



# CITY OF MIAMI



## OFFICE OF CAPITAL IMPROVEMENTS

STEVEN C. WILLIAMSON, DIRECTOR

# NW 24TH AVENUE IMPROVEMENTS FROM NW 28TH STREET TO NW 30TH STREET B-30723

**COMMISSION:** **APPROVED**

MAYOR  
FRANCIS SUAREZ

**APPROVAL PERTAINS TO GENERAL DESIGN FEATURES ONLY AND DOES NOT INCLUDE A COMPLETE CHECK OF DIMENSIONS, ELEVATIONS, CONSTRUCTIBILITY OR QUANTITIES. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE DESIGN, SAFETY AND CONSTRUCTIBILITY OF PLANS AND ASSOCIATED DOCUMENTS**

**COMMISSIONERS**

KEON HARDEMON (D-5)  
CHAIRMAN KEN RUSSELL (D-2)  
VICE CHAIRMAN WIFREDO (WILLY) GORT (D-1)  
JOE CAROLLO (D-3)  
MANOLO REYES (D-4)

BY:   
DATE: 7/24/19  
COMMENTS: (1-2)

**CITY MANAGER**

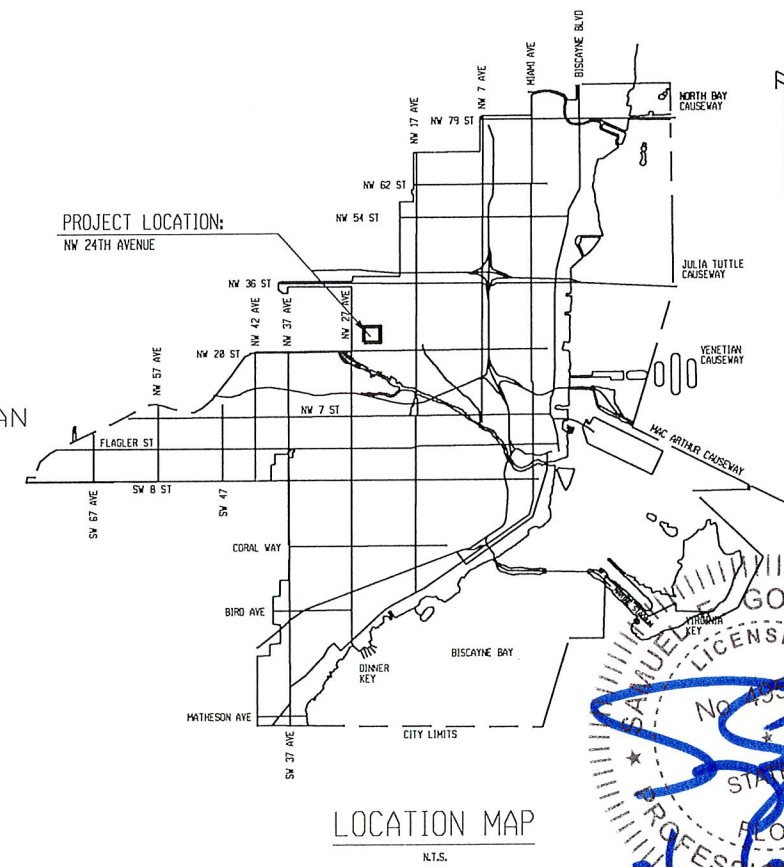
EMILIO T. GONZALEZ, Ph.D.

**INDEX OF DRAWINGS:**  
SHEET NO. DESCRIPTION

1	KEY SHEET
2	DRAINAGE MAP
3	EXISTING DRAINAGE STRUCTURES
4	PROPOSED DRAINAGE STRUCTURES
5	TYPICAL SECTION
6-7	GENERAL NOTES
8	SUMMARY OF QUANTITIES
9	SUMMARY OF DRAINAGE STRUCTURES
10-11	ROADWAY PLAN
12-13	ROADWAY PROFILE
14-15	SPECIAL DETAILS
16-18	INTERSECTION DETAILS
19-25	DRAINAGE STRUCTURE SHEET
26-32	DRAINAGE DETAILS
33-39	CROSS SECTIONS
40-41	STORMWATER POLLUTION PREVENTION PLAN
42-43	EROSION CONTROL DETAILS
44-46	TRAFFIC CONTROL PLAN
47-48	UTILITY ADJUSTMENT PLAN
49	TABULATION OF SIGNING & PAVEMENT MARKING QUANTITIES
50-51	SIGNING & PAVEMENT MARKINGS PLANS
52	TOPOGRAPHIC SURVEY

ROADWAY PLANS  
ENGINEER OF RECORD: SAMUEL E. GONZALEZ, P.E.

