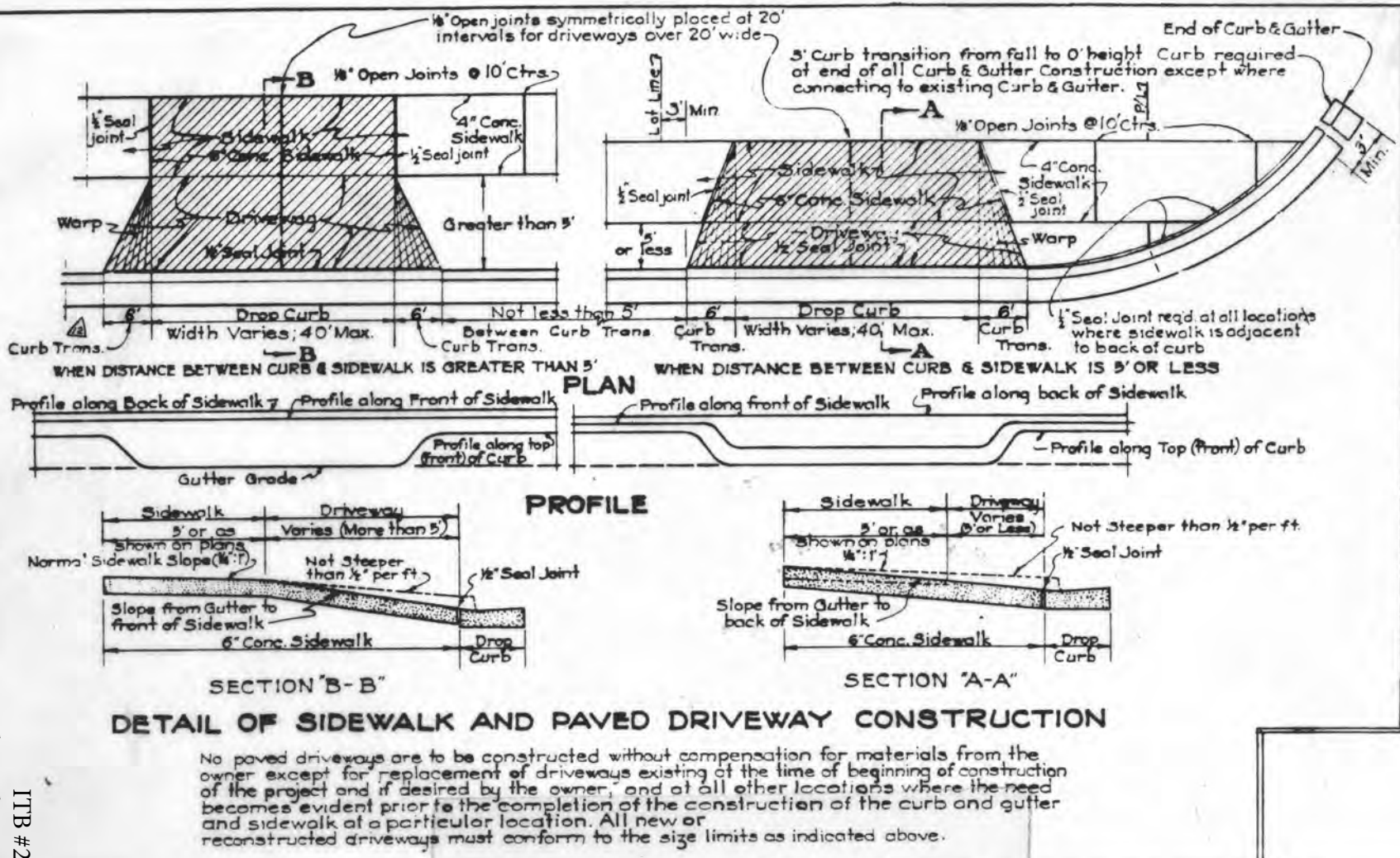
**SECTION C-C**



**SECTION D-D**

|                                     |                            |
|-------------------------------------|----------------------------|
| DADE COUNTY PUBLIC WORKS DEPARTMENT |                            |
| HIGHWAY DIVISION                    |                            |
| DESIGN<br><i>Kelvin</i>             | <b>MEDIAN OPENING</b>      |
| DRAWN<br><b>S.L.</b>                | <b>ON DIVIDED ROADWAYS</b> |
| CHECK<br><i>R. Young</i>            | <b>15-B</b>                |
| PROPOSED<br><i>R. Young</i>         |                            |
| SUBMITTED<br><i>Mike Adams</i>      |                            |
| RECOMMENDED<br><i>Mike Adams</i>    |                            |
| APPROVED<br><i>Mike Adams</i>       |                            |
| REVISION                            | DATE                       |
| DESCRIPTION                         | BY                         |
| DATE                                | PROJ. NO.                  |
| SHEET 92                            |                            |





|          |                                      |             |    |      |       |       |    |
|----------|--------------------------------------|-------------|----|------|-------|-------|----|
| 12/73    | Add 6' Curb Transition               | R.M.        |    |      |       |       |    |
| 9-15     | Dimensions of Grating and Box        | JWB         |    |      |       |       |    |
| 5-71     | Dimensions of Grating                | R.S.        |    |      |       |       |    |
| 11-68    | 2' Sump Detail                       | C.G.        |    |      |       |       |    |
| 10-68    | Special Pipe Detail                  | A.R.        |    |      |       |       |    |
| 10-68    | Added Pipe Plug                      | C.G.        |    |      |       |       |    |
| 9-68     | Added Inlet Top Type #10             | C.G.        |    |      |       |       |    |
| 9-68     | Added Inlet Paving Detail            | C.G.        |    |      |       |       |    |
| 8-68     | Remove A & B                         | C.G.        |    |      |       |       |    |
| 2-67     | Adjust for Flexible Pavement         | M.J.A.      |    |      |       |       |    |
| 3-65     | Added Driveway Limits Near Intersect | JAN         |    |      |       |       |    |
| 10-64    | Added Detail of 9" Curb and Gutter   | RC          |    |      |       |       |    |
| REVISION | DATE                                 | DESCRIPTION | BY | DATE | PROJ. | SHEET | OF |
|          | 6-6-1961                             |             |    |      |       |       |    |

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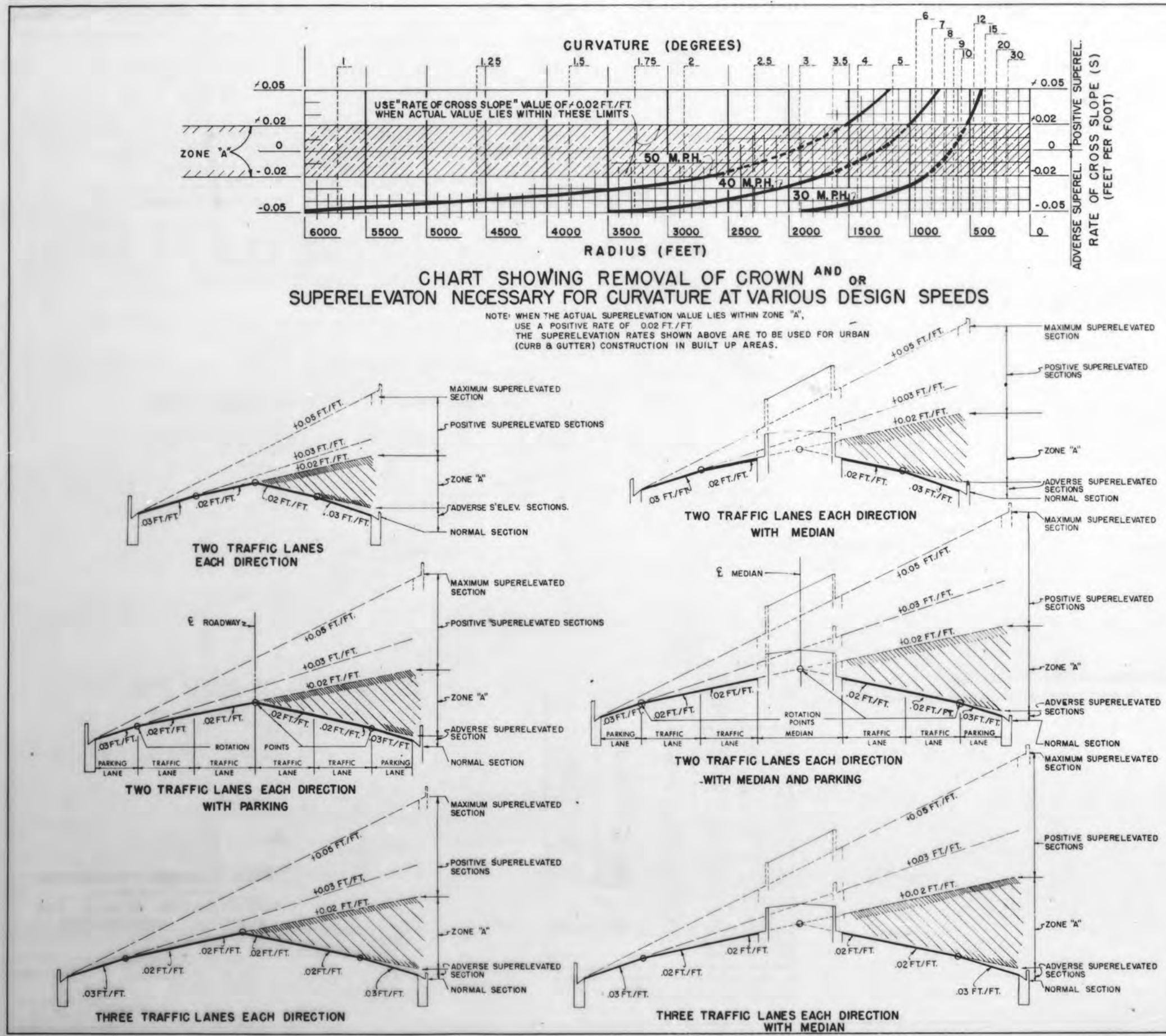
DADE COUNTY PUBLIC WORKS DEPARTMENT  
HIGHWAY DIVISION

DESIGN  
S. R. D.  
DRAWN  
CHECK  
Herndon  
PROPOSED  
SUBMITTED  
JAN. 1961  
RECOMMENDED  
FOR BANK  
APPROVED  
G. H. Herndon

MISCELLANEOUS DETAILS

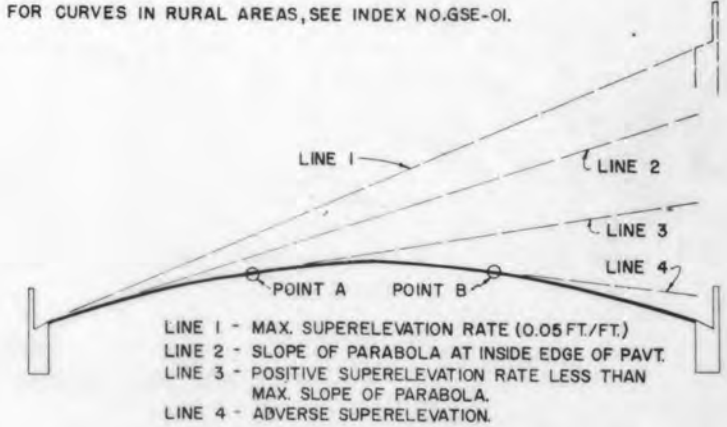
14-A





GENERAL NOTES FOR SUPERELEVATION

1. MAXIMUM RATE OF SUPERELEVATION (IN MUNICIPAL CONSTRUCTION) SHALL BE 0.05 FT./FT.
2. SUPERELEVATION SHALL BE OBTAINED BY ROTATING THE PLANE SUCCESSIVELY ABOUT THE BREAK POINTS OF THE SECTION UNTIL THE PLANE HAS ATTAINED A SLOPE EQUAL TO THAT REQUIRED BY THE CHART. SHOULD THE ROTATION TRAVERSE THE ENTIRE SECTION AND FURTHER SUPERELEVATION BE REQUIRED, THE REMAINING ROTATION OF THE PLANE SHALL BE ABOUT THE LOW EDGE OF THE INSIDE TRAVEL LANE.  
ADVERSE SUPERELEVATION OF SECTIONS WITH PARKING LANES. NO SUPERELEVATION WILL BE REQUIRED WHEN THE MAXIMUM ADVERSE SUPERELEVATION RATE IS GREATER THAN THE NORMAL SLOPE OF THE TRAFFIC LANE ADJACENT TO THE PARKING LANE.
3. WHEN POSITIVE SUPERELEVATION IS REQUIRED, THE SLOPE OF THE GUTTER ON THE HIGH SIDE SHALL BE A CONTINUATION OF THE SLOPE OF THE SUPERELEVATED PAVEMENT.
4. IN CONSTRUCTION, SHORT VERTICAL CURVES SHALL BE PLACED AT ALL ANGULAR PROFILE BREAKS WITHIN THE LIMITS OF THE SUPERELEVATION TRANSITION.
5. MINIMUM GUTTER GRADES WITHIN THE LIMITS OF THE SUPERELEVATION TRANSITION SHALL BE 0.2%.
6. THE VARIABLE SUPERELEVATION TRANSITION LENGTH "L" SHALL HAVE A MINIMUM VALUE OF 50 FEET FOR DESIGN SPEEDS UNDER 40 M.P.H. AND 75 FEET FOR DESIGN SPEEDS OF 40 M.P.H. OR GREATER.
7. MUNICIPAL SECTIONS HAVING LANE ARRANGEMENTS DIFFERENT FROM THOSE SHOWN, BUT COMPOSED OF A SERIES OF PLANES, SHALL BE SUPERELEVATED IN A SIMILAR MANNER.
8. FOR CURVES IN RURAL AREAS, SEE INDEX NO. GSE-01.



VALUES OBTAINED FROM THE CHART ARE ALSO APPLICABLE TO A PARABOLIC CROWN SECTION. WHEN THIS TYPE SECTION IS USED, SUPERELEVATION IS ESTABLISHED BY ROTATING A TANGENT ABOUT THE ARC OF THE PARABOLIC CROWN UNTIL THE DESIRED SLOPE IS ATTAINED (POINTS A & B ON SKETCH). THE NORMAL PARABOLIC CROWN WILL BE MAINTAINED OUTSIDE THE LIMITS OF THE PLANE THUS FORMED.

SUPERELEVATION OF PARABOLIC SECTION

65

FHWA APPROVED: 5-20-77

FLORIDA DEPARTMENT OF TRANSPORTATION  
ROADWAY PLANS SECTION - 65

**SUPERELEVATION DETAILS FOR MUNICIPAL CONSTRUCTION**

| REVISIONS |                                       | REVISIONS |                                       | ROAD NO. |       | COUNTY |       | PROJECT NO. |       |
|-----------|---------------------------------------|-----------|---------------------------------------|----------|-------|--------|-------|-------------|-------|
| Date      | Description                           | Date      | Description                           | Names    | Dates | Names  | Dates | Names       | Dates |
| 5-77      | Added note under LMF 1.3.E. Chart     | 5-77      | REVISED FOR PLANE SECTION             | W.L.B.   | 2-66  | W.L.B. | 2-66  | W.L.B.      | 2-66  |
| 1-78      | Changed all fractions to decimals     | 1-78      | Changed Index N to 1/2" (1/2" = 0.5") | R.L.Q.   | 12-66 | R.L.Q. | 12-66 | R.L.Q.      | 12-66 |
| 10-78     | Changed Index N to 1/2" (1/2" = 0.5") | 10-78     | Changed Index N to 1/2" (1/2" = 0.5") | C.D.R.   | 1-67  | C.D.R. | 1-67  | C.D.R.      | 1-67  |
| LMF       | LMF                                   | LMF       | LMF                                   | C.D.R.   | 1-67  | C.D.R. | 1-67  | C.D.R.      | 1-67  |

1 OF 2 GSE-02-1



A diagram showing a profile grade with several segments. The segments are labeled with their slopes:  $+0.03 \text{ FT./FT.}$ ,  $+0.03 \text{ FT./FT.}$ ,  $+0.02 \text{ FT./FT.}$ ,  $+0.02 \text{ FT./FT.}$ , and  $-0.02 \text{ FT./FT.}$ . The segments are separated by vertical curve segments. The diagram is labeled with "Line A", "Line B", "Line D", "Line F", and "Line G" at the top. A vertical arrow points to a "Profile Grade Refers to this Point". The diagram is labeled with "O" at the bottom left and "A" at the bottom right.

Normal Section

Super-elevation Transition "L" Varies (See Note)

Superelevated Section

0.6 L Tangent

0.2 L Curve

PC or PT Of Curve

Line G

Line F

Line D

Theoretical Grade Line

Line B

Line A

PROFILE

Diagram illustrating the relationship between Profile Grade and Finished Grade. The diagram shows a cross-section of a road with a central gutter and two parking lanes. The Profile Grade is represented by a dashed line, and the Finished Grade is represented by a solid line. The vertical axis is labeled with 'Line A' through 'Line G'. The horizontal axis is labeled with 'Parking Lane' and 'A'. The Profile Grade is shown with a constant slope of 0.02 FT/FT. The Finished Grade is shown with a constant slope of 0.03 FT/FT. The vertical offset between the Profile Grade and the Finished Grade is labeled as 0.01 FT/FT. The diagram also shows a 'Profile Grade refers to this Point.' label pointing to the gutter line.

Normal Section

Superelevation Transition "L"  
Varies (See Note)

Superelevated Section

0.8 L  
Tangent

0.2 L  
Curve

PC. or P.T.  
of Curve

Note: Runoff Rate "d" is to be Applied to the Outside Edge of Traffic Lane.

Line D (Profile at E Const.)

Lines C & E

Lines B & F

Lines A & G

Line B - Theoretical Grade Line

Line A

Inside & Outside Edge Parking Lane

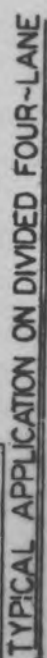
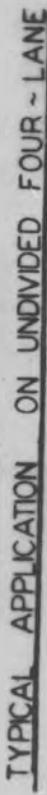
PROFILE

| D       |         | R    | V=30mph | V=40mph | V=50mph |
|---------|---------|------|---------|---------|---------|
|         |         |      | e       | e       | e       |
| 0° 15'  | 229 18' | NC   | NC      | NC      | NC      |
| 0° 30'  | 114 59' | NC   | NC      | NC      | NC      |
| 0° 45'  | 76 39'  | NC   | NC      | NC      | NC      |
| 1° 00'  | 57 30'  | NC   | RC      | RC      | RC      |
| 1° 30'  | 38 20'  | RC   | RC      | RC      | .024    |
| 2° 00'  | 28 65'  | RC   | .022    | .028    | .028    |
| 2° 30'  | 22 92'  | RC   | .026    | .031    | .031    |
| 3° 00'  | 19 10'  | .020 | .029    | .033    | .033    |
| 3° 30'  | 16 37'  | .023 | .032    | .036    | .036    |
| 4° 00'  | 14 32'  | .025 | .033    | .038    | .038    |
| 5° 00'  | 11 46'  | .028 | .036    | .043    | .043    |
| 6° 00'  | 9 55'   | .031 | .039    | .047    | .047    |
| 7° 00'  | 8 19'   | .032 | .041    |         |         |
| 8° 00'  | 7 16'   | .035 | .044    |         |         |
| 9° 00'  | 6 37'   | .035 | .046    |         |         |
| 10° 00' | 5 73'   | .037 | .048    |         |         |
| 11° 00' | 52 1'   | .038 |         |         |         |
| 12° 00' | 47 7'   | .039 |         |         |         |
| 13° 00' | 44 1'   | .040 |         |         |         |
| 14° 00' | 40 9'   | .043 |         |         |         |
| 16° 00' | 35 8'   | .045 |         |         |         |
| 18° 00' | 3 18'   | .047 |         |         |         |
| 20° 00' | 28 6'   | .050 |         |         |         |

e Max.=0.0

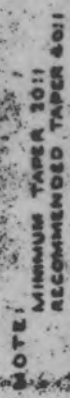
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| THWA APPROVED: 5-20-77                                                      |  |                                                        |  |
| <b>FLORIDA DEPARTMENT OF TRANSPORTATION</b><br><b>ROADWAY PLANS SECTION</b> |  |                                                        |  |
| <b>SUPERELEVATION DETAILS FOR</b><br><b>MUNICIPAL CONSTRUCTION</b>          |  |                                                        |  |
| ROAD NO.                                                                    |  | COUNTRY                                                |  |
|                                                                             |  | PROJECT NO.                                            |  |
|                                                                             |  |                                                        |  |
| Names                                                                       |  | Dates                                                  |  |
| Checked by W.L.B.                                                           |  | 2-66                                                   |  |
| Checked by R.L.O.                                                           |  | 12-66                                                  |  |
| Checked by                                                                  |  | APPROVED BY <i>[Signature]</i><br>Engineer of Roadways |  |
| Checked by                                                                  |  | Drawing No. 2 OF 2                                     |  |
| Traced by C.D.P.                                                            |  | Index No. GSE-02-1                                     |  |



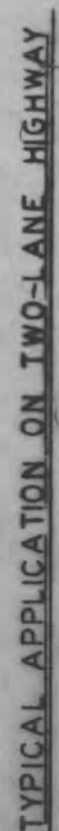


88

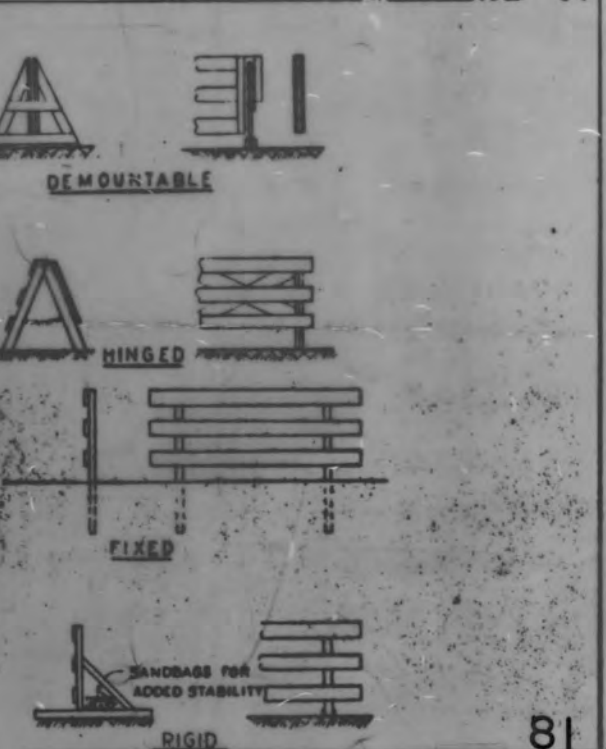
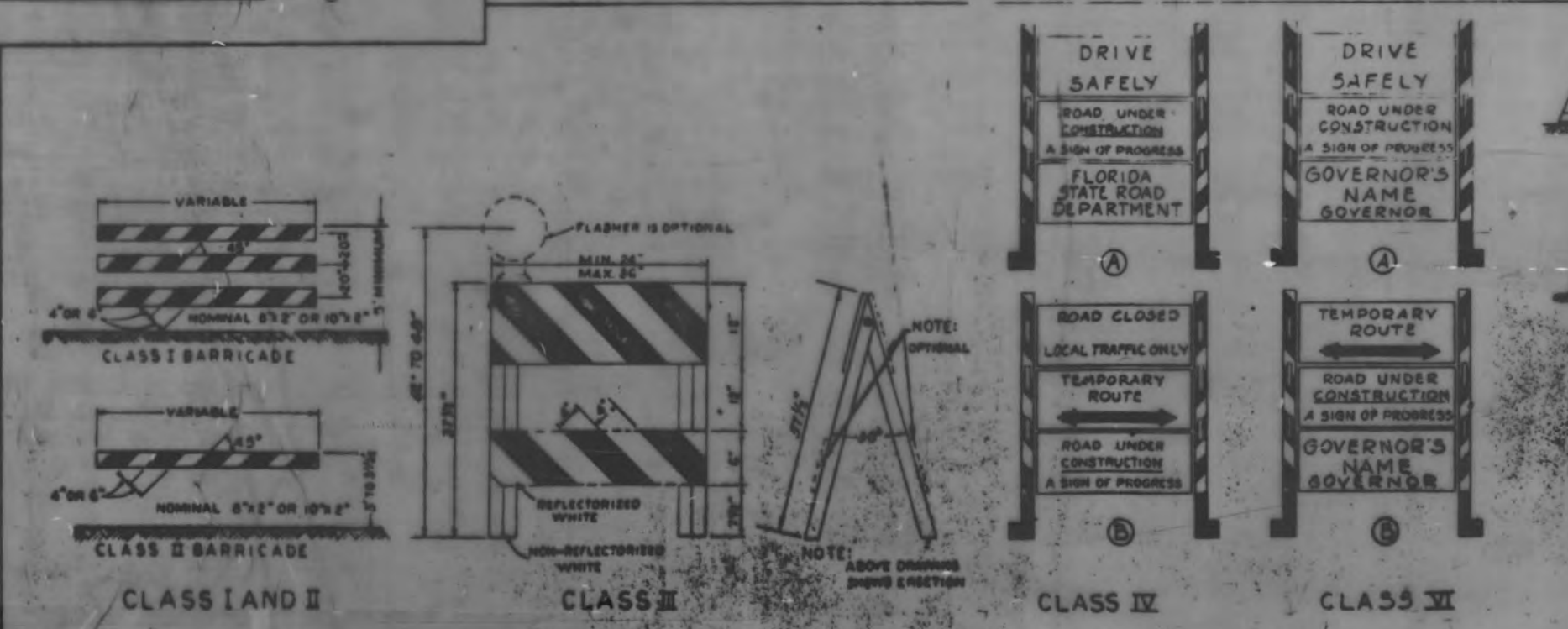
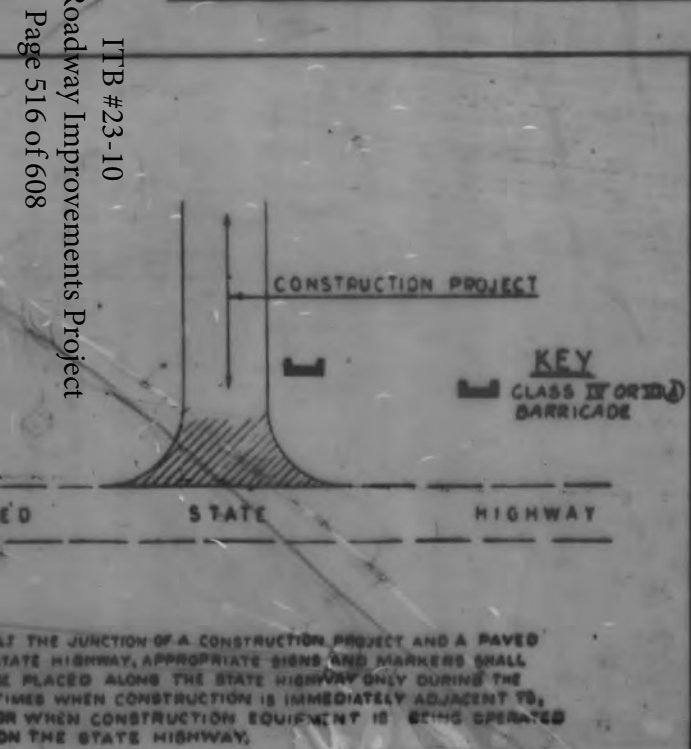
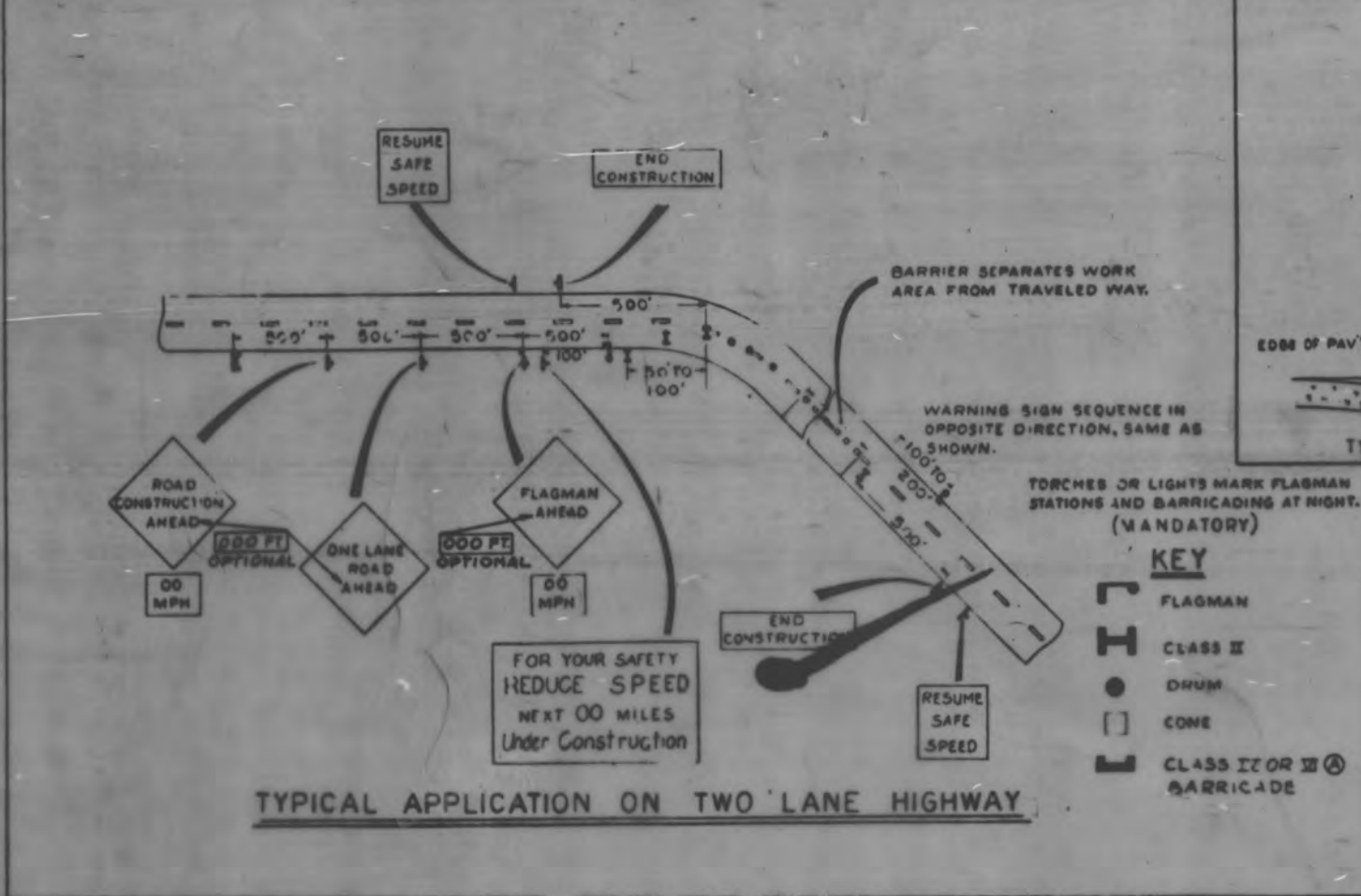
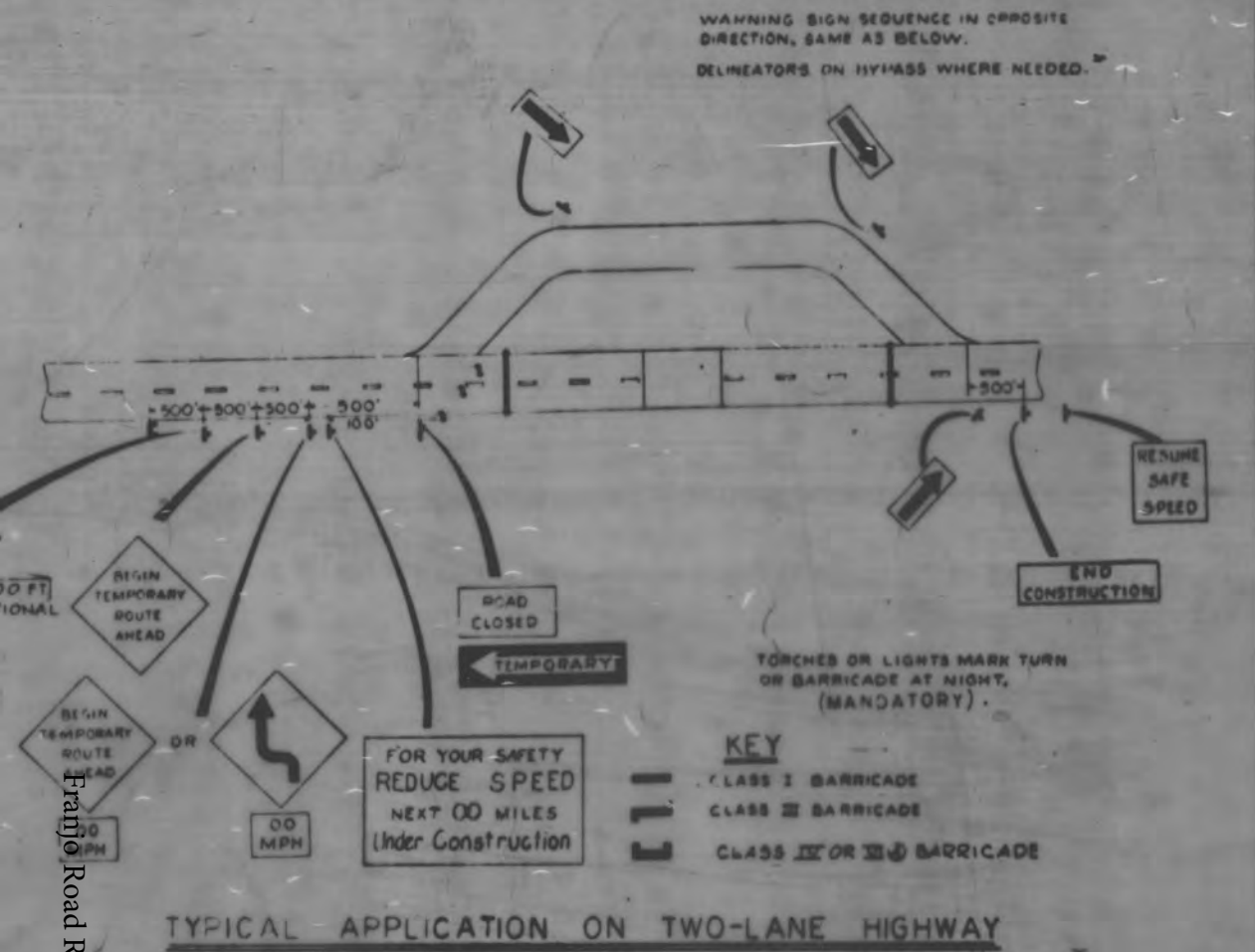
FOR COMPLETION OF SIGNING SEE BELOW



TAPER DIAGRAM  
CONES AND DRUMS







**CLASS II AND III INTERCHANGEABLE UNLESS OTHERWISE NOTED**

**NOTE: THE BOTTOM PANEL ON CLASS II BARRICADE IS OPTIONAL**

**NOTE: SIGNS FOR CLASS II AND III BARRICADES TO BE FURNISHED BY ROAD DEPARTMENT**

**NOTE: CLASS III & IV BARRICADES USED ON STATE JOBS**

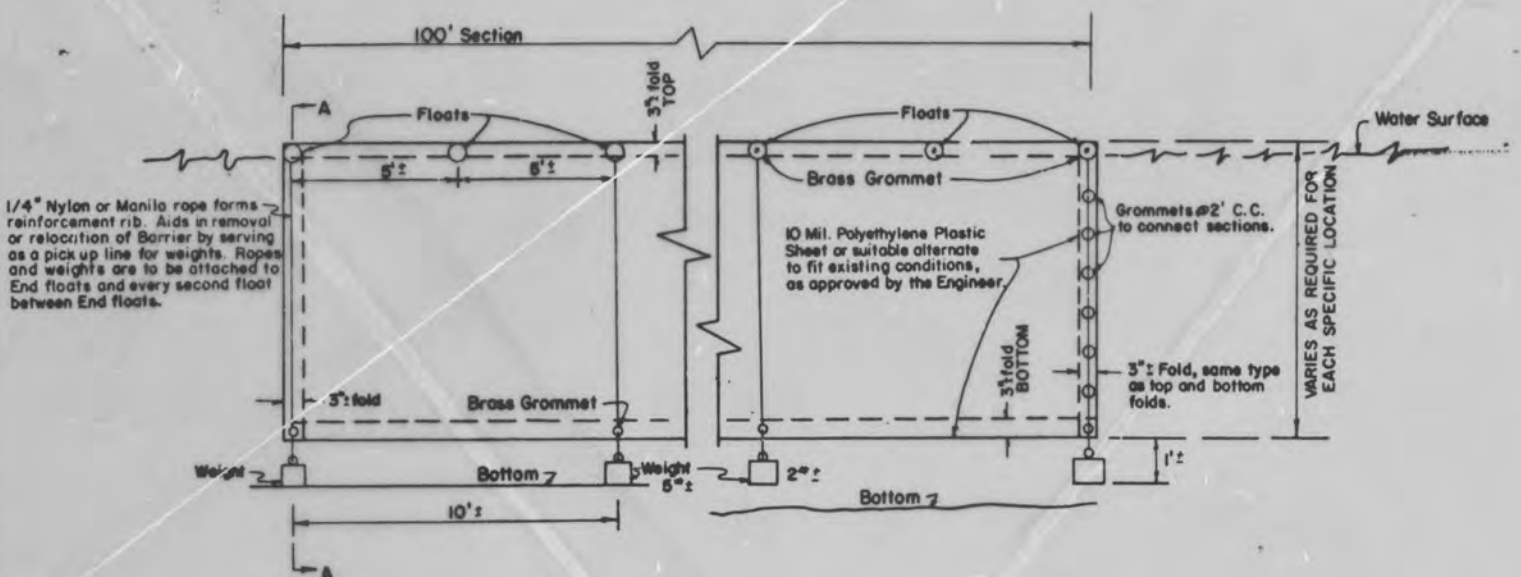
**STANDARD WARNING SIGN DETAILS**

| ITEM NO.                         | QUANTITY | PROJECT NO. |
|----------------------------------|----------|-------------|
| 4-67 ADDED CLASS II BARRICADE    |          |             |
| 4-67 ADDED CLASS III BARRICADE   |          |             |
| 4-67 ADDED CLASS IV BARRICADE    |          |             |
| 4-67 ADDED CLASS V BARRICADE     |          |             |
| 4-67 ADDED CLASS VI BARRICADE    |          |             |
| 4-67 ADDED CLASS VII BARRICADE   |          |             |
| 4-67 ADDED CLASS VIII BARRICADE  |          |             |
| 4-67 ADDED CLASS IX BARRICADE    |          |             |
| 4-67 ADDED CLASS X BARRICADE     |          |             |
| 4-67 ADDED CLASS XI BARRICADE    |          |             |
| 4-67 ADDED CLASS XII BARRICADE   |          |             |
| 4-67 ADDED CLASS XIII BARRICADE  |          |             |
| 4-67 ADDED CLASS XIV BARRICADE   |          |             |
| 4-67 ADDED CLASS XV BARRICADE    |          |             |
| 4-67 ADDED CLASS XVI BARRICADE   |          |             |
| 4-67 ADDED CLASS XVII BARRICADE  |          |             |
| 4-67 ADDED CLASS XVIII BARRICADE |          |             |
| 4-67 ADDED CLASS XIX BARRICADE   |          |             |
| 4-67 ADDED CLASS XX BARRICADE    |          |             |

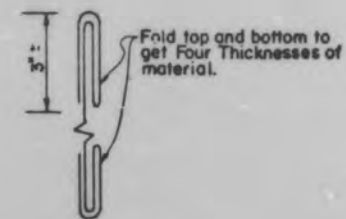
APPROVED BY: *[Signature]*

DATE: 2-11-65

2 of 2 2613-M

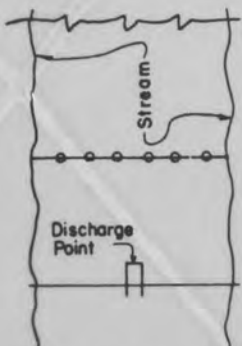


FRONT VIEW

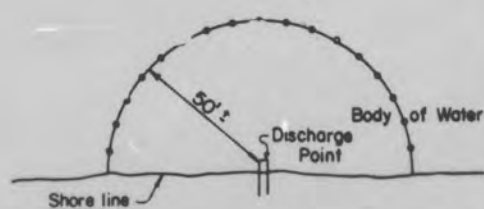


SIDE VIEW

FOLDING DETAIL



TYPICAL APPLICATION



TYPICAL APPLICATION

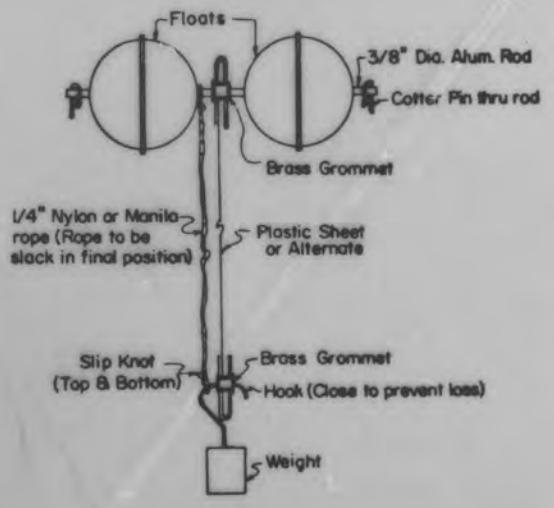
GENERAL NOTES

Silt Barrier to Prevent drifting of Silt caused by discharge of Storm Sewers during Construction, dredging or filling Operations.

Exact placement of silt barrier shall be so as to effectively control silt dispersion under the conditions present on a particular project.

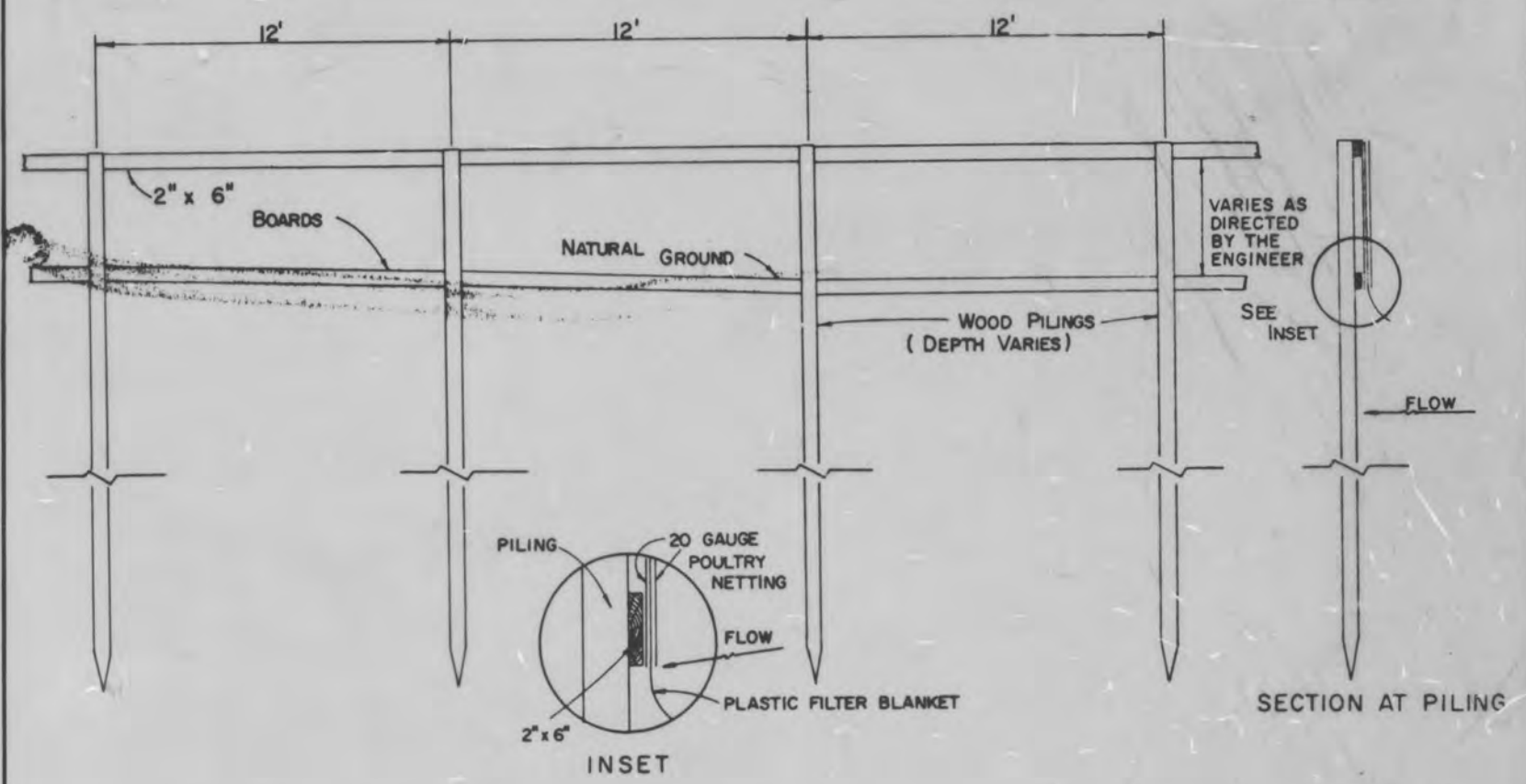
The details shown on this sheet are suggested methods only. Alternate solutions and usage of materials may be used as approved by the Engineer.

DETAIL OF FLOATING SILT BARRIER



SECTION A-A

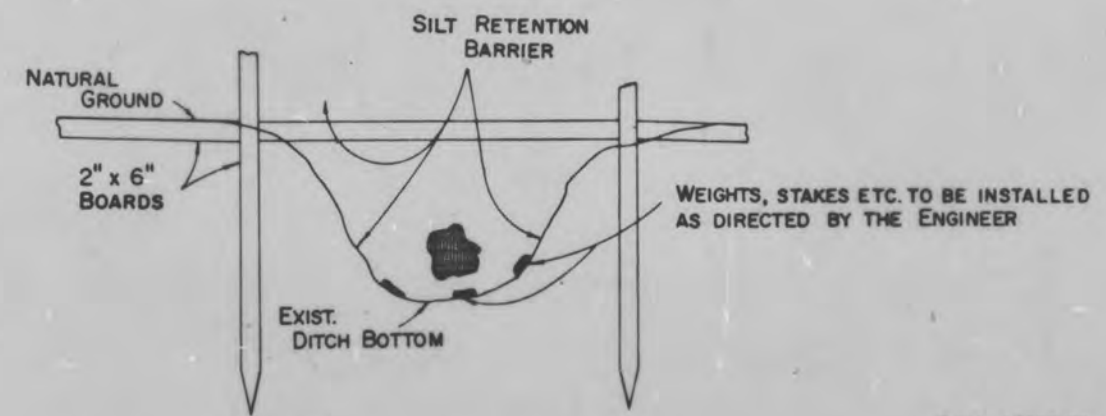
NOTE: At shallow water locations the plastic sheet or suitable alternate may be fastened to stakes driven into the bottom in lieu of floats and weights.



DETAIL OF STAKED SILT BARRIER

NOTES

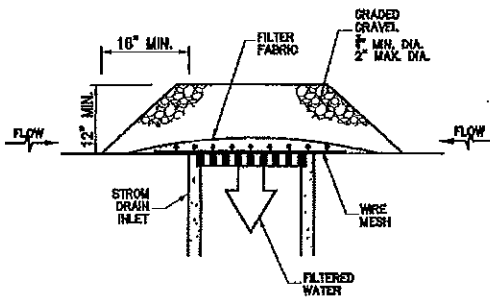
THE FRAME WILL BE CONSTRUCTED WITH 2" x 6" BOARDS. PILINGS WILL BE A MINIMUM OF 6" IN DIAMETER AT THE BUTT END. THE DEPTH OF PILINGS WILL BE AT THE DISCRETION OF THE PROJECT ENGINEER. ATTACHED TO THE FRAME WILL BE 20 GAUGE POULTRY NETTING WITH 1" NET. THE SILT RETAINER WILL BE PLASTIC FILTER BLANKET, EXTENDING FROM THE TOP 2" x 6" BOARD TO 4' BEYOND THE BOTTOM 2" x 6" BOARD. IN THE DITCH BOTTOM, THE BLANKET AND POULTRY NETTING SHOULD EXTEND TO THE DITCH BOTTOM AND BE ANCHORED IN PLACE BY MEANS AVAILABLE TO THE CONTRACTOR TO EFFECTIVELY PREVENT SILT FROM ESCAPING FROM UNDER THE BOTTOM OF THE BARRIER. (SEE DETAIL BELOW)



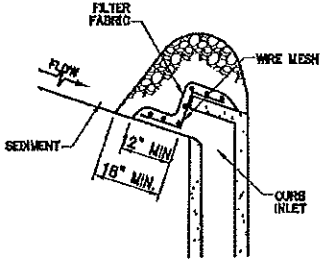
DETAIL SHOWING PLACEMENT OF STAKED SILT BARRIER AT EXISTING DITCH LOCATIONS

|                                      |  |          |  |             |  |                                   |  |
|--------------------------------------|--|----------|--|-------------|--|-----------------------------------|--|
| FHWA APPROVED: 3-13-75               |  |          |  |             |  | 82                                |  |
| FLORIDA DEPARTMENT OF TRANSPORTATION |  |          |  |             |  |                                   |  |
| Road Design Section                  |  |          |  |             |  |                                   |  |
| EROSION CONTROL DEVICES              |  |          |  |             |  |                                   |  |
| SILT BARRIERS                        |  |          |  |             |  |                                   |  |
|                                      |  | INITIALS |  | DATES       |  | Recommended for approval          |  |
| Designed by                          |  | WJR      |  | 5/74        |  | by <u>SAH</u>                     |  |
| Checked by                           |  | HLB      |  | 6/74        |  | Deputy Design Engineer - Roadways |  |
| Quantities by                        |  |          |  |             |  | Approved                          |  |
| Checked by                           |  |          |  |             |  | by <u>W. H. Smith</u>             |  |
| Supervised by                        |  |          |  |             |  | State Design Engineer             |  |
|                                      |  | DCB      |  | DRAWING NO. |  | INDEX NO.                         |  |
| by                                   |  |          |  | 1 OF 1      |  | GEC-04                            |  |





DROP INLET PROTECTION-GRAVEL

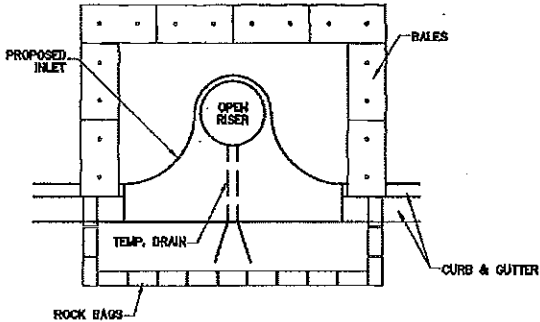


CURB INLET PROTECTION-GRAVEL

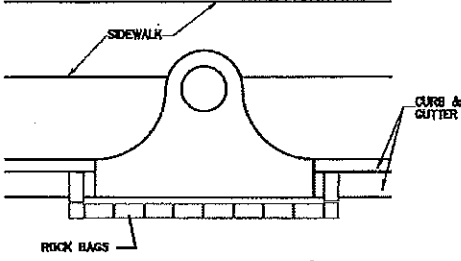
GRAVEL APPLICATIONS (TYP.)  
OR APPROVED ALTERNATIVE

NOTES FOR INLET PROTECTION GRAVEL:

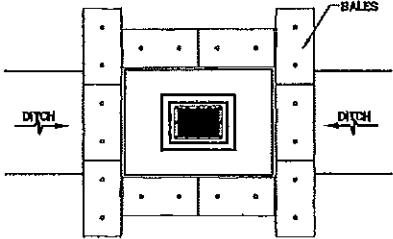
- 1- INSTALLATION/APPLICATION CRITERIA:
- PLACE WIRE MESH (WITH 1/2 INCH OPENINGS) OVER THE INLET GRATE EXTENDING ONE FOOT PAST THE GRATE IN ALL DIRECTIONS.
  - PLACE FILTER FABRIC OVER THE MESH. FILTER FABRIC SHOULD BE SELECTED BASED ON SOIL TYPE.
  - PLACE GRADED GRAVEL, TO A MINIMUM DEPTH OF 12 INCHES, OVER THE FILTER FABRIC AND EXTENDING 16 INCHES PAST THE GRATE IN ALL DIRECTIONS.
- 2- MAINTENANCE:
- INSPECT INLET PROTECTION AFTER EVERY LARGE STORM EVENT AND AT A MINIMUM OF ONCE MONTHLY.
  - REMOVE SEDIMENT ACCUMULATED WHEN IT REACHES 4 INCHES IN DEPTH.
  - REPLACE FILTER FABRIC AND CLEAN OR REPLACE GRAVEL IF CLOGGING IS APPARENT.
- 3- LIMITATIONS:
- RECOMMENDED FOR MAXIMUM DRAINAGE AREA OF ONE ACRE.
  - EXCESS FLOWS MAY BYPASS THE INLET REQUIRING DOWN GRADIENT CONTROLS.
  - PONDING WILL OCCUR AT INLET.



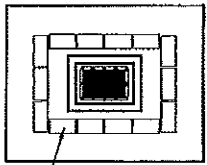
PARTIAL INLET



COMPLETED INLET



DITCH BOTTOM INLET



SWALE INLET

PROTECTION ALONG INLETS WITH ROCK BAGS BALES  
OR APPROVED ALTERNATIVES

NOTES FOR SYNTHETIC BALES OR BALE TYPE BARRIERS:

- 1-TYPE I AND II SYNTHETIC BARRIER SHOULD BE SPACED IN ACCORDANCE WITH CHART 1, SHEET 1 OF 2010 FDOT DESIGN STANDARDS INDEX 102.
- 2-BALES SHALL BE ANCHORED WITH TWO (2) 1"x2" (or 1" dia.) x 4' WOOD STAKES. STAKES OF OTHER MATERIAL OR SHAPE PROVIDING EQUIVALENT STRENGTH MAY BE USED IF APPROVED BY THE ENGINEER. STAKES OTHER THAN WOOD SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
- 3-RAILS AND POSTS SHALL BE 2"x4" WOOD. OTHER MATERIALS PROVIDING EQUIVALENT STRENGTH MAYBE USED IF APPROVED BY THE ENGINEER.
- 4-ADJACENT BALES SHALL BE BUTTED FIRMLY TOGETHER.
- 6-WHERE USED IN CONJUNCTION WITH SILT FENCE, BALES SHALL BE PLACED ON THE UPSTREAM SIDE OF THE FENCE.

INLET PROTECTION SYSTEM (TYP.)  
OR APPROVED ALTERNATIVE

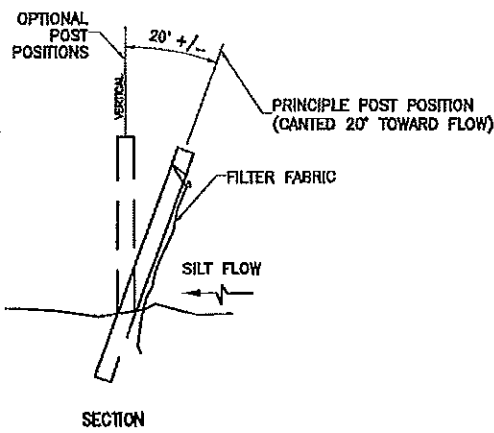
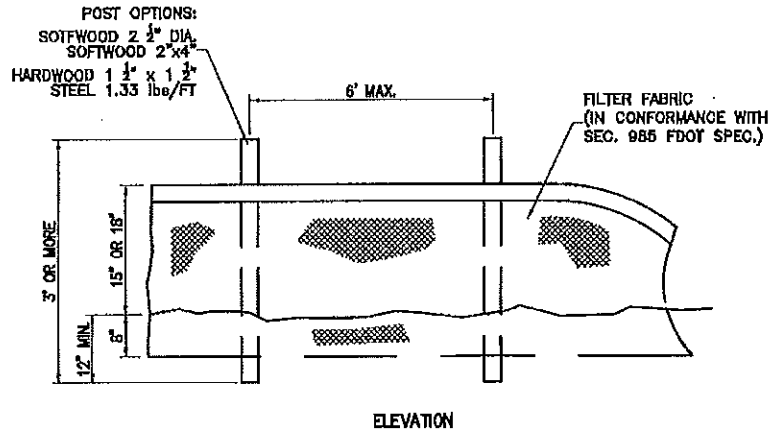
REVISIONS

| DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|------|----|-------------|------|----|-------------|------|----|-------------|
|      |    |             |      |    |             |      |    |             |
|      |    |             |      |    |             |      |    |             |

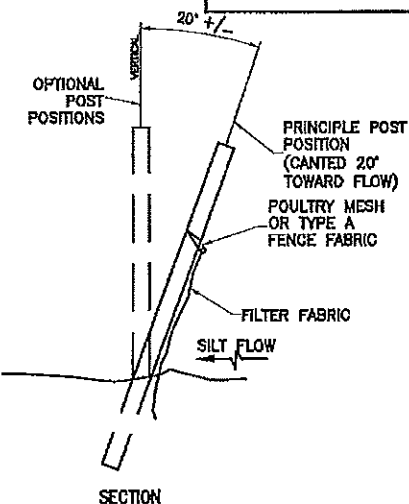
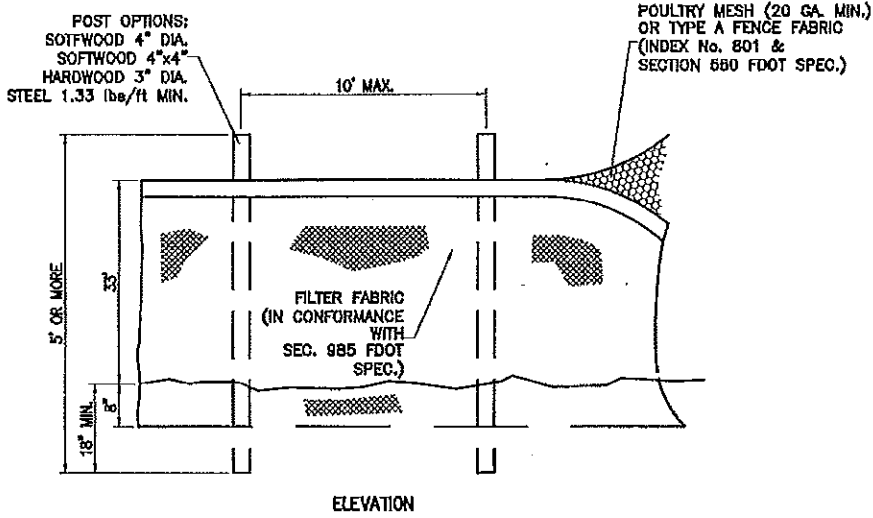
| DESIGNED BY | CHECKED BY | DATE | DATE | DATE |
|-------------|------------|------|------|------|
|             |            |      |      |      |
|             |            |      |      |      |
|             |            |      |      |      |

MIAMI-DADE COUNTY  
PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT  
HIGHWAY DIVISION  
STEVEN P. CLARK, ENGINEER  
16100 N.W. 11TH ST.  
MIAMI, FLORIDA 33128

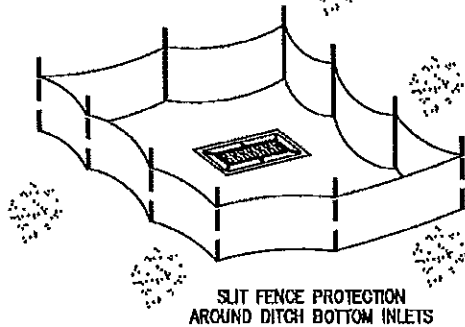
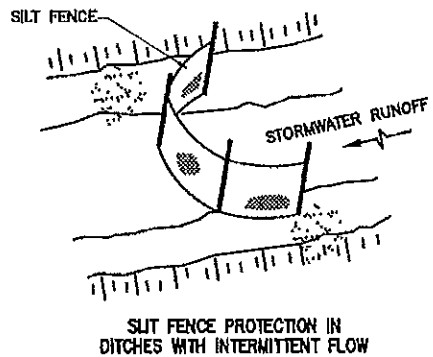
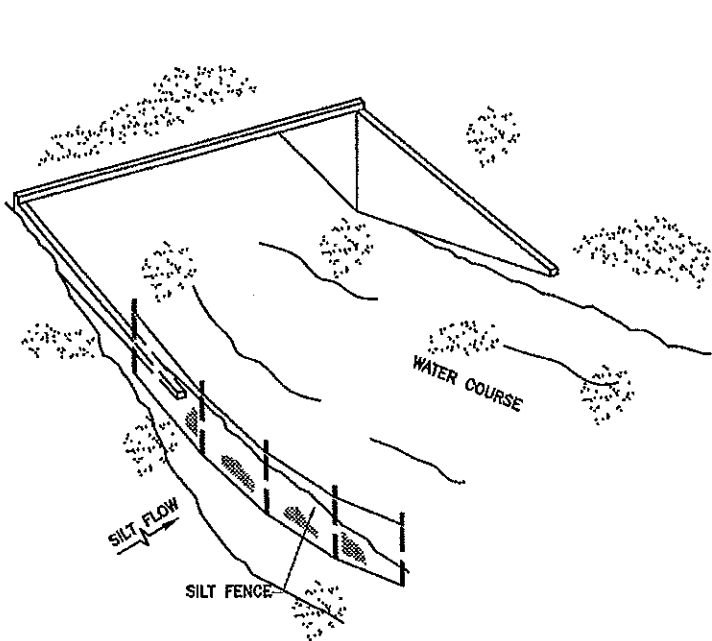
INLET PROTECTION SYSTEMS  
DETAILS



TYPE III SILT FENCE (TYP.)



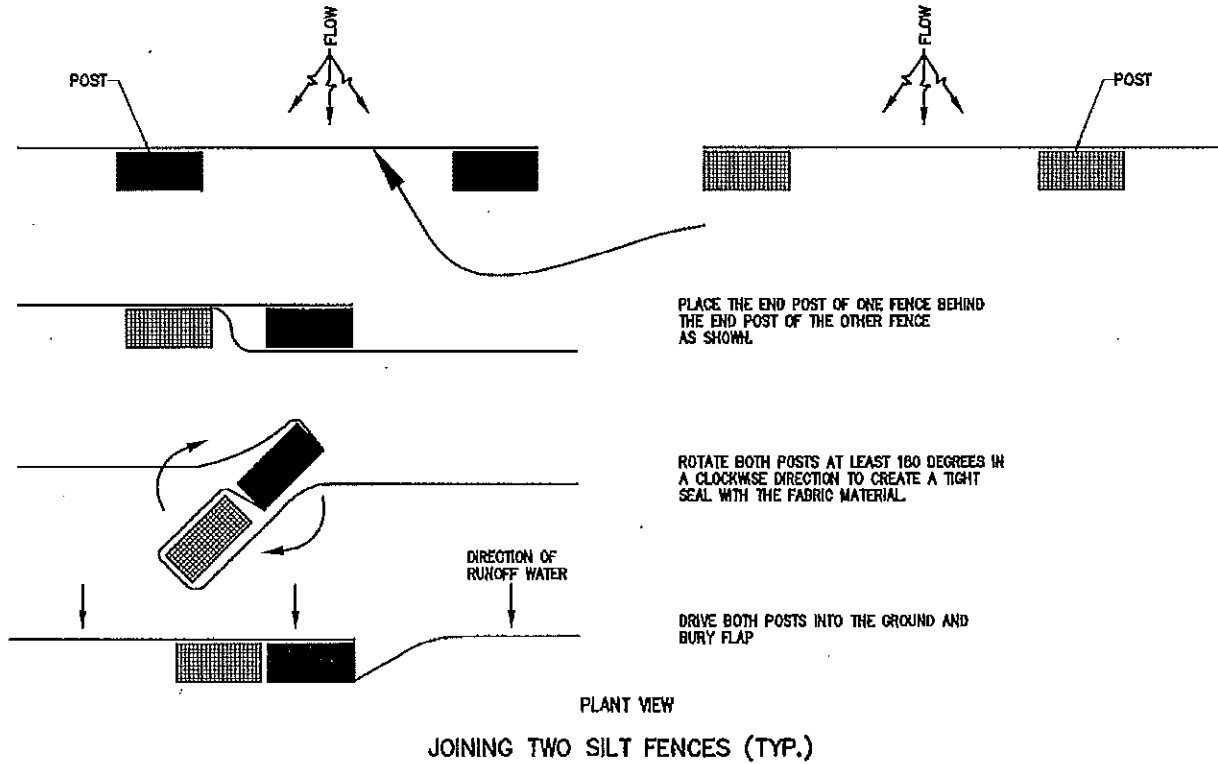
TYPE IV SILT FENCE (TYP.)



SILT FENCE APPLICATIONS (TYP.)

NOTES FOR SILT FENCES:

- 1- TYPE III SILT FENCE TO BE USED AT MOST LOCATIONS. WHERE USED IN DITCHES, THE SPACING FOR TYPE III SILT FENCE SHALL BE IN ACCORDANCE WITH CHART 1, SHEET 1 OF 2010 FDOT DESIGN STANDARDS INDEX 102.
- 2- TYPE IV SILT FENCE TO BE USED WHERE LARGE SEDIMENT LOADS ARE ANTICIPATED. SUGGESTED USE IS WHERE FILL SLOPE IS 1:2 OR STEEPER AND LENGTH OF SLOPE EXCEEDS 25 FEET. AVOID USE WHERE THE DETAINED WATER MAY BACK INTO TRAVEL LANES OR OFF THE RIGHT OF WAY.



- 3- DO NOT CONSTRUCT SILT FENCES ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.
- 4- WHERE USED AS SLOPE PROTECTION, SILT FENCE IS TO BE CONSTRUCTED ON 0% LONGITUDINAL GRADE TO AVOID CHANNELIZING RUNOFF ALONG THE LENGTH OF THE FENCE.