P.E. NO.: 49513



**REVIEW COMMENTS**

AGENCY	COMMENT

CIP PROJECT MANAGER  
CIP CONSTRUCTION MANAGER

ROBERTO CARDONA  
MAURICE HARDIE

PREPARED FOR THE CITY OF MIAMI  
CAPITAL IMPROVEMENTS  
PROGRAM BY:

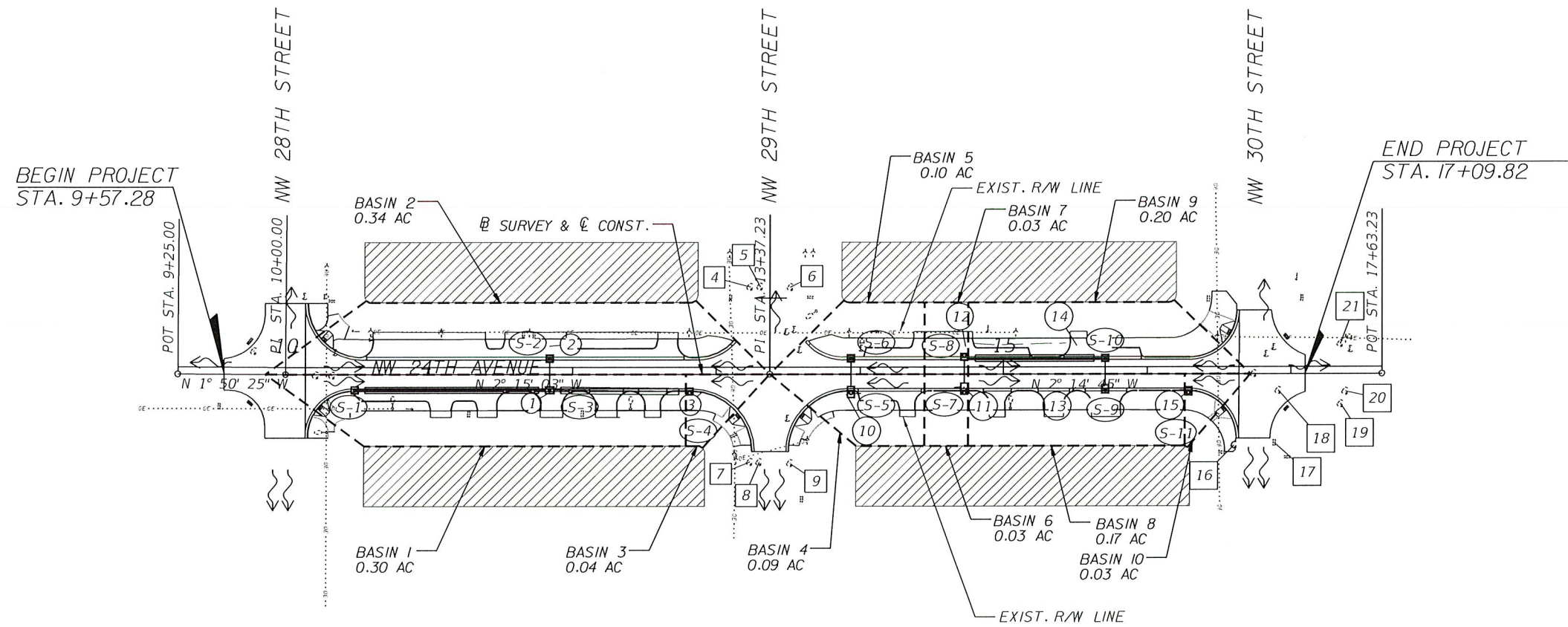
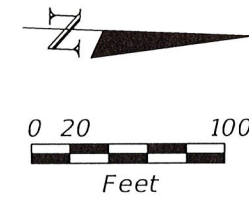
RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

**FINAL PLANS**

**NW 24TH AVENUE  
IMPROVEMENTS PROJECT**



JOB NO. B-30723  
FILE NO.  
NO.