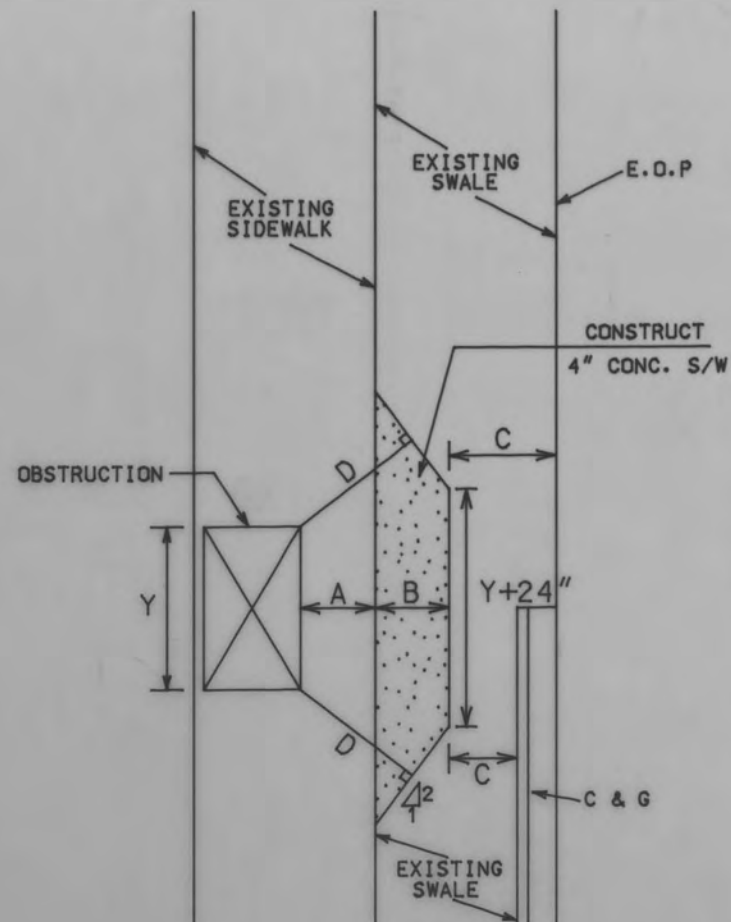
SEDIMENT BARRIERS (TYP.)  
OR APPROVED ALTERNATIVE

| REVISIONS |    |             |      |    |             |
|-----------|----|-------------|------|----|-------------|
| DATE      | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|           |    |             |      |    |             |
|           |    |             |      |    |             |

| DESIGNED BY | CHECKED BY | DATE | DESIGNED BY | CHECKED BY | DATE |
|-------------|------------|------|-------------|------------|------|
|             |            |      |             |            |      |
|             |            |      |             |            |      |

|                   |                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| MIAMI-DADE COUNTY | PUBLIC WORKS AND WASTE MANAGEMENT DEPARTMENT<br>HIGHWAY DIVISION<br>STANDARD P. 0405, CONTROL NO. 10 10 1 97<br>MIAMI, FLORIDA 33126 |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------|





## SIDEWALK WIDENING DETAIL

CRITERIA TO BE USED TO AVOID RELOCATING  
EXISTING OBSTRUCTIONS WHERE  
SWALE AREA IS AVAILABLE:

$Y \leq 24"$  AND  $A < 32"$  OR  $Y > 24"$  AND  $A < 36"$

THEN:  $A+B = 36"$  MIN.

$B = 24"$  MIN.

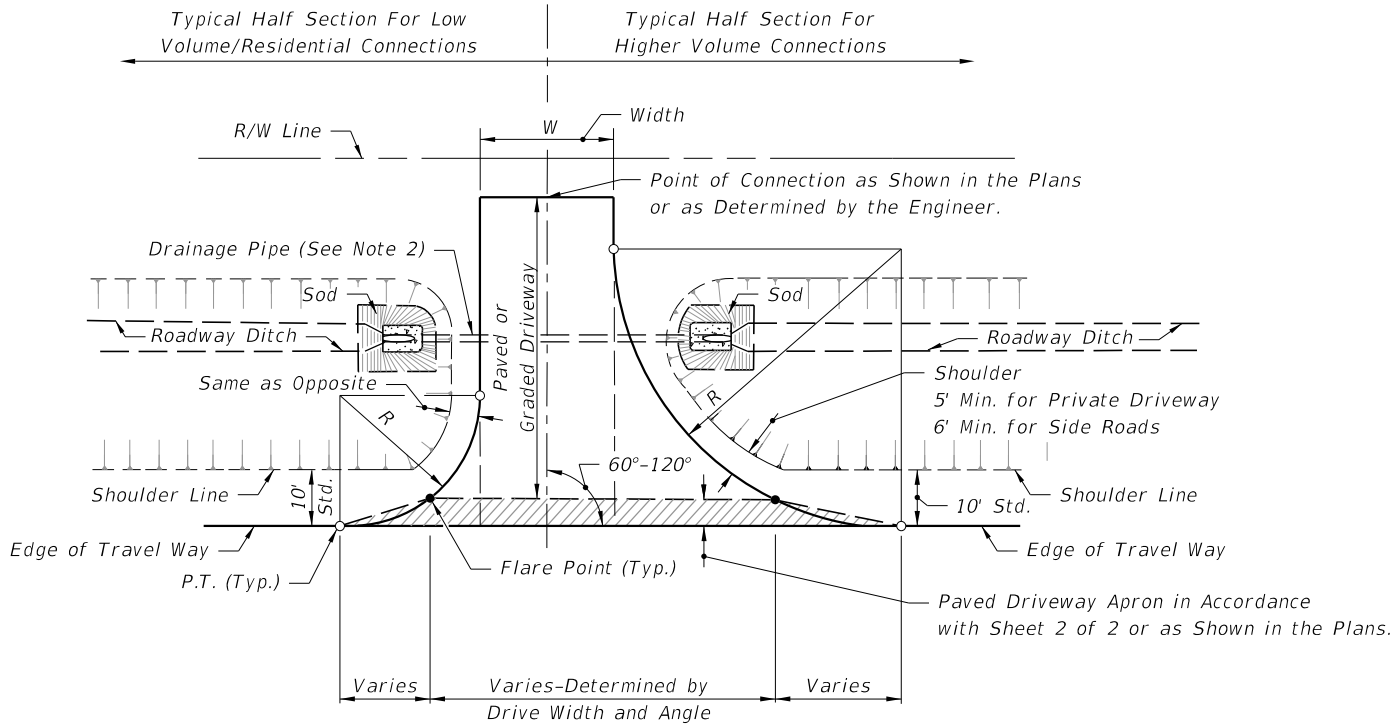
FOR C&G SECTIONS, IF  $C \leq 24"$  THEN "B" SHALL EXTEND TO BACK OF CURB.

$C \geq 4'$  FOR SECTIONS WITHOUT CURB & GUTTER

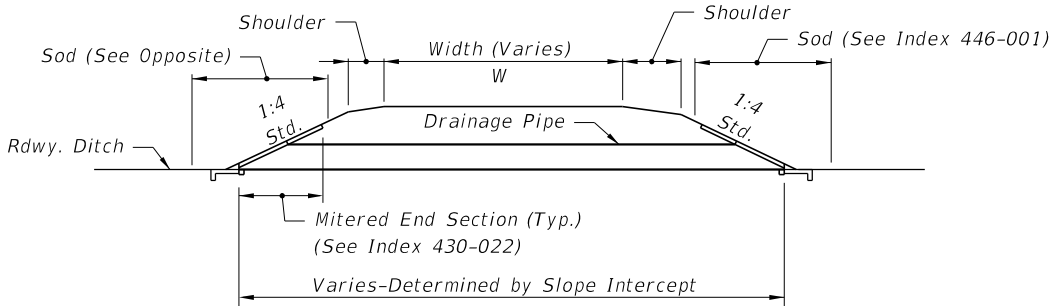
$D = 36"$  MIN.

93

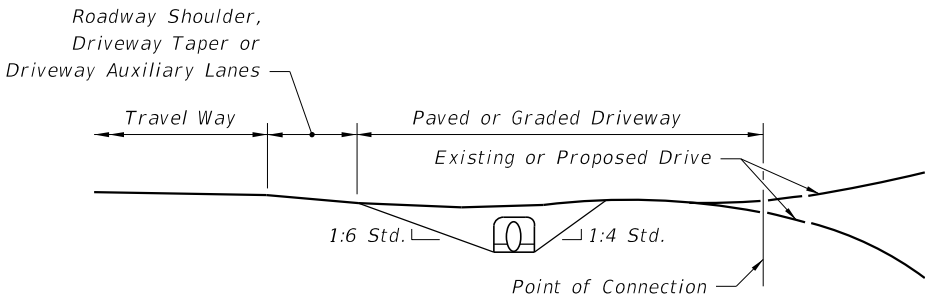
|                                                    |                |              |  |
|----------------------------------------------------|----------------|--------------|--|
| DADE COUNTY PUBLIC WORKS DEPT.<br>HIGHWAY DIVISION |                |              |  |
| SIDEWALK WIDENING<br>DETAIL                        |                |              |  |
| DESIGN<br>BY                                       | I-PR-A         |              |  |
| DRAWN<br>BY                                        |                |              |  |
| CHECK<br>BY                                        |                |              |  |
| PROPOSED<br>BY                                     |                |              |  |
| SUBMITTED                                          | RECOMMENDED    | APPROVED     |  |
| HIGHWAY ENGINEER                                   | CHIEF ENGINEER | DIRECTOR     |  |
| DATE                                               | PROJ.          | SHEET 1 OF 1 |  |



PLAN

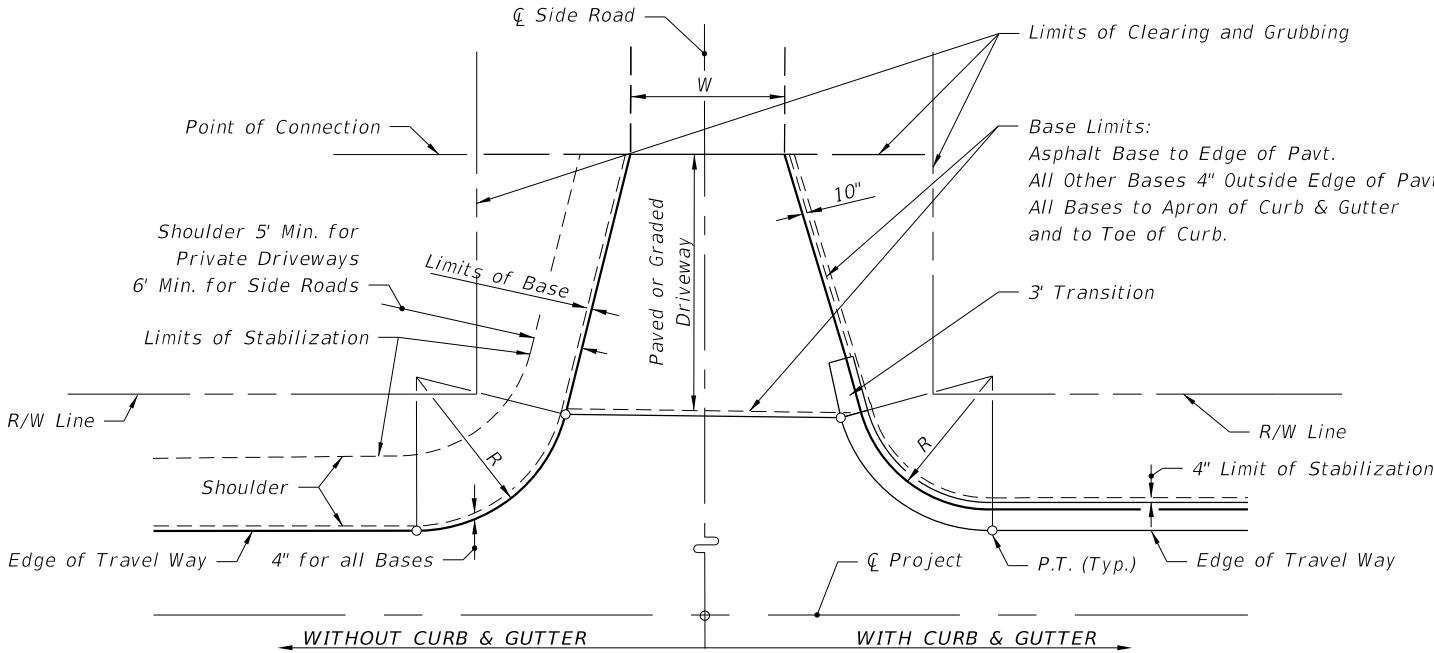


DRAINAGE SECTION



DRIVEWAY PROFILE AND END VIEW

FLUSH SHOULDER ROADWAY - DRIVEWAY CONSTRUCTION



PLAN

LIMITS OF CLEARING & GRUBBING,  
STABILIZING AND BASE AT DRIVEWAYS

DRIVEWAY ENTRANCES NOTES:

1. See Plans for Driveway Width (W) and Return Radius (R).
2. See the Plans for drainage pipe size and length or as determined by the Engineer. The size will be no less than 15" diameter or equivalent.
3. Stable material may be required for graded driveways to private property as directed by the Engineer in accordance with Specification 102-8.
4. The driveway pavement requirement at graded connections may be waived for connections serving one or two homes or field entrances with less than 20 trips per day, or 5 trips per hour as approved by the Engineer, or when not shown in the Plans.
5. Point of Connection:
  - a. Construct paved driveways for all paved connecting facilities. The connecting point will be determined by the Engineer.
  - b. Construct paved driveways for all business, commercial, industrial or high volume residential graded connecting facilities. Construct the connecting point 30'-0' from edge of travel way or at R/W line, whichever is less.
  - c. Construct paved driveways for all side road connections. The R/W is the connecting point.



FY 2022-23  
STANDARD PLANS

PAVED AND GRADED DRIVEWAYS

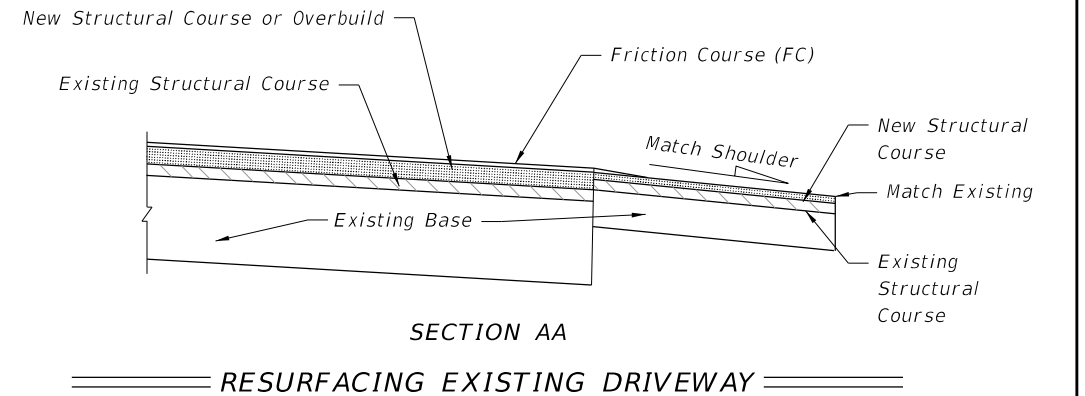
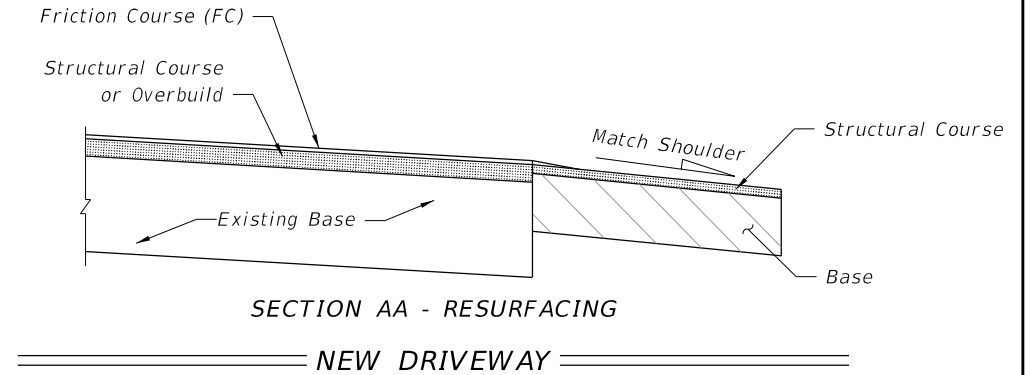
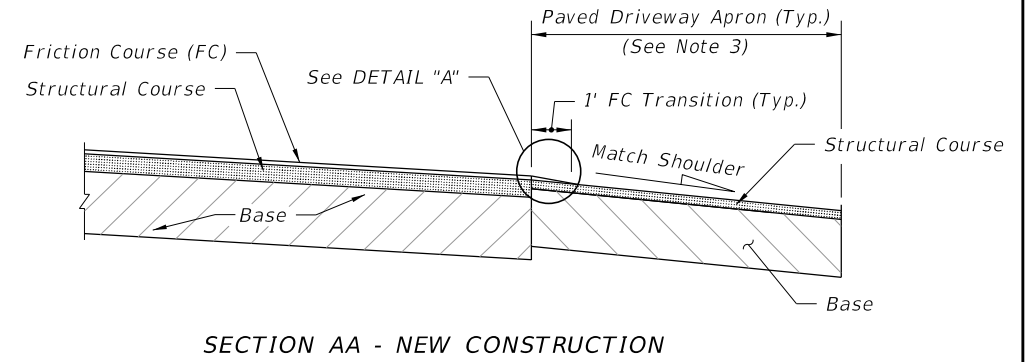
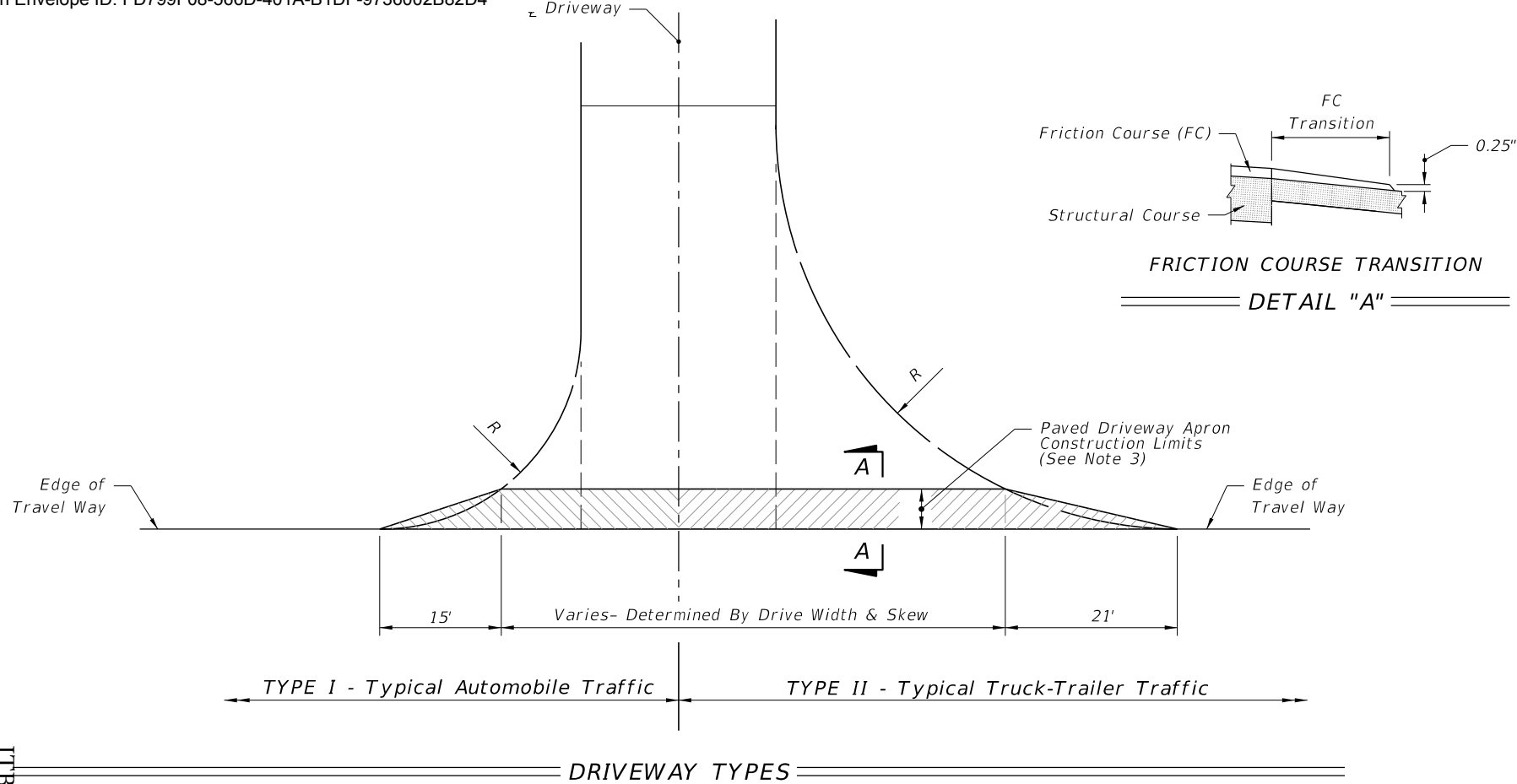
INDEX  
330-001

SHEET  
1 of 2

LAST  
REVISION  
11/01/18

REVISION  
DESCRIPTION:





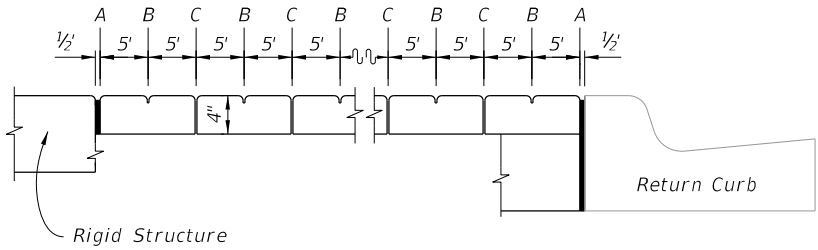
**GENERAL NOTES:**

1. Driveways are to be constructed or resurfaced for low volume (single family, duplex, farm, etc.) residential connections as directed by the Engineer.
2. Driveways construction is not required for low volume residential connections where roadway shoulders are paved.
3. Match existing paved shoulder widths  $\geq 4'$ . For all other shoulders conditions, construct at 5' wide.
4. Connections beyond the shoulder width are to be constructed as directed by the Engineer.
5. Construct Driveway Base in accordance with Specification 286.
6. Payment for structural course and friction course is to be included in roadway pavement pay item.

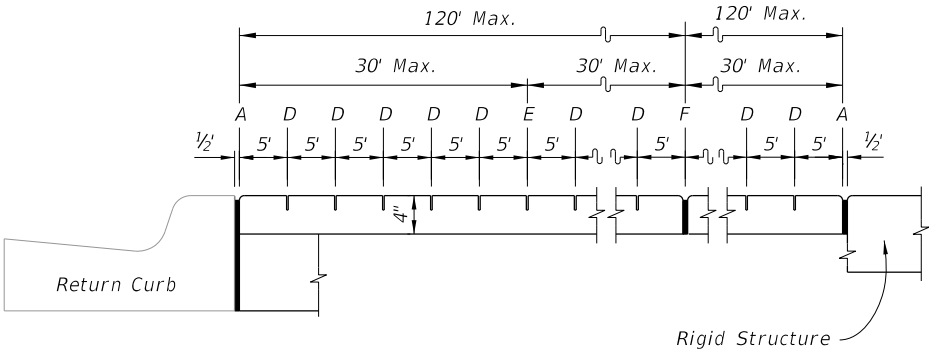
| AREAS FOR ONE 5' DEEP DRIVEWAY APRON (SY) |              |         |        |         |
|-------------------------------------------|--------------|---------|--------|---------|
| Drive Width (Ft.)                         | Intersection |         |        |         |
|                                           | Normal       |         | Skewed |         |
|                                           | Type I       | Type II | Type I | Type II |
| 12                                        | 26           | 51      | 31     | 60      |
| 14                                        | 27           | 52      | 33     | 61      |
| 16                                        | 28           | 53      | 34     | 63      |
| 18                                        | 29           | 54      | 35     | 64      |
| 20                                        | 31           | 55      | 37     | 65      |
| 22                                        | 32           | 56      | 38     | 67      |
| 24                                        | 33           | 57      | 39     | 68      |
| 26                                        | 34           | 58      | 40     | 69      |
| 28                                        | 35           | 59      | 42     | 70      |
| 30                                        | 36           | 61      | 43     | 72      |
| 32                                        | 37           | 62      | 44     | 73      |
| 34                                        | 38           | 63      | 46     | 74      |
| 36                                        | 39           | 64      | 47     | 76      |
| 38                                        | 41           | 65      | 48     | 77      |
| 40                                        | 42           | 66      | 49     | 78      |
| 42                                        | 43           | 67      | 51     | 79      |
| 44                                        | 44           | 68      | 52     | 81      |
| 46                                        | 45           | 69      | 53     | 82      |
| 48                                        | 46           | 71      | 55     | 83      |
| 50                                        | 47           | 72      | 56     | 85      |
| 52                                        | 48           | 73      | 57     | 86      |
| 54                                        | 49           | 74      | 58     | 87      |
| 56                                        | 51           | 75      | 60     | 88      |
| 58                                        | 52           | 76      | 61     | 90      |
| 60                                        | 53           | 77      | 62     | 91      |

| MATERIAL TYPES AND THICKNESSES FOR PAVED CONNECTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                       |                         |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------------|----------|
| Course                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Materials                             | Minimum Thickness (in.) |          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                       | Connections             | Roadway* |
| Structural                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Asphaltic Concrete                    | 1½"                     | 1½"      |
| Bases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Optional Base (See Specification 285) | O.B.G. 2                | O.B.G. 3 |
| * Travel way flares (bypass lanes), auxiliary lanes serving more than a single connection, and all median crossovers including their auxiliary lanes and/or transition tapers.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                       |                         |          |
| <b>NOTES</b> <ol style="list-style-type: none"><li>1. Use same material for driveway structural course and roadway overbuild or structural course, except as approved by the Engineer for graded connections. Other Department-approved equivalent pavements may be used at the discretion of the Engineer.</li><li>2. Auxiliary lanes and their transition tapers shall be the same structure as the abutting travel way pavement thickness or any of the roadway structures tabulated above, whichever is thicker.</li><li>3. If an asphalt base course is used for a driveway, its thickness may be increased to match the edge of travel way pavement thickness in lieu of a separate structural course. 6" of Portland cement concrete will be acceptable in lieu of the asphalt base and structural courses. See Notes 4 and 5 below.</li><li>4. A structural course is required for flexible pavements when they are used for auxiliary lanes serving more than a single connection.</li><li>5. Use Class NS concrete at least 6" thick for driveways paved with Portland Cement Concrete. Construct in accordance with Specifications 347, 350, and 522.</li><li>6. The Department may require other pavement criteria where local conditions warrant.</li></ol> |                                       |                         |          |

1. Construct sidewalks in accordance with Specification 522. Use 6" concrete for Sidewalks and Curb Ramps Located within Curb Returns (See Plan View). Install all other concrete with thickness as shown, unless otherwise detailed in the Plans.
2. Include detectable warnings on sidewalk curb ramps in accordance with Index 522-002.
3. For Driveways see Index 522-003.
4. Bond breaker material can be any impermeable coated or sheet membrane or preformed material having a thickness of not less than 6 mils and not more than 1/2".
5. Construct sidewalks with Edge Beam through the limits of any surface mounted Pedestrian/Bicycle Railing or Pipe Guiderail shown in the plans. (See RAILING DETAIL)



OPEN JOINTS

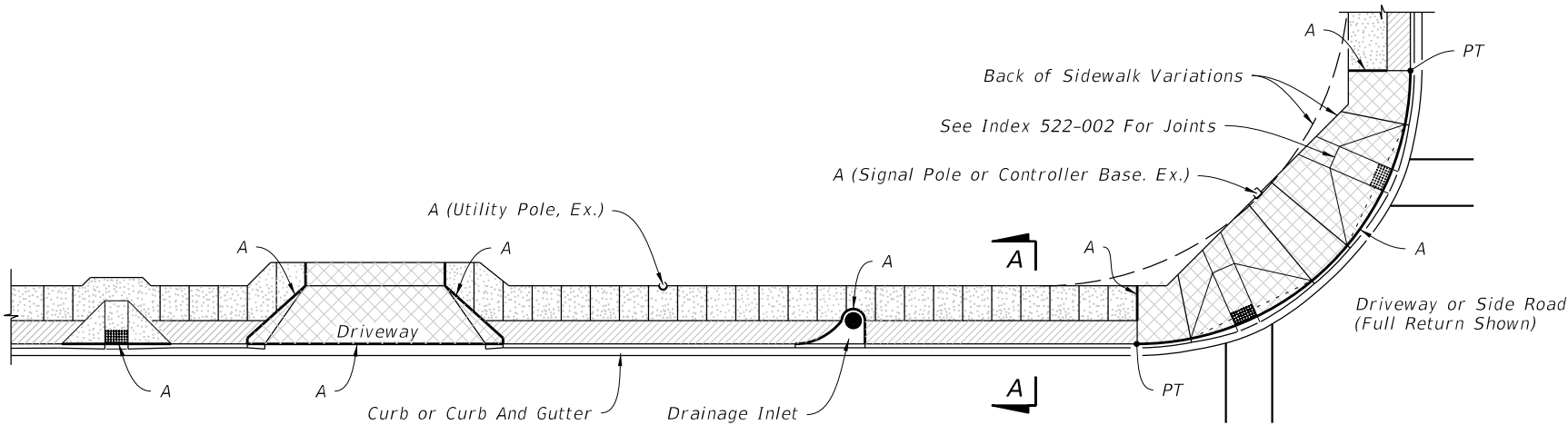


SAWED JOINTS

LONGITUDINAL SECTION

- LEGEND:**
- A- 1/2" Expansion Joints (Preformed Joint Filler) between the sidewalk and; driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).
- B- 1/8" Dummy Joints, Tooled
- C- 1/8" Formed Open Joints
- D- 3/16" Saw Cut Joints, 1 1/2" Deep (within 96 hours) Max. 5' Centers
- E- 3/16" Saw Cut Joints, 1 1/2" Deep (within 12 hours) Max. 30' Centers Joint(s) Required When Length Exceeds 30'
- F- 1/2" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.
- G- Cold Joint With Bond Breaker, Tooled

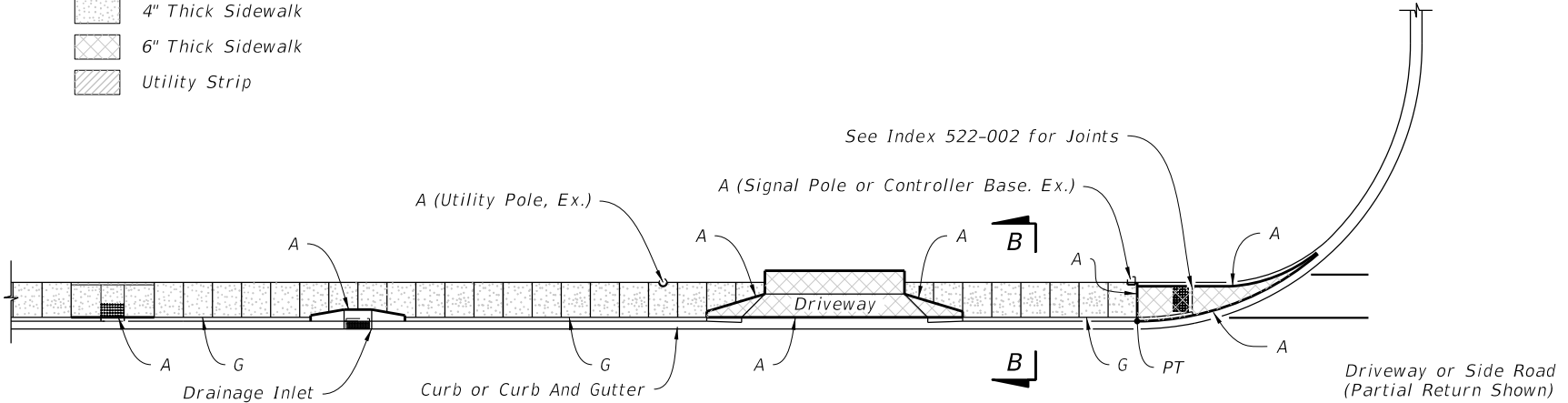
SIDEWALK JOINTS



PLAN

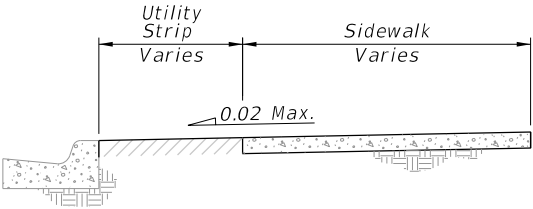
SIDEWALK WITH UTILITY STRIP

- LEGEND:**
- 4" Thick Sidewalk
- 6" Thick Sidewalk
- Utility Strip

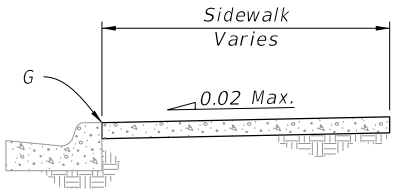


PLAN

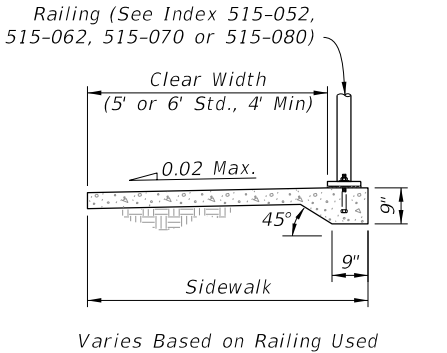
SIDEWALK WITHOUT UTILITY STRIP



SECTION A-A



SECTION B-B

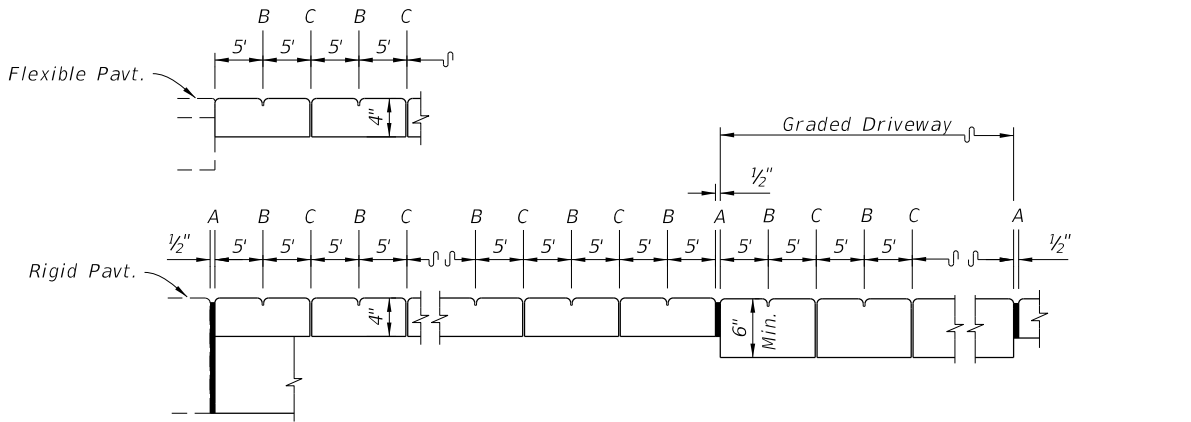


RAILING DETAIL

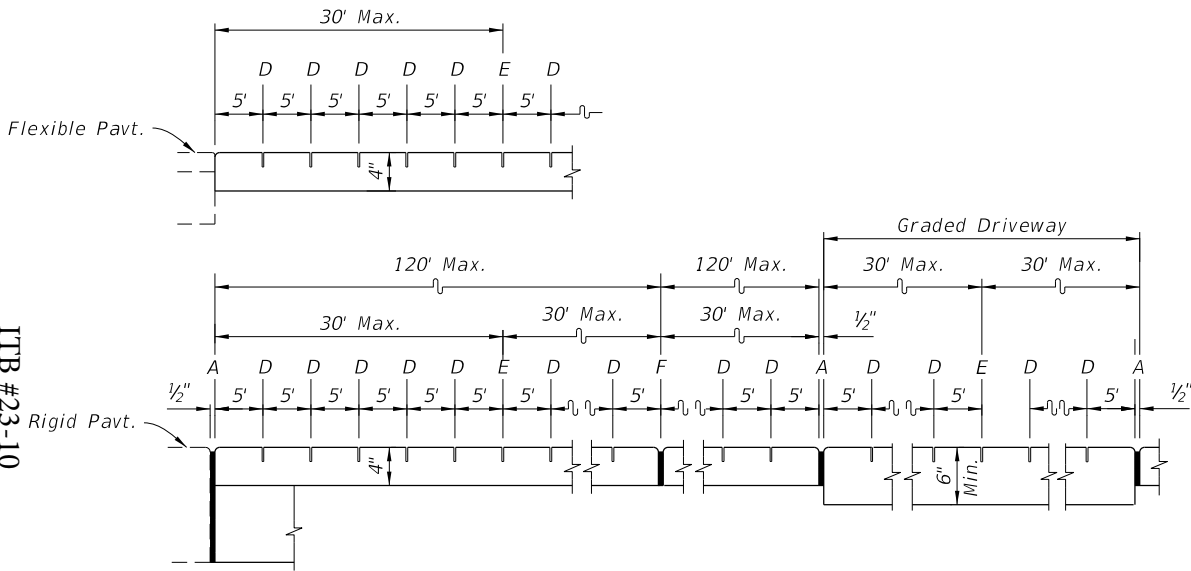
GENERAL NOTES AND CONCRETE SIDEWALK ON CURBED ROADWAYS

| LAST REVISION | DESCRIPTION: | FY 2022-23 STANDARD PLANS | CONCRETE SIDEWALK | INDEX   | SHEET  |
|---------------|--------------|---------------------------|-------------------|---------|--------|
| 11/01/18      |              |                           |                   | 522-001 | 1 of 2 |





OPEN JOINTS

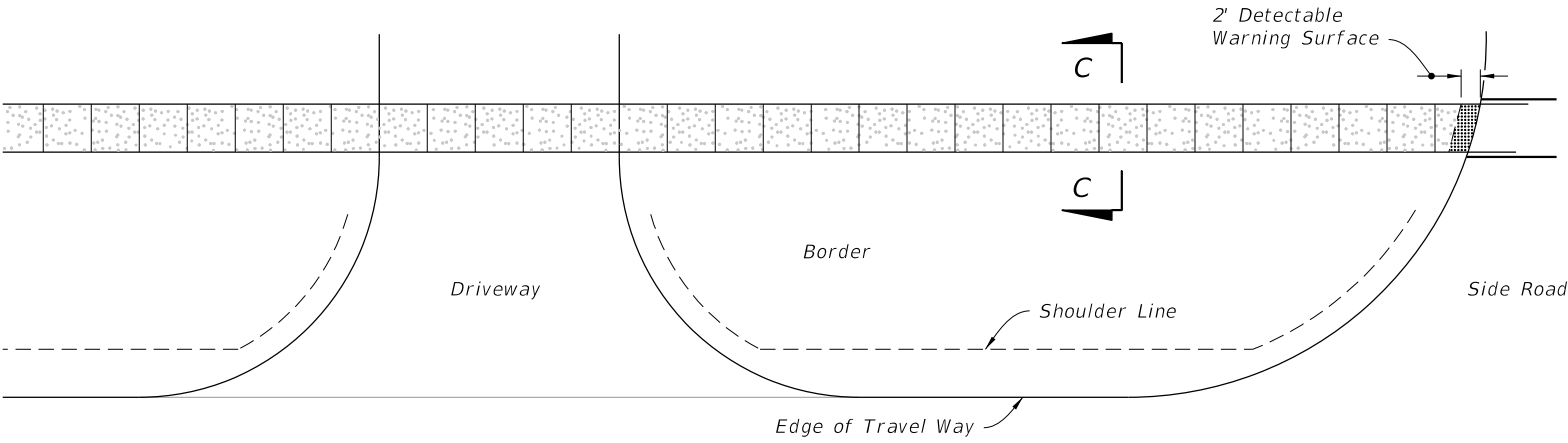


SAWED JOINTS

LONGITUDINAL SECTION

- LEGEND:**
- A- 1/2" Expansion Joints (Preformed Joint Filler) between the sidewalk and driveways, sidewalk-intersections, and all other fixed objects (e.g. drainage inlets and utility poles).
  - B- 1/8" Dummy Joints, Tooled
  - C- 1/8" Formed Open Joints
  - D- 3/16" Saw Cut Joints, 1 1/2" Deep (within 96 hours) Max. 5' Centers
  - E- 3/16" Saw Cut Joints, 1 1/2" Deep (within 12 hours) Max. 30' Centers Joint(s) Required When Length Exceeds 30'
  - F- 1/2" Expansion Joint When Run Of Sidewalk Exceeds 120'. Intermediate locations when called for in the plans or at locations as directed by the Engineer.

SIDEWALK JOINTS

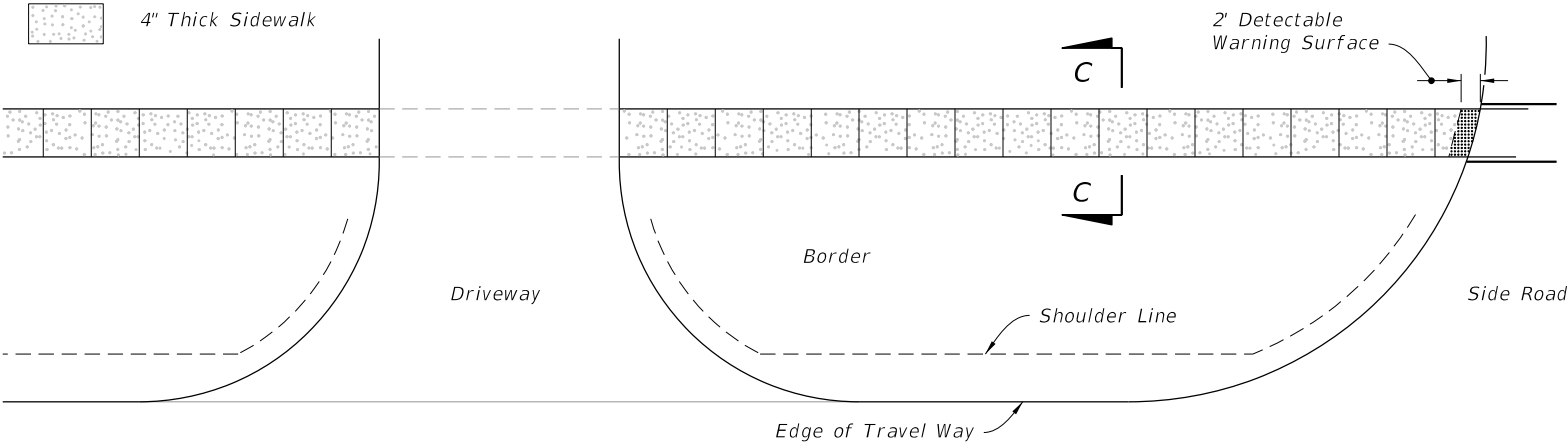


PLAN

CONTINUOUS SIDEWALK

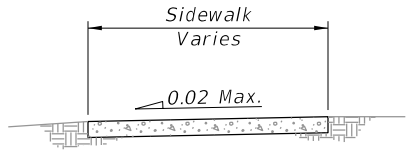
LEGEND:

4" Thick Sidewalk



PLAN

DISCONTINUOUS SIDEWALK



SECTION C-C

CONCRETE SIDEWALK ON FLUSH SHOULDER ROADWAYS

| LAST REVISION | DESCRIPTION: | FY 2022-23 STANDARD PLANS | CONCRETE SIDEWALK | INDEX   | SHEET  |
|---------------|--------------|---------------------------|-------------------|---------|--------|
| 11/01/18      |              |                           |                   | 522-001 | 2 of 2 |

GENERAL NOTES:

1. Cross Slopes and Grades:

A. Sidewalk, ramp, and landing slopes (i.e. 0.02, 0.05, and 1:12) shown in this Index are maximums. With approval of the Engineer, provide the minimum feasible slope where the requirements cannot be met.

B. Landings must have cross-slopes less than or equal to 0.02 in any direction.

C. Maintain a single longitudinal slope along each side of the curb ramp. Ramp slopes are not required to exceed 15 feet in length.

D. Joints permitted at the location of Slope Breaks. Otherwise locate joints in accordance with Index 522-001. No joints are permitted within the ramp portion of the Curb Ramp.
2. Curb, Curb and Gutter and/or Sidewalk:

A. Refer to Index 522-001 for concrete thickness and sidewalk details.

B. Remove any existing curb, curb and gutter, or sidewalk to the nearest joint beyond the curb transition or to the extent that no remaining section is less than 5 feet long.

C. Width of Curb Ramp is 4'-0" minimum. Match sidewalk or Shared Use Path width as shown in the Plans.
3. Curb Ramp Alpha-Identification:

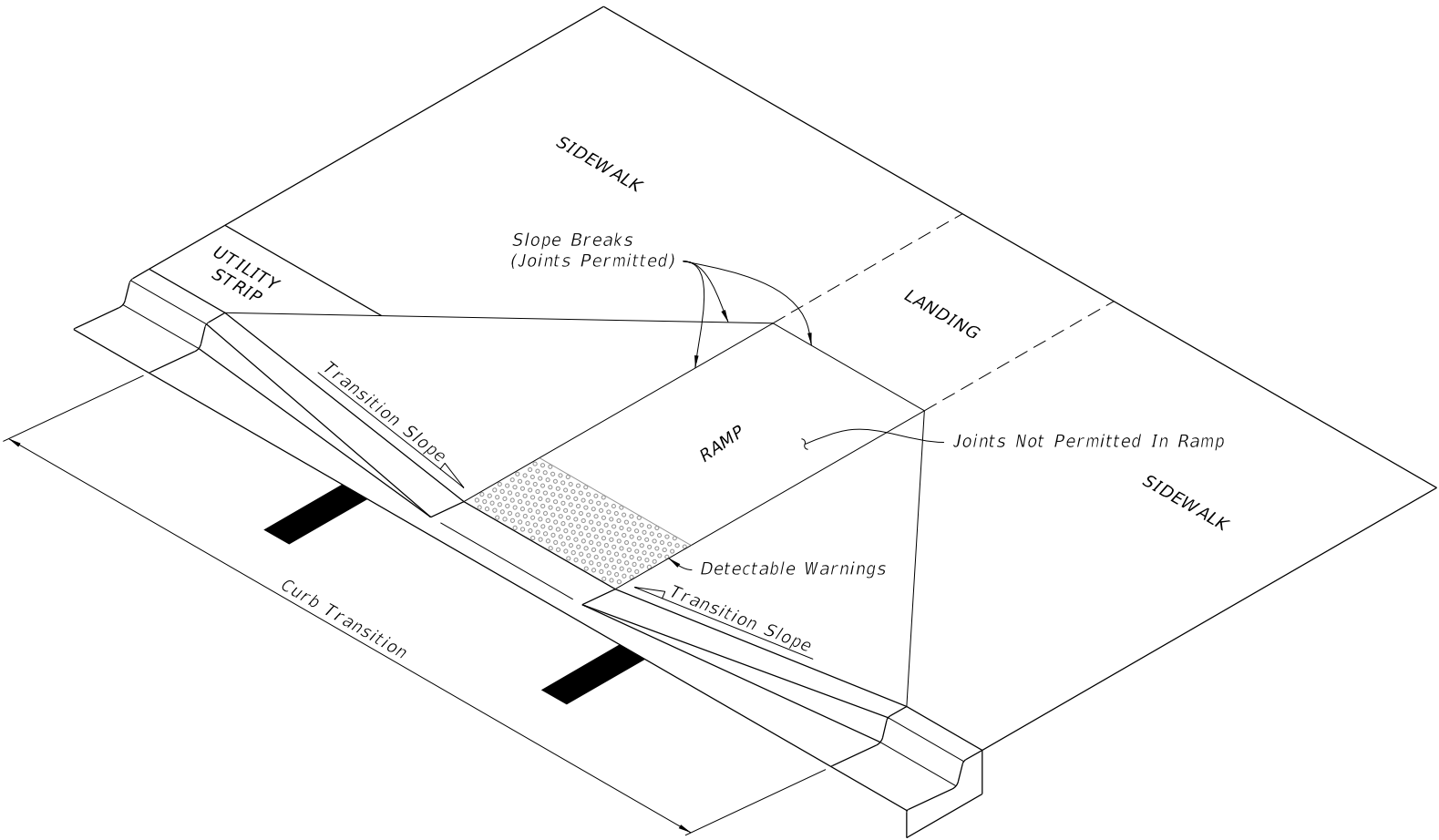
A. Sidewalk curb ramp alpha-identifications (e.g. CR-A) are provided for reference purposes in the Plans.

B. Alpha-identifications CR-I and CR-J are intentionally omitted.
4. Detectable Warnings:

A. Install detectable warnings in accordance with Specification 527.

B. Place detectable warnings across the full width of the ramp or landing, to a minimum depth of 2 feet measured perpendicular to the curb line and no greater than 5 feet from the back of the curb or edge of pavement.

C. If detectable warnings are shown in the Plans on slopes greater than 5%, align the truncated domes with the centerline of the ramp; otherwise, the truncated domes are not required to be aligned.



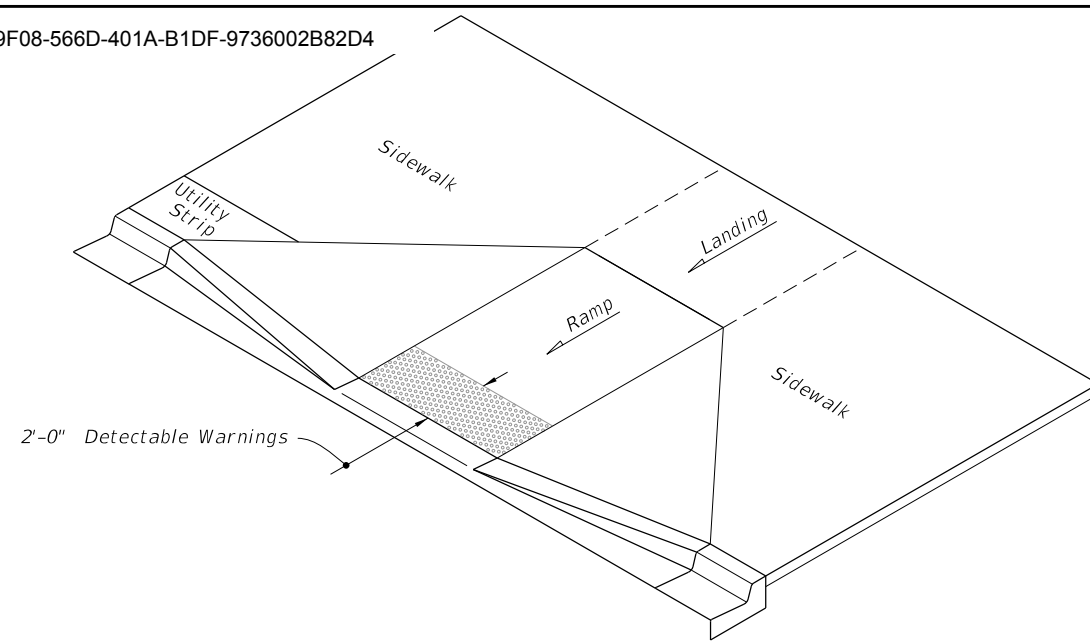
CURB RAMP NOMENCLATURE

|                              |          |              |                                                                                                     |                                             |                  |                 |
|------------------------------|----------|--------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-----------------|
| LAST<br>REVISION<br>11/01/21 | REVISION | DESCRIPTION: | <div><div><div><div></div></div><div>FDOT</div></div><div>FY 2022-23<br/>STANDARD PLANS</div></div> | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX<br>522-002 | SHEET<br>1 of 7 |
|------------------------------|----------|--------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-----------------|

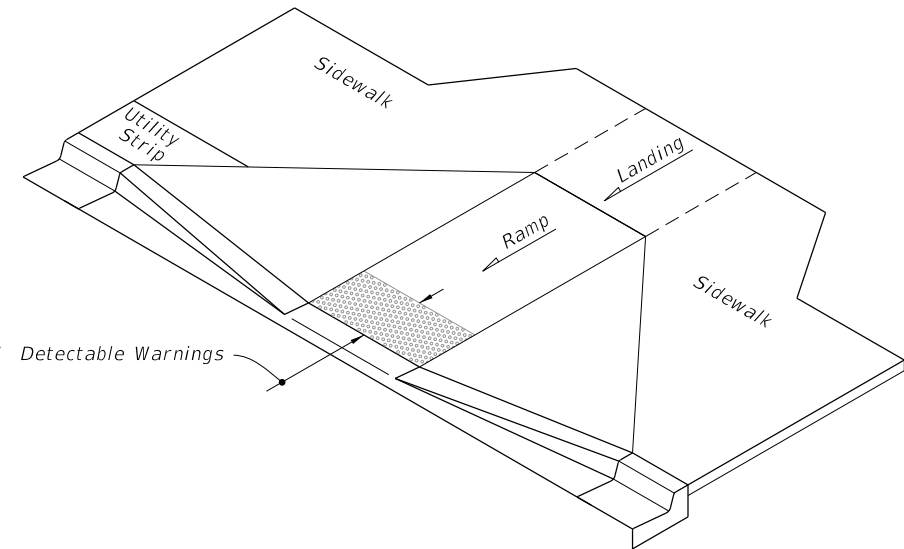


ITB #23-10

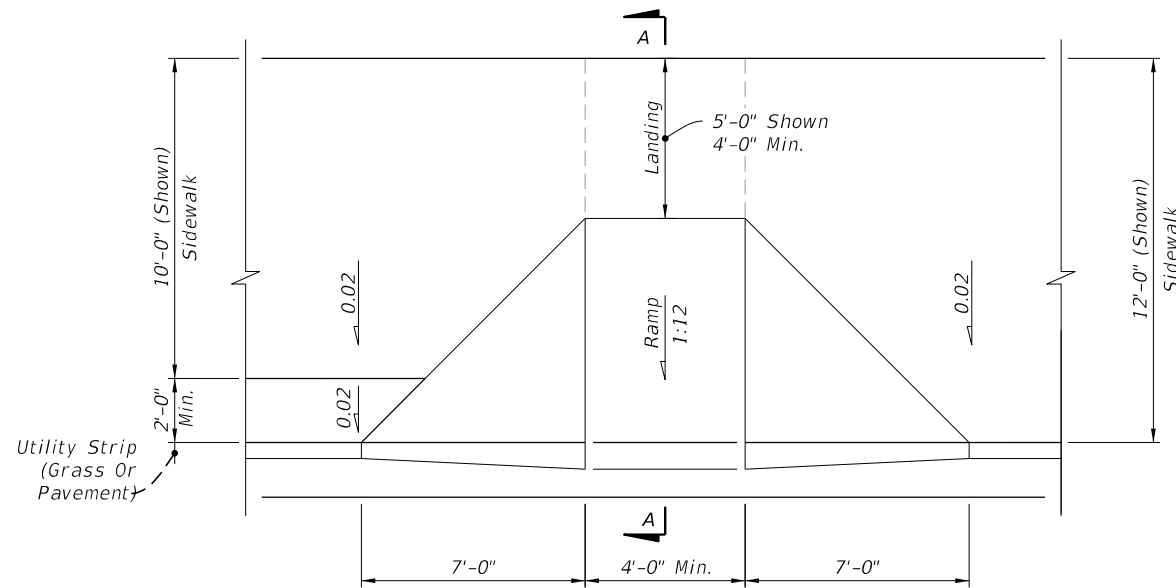
8:50:30 AM  
9/22/2021



ISOMETRIC VIEW



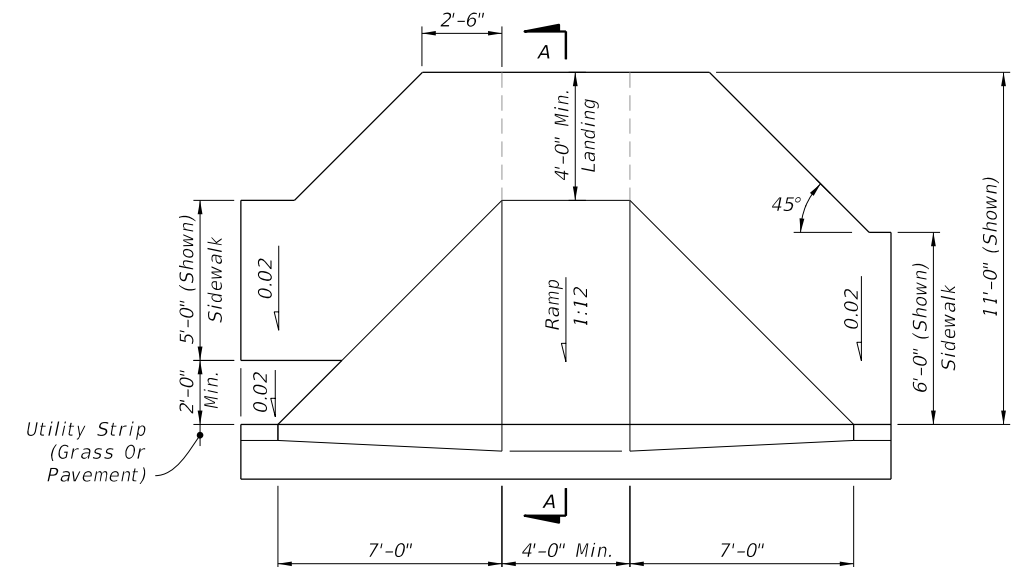
ISOMETRIC VIEW



PLAN VIEW

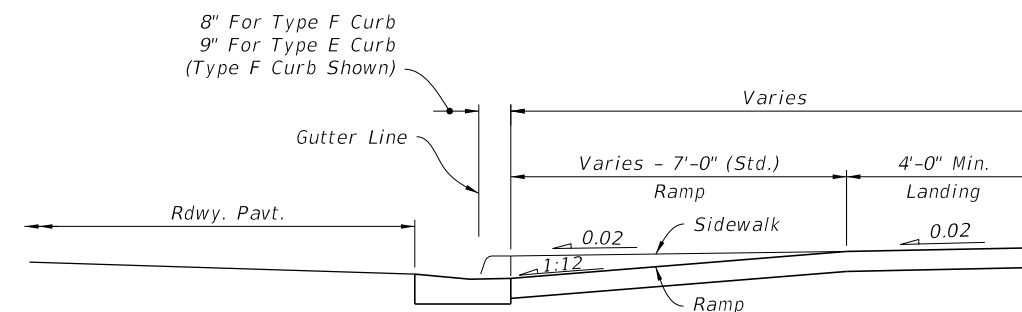
NOTE: For Example of CR-A used in Radial Curb Returns, See Sheet 8.

CR-A



PLAN VIEW

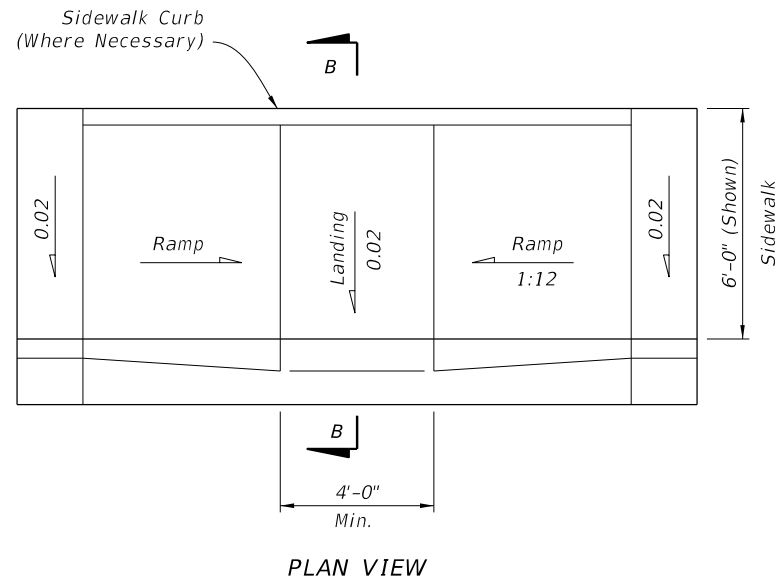
CR-B



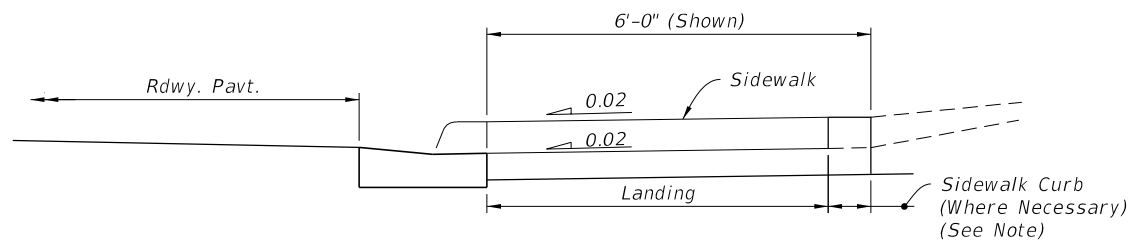
SECTION A-A

SIDEWALK CURB RAMPS CR-A AND CR-B

|                              |          |              |                                      |                                             |                  |                 |
|------------------------------|----------|--------------|--------------------------------------|---------------------------------------------|------------------|-----------------|
| LAST<br>REVISION<br>11/01/20 | REVISION | DESCRIPTION: | FDOT<br>FY 2022-23<br>STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX<br>522-002 | SHEET<br>2 of 7 |
|------------------------------|----------|--------------|--------------------------------------|---------------------------------------------|------------------|-----------------|

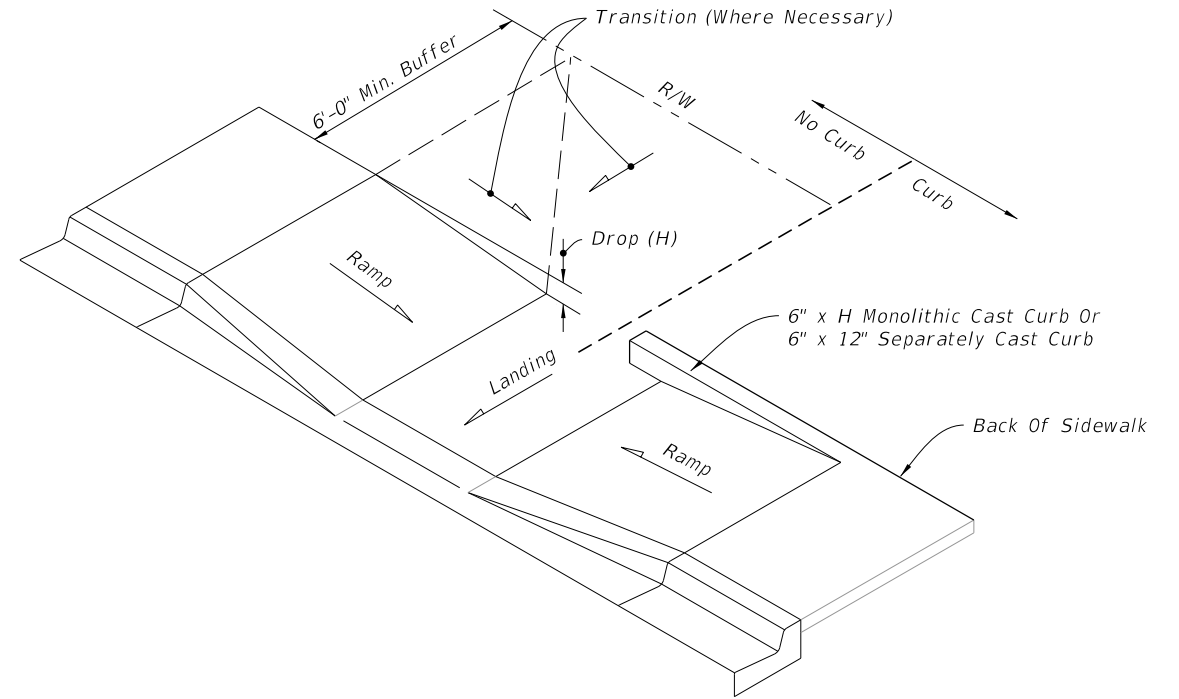


CR-C

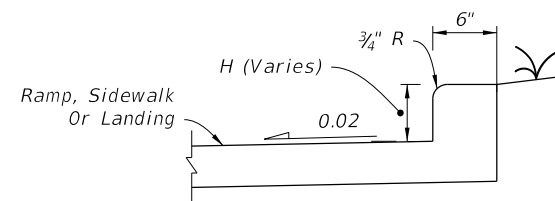


NOTE: For additional information on sidewalk curb construction, see SIDEWALK CURB OPTIONS details.