**LEGEND**

- S-# PROPOSED DRAINAGE STRUCTURE
- # EXISTING DRAINAGE STRUCTURE TO REMAIN
- # EXISTING DRAINAGE STRUCTURE TO BE REMOVED
- DRAINAGE BASIN LIMITS
- FLOW DIRECTION
- DRAINAGE AREA NOT INCLUDED PER CITY OF MIAMI STANDARDS

NOTE: DO NOT USE THE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES. THIS SHEET IS IN THE PLANS FOR DOCUMENTATION AND TO ASSIST CONSTRUCTION PERSONNEL WITH DRAINAGE CONCERNS.

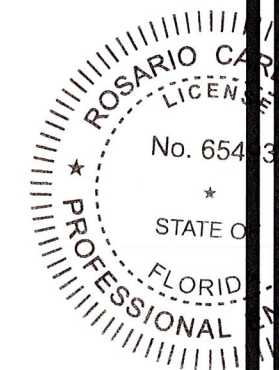
CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



**RS&H, Inc.**  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE MAP

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: A.C.  
REVISIONS:



JOB NO. 65493  
FILED  
SEAL  
Rosario Cardenas, P.E.  
F.L. Reg. No. 65493

HORIZONTAL SCALE:  
1" = 100'  
VERTICAL SCALE:  
N/A  
SHEET No. 2

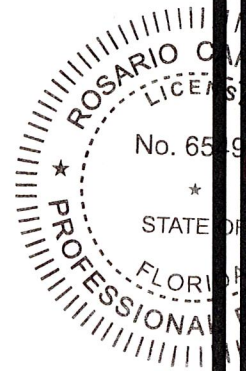


RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
EXISTING DRAINAGE STRUCTURES

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: A.C.  
REVISIONS:

JOB No. B-30723



Rosario Cardenas, P.E.  
P.E. Reg. No. 65493

HORIZONTAL SCALE:  
N/A

VERTICAL SCALE:  
N/A

SHEET No. 3

EXISTING DRAINAGE STRUCTURES TABLE

NUMBER	DISPOSITION	PIPE				STRUCTURE TYPE
		MATERIAL	SIZE (IN)	LENGTH (FT)	INVERT ELEV.	
1	TO BE REMOVED	PVC (N), PVC (S), METAL (W)	24 (N), 24 (S), 12 (W)	105 (N), 24 (S), 32 (W)	1.48 (N), 1.48 (S), 6.28 (W)	CATCH BASIN
2	TO BE REMOVED	METAL	12 (E)	32 (E)	6.46 (E)	CATCH BASIN
3	TO BE REMOVED	PVC	24 (S)	105 (S)	2.12 (S)	CATCH BASIN
4	TO REMAIN	CONC.	12 (N)	4 (N)	5.14 (N)	CATCH BASIN
5	TO REMAIN	CONC.	12 (N), 12 (E), 15 (S)	18 (N), 119 (E), 4 (S)	4.88 (N), 5.18 (E), 3.63 (S)	MANHOLE
6	TO REMAIN	CONC.	12 (S)	18 (S)	5.32 (S)	CATCH BASIN
7	TO REMAIN	CONC.	12 (N)	3 (N)	5.24 (N)	CATCH BASIN
8	TO REMAIN	CONC.	12 (N), 12 (S), 12 (W)	18 (N), 3 (S), 119 (W)	4.95 (N), 5.35 (S), 5.50 (W)	MANHOLE
9	TO REMAIN	CONC.	12 (S)	18 (S)	3.70 (S)	CATCH BASIN
10	TO BE REMOVED	PERFORATED PVC	24 (N)	80 (N)	0.36 (N)	CATCH BASIN
11	TO BE REMOVED	PVC	15 (W), 24 (S)	27 (W), 80 (S)	4.52 (W), 2.47 (S)	CATCH BASIN
12	TO BE REMOVED	PVC	15 (E)	27 (E)	3.16 (E)	CATCH BASIN
13	TO BE REMOVED	PVC	24 (N), 15 (W)	77 (N), 27 (W)	3.92 (N), 4.62 (W)	CATCH BASIN
14	TO BE REMOVED	PVC	15 (E)	27 (E)	5.14 (E)	CATCH BASIN
15	TO BE REMOVED	PVC (S), CONC. (N)	15 (N), 15 (S)	59 (N), 77 (S)	4.38 (N), 4.30 (S)	CATCH BASIN
16	TO REMAIN	CONC.	15 (N)	24 (N)	5.07 (N)	CATCH BASIN
17	TO REMAIN	CONC.	15 (S), 15 (W)	24 (S), 33 (W)	4.36 (S), 4.36 (W)	CATCH BASIN
18	TO REMAIN	PVC (N), RCP (E), RCP (S)	24 (N), 15 (E), 15 (S)	43 (N), 33 (E), 59 (S)	1.68 (N), 2.68 (E), 3.38 (S)	MANHOLE
19	TO REMAIN	CONC.	15 (W)	6 (W)	3.91 (W)	CATCH BASIN
20	TO REMAIN	METAL(W), RCP (E), PVC(N), PVC(S)	12 (W), 15 (E), 24 (N), 24 (S)	30 (W), 6 (E), 43 (S)	3.85 (W), 3.00 (E), 1.95 (N), 1.95 (S)	MANHOLE
21	TO REMAIN	METAL	12 (E)	30 (E)	3.62 (E)	CATCH BASIN