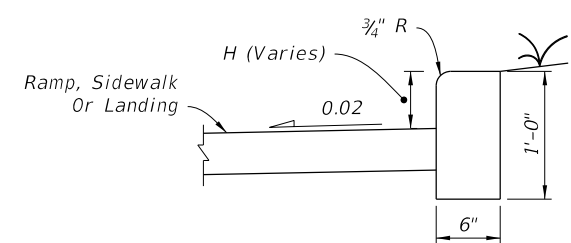
SECTION B-B



CONSTRUCTION OF SIDEWALK CURB IN CUT SECTIONS



MONOLITHIC CAST CURB



SEPARATELY CAST CURB

SIDEWALK CURB OPTIONS

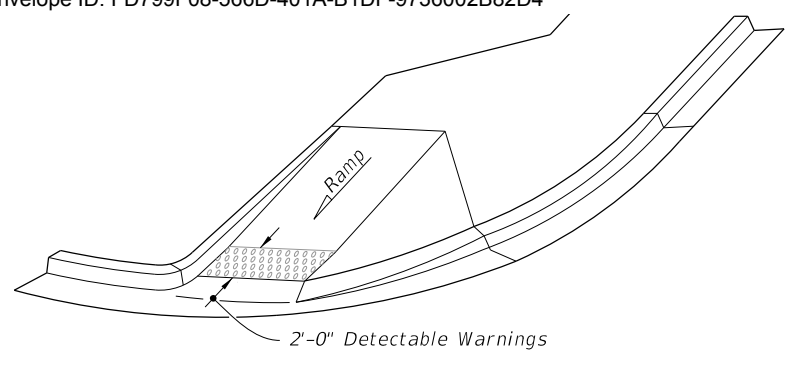
SIDEWALK CURB RAMPS CR-C AND SIDEWALK CURB

| LAST REVISION | DESCRIPTION: | FY 2022-23 STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX   | SHEET  |
|---------------|--------------|---------------------------|---------------------------------------------|---------|--------|
| 11/01/20      |              |                           |                                             | 522-002 | 3 of 7 |

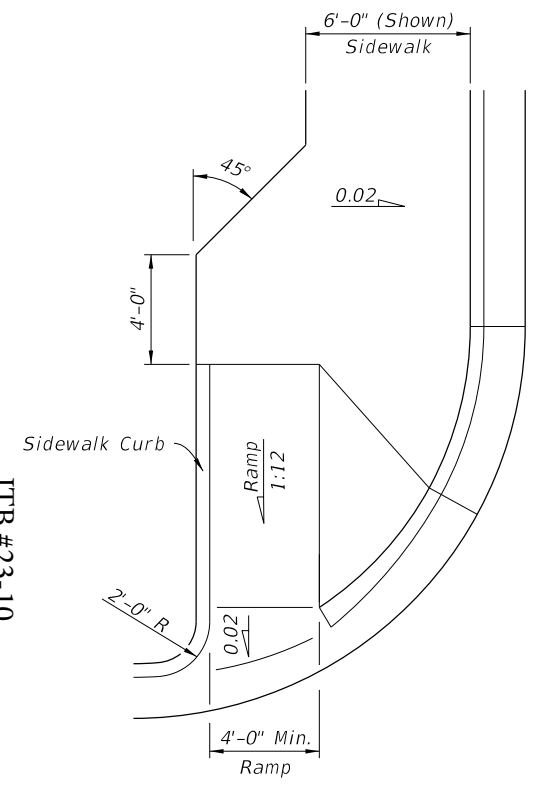


|                              |          |              |                                                                                                                   |                                             |                  |                 |
|------------------------------|----------|--------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-----------------|
| LAST<br>REVISION<br>11/01/21 | REVISION | DESCRIPTION: |  FY 2022-23<br>STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX<br>522-002 | SHEET<br>4 of 7 |
|------------------------------|----------|--------------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-----------------|

ITB #23-10

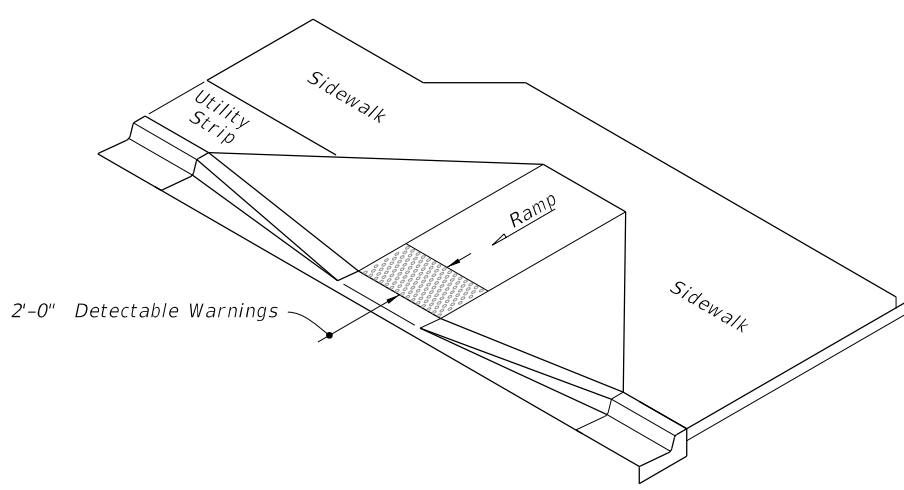


ISOMETRIC VIEW

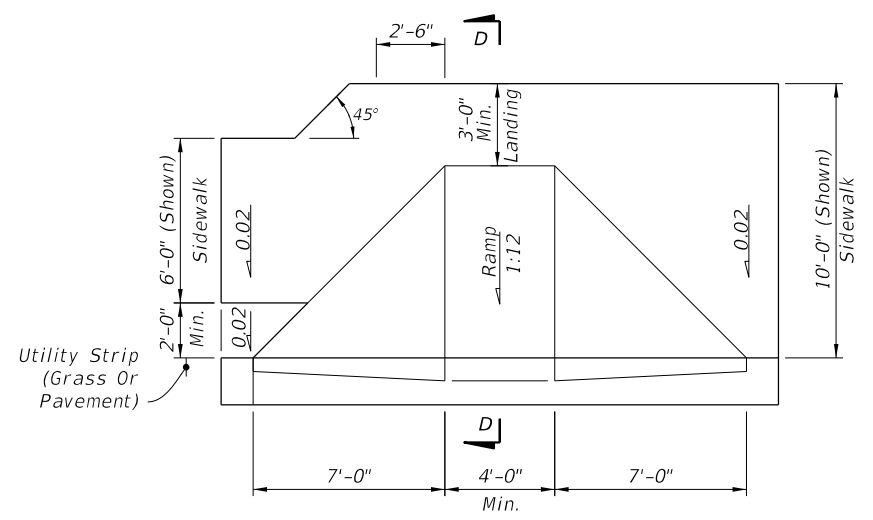


PLAN VIEW

CR-H

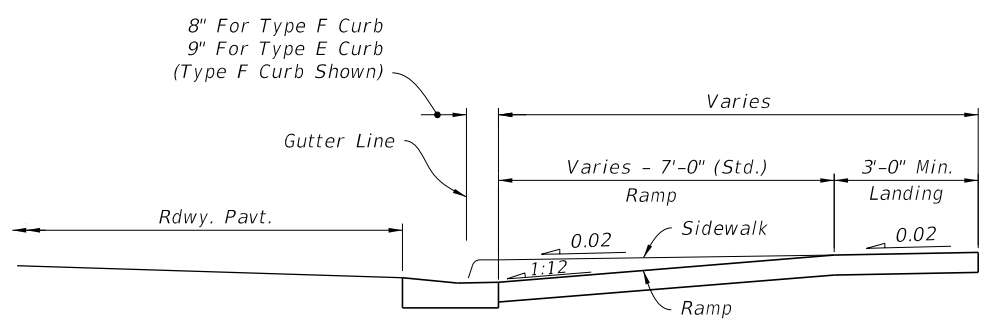


ISOMETRIC VIEW

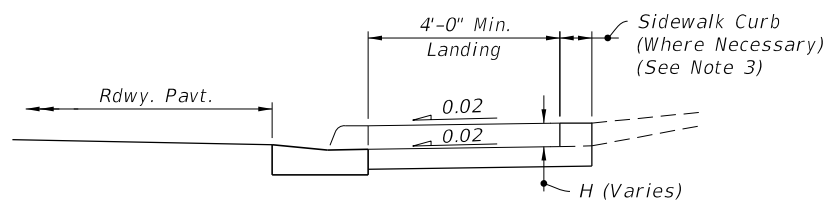


PLAN VIEW

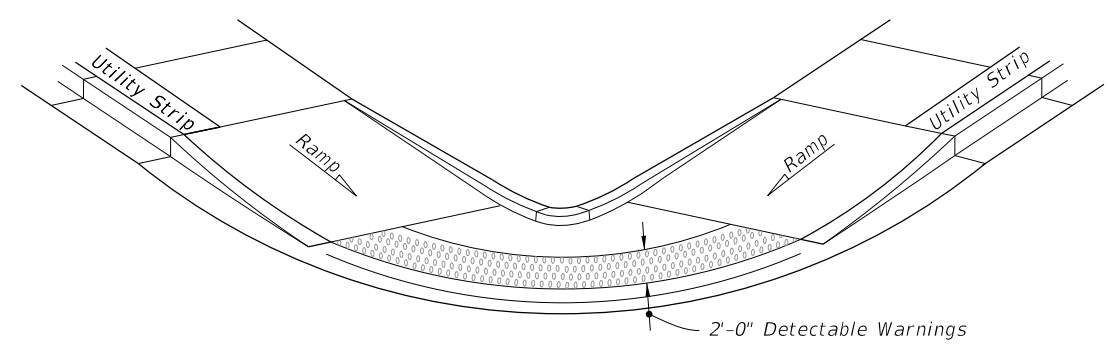
CR-K



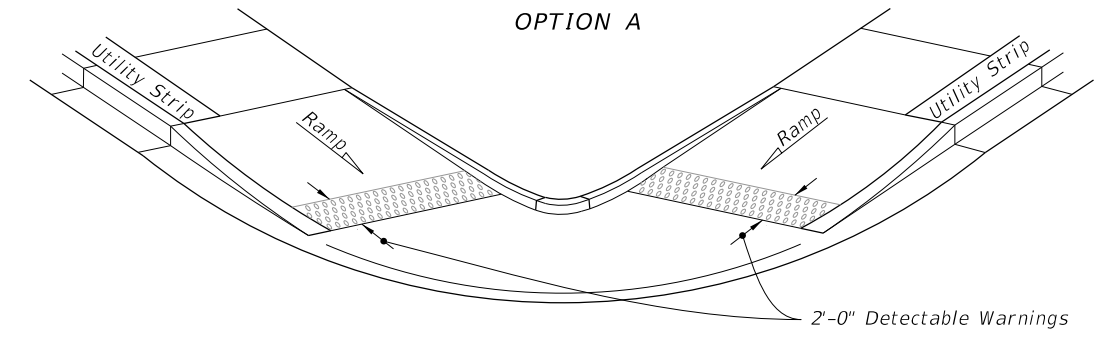
SECTION D-D



SECTION E-E

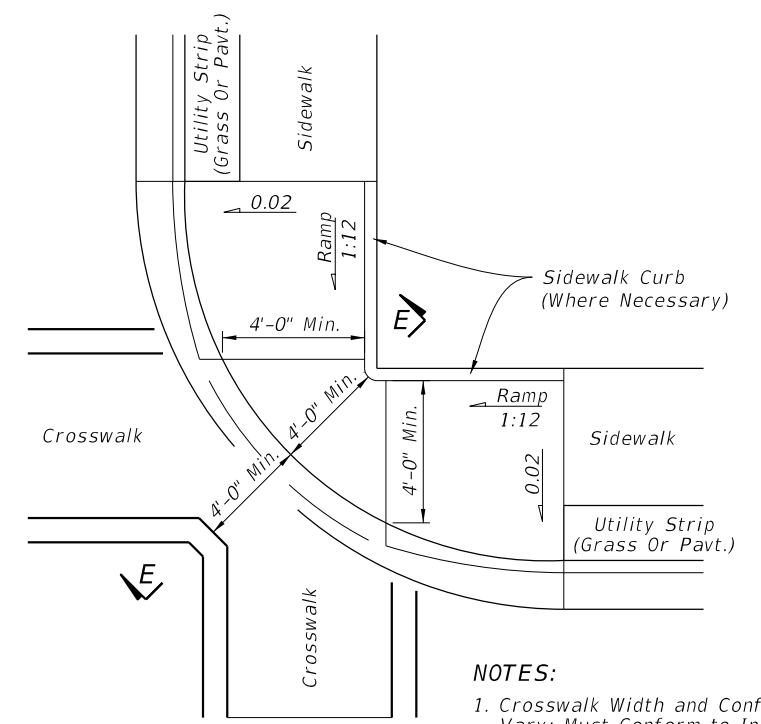


OPTION A



OPTION B

ISOMETRIC VIEW



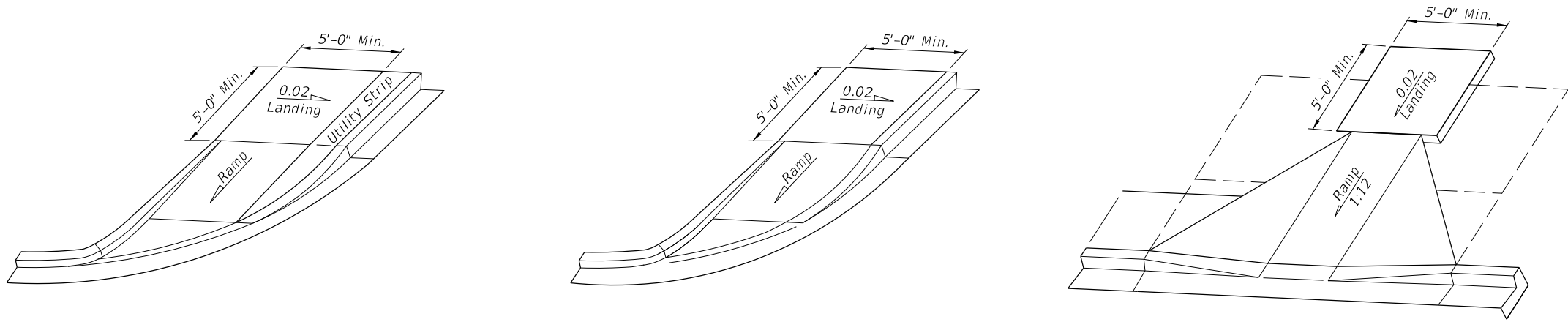
PLAN VIEW

CR-L

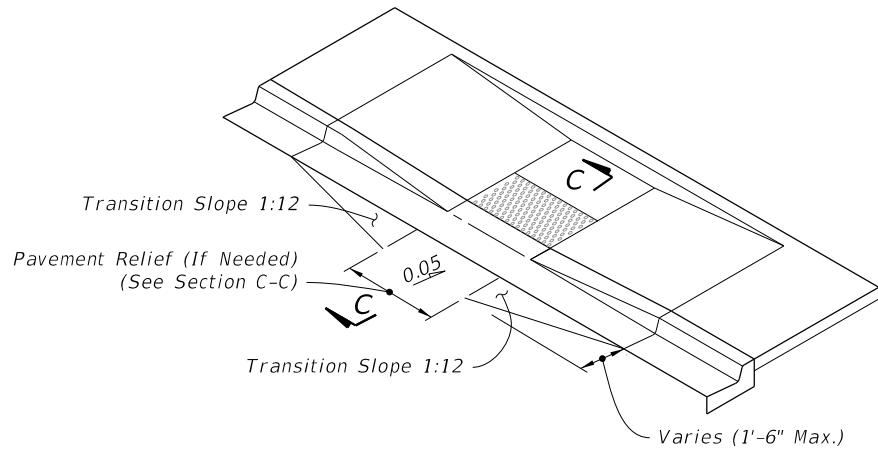
- NOTES:
1. Crosswalk Width and Configuration Vary; Must Conform to Index 711-001.
  2. 15' Radius Curve Shown for CR-L.
  3. For additional information on sidewalk curb construction, see SIDEWALK CURB OPTIONS details, on Sheet 3.

SIDEWALK CURB RAMPS CR-H, CR-K & CR-L

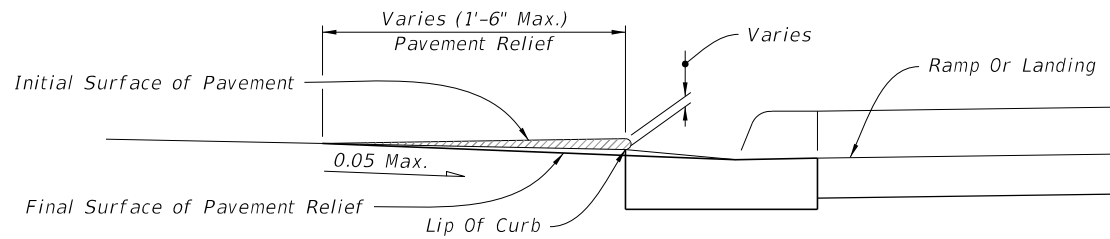
| LAST REVISION |          | DESCRIPTION: | FDOT | FY 2022-23<br>STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX<br>522-002 | SHEET<br>5 of 7 |
|---------------|----------|--------------|------|------------------------------|---------------------------------------------|------------------|-----------------|
| 11/01/20      | REVISION |              |      |                              |                                             |                  |                 |



LANDINGS FOR CURB RAMPS WITHOUT SIDEWALKS  
(See CR-F, CR-G & CR-K Respectively For Detectable Warning Details/Options)



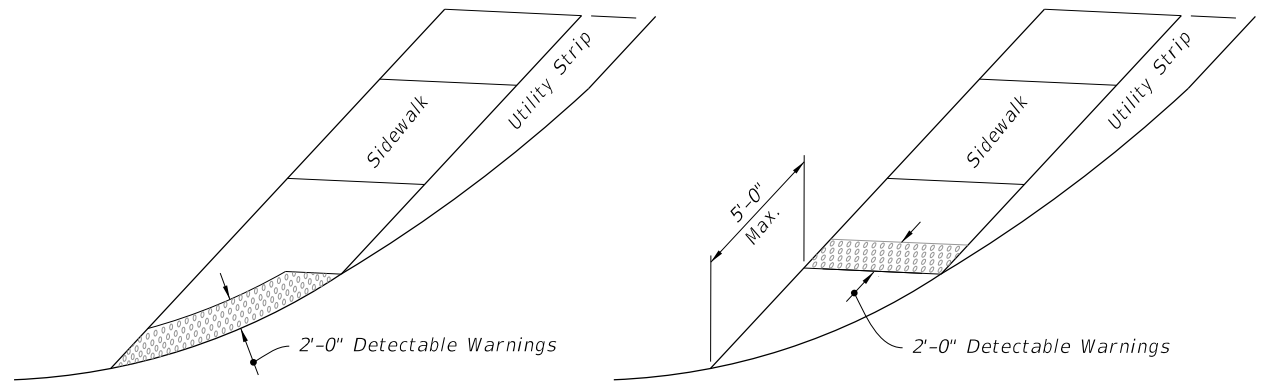
ISOMETRIC VIEW  
(CR-C Shown, Other Similar)



NOTE: Remove Elevated Pavement By Spading And Rolling, Smooth Milling, or Grinding.

SECTION C-C

PAVEMENT RELIEF DETAILS



OPTION A

OPTION B

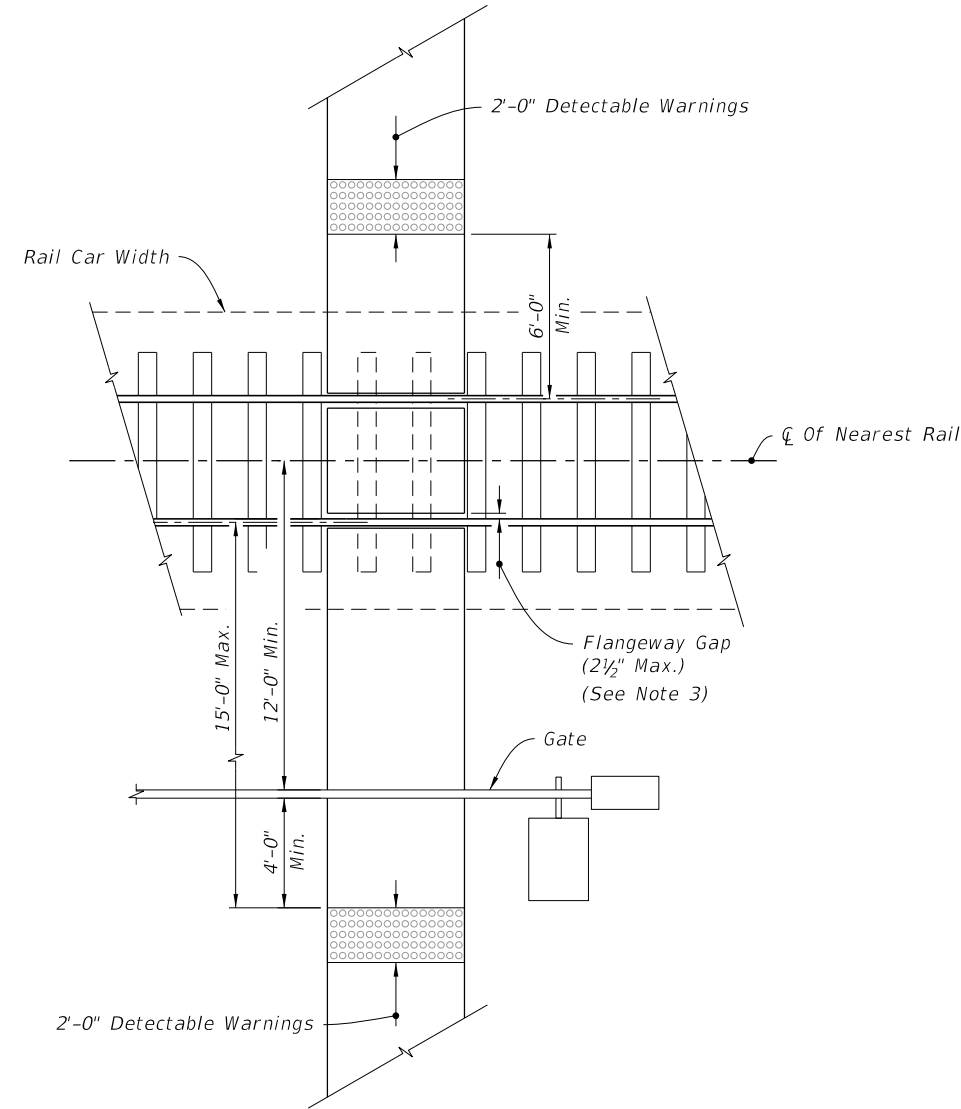
DETECTABLE WARNING ON FLUSH SHOULDER SIDEWALKS

CURB RAMPS WITHOUT SIDEWALKS AND FLUSH SHOULDER SIDEWALKS

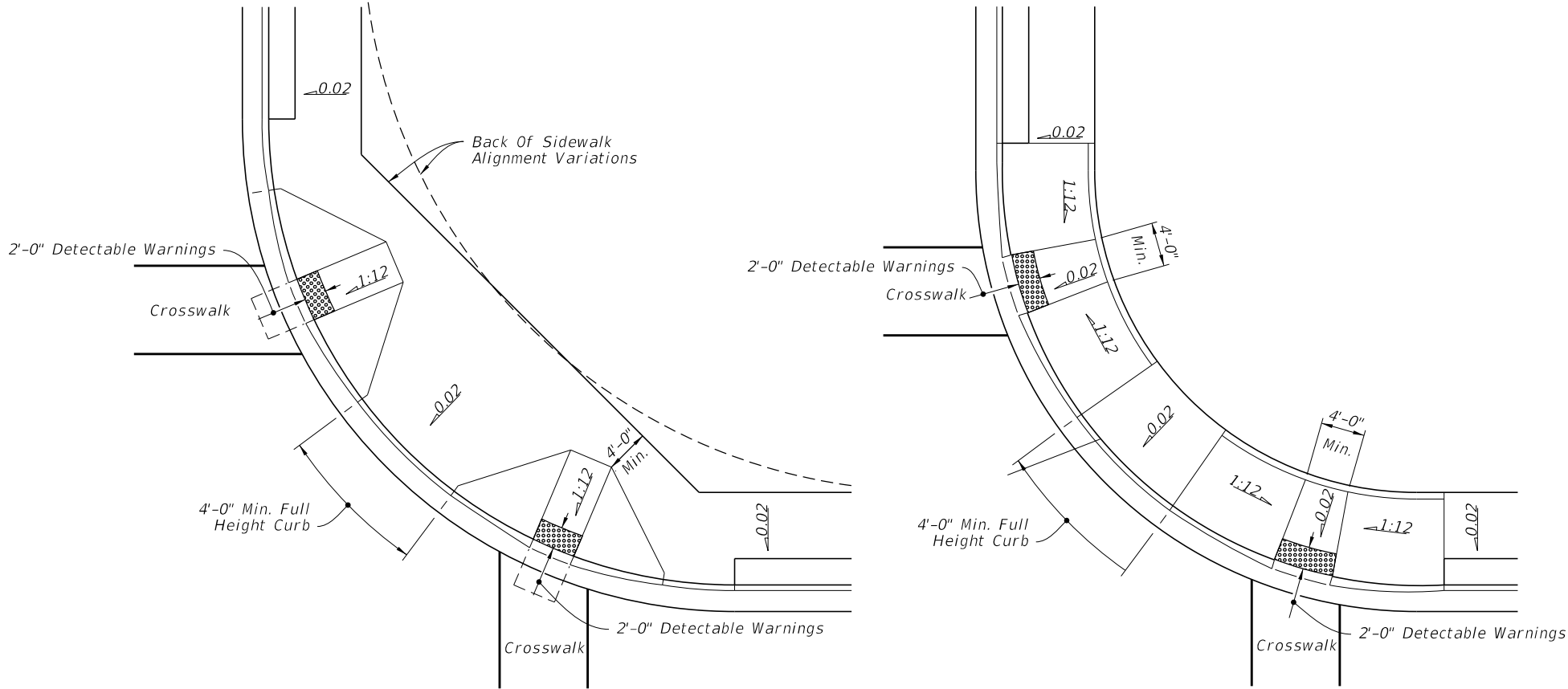
|                              |          |              |                                                                                                                    |                                             |                  |                 |
|------------------------------|----------|--------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-----------------|
| LAST<br>REVISION<br>11/01/20 | REVISION | DESCRIPTION: |  FY 2022-23<br>STANDARD PLANS | DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS | INDEX<br>522-002 | SHEET<br>6 of 7 |
|------------------------------|----------|--------------|--------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------------|-----------------|



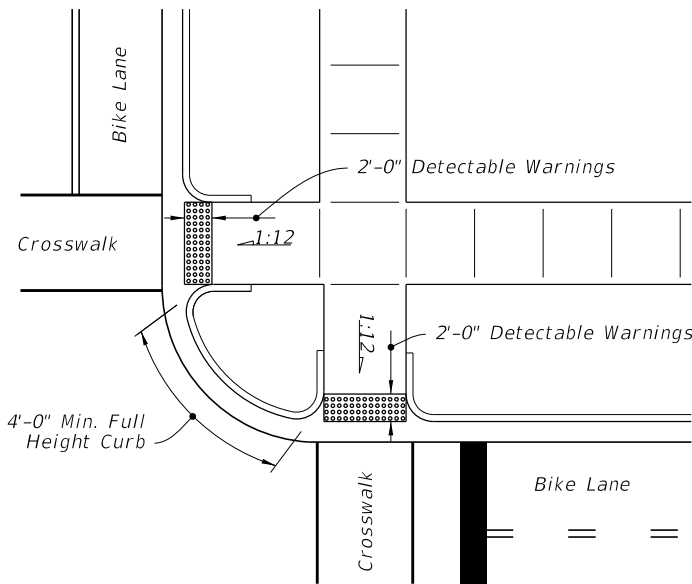
- NOTES:**
- 1. Where crosswalk markings are used, ramps must fall within the crosswalk limits. A clear space of 48" minimum is required at the bottom of the ramp within a marked crosswalk. If crosswalk markings are not present, a clear space of 48" minimum is required at the bottom of the ramp outside of active travel lanes.
  - 2. Crosswalk widths and configurations vary; must conform to Index 711-001.
  - 3. Flangeway Gap may be up to 3" for Freight-only Railways.



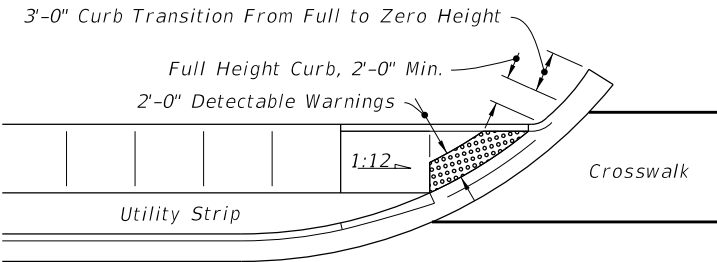
RAILROAD CROSSING



CURB RAMPS WITHIN RADIAL RETURN



CURB RAMPS OUTSIDE RADIAL RETURN



LINEAR SIDEWALK RAMPS

PLACEMENT OF SIDEWALK CURB RAMPS AT CURBED RETURNS (TYP.)

RAILROAD CROSSING AND CURB RAMPS AT CURBED RETURNS

|                              |              |                                                                                                                            |                                                    |                         |                        |
|------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------|------------------------|
| LAST<br>REVISION<br>11/01/20 | DESCRIPTION: |  <b>FY 2022-23<br/>STANDARD PLANS</b> | <b>DETECTABLE WARNINGS AND SIDEWALK CURB RAMPS</b> | INDEX<br><b>522-002</b> | SHEET<br><b>7 of 7</b> |
|------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------|------------------------|

**APPENDIX D**

January 29, 2021

Carlos M Herdocia, PE  
Project Manager  
Stantec Inc.  
901 Ponce de Leon Boulevard,  
Suite 900 Coral Gables FL 33134-3070

Subject: Report of a Geotechnical Exploration – Roadway Soils Survey  
**Franjo Road, from Old Cutler Road to SW 184<sup>th</sup> Street**  
Town of Cutler Bay  
Department of Public Works  
Miami-Dade County, Florida  
HRES Project No. HR19-1573R

Dear Carlos:

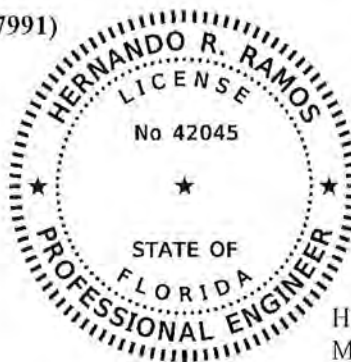
HR Engineering Services, Inc. (HRES) is pleased to provide this Report of a Geotechnical Exploration - Roadway Soils Survey for the subject project. This report presents our understanding of the project, outlines our exploratory procedures, and documents the field test data.

We have enjoyed assisting you on this project and look forward to serving as your geotechnical consultant on the remainder of this project and on future projects. If you have any questions concerning this report, please call our office at (305) 888-8880.

Sincerely,

**HR ENGINEERING SERVICES, INC.**  
**(Certificate of Authorization No. 7991)**

  
Chollada Soonyakanit, E.I.  
MAT Staff Geotechnical Engineer



THIS ITEM HAS BEEN DIGITALLY SIGNED  
AND SEALED BY

**Hernando R Ramos**

**2021.02.09 14:05:11 -05'00'**

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE  
NOT CONSIDERED SIGNED AND SEALED  
AND THE SIGNATURE MUST BE VERIFIED  
ON ANY ELECTRONIC COPIES

Hernando R. Ramos, P.E.  
MAT Chief Geotechnical Engineer  
Florida Registration 42045

Distribution: Addressee (1)  
File (1)

*Franjo Road, from Old Cutler Road to SW 184<sup>th</sup> Street*  
*HR Engineering Services, Inc.*

*January 29, 2021*  
*Project No. HR19-1573R*

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*HR Engineering Services, Inc.*

*January 29, 2021*  
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*HR Engineering Services, Inc.*

*January 29, 2021*  
*Project No. HR19-1573R*

## **1.0 INTRODUCTION**

The purpose of this geotechnical exploration was to obtain information concerning the site and subsurface conditions along the proposed project. The project consists of the construction of the roadway widening of Franjo Road. This report discusses our exploratory and testing procedures, presents our findings and includes the following items:

### **Field Services - HRES**

- Performed two (2) auger borings for the proposed roadway widening, each to a depth of 10.0 feet, measured from the existing ground surface. The borings subsurface information is presented on the Report of Core Borings and Soils Information Table in Appendix A.
- Forty-two (42) SPT borings performed along the proposed roadway widening, each to a depth of 10 feet. The test borings subsurface information is presented on the Report of Core Borings and Soils Information Table in Appendix A.
- Performed a total of nine (9) SFWMD usual open-hole constant head percolation tests. The tests were conducted at one depth interval, from 0 to 15 feet. The percolation test results are presented in Appendix A. The subsurface information is presented on the Soils Information Table in Appendix A.
- A brief description of our field testing procedures.

### **Evaluation**

- Review of Miami-Dade County USDA Soil Survey Maps.
- Review of Miami-Dade County USGS Water Level Maps.
- Review of USGS Quadrangle Map.
- A general review of existing surface features and site conditions.
- Report of Core Borings and Soils Information Table.
- Roadway Soils Survey.
- Roadway construction recommendations.

### **Laboratory Testing**

- The results of laboratory tests performed on selected soil samples obtained from the test borings.
- A brief description of our laboratory testing procedures.

***Franjo Road, from Old Cutler Road to SW 184<sup>th</sup> Street***  
*HR Engineering Services, Inc.*

*January 29, 2021*  
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## **2.0 PROJECT INFORMATION**

### **2.1 GENERAL**

Project information for this subsurface exploration has been provided to us by various members of the design team. Additional information has been provided during telephone conversations.

During our geotechnical study, we have been furnished with the following project-related plans and information:

- Plans: Franjo Road, from Old Cutler Road to SW184 Street– Map of Topographic Survey  
Prepared by: N/A  
Dated: 11/03/2020

### **2.2 PROJECT DESCRIPTION**

The project consists of the roadway widening along Franjo Road, from Old Cutler Road to SW 184th Street. The project is located in Miami-Dade County Florida. This report provides recommendations for the construction of the roadway widening.