S-1 STA. 10+48.45 (11.00' RT.)  
 CONST. TYPE V CATCH BASIN  
 WITH J-BOTTOM (4.0' X 4.0')  
 BAFFLE (N)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 8.11  
 FL EL. 2.38 (N)  
 BOT.EL. (-) 1.62

S-2 STA. 11+83.87 (11.00' LT.)  
 CONST. TYPE V CATCH BASIN  
 WITH P-BOTTOM  
 DETAIL 35-86-3  
 GRATE EL. 7.63  
 FL EL. 1.37 (E)  
 BOT.EL. (-) 0.63

S-3 STA. 11+83.87 (11.00' RT.)  
 CONST. TYPE V CATCH BASIN  
 WITH J-BOTTOM (4.0' X 6.0')  
 BAFFLES (N, S)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 7.63  
 FL EL. 1.34 (W)  
 FL EL. 2.38 (N, S)  
 BOT.EL. (-) 2.66

S-4 STA. 12+81.56 (13.04' RT.)  
 CONST. TYPE F-3 CATCH BASIN  
 WITH J-BOTTOM (4.0' X 4.0')  
 BAFFLE (S)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.04 (EOP)  
 FL EL. 2.38 (S)  
 BOT.EL. (-) 1.62

S-5 STA. 13+93.60 (13.04' RT.)  
 CONST. TYPE F-3 CATCH BASIN  
 WITH J-BOTTOM (4.0' X 7.0')  
 BAFFLE (N)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.34 (EOP)  
 FL EL. 2.56 (N)  
 FL EL. 3.19 (W)  
 BOT.EL. (-) 1.44

S-6 STA. 13+93.60 (11.00' LT.)  
 CONST. TYPE V CATCH BASIN  
 WITH P-BOTTOM  
 DETAIL 35-86-3  
 GRATE EL. 8.16  
 FL EL. 3.22 (E)  
 BOT.EL. 1.22

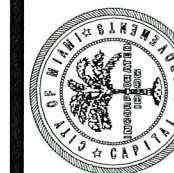
S-7 STA. 14+72.72 (13.04' RT.)  
 CONST. TYPE F-3 CATCH BASIN  
 WITH J-BOTTOM (4.0' X 7.0')  
 BAFFLE (S)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.39 (EOP)  
 FL EL. 3.17 (W)  
 FL EL. 2.47 (S)  
 BOT.EL. (-) 1.53

S-8 STA. 14+72.72 (13.04' LT.)  
 CONST. TYPE F-3 CATCH BASIN  
 WITH J-BOTTOM (4.0' X 4.0')  
 BAFFLE (N)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.39 (EOP)  
 FL EL. 2.38 (N)  
 FL EL. 3.15 (E)  
 BOT.EL. (-) 1.62