### **3.0 FIELD EXPLORATION AND LABORATORY TESTING**

#### **3.1 FIELD EXPLORATION**

The field exploration was conducted by HRES. The locations of the test borings are provided in the Summary of Test Boring Locations in Appendix A. The Report of Core Borings and the Soils Information Table in Appendix A summarize the approximate boundary between soil types. In some instances, the transition between material types may be gradual. A brief description of the exploratory sampling techniques used is presented in the Field Testing Procedures section in Appendix A. A discussion of the subsurface conditions encountered along the project alignment is provided in Section 4.2 of this report.

#### **3.2 PERCOLATION TESTING**

HRES completed nine (9) South Florida Water Management District (SFWMD) usual open-hole constant head percolation tests for the subject project. The percolation tests were conducted at one depth interval: from 0 to 15 feet. The hydraulic conductivity values were then calculated and reported in units of cubic feet per second, per square foot, per foot of head (cfs/ft<sup>2</sup>-ft of head). The calculated hydraulic conductivity values ranged as follows:

- From 0 to 15 ft.: 1.4E-04 cfs/ft<sup>2</sup>-ft to 8.2E-04 cfs/ft<sup>2</sup>-ft of head

The conductivity values are ultimate values. An appropriate factor of safety should be employed in any storm water or other subsurface drainage design computations. The percolation test results are presented in Appendix A.

#### **3.3 LABORATORY TESTING**

##### **3.3.1 Soil Testing**

In order to aid in classifying and estimate engineering characteristics of the subsurface materials encountered, laboratory classification tests were performed on representative soil samples obtained from the test borings. The laboratory testing program included the following:

- 6 Sieve Analyses
- 17 Fines Content Tests
- 2 Organic Content Tests
- 24 Moisture Content Tests

The soil laboratory test results were classified following the AASHTO Classification System. The test results are presented in Appendix B.

## 4.0 SITE AND SUBSURFACE CONDITIONS

### 4.1 SITE CONDITIONS

The site conditions were observed by a Geotechnical Engineer during the months of November and December, 2020.

### 4.2 SUBSURFACE CONDITIONS

#### 4.2.1 Miami-Dade County Soil Survey Map

The Soil Map of Miami-Dade County Area, Florida, published by the United States Department of Agriculture (USDA) was reviewed for general near-surface soil information within the general project vicinity. This information indicates that there is four (4) mapping unit in the vicinity of the project. The map soil unit encountered is:

**Table 4.2.1 Miami-Dade Soil Survey**

| Map Unit Symbol | Map Unit Name                                                        | Typical Profile                                                                                                                                                            |
|-----------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7               | Krome very gravelly loam<br>(4.7% of AOI)                            | Ap - 0 to 7 inches: very gravelly loam<br>R - 7 to 11 inches: unweathered bedrock                                                                                          |
| 10              | Udorthents, limestone<br>(65.5% of AOI)                              | C - 0 to 55 inches: extremely gravelly loam<br>2R - 55 to 59 inches: unweathered bedrock                                                                                   |
| 11              | Udorthents, marl substratum-<br>Urban land complex<br>(29.5% of AOI) | C1 - 0 to 12 inches: very gravelly loam<br>C2 - 12 to 41 inches: gravelly sandy loam<br>Cg - 41 to 80 inches: marly silt loam<br>2R - 80 to 90 inches: unweathered bedrock |
| 99              | Water<br>(0.4% of AOI)                                               | Water: 100 percent                                                                                                                                                         |

A reproduction of the USDA map for the project area is included in Appendix A.

#### 4.2.2 USGS Quadrangle Map

The Perrine Quadrangle, Florida-Miami-Dade Topographic Map (1999 published by the United States Geological Survey (USGS) was reviewed for general existing ground surface elevations in

***Franjo Road, from Old Cutler Road to SW 184<sup>th</sup> Street***  
*HR Engineering Services, Inc.*

*January 29, 2021*  
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the project area. Based on the map, the existing ground elevations in the project vicinity is 10.0 feet, NGVD29. A reproduction of the USGS Quadrangle Map for the project area is included in Appendix A.

#### **4.2.3 Generalized Subsurface Conditions Encountered Along the Alignment**

A total of seven different layers of materials were observed during the performance of the boreholes. Stratum 1a is asphalt. Stratum 1b is topsoil. Stratum 2 consists of limerock with silty fine sand. Stratum 3 consists of silty fine sand with traces limerock fragments. Stratum 4 consists of sandy silt/ slightly organic sandy silt with traces of limerock fragments. Stratum 5 consists of fine sand with traces limerock fragments. Stratum 6 consists of the natural limestone. For a detailed subsurface condition at a particular borehole location, please refer to the Report of Core Borings and the Soils Information Table in Appendix A.

#### **4.2.4 Groundwater Conditions**

The groundwater levels in the borings were measured at the time of drilling. Groundwater levels were encountered at depths ranging from 4.0 to 10.8 feet.

The average October Water Level was 3.0 feet, NGVD29 (1.5 feet, NAVD88 and the Seasonal High Ground Water Table is about 4.0 feet, NGVD29 (2.5 feet, NAVD88 were found for the project area based on U.S. Geological Survey (2002, "Average Altitude of the Water Table (1990-99 and Frequency Analysis of Water Levels (1974-99 in Biscayne Aquifer, Miami-Dade County, Florida" included in Appendix A.

Fluctuation in the observed groundwater levels should be expected due to seasonal climatic changes, construction activity, rainfall variations, a storm surge, surface water runoff and water level variations in the nearby lakes. Since groundwater level variations are anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based on the assumption that variations will occur.



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*HR Engineering Services, Inc.*

*January 29, 2021*  
*Project No. HR19-1573R*

## **5.0 ROADWAY CONSTRUCTION RECOMMENDATIONS**

### **5.1 BASIS FOR RECOMMENDATIONS**

The following construction recommendations are based upon our understanding of the conceptual design information available at the writing of this report and the data gathered during our subsurface exploration. The stratification of the subsurface materials underlying the site may vary within even short lateral distances; therefore, any subsurface condition encountered which differs from those documented in this study should be reported to us so that our recommendations can be reviewed.

### **5.2 SUITABILITY OF IN-SITU MATERIALS**

The following is a summary of the subsurface information provided by the borings and their suitability.

Stratum 1a – This Stratum consists of asphalt.

Stratum 1b – This Stratum consists of dark brown organic silty fine sand (topsoil, A-8. No laboratory testing was conducted on this material. This material is unsuitable for use as stabilized subgrade or fill material and should be removed.

Stratum 2 – This Stratum consists of brown to light brown limerock fragments with silty fine sand (fill, A-1-b. Laboratory testing on this material consisted of 3 sieve analyses and 3 moisture content tests. The fines content ranged from 15 to 21 percent and the moisture content ranged from 11 to 18 percent. This material appears suitable for use as a general fill when utilized in accordance with FDOT Index 120-001. It cannot be used as base material.

Stratum 3 – This stratum consists of brown silty fine sand with traces of limerock fragments (A-2-4. Laboratory testing on this material consisted of 3 sieve analyses, 3 fines content tests and 6 moisture content tests. The fines content ranged from 23 to 35 percent and the moisture content ranged from 11 to 36 percent. This material appears suitable for use in the embankment when utilized in accordance with FDOT Standard Plan Index 120-001. However, this material is likely to retain excess moisture and be difficult to dry and compact. It should be used in the embankment above the water level existing at the time of construction. It cannot be used as stabilized subgrade or base material.

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Stratum 4 – This Stratum consists of brown sandy silt or slightly organic sandy silt with traces of limerock fragments (A-4. Laboratory testing on this material consisted of 2 organic content tests, 13 fines content tests and 14 moisture content tests. The organic content ranged from 4 to 5, the fines content ranged from 50 to 98 percent and the moisture content ranged from 32 to 75 percent. This material is unsuitable for use in the embankment and as stabilized subgrade and shall be removed in accordance with FDOT Standard Plan Index 120-002. It should be removed if encountered within 2 feet below the bottom of the base.

This material was encountered within 2 feet below the bottom of the base at the following borehole locations: RB-28, RB-32, RB-36, RB-39, RB-40 and Percolations Tests P-7, P-8 and P-9.

Stratum 5 – This Stratum consists of brown fine sand with traces of limerock fragments (A-3. Laboratory testing on this material consisted of 1 fines content test and 1 moisture content test. The fines content was 8 percent and the moisture content was 25 percent. This material appears suitable for use in the embankment when utilized in accordance with FDOT Standard Index 120-001. It cannot be used as stabilized subgrade or base material.

Stratum 6 – This stratum consists of the natural limestone. This material appears suitable for use as general fill when utilized in accordance with FDOT Standard Plan Index 120-001. This material typically offers a high resistance to excavation. Special equipment and breaking tools may be required to excavate it. This material is also difficult to dewater due to its high porosity and permeability.

### **5.3 CONSTRUCTION PLANS AND SPECIFICATIONS REVIEW**

It is recommended that this office be provided the opportunity to make a general review of the earthwork plans and special provisions prepared from the recommendations presented in this report. We would then suggest any modifications so that our recommendations are properly interpreted and implemented.

### **5.4 SETTLEMENT AND VIBRATION MONITORING**

Construction vibrations associated compaction equipment may occur. Settlement and vibration monitoring should be performed in accordance with Section 108 of FDOT Standard Specifications.

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*HR Engineering Services, Inc.*

*January 29, 2021*  
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## **6.0 REPORT LIMITATIONS**

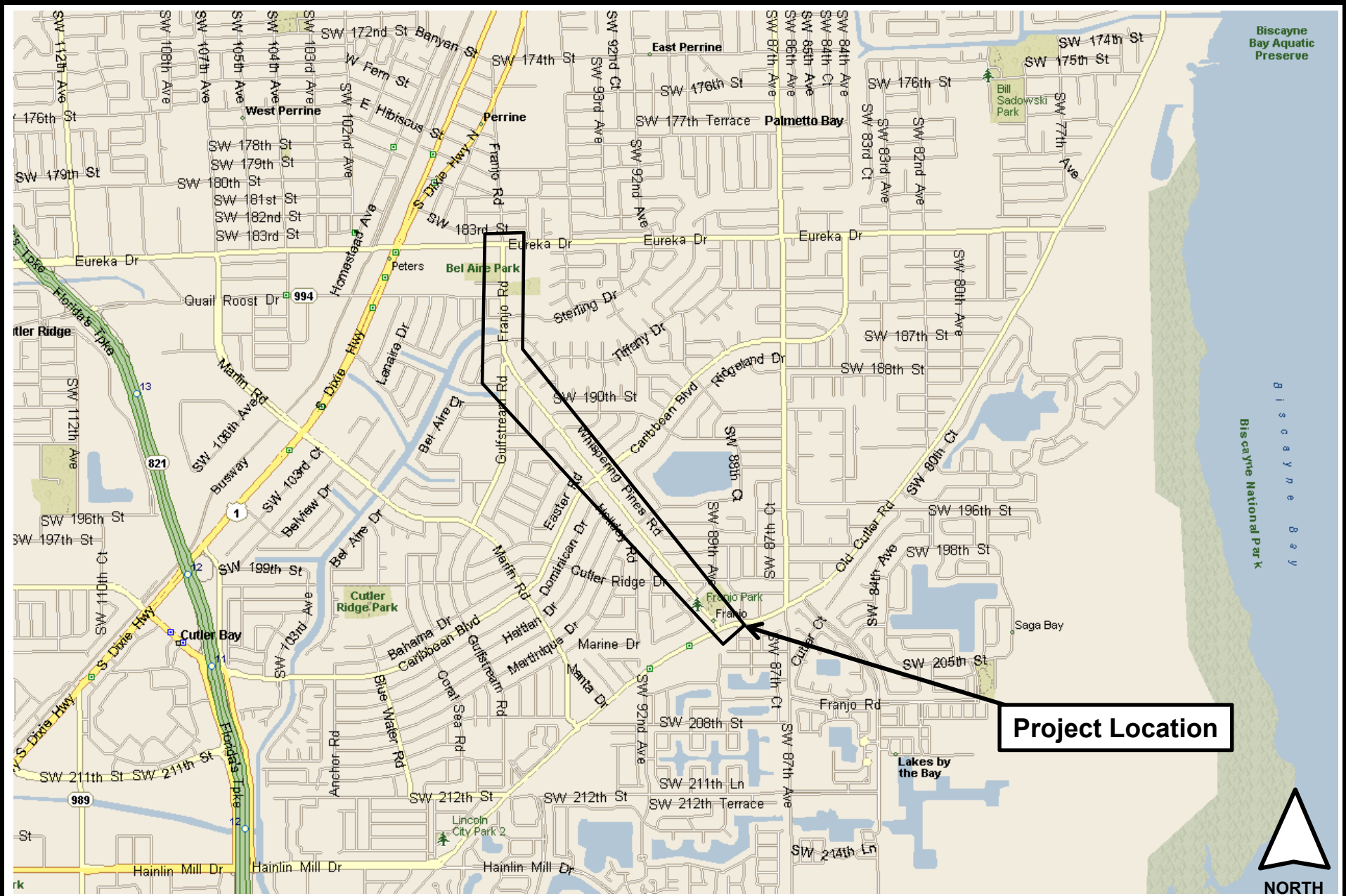
The scope of the investigation was intended to evaluate the subsurface conditions along the proposed roadway improvements. The analyses and recommendations submitted in this report are based upon the data obtained from the test borings performed at the locations indicated. The applicability of the report should also be reviewed in the event significant changes occur in the design, nature or location of the proposed improvement.

The scope of our services does not include any environmental assessment or investigation for the presence or absence of hazardous or toxic material in the soil, groundwater, or surface water within or beyond the site studied.



## **APPENDIX A**

|                                                  |                       |
|--------------------------------------------------|-----------------------|
| <b>SITE LOCATION MAP</b>                         | <b>A-1</b>            |
| <b>FIELD EXPLORATION PLANS</b>                   | <b>A-2 THRU A-14</b>  |
| <b>MIAMI-DADE COUNTY SOIL SURVEY MAP</b>         | <b>A-15</b>           |
| <b>USGS QUADRANGLE ELEVATION MAP</b>             | <b>A-16</b>           |
| <b>USGS AVERAGE YEARLY HIGH WATER LEVELS MAP</b> | <b>A-17</b>           |
| <b>USGS AVERAGE OCTOBER WATER LEVELS MAP</b>     | <b>A-18</b>           |
| <b>SUMMARY OF TEST BORING LOCATIONS</b>          | <b>A-19 AND A-20</b>  |
| <b>SUMMARY OF PERCOLATION TEST RESULTS</b>       | <b>A-21</b>           |
| <b>REPORT OF CORE BORINGS</b>                    | <b>A-22 AND A-25</b>  |
| <b>SOILS INFORMATION TABLE</b>                   | <b>A-26 THRU A-31</b> |
| <b>FIELD TESTING PROCEDURES</b>                  | <b>A-32</b>           |

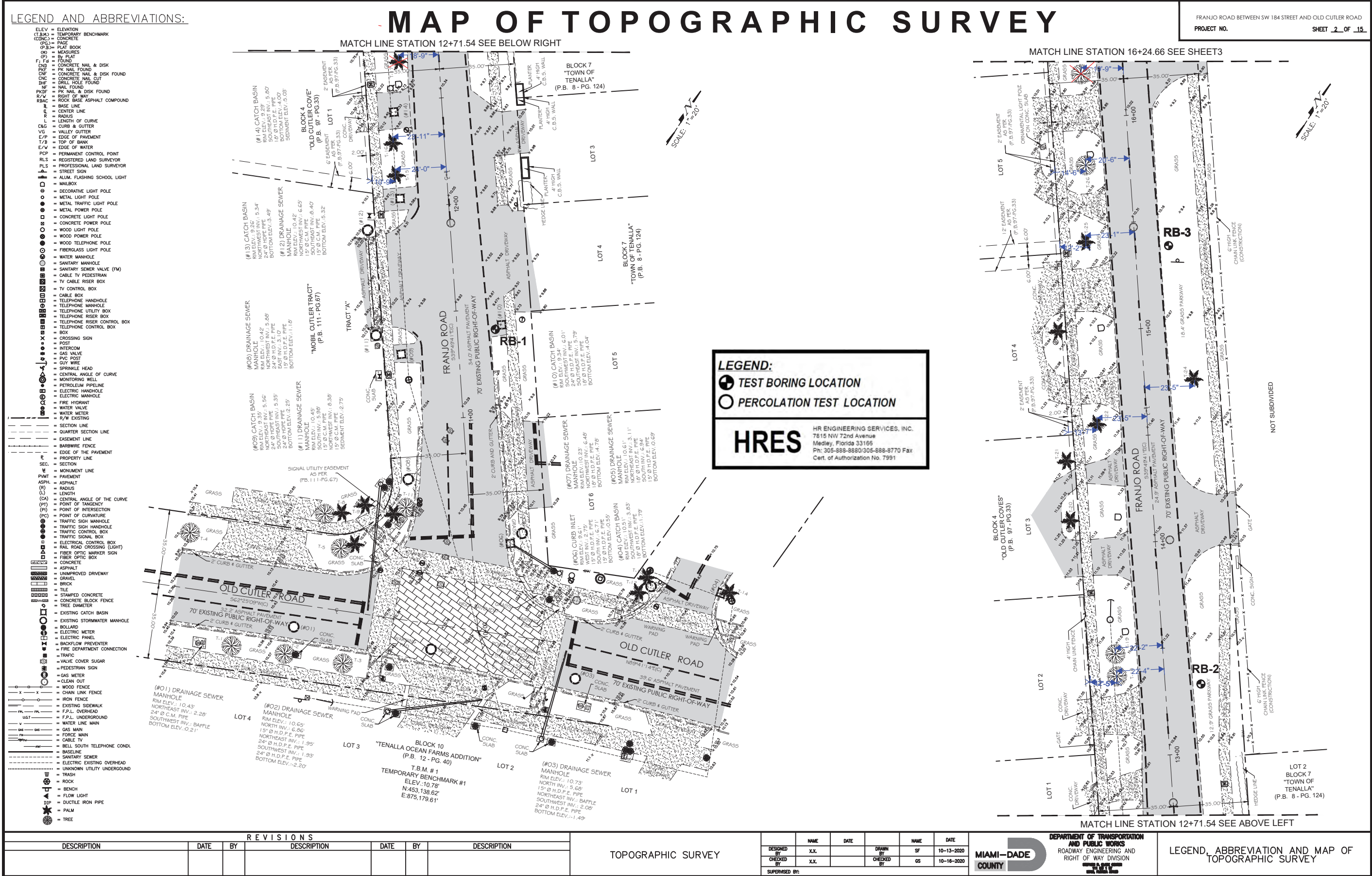


FRANJO ROAD, FROM OLD CUTLER ROAD  
TO SW 184<sup>TH</sup> STREET  
TOWN CUTLER BAY, MIAMI-DADE COUNTY, FLORIDA  
DEPARTMENT OF PUBLIC WORKS

**HRES**  
HR Engineering Services, Inc.

**SITE LOCATION PLAN      A-1**

|                        |                |
|------------------------|----------------|
| DRAWN BY: CS           | DATE: 01/29/21 |
| PROJECT No: HR19-1573R | SCALE: NTS     |



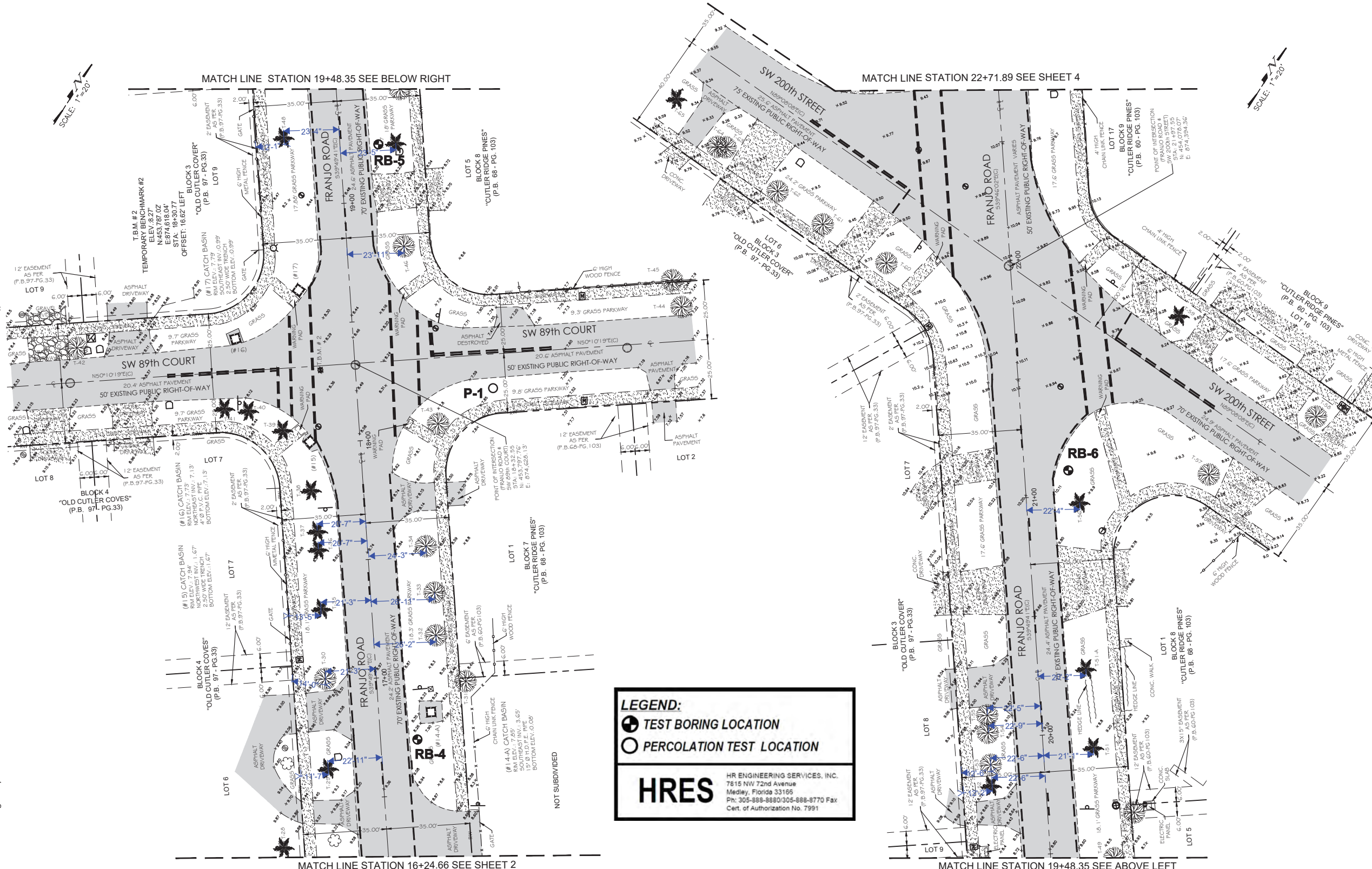


LEGEND AND ABBREVIATIONS:

- ELEV = ELEVATION
- CONC = CONCRETE
- PG = PAGE
- PL = PLAT BOOK
- MEAS = MEASURES
- BY = BY
- FOUND = FOUND
- CONC. NAIL & DISK = CONCRETE NAIL & DISK
- PK NAIL FOUND = PK NAIL FOUND
- CONC. NAIL & DISK FOUND = CONCRETE NAIL & DISK FOUND
- DRILL HOLE FOUND = DRILL HOLE FOUND
- NAIL FOUND = NAIL FOUND
- PK NAIL & DISK FOUND = PK NAIL & DISK FOUND
- R/W = RIGHT OF WAY
- RBAC = ROCK BASE ASPHALT COMPOUND
- BASE LINE = BASE LINE
- CENTER LINE = CENTER LINE
- RADIUS = RADIUS
- LENGTH OF CURVE = LENGTH OF CURVE
- CURB & GUTTER = CURB & GUTTER
- VALLEY CUTTER = VALLEY CUTTER
- E/P = EDGE OF PAVEMENT
- T/B = TOP OF BANK
- E/W = EDGE OF WATER
- PERM. CONTROL POINT = PERMANENT CONTROL POINT
- REGISTERED LAND SURVEYOR = REGISTERED LAND SURVEYOR
- PROFESSIONAL LAND SURVEYOR = PROFESSIONAL LAND SURVEYOR
- STREET SIGN = STREET SIGN
- ALUM. FLASHING SCHOOL LIGHT = ALUM. FLASHING SCHOOL LIGHT
- MAILBOX = MAILBOX
- DECORATIVE LIGHT POLE = DECORATIVE LIGHT POLE
- METAL LIGHT POLE = METAL LIGHT POLE
- METAL TRAFFIC LIGHT POLE = METAL TRAFFIC LIGHT POLE
- METAL POWER POLE = METAL POWER POLE
- CONCRETE LIGHT POLE = CONCRETE LIGHT POLE
- CONCRETE POWER POLE = CONCRETE POWER POLE
- WOOD LIGHT POLE = WOOD LIGHT POLE
- WOOD POWER POLE = WOOD POWER POLE
- FIBERGLASS LIGHT POLE = FIBERGLASS LIGHT POLE
- WATER MANHOLE = WATER MANHOLE
- SANITARY MANHOLE = SANITARY MANHOLE
- SANITARY SEWER VALVE (SV) = SANITARY SEWER VALVE (SV)
- CABLE TV PEDESTAL = CABLE TV PEDESTAL
- TV CABLE RISER BOX = TV CABLE RISER BOX
- TV CONTROL BOX = TV CONTROL BOX
- CABLE BOX = CABLE BOX
- TELEPHONE HANDHOLE = TELEPHONE HANDHOLE
- TELEPHONE MANHOLE = TELEPHONE MANHOLE
- TELEPHONE UTILITY BOX = TELEPHONE UTILITY BOX
- TELEPHONE RISER BOX = TELEPHONE RISER BOX
- TELEPHONE RISER CONTROL BOX = TELEPHONE RISER CONTROL BOX
- TELEPHONE CONTROL BOX = TELEPHONE CONTROL BOX
- CROSSING SIGN = CROSSING SIGN
- POST = POST
- INTERCOM = INTERCOM
- GAS VALVE = GAS VALVE
- POST = POST
- BUY WIRE = BUY WIRE
- SPRINKLE HEAD = SPRINKLE HEAD
- CENTRAL ANGLE OF CURVE = CENTRAL ANGLE OF CURVE
- MONITORING WELL = MONITORING WELL
- PETROLEUM PIPELINE = PETROLEUM PIPELINE
- ELECTRIC HANDHOLE = ELECTRIC HANDHOLE
- ELECTRIC MANHOLE = ELECTRIC MANHOLE
- FIRE HYDRANT = FIRE HYDRANT
- WATER VALVE = WATER VALVE
- WATER METER = WATER METER
- R/W EXISTING = R/W EXISTING
- SECTION LINE = SECTION LINE
- QUARTER SECTION LINE = QUARTER SECTION LINE
- EASEMENT LINE = EASEMENT LINE
- BARBERRY FENCE = BARBERRY FENCE
- EDGE OF THE PAVEMENT = EDGE OF THE PAVEMENT
- PROPERTY LINE = PROPERTY LINE
- MONUMENT LINE = MONUMENT LINE
- PAVEMENT = PAVEMENT
- ASPHALT = ASPHALT
- RADIUS = RADIUS
- LENGTH = LENGTH
- CENTRAL ANGLE OF THE CURVE = CENTRAL ANGLE OF THE CURVE
- POINT OF TANGENCY = POINT OF TANGENCY
- POINT OF INTERSECTION = POINT OF INTERSECTION
- POINT OF CURVATURE = POINT OF CURVATURE
- TRAFFIC SIGN MANHOLE = TRAFFIC SIGN MANHOLE
- TRAFFIC SIGN HANDHOLE = TRAFFIC SIGN HANDHOLE
- TRAFFIC CONTROL BOX = TRAFFIC CONTROL BOX
- TRAFFIC SIGNAL BOX = TRAFFIC SIGNAL BOX
- ELECTRICAL CONTROL BOX = ELECTRICAL CONTROL BOX
- RAIL ROAD CROSSING (LIGHT) = RAIL ROAD CROSSING (LIGHT)
- FIBER OPTIC MARKER SIGN = FIBER OPTIC MARKER SIGN
- FIBER OPTIC BOX = FIBER OPTIC BOX
- CONCRETE = CONCRETE
- ASPHALT = ASPHALT
- UNIMPROVED DRIVEWAY = UNIMPROVED DRIVEWAY
- GRAVEL = GRAVEL
- BRICK = BRICK
- TILE = TILE
- STAMPED CONCRETE = STAMPED CONCRETE
- CONCRETE BLOCK FENCE = CONCRETE BLOCK FENCE
- TREE DIAMETER = TREE DIAMETER
- EXISTING CATCH BASIN = EXISTING CATCH BASIN
- EXISTING STORMWATER MANHOLE = EXISTING STORMWATER MANHOLE
- BOLLARD = BOLLARD
- ELECTRIC METER = ELECTRIC METER
- ELECTRIC PANEL = ELECTRIC PANEL
- BACKFLOW PREVENTER = BACKFLOW PREVENTER
- FIRE DEPARTMENT CONNECTION = FIRE DEPARTMENT CONNECTION
- TRAPIC = TRAPIC
- WALK COVER SUGAR = WALK COVER SUGAR
- PEDESTRIAN SIGN = PEDESTRIAN SIGN
- GAS METER = GAS METER
- CLEAN OUT = CLEAN OUT
- WOOD FENCE = WOOD FENCE
- CHAIN LINK FENCE = CHAIN LINK FENCE
- IRON FENCE = IRON FENCE
- EXISTING SIDEWALK = EXISTING SIDEWALK
- F.P.L. OVERHEAD = F.P.L. OVERHEAD
- F.P.L. UNDERGROUND = F.P.L. UNDERGROUND
- WATER LINE MAIN = WATER LINE MAIN
- GAS MAIN = GAS MAIN
- FORCE MAIN = FORCE MAIN
- CABLE TV = CABLE TV
- BELL SOUTH TELEPHONE CONDUIT = BELL SOUTH TELEPHONE CONDUIT
- BASLINE = BASLINE
- SANITARY SEWER = SANITARY SEWER
- ELECTRIC EXISTING OVERHEAD = ELECTRIC EXISTING OVERHEAD
- UNKNOWN UTILITY UNDERGROUND = UNKNOWN UTILITY UNDERGROUND
- TRASH = TRASH
- ROCK = ROCK
- BENCH = BENCH
- FLOW LIGHT = FLOW LIGHT
- DUCTILE IRON PIPE = DUCTILE IRON PIPE
- PALM = PALM
- TREE = TREE

MAP OF TOPOGRAPHIC SURVEY

FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD  
PROJECT NO. SHEET 3 OF 15



**LEGEND:**

- TEST BORING LOCATION
- PERCOLATION TEST LOCATION

**HRES**

HR ENGINEERING SERVICES, INC.  
7615 NW 72nd Avenue  
Medley, Florida 33166  
Ph: 305-888-8880/305-888-8770 Fax  
Cert. of Authorization No. 7991

| REVISIONS   |      |    |             |      |    |
|-------------|------|----|-------------|------|----|
| DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|             |      |    |             |      |    |
|             |      |    |             |      |    |

TOPOGRAPHIC SURVEY

| DESIGNED BY    | NAME | DATE | DRAWN BY   | NAME | DATE |
|----------------|------|------|------------|------|------|
|                |      |      |            |      |      |
| CHECKED BY     |      |      | CHECKED BY |      |      |
|                |      |      |            |      |      |
| SUPERVISED BY: |      |      |            |      |      |

**MIAMI-DADE COUNTY**

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION

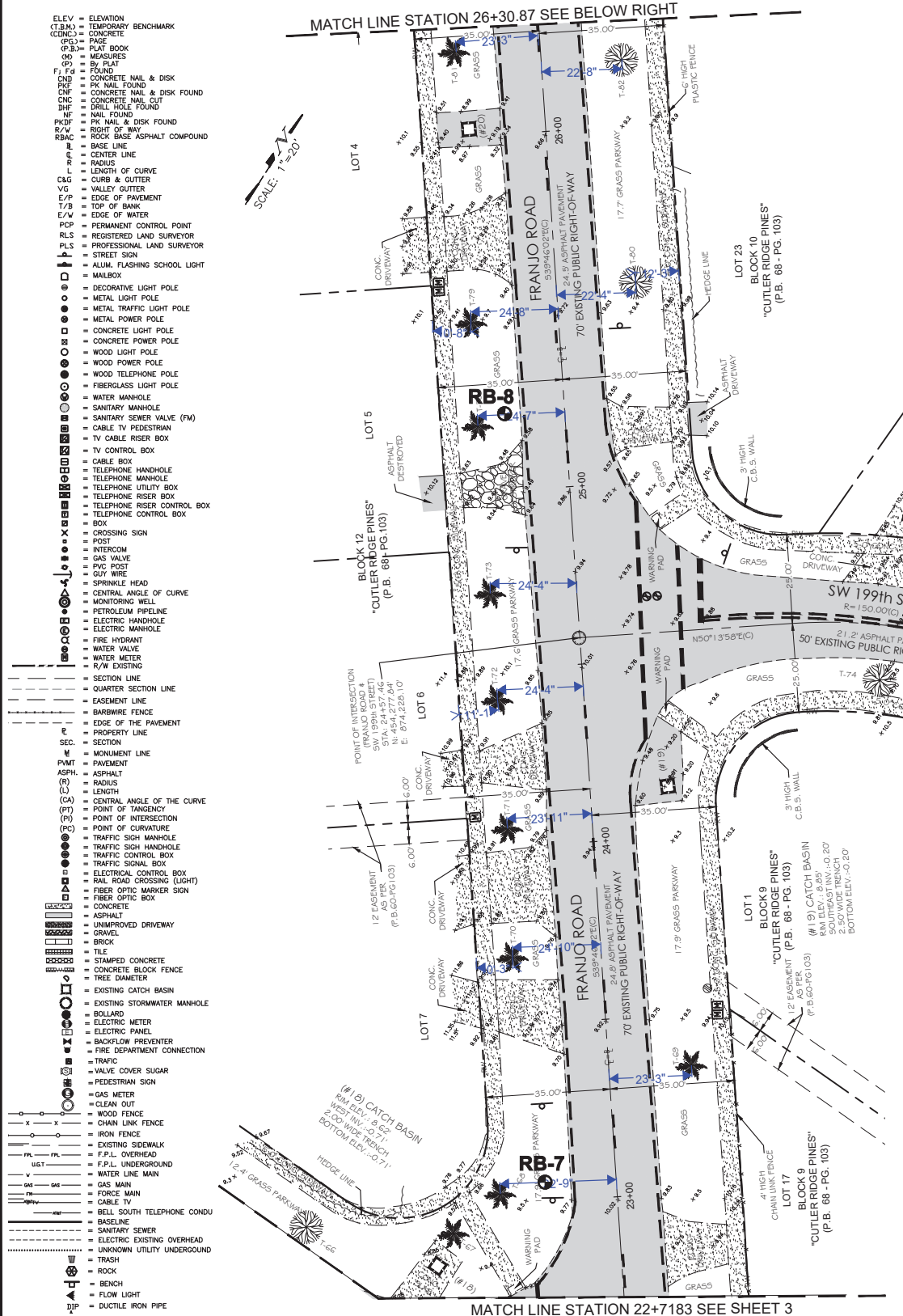
LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY



LEGEND AND ABBREVIATIONS:

MAP OF TOPOGRAPHIC SURVEY

FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD  
PROJECT NO. SHEET 4 OF 15



**LEGEND:**

- TEST BORING LOCATION
- PERCOLATION TEST LOCATION

**HRES** HR ENGINEERING SERVICES, INC.  
7815 NW 72nd Avenue  
Medley, Florida 33155  
Ph: 305-898-8880/305-888-8770 Fax  
Cert. of Authorization No. 7991

TOPOGRAPHIC SURVEY

|                |      |      |            |      |            |
|----------------|------|------|------------|------|------------|
| DESIGNED BY    | NAME | DATE | DRAWN BY   | NAME | DATE       |
| CHECKED BY     | XX   |      | CHECKED BY | GS   | 10-15-2020 |
| SUPERVISED BY: |      |      |            |      | 10-16-2020 |



LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY



FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD

PROJECT NO. SHEET 5 OF 1

| ELEVATION | ELEVATION                     | BENCHMARK |
|-----------|-------------------------------|-----------|
| (CONC.)   | CONCRETE                      |           |
| (P.G.)    | PAGE                          |           |
| (P.B.)    | PLAT BOOK                     |           |
| (H)       | MEASURES                      |           |
| Fy FLAT   | FLY FLAT                      |           |
| F, Pd     | FOUND                         |           |
| CND       | CONCRETE NAIL, & DISK         |           |
| KNF       | PK NAIL FOUND                 |           |
| KNF       | CONCRETE NAIL & DISK FOUND    |           |
| CNC       | CONCRETE NAIL CUT             |           |
| GRILL     | GRILL HOLE                    |           |
| NF        | NAIL FOUND                    |           |
| PK NAIL   | PK NAIL DISK FOUND            |           |
| PKD/V     | RIGHT OF WAY                  |           |
| RBCAC     | ROCK BASE ASPHALT COMPOUND    |           |
| BASE LINE | BASE LINE                     |           |
| C         | CENTER LINE                   |           |
| R         | RADIUS                        |           |
| C/P       | CURVE & GUTTER                |           |
| E&G       | EDGE OF PAVEMENT              |           |
| P/B       | POINT OF BANK                 |           |
| E/V       | EDGE OF WATER                 |           |
| TCP       | PERMANENT CONTROL POINT       |           |
| RLS       | REGISTERED LAND SURVEYOR      |           |
| PLS       | PROFESSIONAL LAND SURVEYOR    |           |
| S         | STREET SIGN                   |           |
| ALUM.     | ALUM. FLASHING SCHOOL LIGHT   |           |
| MALBOX    | MALBOX                        |           |
| ○         | DECORATIVE LIGHT POLE         |           |
| ○         | METAL LIGHT POLE              |           |
| ○         | METAL TRAFFIC LIGHT POLE      |           |
| ○         | METAL POWER POLE              |           |
| ○         | CONCRETE LIGHT POLE           |           |
| ○         | CONCRETE POWER POLE           |           |
| ○         | WOOD LIGHT POLE               |           |
| ○         | WOOD POWER POLE               |           |
| ○         | WOOD TELEPHONE POLE           |           |
| ○         | FIBERGLASS LIGHT POLE         |           |
| ○         | WATER MANHOLE                 |           |
| ○         | SANITARY MANHOLE              |           |
| ○         | SANITARY SINKER VALVE (FM)    |           |
| ○         | CABLE TV PEDESTAL             |           |
| ○         | TV CABLE RISER BOX            |           |
| ○         | TV CONTROL BOX                |           |
| ○         | CABLE BOX                     |           |
| ○         | TELEPHONE HANDHOLE            |           |
| ○         | TELEPHONE MANHOLE             |           |
| ○         | TELEPHONE UTILITY BOX         |           |
| ○         | TELEPHONE RISER BOX           |           |
| ○         | TELEPHONE RISER CONTROL BOX   |           |
| ○         | BOX                           |           |
| ○         | CROSSING SIGN                 |           |
| ○         | POST                          |           |
| ○         | INTERCOM                      |           |
| ○         | GAS VALVE                     |           |
| ○         | PVC POST                      |           |
| ○         | GUY WIRE                      |           |
| ○         | SPRINKLER HEAD                |           |
| ○         | CENTRAL ANGLE OF CURVE        |           |
| ○         | MONTROMING W                  |           |
| ○         | PETROLEUM PIPELINE            |           |
| ○         | ELECTRIC HANGAR               |           |
| ○         | ELECTRIC MANHOLE              |           |
| ○         | FIRE HYDRANT                  |           |
| ○         | WATER VALVE                   |           |
| ○         | WATER METER                   |           |
| ○         | R/W EXISTING                  |           |
| ○         | SECTION LINE                  |           |
| ○         | QUARTER SECTION LINE          |           |
| ○         | EASEMENT LINE                 |           |
| ○         | BARBWARE FENCE                |           |
| ○         | EDGE OF THE PAVEMENT          |           |
| ○         | PROPERTY LINE                 |           |
| ○         | SECTION                       |           |
| ○         | MONUMENT LINE                 |           |
| ○         | PAVEMENT                      |           |
| ○         | ASPHALT                       |           |
| ○         | RADIUS                        |           |
| ○         | LENGTH                        |           |
| ○         | CENTRAL ANGLE OF THE CURVE    |           |
| ○         | POINT OF TANGENCY             |           |
| ○         | POINT OF INTERSECTION         |           |
| ○         | POINT OF CURVATURE            |           |
| ○         | TRAFFIC SIGN MANHOLE          |           |
| ○         | TRAFFIC SIGN HANDHOLE         |           |
| ○         | TRAFFIC CONTROL BOX           |           |
| ○         | TRAFFIC SIGNAL BOX            |           |
| ○         | ELECTRICAL CONTROL BOX        |           |
| ○         | RAIL ROAD CROSSING (LIGHT)    |           |
| ○         | FIBER OPTIC MARKER SIGN       |           |
| ○         | FIBER OPTIC BOX               |           |
| ○         | CONCRETE                      |           |
| ○         | ASPHALT                       |           |
| ○         | UNIMPROVED DRIVEWAY           |           |
| ○         | GRAVEL                        |           |
| ○         | BRICK                         |           |
| ○         | TILE                          |           |
| ○         | STAMPED CONCRETE              |           |
| ○         | CONCRETE BLOCK FENCE          |           |
| ○         | TREE DWAMETER                 |           |
| ○         | EXISTING GATCH BASIN          |           |
| ○         | EXISTING STORMWATER MANHOLE   |           |
| ○         | BOLLARD                       |           |
| ○         | ELECTRIC METER                |           |
| ○         | ELECTRIC PANEL                |           |
| ○         | BACKFLOW PREVENTER            |           |
| ○         | FIRE DEPARTMENT CONNECTION    |           |
| ○         | TRAFFIC                       |           |
| ○         | VALVE COVER SUGAR             |           |
| ○         | PEDESTRIAN SIGN               |           |
| ○         | GAS METER                     |           |
| ○         | CLEAN OUT                     |           |
| ○         | WOOD FENCE                    |           |
| ○         | CHAIN LINK FENCE              |           |
| ○         | IRON FENCE                    |           |
| ○         | EXISTING SIDEWALK             |           |
| ○         | F.P.L. OVERHEAD               |           |
| ○         | F.P.L. UNDERGROUND            |           |
| ○         | WATER LINE MAIN               |           |
| ○         | GAS MAIN                      |           |
| ○         | FORCE MAIN                    |           |
| ○         | CABLE TV                      |           |
| ○         | BELL SCHOOL TELEPHONE CON     |           |
| ○         | BASIN                         |           |
| ○         | SANITARY SINKER               |           |
| ○         | ELECTRIC EXISTING UNDERGROUND |           |
| ○         | UNKNOWN UTILITY OVERGROUND    |           |
| ○         | TRASH                         |           |
| ○         | ROCK                          |           |
| ○         | BENCH                         |           |
| ○         | FLOW LIGHT                    |           |
| ○         | DUCTILE IRON PIPE             |           |
| ○         | PALM                          |           |
| ○         | TREE                          |           |



**HRES** HR ENGINEERING SERVICES, INC.  
7815 NW 72nd Avenue  
Medley, Florida 33165  
Ph: 305-888-8880/305-888-8770 Fax  
Cert. of Authorization No. 7991

|                | NAME | DATE |            | NAME | DATE       |
|----------------|------|------|------------|------|------------|
| DESIGNED BY    | X.X. |      | DRAWN BY   | SF   | 10-13-2020 |
| CHECKED BY     | X.X. |      | CHECKED BY | GS   | 10-16-2020 |
| SUPERVISED BY: |      |      |            |      |            |

**MIAMI-DADE COUNTY**

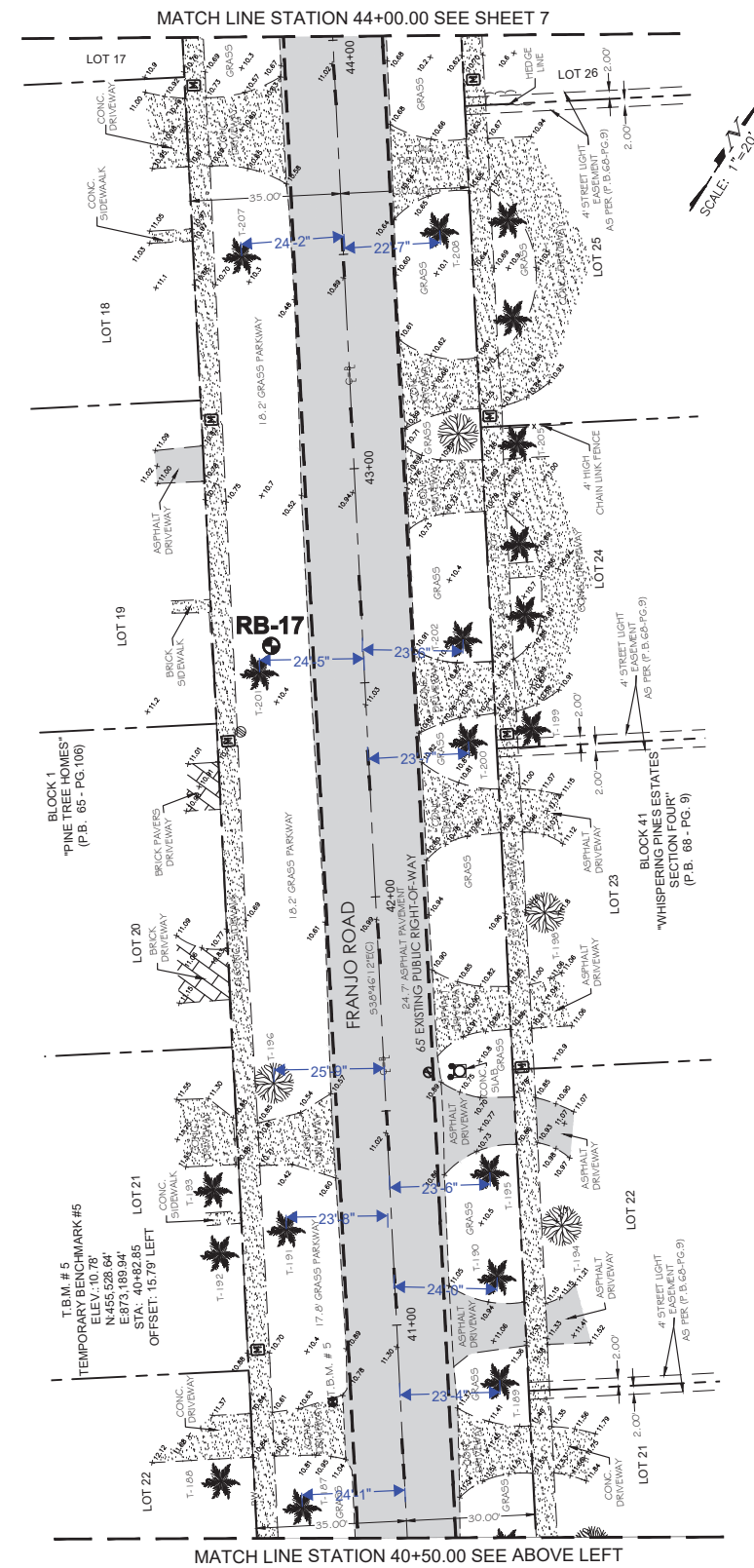
### LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY

| R E V I S I O N S |      |    |             |      |    |             |
|-------------------|------|----|-------------|------|----|-------------|
| DESCRIPTION       | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|                   |      |    |             |      |    |             |



# MAP OF TOPOGRAPHIC SURVEY

SHEET 6 OF 15



| REVISIONS   |      |    |             |      |    |             |
|-------------|------|----|-------------|------|----|-------------|
| DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY | DESCRIPTION |
|             |      |    |             |      |    |             |

|                |      |      |            |      |            |
|----------------|------|------|------------|------|------------|
|                | NAME | DATE |            | NAME | DATE       |
| DESIGNED BY    | X.X. |      | DRAWN BY   | SF   | 10-13-2020 |
| CHECKED BY     | X.X. |      | CHECKED BY | GS   | 10-16-2020 |
| SUPERVISED BY: |      |      |            |      |            |

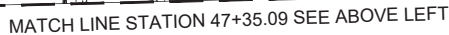
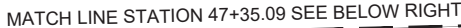
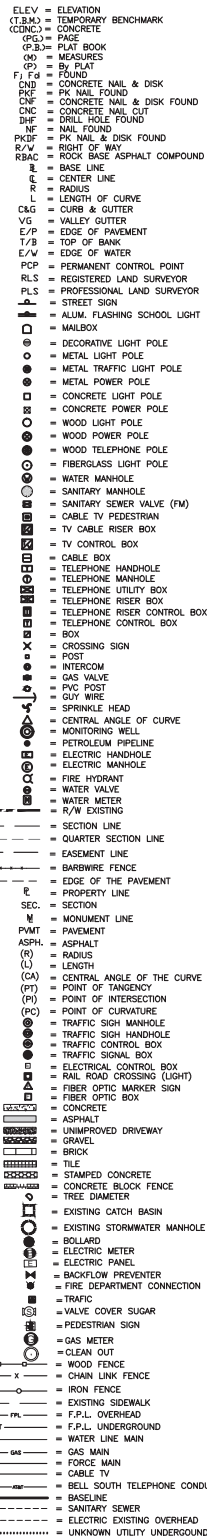

**MIAMI-DADE COUNTY**  
 DEPARTMENT OF TRANSPORTATION  
 AND PUBLIC WORKS  
 ROADWAY ENGINEERING AND  
 RIGHT OF WAY DIVISION  
 1100 N.W. 11th Street  
 3rd Floor, Miami, FL 33136

LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY



# MAP OF TOPOGRAPHIC SURVEY

SHEET 7 OF 15



## TOPOGRAPHIC SURVEY

**MIAMI-DADE COUNTY**

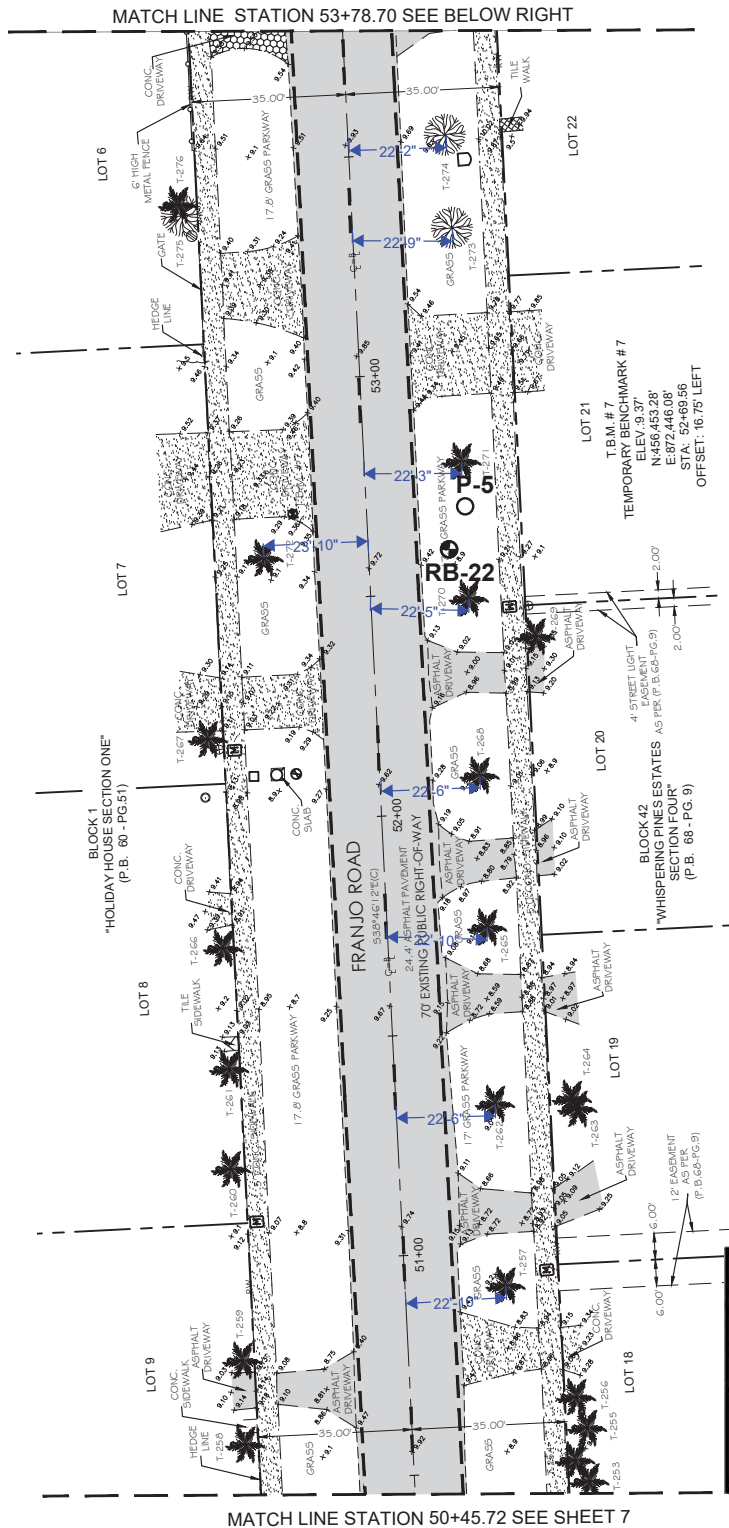
### LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY

LEGEND AND ABBREVIATIONS:

- ELEV = ELEVATION
- (T.B.M.) = TEMPORARY BENCHMARK
- (CONC.) = CONCRETE
- (P.B.) = PAGE
- (P.B.) = PLAT BOOK
- (M) = MEASURES
- (P) = BY PLAT
- (F) = FOUND
- (C.N.B.) = CONCRETE NAIL & DISK
- (P.N.F.) = PK NAIL FOUND
- (C.N.F.) = CONCRETE NAIL & DISK FOUND
- (N.F.) = CONCRETE NAIL FOUND
- (P.N.F.) = PK NAIL & DISK FOUND
- (R.W.) = RIGHT OF WAY
- (R.B.C.) = ROCK BASE ASPHALT COMPOUND
- (B.L.) = BASE LINE
- (C.L.) = CENTER LINE
- (R) = RADIUS
- (L) = LENGTH OF CURVE
- (C&G) = CURB & GUTTER
- (V.G.) = VALLEY GUTTER
- (E/P) = EDGE OF PAVEMENT
- (T/B) = TOP OF BANK
- (E/W) = EDGE OF WATER
- (P.C.P.) = PERMANENT CONTROL POINT
- (R.L.S.) = REGISTERED LAND SURVEYOR
- (P.L.S.) = PROFESSIONAL LAND SURVEYOR
- (S.T.S.) = STREET SIGN
- (A.L.S.) = ALUM. FLASHING SCHOOL LIGHT
- (M.B.) = MAILBOX
- (D.L.P.) = DECORATIVE LIGHT POLE
- (M.L.P.) = METAL LIGHT POLE
- (M.T.L.P.) = METAL TRAFFIC LIGHT POLE
- (M.P.P.) = METAL POWER POLE
- (C.L.P.) = CONCRETE LIGHT POLE
- (C.P.P.) = CONCRETE POWER POLE
- (W.L.P.) = WOOD LIGHT POLE
- (W.P.P.) = WOOD POWER POLE
- (F.L.P.) = FIBERGLASS LIGHT POLE
- (W.M.) = WATER MANHOLE
- (S.M.) = SANITARY MANHOLE
- (S.S.V.) = SANITARY SEWER VALVE (FM)
- (C.T.P.) = CABLE TV PEDESTRIAN
- (C.R.B.) = CABLE RISER BOX
- (T.C.B.) = TV CONTROL BOX
- (C.B.) = CABLE BOX
- (T.H.) = TELEPHONE HANDHOLE
- (T.M.) = TELEPHONE MANHOLE
- (T.U.B.) = TELEPHONE UTILITY BOX
- (T.R.B.) = TELEPHONE RISER BOX
- (T.R.C.B.) = TELEPHONE RISER CONTROL BOX
- (T.C.B.) = TELEPHONE CONTROL BOX
- (B) = BOX
- (C.S.) = CROSSING SIGN
- (P) = POST
- (I) = INTERCOM
- (G.V.) = GAS VALVE
- (P.V.C.) = PVC POST
- (G.W.) = GUT WIRE
- (S.H.) = SPRINKLE HEAD
- (C.A.) = CENTRAL ANGLE OF CURVE
- (M.W.) = MONITORING WELL
- (P.P.) = PETROLEUM PIPELINE
- (E.H.) = ELECTRIC HANDHOLE
- (E.M.) = ELECTRIC MANHOLE
- (F.H.) = FIRE HYDRANT
- (W.V.) = WATER VALVE
- (W.M.) = WATER METER
- (R.W.E.) = R/W EXISTING
- (S.L.) = SECTION LINE
- (Q.S.L.) = QUARTER SECTION LINE
- (E.L.) = EASEMENT LINE
- (B.F.) = BARBWARE FENCE
- (E.O.P.) = EDGE OF THE PAVEMENT
- (P.L.) = PROPERTY LINE
- (S.L.) = SECTION
- (M.L.) = MONUMENT LINE
- (P.M.) = PAVEMENT
- (A.S.P.) = ASPHALT
- (R) = RADIUS
- (L) = LENGTH
- (C.A.) = CENTRAL ANGLE OF THE CURVE
- (P.T.) = POINT OF TANGENCY
- (P.I.) = POINT OF INTERSECTION
- (P.C.) = POINT OF CURVATURE
- (T.S.M.) = TRAFFIC SIGN MANHOLE
- (T.S.H.) = TRAFFIC SIGN HANDHOLE
- (T.C.B.) = TRAFFIC CONTROL BOX
- (T.S.B.) = TRAFFIC SIGNAL BOX
- (E.C.B.) = ELECTRICAL CONTROL BOX
- (R.R.C.) = RAIL ROAD CROSSING (LIGHT)
- (F.O.M.S.) = FIBER OPTIC MARKER SIGN
- (F.O.B.) = FIBER OPTIC BOX
- (C) = CONCRETE
- (A) = ASPHALT
- (U.D.) = UNIMPROVED DRIVEWAY
- (G) = GRAVEL
- (B) = BRICK
- (T) = TILE
- (S.C.) = STAMPED CONCRETE
- (C.B.F.) = CONCRETE BLOCK FENCE
- (T.D.) = TREE DIAMETER
- (E.C.B.) = EXISTING CATCH BASIN
- (E.S.M.) = EXISTING STORMWATER MANHOLE
- (B) = BOLLARD
- (E.M.) = ELECTRIC METER
- (E.P.) = ELECTRIC PANEL
- (B.P.) = BACKFLOW PREVENTER
- (F.D.C.) = FIRE DEPARTMENT CONNECTION
- (T.V.) = TRAFFIC
- (V.C.S.) = VALVE COVER SUGAR
- (P.S.) = PEDESTRIAN SIGN
- (G.M.) = GAS METER
- (C.O.) = CLEAN OUT
- (W.F.) = WOOD FENCE
- (I.F.) = IRON FENCE
- (E.S.) = EXISTING SIDEWALK
- (F.O.) = F.P.L. OVERHEAD
- (U.G.) = F.P.L. UNDERGROUND
- (W.L.M.) = WATER LINE MAIN
- (G.M.) = GAS MAIN
- (F.M.) = FORCE MAIN
- (C.T.V.) = CABLE TV
- (B.S.T.) = BELL SOUTH TELEPHONE CONDUIT
- (B.L.) = BASELINE
- (S.S.) = SANITARY SEWER
- (E.E.O.) = ELECTRIC EXISTING OVERHEAD
- (U.U.U.) = UNKNOWN UTILITY UNDERGROUND
- (T) = TRASH
- (R) = ROCK
- (B) = BENCH
- (F.L.) = FLOW LIGHT
- (D.I.P.) = DUCTILE IRON PIPE
- (P) = PALM
- (T) = TREE
- (O.T.) = ORNAMENTAL TREE

MAP OF TOPOGRAPHIC SURVEY

FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD  
PROJECT NO. SHEET 8 OF 15

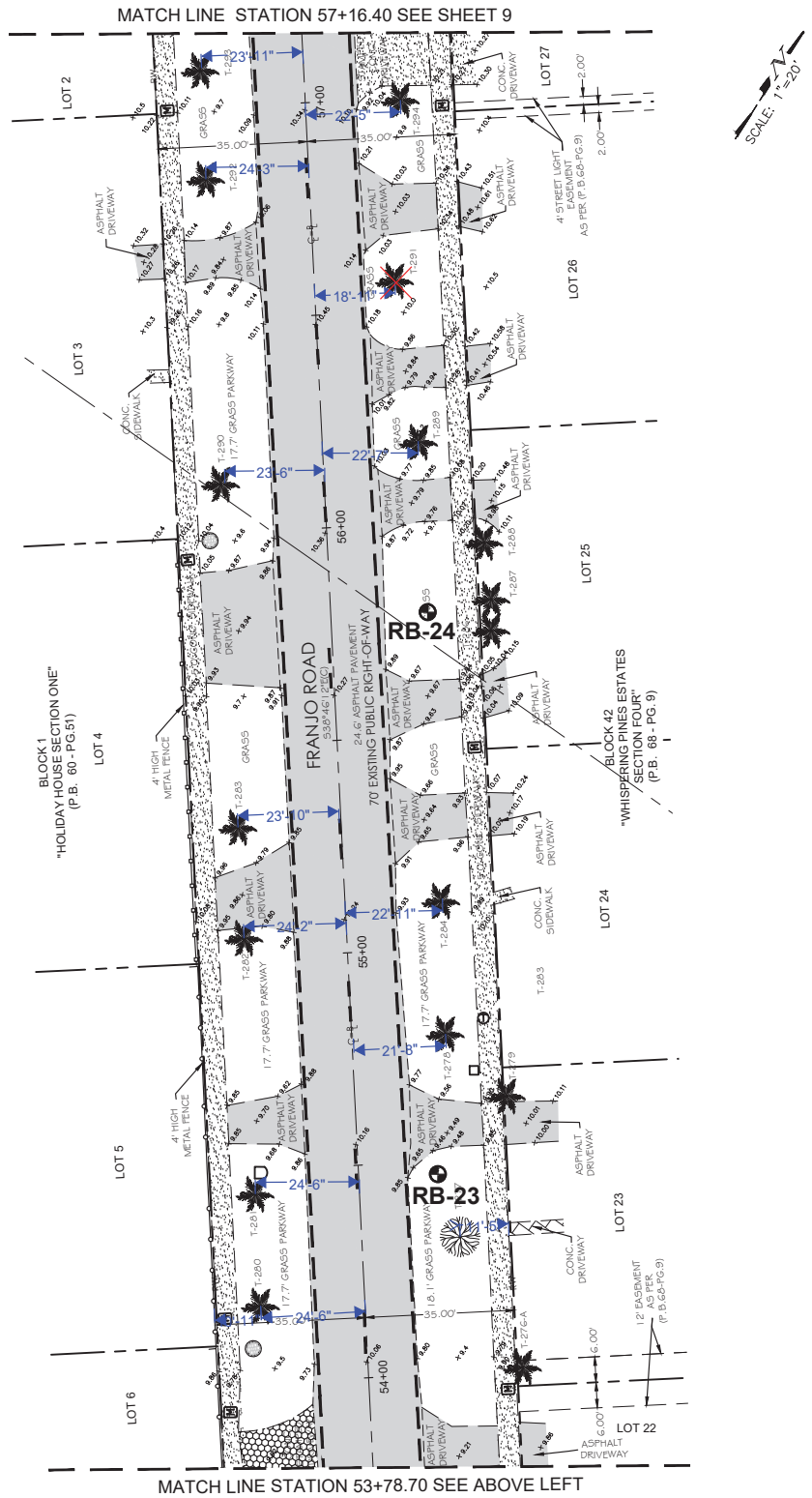


**LEGEND:**

- ⊕ TEST BORING LOCATION
- PERCOLATION TEST LOCATION

**HRES**

HR ENGINEERING SERVICES, INC.  
7615 NW 72nd Avenue  
Medley, Florida 33165  
Ph: 305-888-8880/305-888-8770 Fax  
Cert. of Authorization No. 7991



| REVISIONS   |      |    |             |      |    |
|-------------|------|----|-------------|------|----|
| DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|             |      |    |             |      |    |
|             |      |    |             |      |    |

TOPOGRAPHIC SURVEY

| DESIGNED BY    | NAME | DATE | DRAWN BY   | NAME | DATE       |
|----------------|------|------|------------|------|------------|
|                | X.X. |      |            | SF   | 10-15-2020 |
| CHECKED BY     | X.X. |      | CHECKED BY | GS   | 10-16-2020 |
| SUPERVISED BY: |      |      |            |      |            |

**MIAMI-DADE COUNTY**

**DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS**

ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION

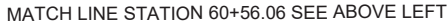
LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY



# MAP OF TOPOGRAPHIC SURVEY

**SHEET 9 OF 15**

- [illegible]



# TOPOGRAPHIC SURVEY



MIAMI-DADE  
COUNTY

## LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY

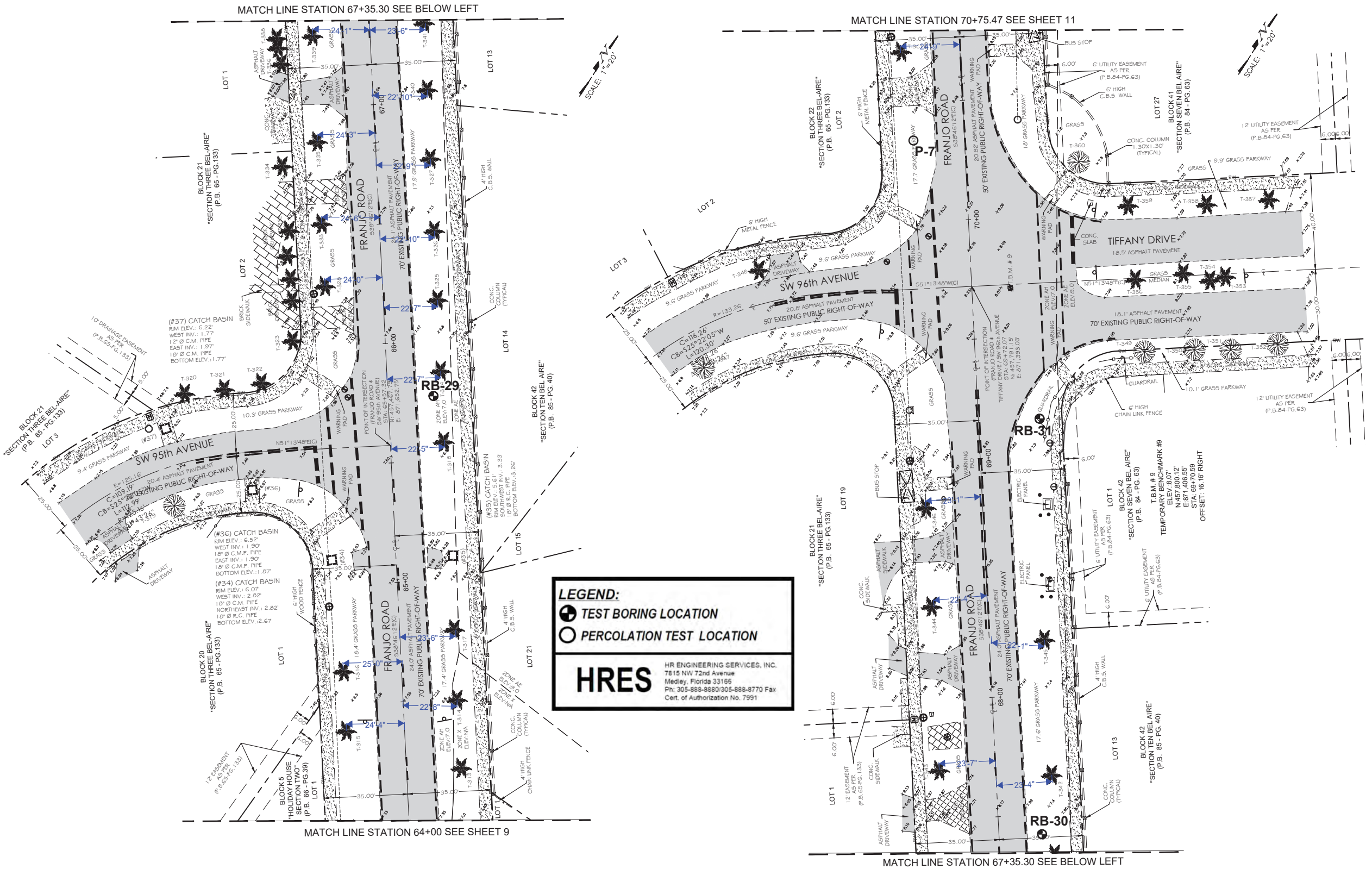


LEGEND AND ABBREVIATIONS:

- ELEV = ELEVATION
- (T.B.M.) = TEMPORARY BENCHMARK
- (C.C.N.C.) = CONCRETE
- (P.B.) = PLAT BOOK
- (M) = MEASURES
- (P) = BY PLAT
- (F) = FOUND
- (C.N.D.) = CONCRETE NAIL & DISK
- (P.N.F.) = PERMANENT NAIL FOUND
- (C.N.F.) = CONCRETE NAIL & DISK FOUND
- (D.F.) = DRILL HOLE FOUND
- (N.F.) = NAIL FOUND
- (P.N.F.) = PERMANENT NAIL FOUND
- (R.V.) = RIGHT OF WAY
- (R.B.A.C.) = ROCK BASE ASPHALT COMPOUND
- (L) = BASE LINE
- (R) = RADIUS
- (L) = LENGTH OF CURVE
- (V.G.) = VALLEY GUTTER
- (E.V.P.) = EDGE OF PAVEMENT
- (T.B.) = TOP OF BANK
- (E.W.) = EDGE OF WATER
- (P.C.P.) = PERMANENT CONTROL POINT
- (R.L.S.) = REGISTERED LAND SURVEYOR
- (P.L.S.) = PROFESSIONAL LAND SURVEYOR
- (S.T.S.) = STREET SIGN
- (A.L.S.) = ALUM. FLASHING SCHOOL LIGHT
- (M.A.L.B.) = MAIL BOX
- (D.C.L.P.) = DECORATIVE LIGHT POLE
- (M.L.P.) = METAL LIGHT POLE
- (M.T.L.P.) = METAL TRAFFIC LIGHT POLE
- (M.P.P.) = METAL POWER POLE
- (C.L.P.) = CONCRETE LIGHT POLE
- (C.P.P.) = CONCRETE POWER POLE
- (W.L.P.) = WOOD LIGHT POLE
- (W.P.P.) = WOOD POWER POLE
- (W.T.P.) = WOOD TELEPHONE POLE
- (F.L.P.) = FIBERGLASS LIGHT POLE
- (W.M.) = WATER MANHOLE
- (S.M.) = SANITARY MANHOLE
- (S.S.V.) = SANITARY SEWER VALVE (FM)
- (C.T.P.) = CABLE TV PEDESTRIAN
- (C.R.B.) = CABLE RISER BOX
- (T.C.B.) = TV CONTROL BOX
- (C.B.) = CABLE BOX
- (T.H.) = TELEPHONE HANDHOLE
- (T.M.) = TELEPHONE MANHOLE
- (T.U.B.) = TELEPHONE UTILITY BOX
- (T.R.B.) = TELEPHONE RISER BOX
- (T.R.C.B.) = TELEPHONE RISER CONTROL BOX
- (T.C.B.) = TELEPHONE CONTROL BOX
- (B) = BOX
- (C.S.) = CROSSING SIGN
- (P) = POST
- (I) = INTERCOM
- (G.V.) = GAS VALVE
- (P.V.P.) = PVC POST
- (G.W.) = GUT WIRE
- (S.H.) = SPRINKLER HEAD
- (C.A.C.) = CENTRAL ANGLE OF CURVE
- (M.W.) = MONITORING WELL
- (P.P.) = PETROLEUM PIPELINE
- (E.H.) = ELECTRIC HANDHOLE
- (E.M.) = ELECTRIC MANHOLE
- (F.H.) = FIRE HYDRANT
- (W.V.) = WATER VALVE
- (W.M.) = WATER METER
- (P.V.E.) = P.V. EXISTING
- (S.L.) = SECTION LINE
- (Q.S.L.) = QUARTER SECTION LINE
- (E.L.) = EASEMENT LINE
- (B.F.) = BARBIRE FENCE
- (E.O.P.) = EDGE OF THE PAVEMENT
- (P.L.) = PROPERTY LINE
- (S.L.) = SECTION
- (M.L.) = MONUMENT LINE
- (P) = PAVEMENT
- (A) = ASPHALT
- (R) = RADIUS
- (L) = LENGTH
- (C.A.C.) = CENTRAL ANGLE OF THE CURVE
- (P.T.) = POINT OF TANGENCY
- (P.I.) = POINT OF INTERSECTION
- (P.C.) = POINT OF CURVATURE
- (T.S.) = TRAFFIC SIGN
- (T.S.H.) = TRAFFIC SIGN HANDHOLE
- (T.C.B.) = TRAFFIC CONTROL BOX
- (T.S.B.) = TRAFFIC SIGNAL BOX
- (E.C.B.) = ELECTRICAL CONTROL BOX
- (P.R.C.) = PAV. ROAD CROSSING (LIGHT)
- (F.M.S.) = FIBER OPTIC MARKER SIGN
- (F.O.B.) = FIBER OPTIC BOX
- (C) = CONCRETE
- (A) = ASPHALT
- (U.D.) = UNIMPROVED DRIVEWAY
- (G) = GRAVEL
- (B) = BRICK
- (T) = TILE
- (S.C.) = STAMPED CONCRETE
- (C.B.F.) = CONCRETE BLOCK FENCE
- (T.D.) = TREE DIAMETER
- (E.C.B.) = EXISTING CATCH BASIN
- (E.S.M.) = EXISTING STORMWATER MANHOLE
- (B) = BOLLARD
- (E.M.) = ELECTRIC METER
- (E.P.) = ELECTRIC PANEL
- (B.P.) = BACKFLOW PREVENTER
- (F.D.C.) = FIRE DEPARTMENT CONNECTION
- (T.V.) = TRAFFIC
- (V.C.S.) = VALVE COVER SUGAR
- (P.S.) = PEDESTRIAN SIGN
- (G.M.) = GAS METER
- (C.O.) = CLEAN OUT
- (W.F.) = WOOD FENCE
- (C.L.F.) = CHAIN LINK FENCE
- (I.F.) = IRON FENCE
- (E.S.) = EXISTING SIDEWALK
- (F.O.) = F.P.L. OVERHEAD
- (F.U.) = F.P.L. UNDERGROUND
- (W.L.M.) = WATER LINE MAIN
- (G.M.) = GAS MAIN
- (F.M.) = FORCE MAIN
- (C.T.) = CABLE TV
- (B.S.C.) = BELL SOUTH TELEPHONE CONDUIT
- (B.E.) = BASELINE
- (S.S.) = SANITARY SEWER
- (E.E.O.) = ELECTRIC EXISTING OVERHEAD
- (U.U.U.) = UNKNOWN UTILITY UNDERGROUND
- (T) = TRASH
- (R) = ROCK
- (B) = BENCH
- (F.L.) = FLOW LIGHT
- (D.I.P.) = DUCTILE IRON PIPE
- (P) = PALM
- (T) = TREE
- (O.T.) = ORNAMENTAL TREE

MAP OF TOPOGRAPHIC SURVEY

FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD  
PROJECT NO. SHEET 10 OF 15



**LEGEND:**

- ⊕ TEST BORING LOCATION
- PERCOLATION TEST LOCATION

**HRES**

HR ENGINEERING SERVICES, INC.  
7515 NW 72nd Avenue  
Medley, Florida 33165  
Ph: 305-888-8880/305-888-8770 Fax  
Cert. of Authorization No. 7991

| REVISIONS   |      |    |             |      |    |
|-------------|------|----|-------------|------|----|
| DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|             |      |    |             |      |    |
|             |      |    |             |      |    |

TOPOGRAPHIC SURVEY

| DESIGNED BY    | NAME | DATE | DRAWN BY   | NAME | DATE       |
|----------------|------|------|------------|------|------------|
|                | X.X. |      |            | SF   | 10-13-2020 |
| CHECKED BY     | X.X. |      | CHECKED BY | GS   | 10-16-2020 |
| SUPERVISED BY: |      |      |            |      |            |

**MIAMI-DADE COUNTY**

**DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS**  
ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION

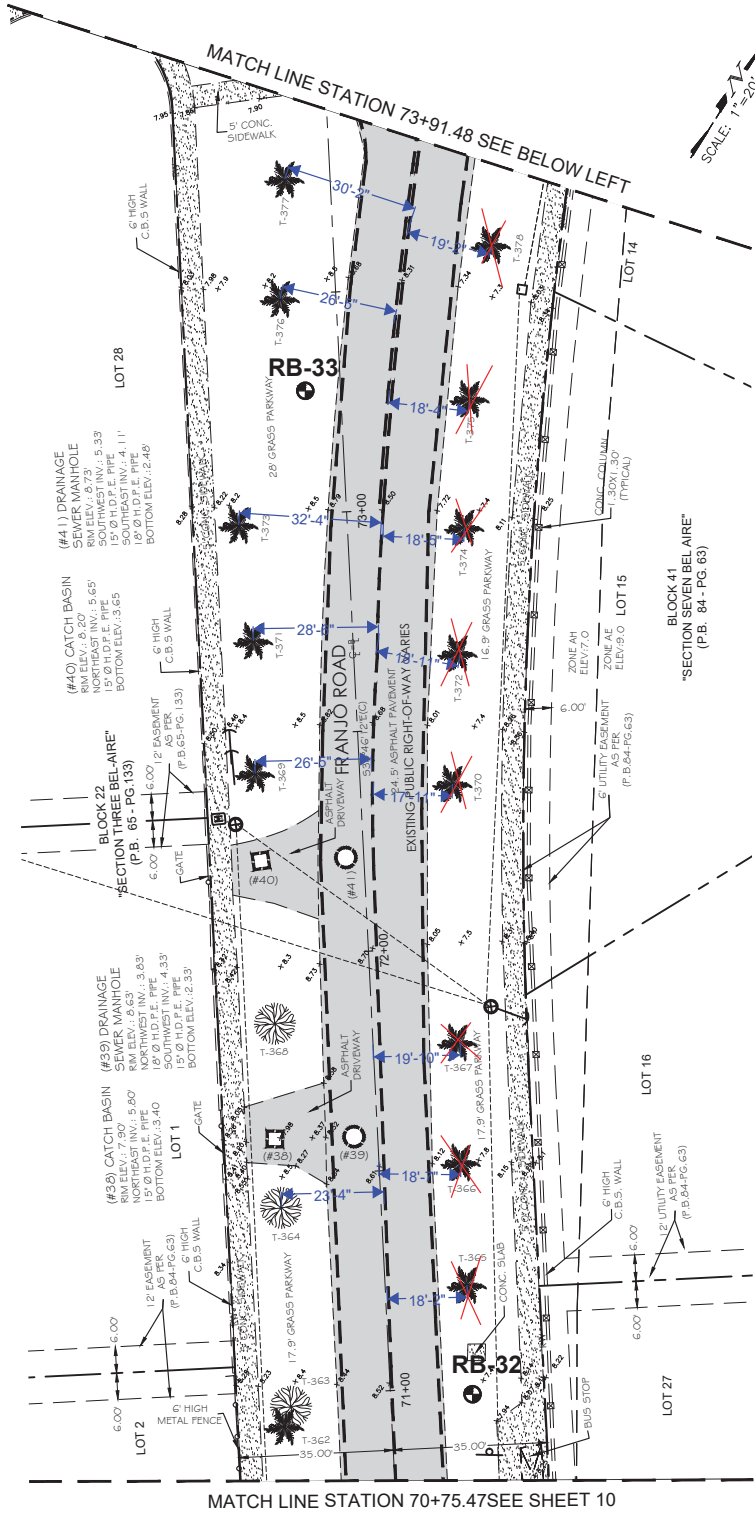
LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY

LEGEND AND ABBREVIATIONS:

- ELEV = ELEVATION  
(T.B.M.) = TEMPORARY BENCHMARK  
(C.C.N.C.) = CONCRETE  
(P.C.) = PAVEMENT  
(P.B.) = PLANT BOOK  
(M) = MEASURES  
(F) = FOUND  
(F.F.) = FOUND  
(C.N.C.) = CONCRETE NAIL & DISK  
(C.N.C.F.) = CONCRETE NAIL & DISK FOUND  
(C.N.C.) = CONCRETE NAIL CUT  
(D.H.F.) = DRILL HOLE FOUND  
(N.F.) = NAIL FOUND  
(P.K.F.) = PK NAIL & DISK FOUND  
(R.V.) = RIGHT OF WAY  
(R.B.A.C.) = ROCK BASE ASPHALT COMPOUND  
(L) = CENTER LINE  
(R) = RADIUS  
(L) = LENGTH OF CURVE  
(C.M.G.) = CURB & GUTTER  
(V.G.) = VALLEY GUTTER  
(E.P.) = EDGE OF PAVEMENT  
(T.B.) = TOP OF BANK  
(E.V.) = EDGE OF WATER  
(P.C.P.) = PERMANENT CONTROL POINT  
(R.L.S.) = REGISTERED LAND SURVEYOR  
(P.L.S.) = PROFESSIONAL LAND SURVEYOR  
(S.T.S.) = STREET SIGN  
(A.L.M.) = ALUM. FLASHING SCHOOL LIGHT  
(M.B.O.X.) = MAILBOX  
(D.L.P.) = DECORATIVE LIGHT POLE  
(M.L.P.) = METAL LIGHT POLE  
(M.T.L.P.) = METAL TRAFFIC LIGHT POLE  
(M.P.P.) = METAL POWER POLE  
(C.L.P.) = CONCRETE LIGHT POLE  
(C.P.P.) = CONCRETE POWER POLE  
(W.L.P.) = WOOD LIGHT POLE  
(W.P.P.) = WOOD POWER POLE  
(W.T.P.) = WOOD TELEPHONE POLE  
(F.L.P.) = FIBERGLASS LIGHT POLE  
(W.M.H.) = WATER MANHOLE  
(S.M.H.) = SANITARY MANHOLE  
(S.S.V.) = SANITARY SEWER VALVE (FM)  
(C.T.V.) = CABLE TV FIBERSTRAN  
(T.V.C.B.) = TV CABLE RISER BOX  
(T.V.C.B.) = TV CONTROL BOX  
(C.B.) = CABLE BOX  
(T.H.M.) = TELEPHONE HANDHOLE  
(T.M.H.) = TELEPHONE MANHOLE  
(T.U.B.) = TELEPHONE UTILITY BOX  
(T.R.B.) = TELEPHONE RISER BOX  
(T.C.B.) = TELEPHONE CONTROL BOX  
(C.B.) = BOX  
(C.S.) = CROSSING SIGN  
(P.) = POST  
(I.) = INTERCOM  
(G.V.) = GAS VALVE  
(P.C.P.) = P.C. POST  
(G.W.) = GUY WIRE  
(S.H.) = SPRINKLE HEAD  
(C.A.) = CENTRAL ANGLE OF CURVE  
(M.W.) = MONITORING WELL  
(P.P.) = PETROLEUM PIPELINE  
(E.H.) = ELECTRIC HANDHOLE  
(E.M.H.) = ELECTRIC MANHOLE  
(F.H.) = FIRE HYDRANT  
(W.V.) = WATER VALVE  
(W.M.) = WATER METER  
(R/W) = R/W EXISTING  
(S.L.) = SECTION LINE  
(Q.S.L.) = QUARTER SECTION LINE  
(E.S.L.) = EASEMENT LINE  
(B.W.F.) = BARB WIRE FENCE  
(E.O.P.) = EDGE OF THE PAVEMENT  
(P.L.) = PROPERTY LINE  
(S.L.) = SECTION LINE  
(M.L.) = MONUMENT LINE  
(P.V.M.) = PAVEMENT  
(A.S.P.) = ASPHALT  
(R.) = RADIUS  
(L) = LENGTH  
(C.A.) = CENTRAL ANGLE OF THE CURVE  
(P.T.) = POINT OF TANGENCY  
(P.I.) = POINT OF INTERSECTION  
(P.C.) = POINT OF CURVATURE  
(T.S.M.H.) = TRAFFIC SIGN MANHOLE  
(T.S.H.) = TRAFFIC SIGN HANDHOLE  
(T.C.B.) = TRAFFIC CONTROL BOX  
(T.S.B.) = TRAFFIC SIGNAL BOX  
(E.C.B.) = ELECTRICAL CONTROL BOX  
(R.R.C.) = RAIL ROAD CROSSING (LIGHT)  
(F.O.S.) = FIBER OPTIC MARKER SIGN  
(F.O.B.) = FIBER OPTIC BOX  
(C.) = CONCRETE  
(A.) = ASPHALT  
(U.D.) = UNIMPROVED DRIVEWAY  
(G.) = GRAVEL  
(B.) = BRICK  
(T.) = TILE  
(S.C.) = STAMPED CONCRETE  
(C.B.F.) = CONCRETE BLOCK FENCE  
(T.D.) = TREE DIAMETER  
(E.C.B.) = EXISTING CATCH BASIN  
(E.S.M.H.) = EXISTING STORMWATER MANHOLE  
(B.) = BOLLARD  
(E.M.) = ELECTRIC METER  
(E.P.) = ELECTRIC PANEL  
(B.P.) = BACKFLOW PREVENTER  
(F.D.C.) = FIRE DEPARTMENT CONNECTION  
(T.) = TRAFFIC  
(V.C.S.) = VALVE COVER SUGAR  
(P.S.) = PEDESTRIAN SIGN  
(G.M.) = GAS METER  
(C.O.) = CLEAN OUT  
(W.F.) = WOOD FENCE  
(C.L.F.) = CHAIN LINK FENCE  
(I.F.) = IRON FENCE  
(E.S.) = EXISTING SIDEWALK  
(F.P.L.) = F.P.L. OVERHEAD  
(F.P.L.) = F.P.L. UNDERGROUND  
(W.L.M.) = WATER LINE MAIN  
(G.M.) = GAS MAIN  
(F.M.) = FORCE MAIN  
(C.T.) = CABLE TV  
(B.S.T.C.) = BELL SOUTH TELEPHONE CONDUIT  
(B.) = BASELINE  
(S.S.) = SANITARY SEWER  
(E.E.O.) = ELECTRIC EXISTING OVERHEAD  
(U.U.) = UNKNOWN UTILITY UNDERGROUND  
(T.) = TRASH  
(R.) = ROCK  
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(F.L.) = FLOW LIGHT  
(D.I.P.) = DUCTILE IRON PIPE  
(P.) = PALM  
(T.) = TREE

MAP OF TOPOGRAPHIC SURVEY

FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD  
PROJECT NO. SHEET 11 OF 15



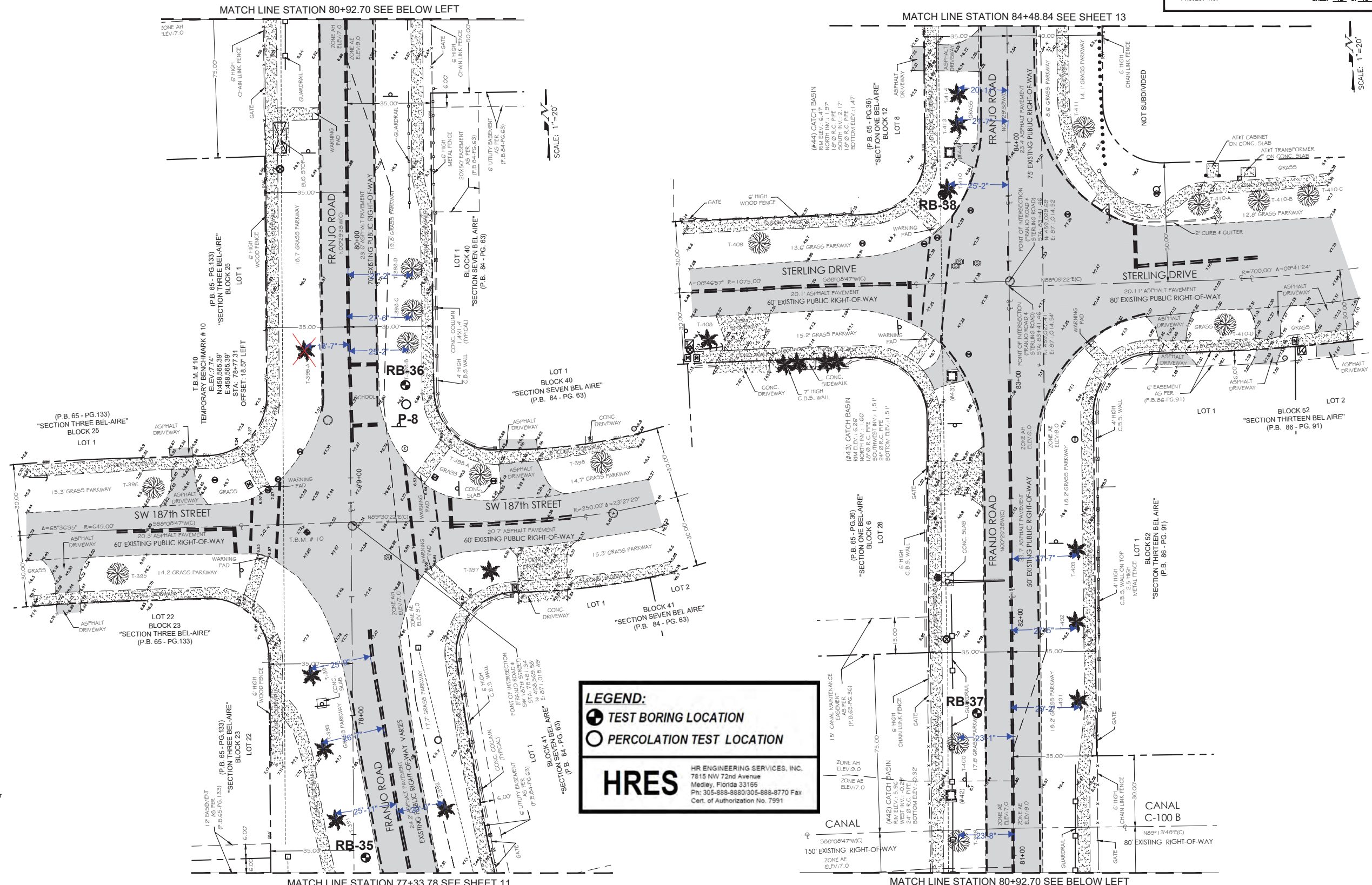


LEGEND AND ABBREVIATIONS:

- ELEV = ELEVATION
- TTB = TEMPORARY BENCHMARK
- CONC = CONCRETE
- ASPH = ASPHALT
- OP.B. = PLAT BOOK
- OH = MEASURES
- OP = BY PLAT
- F.F. = FOUND
- CONC. NAIL & DISK = CONCRETE NAIL & DISK
- PK NAIL FOUND = CONCRETE NAIL & DISK FOUND
- CNE = CONCRETE NAIL & DISK FOUND
- CONC. NAIL OUT = CONCRETE NAIL & DISK FOUND
- PK NAIL OUT = CONCRETE NAIL & DISK FOUND
- R/W = RIGHT OF WAY
- RBAC = ROCK BASE ASPHALT COMPOUND
- R = RADIUS
- L = LENGTH OF CURVE
- CG = CURB & GUTTER
- VG = VALLEY GUTTER
- E/P = EDGE OF PAVEMENT
- T/B = TOP OF BANK
- E/W = EDGE OF WATER
- PCP = PERMANENT CONTROL POINT
- RLS = REGISTERED LAND SURVEYOR
- PLS = PROFESSIONAL LAND SURVEYOR
- ST = STREET SIGN
- ALUM. FLASHING SCHOOL LIGHT = ALUM. FLASHING SCHOOL LIGHT
- MAILBOX = MAILBOX
- DECORATIVE LIGHT POLE = DECORATIVE LIGHT POLE
- METAL LIGHT POLE = METAL LIGHT POLE
- METAL TRAFFIC LIGHT POLE = METAL TRAFFIC LIGHT POLE
- METAL POWER POLE = METAL POWER POLE
- CONCRETE LIGHT POLE = CONCRETE LIGHT POLE
- CONCRETE POWER POLE = CONCRETE POWER POLE
- WOOD LIGHT POLE = WOOD LIGHT POLE
- WOOD POWER POLE = WOOD POWER POLE
- FIBERGLASS LIGHT POLE = FIBERGLASS LIGHT POLE
- WATER MANHOLE = WATER MANHOLE
- SANITARY MANHOLE = SANITARY MANHOLE
- SANITARY SEWER VALVE (FM) = SANITARY SEWER VALVE (FM)
- CABLE TV PEDESTRIAN = CABLE TV PEDESTRIAN
- TV CABLE RISER BOX = TV CABLE RISER BOX
- TV CONTROL BOX = TV CONTROL BOX
- CABLE BOX = CABLE BOX
- TELEPHONE HANDHOLE = TELEPHONE HANDHOLE
- TELEPHONE MANHOLE = TELEPHONE MANHOLE
- TELEPHONE UTILITY BOX = TELEPHONE UTILITY BOX
- TELEPHONE RISER BOX = TELEPHONE RISER BOX
- TELEPHONE RISER CONTROL BOX = TELEPHONE RISER CONTROL BOX
- TELEPHONE CONTROL BOX = TELEPHONE CONTROL BOX
- CROSSING SIGN = CROSSING SIGN
- POST = POST
- INTERCOM = INTERCOM
- GAS VALVE = GAS VALVE
- PVC POST = PVC POST
- GUT WIRE = GUT WIRE
- SPRINKLE HEAD = SPRINKLE HEAD
- CENTRAL ANGLE OF CURVE = CENTRAL ANGLE OF CURVE
- MONITORING WELL = MONITORING WELL
- PETROLEUM PIPELINE = PETROLEUM PIPELINE
- ELECTRIC HANDHOLE = ELECTRIC HANDHOLE
- ELECTRIC MANHOLE = ELECTRIC MANHOLE
- FIRE HYDRANT = FIRE HYDRANT
- WATER VALVE = WATER VALVE
- WATER METER = WATER METER
- R/W EXISTING = R/W EXISTING
- SECTION LINE = SECTION LINE
- QUARTER SECTION LINE = QUARTER SECTION LINE
- EASEMENT LINE = EASEMENT LINE
- BARBIRE FENCE = BARBIRE FENCE
- EDGE OF THE PAVEMENT = EDGE OF THE PAVEMENT
- PROPERTY LINE = PROPERTY LINE
- SECTION = SECTION
- MONUMENT LINE = MONUMENT LINE
- PAVEMENT = PAVEMENT
- ASPH = ASPHALT
- RADIUS = RADIUS
- LENGTH = LENGTH
- CENTRAL ANGLE OF THE CURVE = CENTRAL ANGLE OF THE CURVE
- POINT OF TANGENCY = POINT OF TANGENCY
- POINT OF INTERSECTION = POINT OF INTERSECTION
- POINT OF CURVATURE = POINT OF CURVATURE
- TRAFFIC SIGN MANHOLE = TRAFFIC SIGN MANHOLE
- TRAFFIC SIGN HANDHOLE = TRAFFIC SIGN HANDHOLE
- TRAFFIC CONTROL BOX = TRAFFIC CONTROL BOX
- TRAFFIC SIGNAL BOX = TRAFFIC SIGNAL BOX
- ELECTRONIC CONTROL BOX = ELECTRONIC CONTROL BOX
- RAIL ROAD CROSSING (LIGHT) = RAIL ROAD CROSSING (LIGHT)
- FIBER OPTIC MARKER SIGN = FIBER OPTIC MARKER SIGN
- FIBER OPTIC BOX = FIBER OPTIC BOX
- CONCRETE = CONCRETE
- ASPHALT = ASPHALT
- UNIMPROVED DRIVEWAY = UNIMPROVED DRIVEWAY
- GRAVEL = GRAVEL
- BRICK = BRICK
- TILE = TILE
- STAMPED CONCRETE = STAMPED CONCRETE
- CONCRETE BLOCK FENCE = CONCRETE BLOCK FENCE
- TREE DIAMETER = TREE DIAMETER
- EXISTING CATCH BASIN = EXISTING CATCH BASIN
- EXISTING STORMWATER MANHOLE = EXISTING STORMWATER MANHOLE
- BOLLARD = BOLLARD
- ELECTRIC METER = ELECTRIC METER
- ELECTRIC PANEL = ELECTRIC PANEL
- BACKFLOW PREVENTER = BACKFLOW PREVENTER
- FIRE DEPARTMENT CONNECTION = FIRE DEPARTMENT CONNECTION
- TRAFFIC = TRAFFIC
- VALVE COVER SUGAR = VALVE COVER SUGAR
- PEDESTRIAN SIGN = PEDESTRIAN SIGN
- GAS METER = GAS METER
- CLEAN OUT = CLEAN OUT
- WOOD FENCE = WOOD FENCE
- CHAIN LINK FENCE = CHAIN LINK FENCE
- IRON FENCE = IRON FENCE
- EXISTING SIDEWALK = EXISTING SIDEWALK
- F.P.L. OVERHEAD = F.P.L. OVERHEAD
- F.P.L. UNDERGROUND = F.P.L. UNDERGROUND
- WATER LINE MAIN = WATER LINE MAIN
- GAS MAIN = GAS MAIN
- FORCE MAIN = FORCE MAIN
- CABLE TV = CABLE TV
- BELL SOUTH TELEPHONE CONDUIT = BELL SOUTH TELEPHONE CONDUIT
- BASELINE = BASELINE
- SANITARY SEWER = SANITARY SEWER
- ELECTRIC EXISTING OVERHEAD = ELECTRIC EXISTING OVERHEAD
- UNKNOWN UTILITY UNDERGROUND = UNKNOWN UTILITY UNDERGROUND
- TRASH = TRASH
- ROCK = ROCK
- BENCH = BENCH
- FLOW LIGHT = FLOW LIGHT
- DUCTILE IRON PIPE = DUCTILE IRON PIPE
- PALM = PALM
- TREE = TREE

MAP OF TOPOGRAPHIC SURVEY

FRANJO ROAD BETWEEN SW 184 STREET AND OLD CUTLER ROAD  
PROJECT NO. SHEET 12 OF 15



**LEGEND:**

- ⊕ TEST BORING LOCATION
- PERCOLATION TEST LOCATION

**HRES**

HR ENGINEERING SERVICES, INC.  
7815 NW 72nd Avenue  
Medley, Florida 33165  
Ph: 305-888-8880/305-888-8770 Fax  
Cert. of Authorization No. 7991

| REVISIONS   |      |    |             |      |    |
|-------------|------|----|-------------|------|----|
| DESCRIPTION | DATE | BY | DESCRIPTION | DATE | BY |
|             |      |    |             |      |    |
|             |      |    |             |      |    |
|             |      |    |             |      |    |

TOPOGRAPHIC SURVEY

| DESIGNED BY   | NAME | DATE | DRAWN BY   | NAME | DATE |
|---------------|------|------|------------|------|------|
|               |      |      |            |      |      |
| CHECKED BY    |      |      | CHECKED BY |      |      |
|               |      |      |            |      |      |
| SUPERVISED BY |      |      |            |      |      |

**MIAMI-DADE COUNTY**

DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS  
ROADWAY ENGINEERING AND RIGHT OF WAY DIVISION

LEGEND, ABBREVIATION AND MAP OF TOPOGRAPHIC SURVEY