S-9 STA. 15+70.64 (11.00' RT.)  
 CONST. TYPE V CATCH BASIN  
 WITH J-BOTTOM (4.0' X 5.0')  
 BAFFLE (N)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 7.97  
 FL EL. 3.01 (W)  
 FL EL. 4.02 (N)  
 BOT.EL. (-) 0.99

S-10 STA. 15+70.64 (11.00' LT.)  
 CONST. TYPE V CATCH BASIN  
 WITH J-BOTTOM (4.0' X 4.0')  
 BAFFLE (S)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 7.97  
 FL EL. 3.03 (E)  
 FL EL. 2.38 (S)  
 BOT.EL. (-) 1.62

S-11 STA. 16+28.78 (13.04' RT.)  
 CONST. TYPE F-3 CATCH BASIN  
 WITH J-BOTTOM (4.0' X 5.0')  
 BAFFLE (S)  
 DETAIL 35-86-3-4, 35-86-39  
 GRATE EL. 8.29 (EOP)  
 FL EL. 4.30 (S) (EXIST.)  
 FL EL. 4.38 (N) (EXIST.)  
 BOT.EL. 0.30



RS&H, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 PROPOSED DRAINAGE STRUCTURES

DATE: 07/19/16  
 DESIGN: R.C.  
 DRAWN: D.R.  
 CHECKED: A.C.  
 REVISIONS:

JOB No. B-30723

No. 65493

STATE OF FLORIDA

Rosario Cardenas, P.E.  
 P.L. Reg. No. 65493

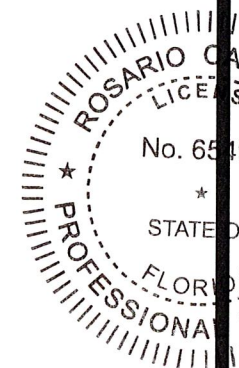
HORIZONTAL SCALE:

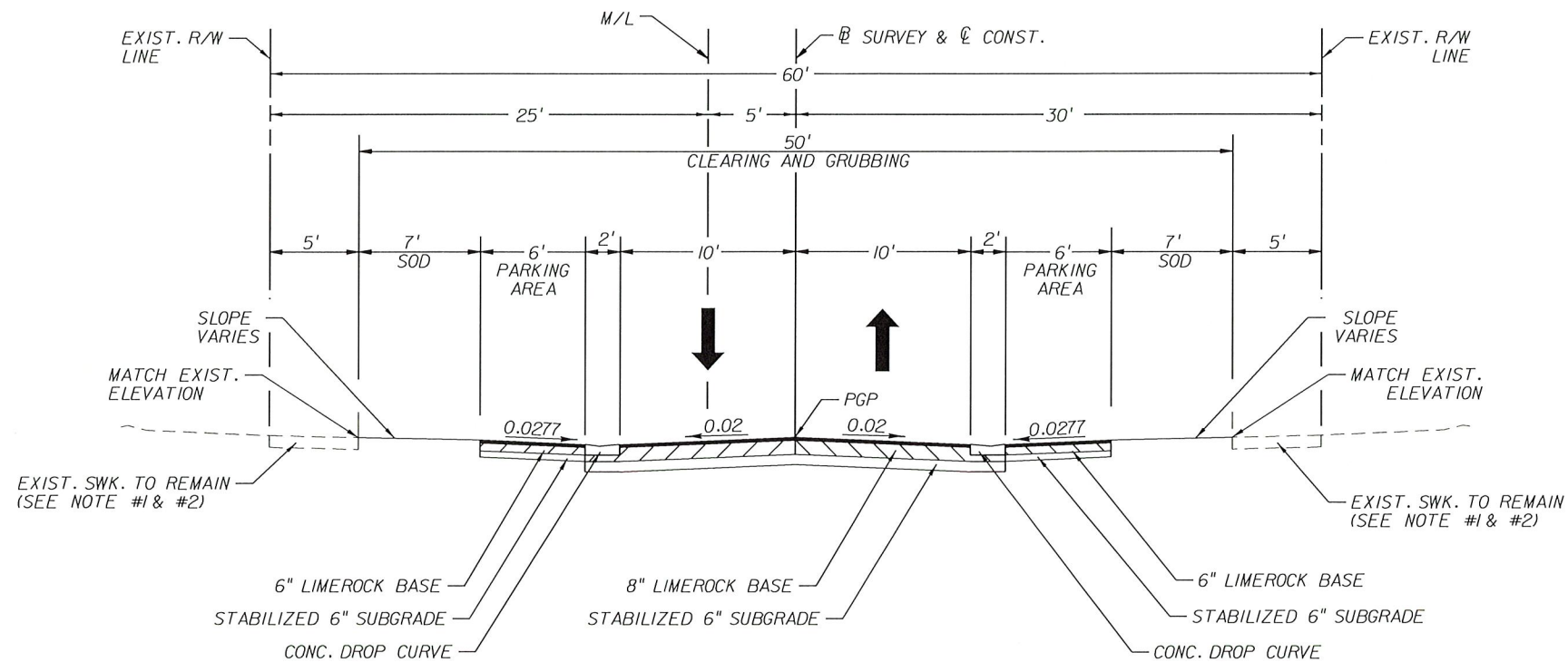
N/A

VERTICAL SCALE:

N/A

SHEET No. 4





TYPICAL SECTION  
 NW 24TH AVENUE  
 (FROM NW 28TH STREET TO NW 30TH STREET)

MAINLINE RECONSTRUCTION  
 TYPE SP FRICTION COURSE (FC-9.5) (1")  
 TYPE SP STRUCTURAL COURSE 9.5 (TRAFFIC A) (1")  
 LIMEROCK BASE (8")  
 STABILIZED SUBGRADE 6"

MILLING  
 MILL EXISTING ASPHALT (1")

RESURFACING  
 TYPE SP FRICTION COURSE (FC-9.5) (1")

PARKING & DRIVEWAY RECONSTRUCTION  
 ASPHALTIC CONCRETE (1")  
 LIMEROCK BASE (6")  
 STABILIZED SUBGRADE 6"

DESIGN SPEED: 30 MPH

NOTE:

- DAMAGED EXISTING SIDEWALK SHALL BE REPLACED WITH 4" CONCRETE SIDEWALK (6" AT DRIVEWAYS). SEE PLANS AND DETAILS.
- SIDEWALK TO BE REPLACED SHALL MEET ADA REQUIREMENTS BY PROVIDING A MAXIMUM 2% CROSS-SLOPE



DATE: 07/19/16  
 DESIGN: S.G.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

FILE: B-30723  
 SEAL



Samuel E. Gonzalez, P.E.  
 P.L. Reg. No. 49513

HORIZONTAL SCALE: N/A  
 VERTICAL SCALE: N/A

SHEET No. 5

GENERAL NOTES

1. REFER TO THE SURVEY PREPARED BY MANUEL G. VERA & ASSOCIATES, INC. FOR HORIZONTAL AND VERTICAL CONTROL. ALL ELEVATIONS SHOWN WITH THE PROJECT PLANS REFLECT THE CITY OF MIAMI VERTICAL DATUM.

2. ALL PUBLIC LAND CORNERS AND PRIMARY NETWORK CONTROL SURVEY MONUMENTS ARE TO BE PROTECTED BY THE CONTRACTOR. CORNERS AND MONUMENTS WITHIN THE WORK ZONE AND IN DANGER OF BEING DAMAGED, DESTROYED OR COVERED SHALL BE PROPERLY REFERENCED BY A REGISTERED LAND SURVEYOR IN ACCORDANCE WITH THE MINIMUM TECHNICAL STANDARDS OF THE FLORIDA BOARD OF PROFESSIONAL LAND SURVEYORS PRIOR TO THE BEGINNING OF WORK. UPON PROJECT COMPLETION THE CONTRACTOR SHALL RESTORE ALL SUCH CORNERS AND MONUMENTS AND SHALL FURNISH TO THE CITY OF MIAMI LAND SURVEYOR A SIGNED AND SEALED COPY OF THE LAND SURVEYOR'S REFERENCE DRAWING.

3. ALL EXCESS MATERIAL AS DESIGNATED BY THE ENGINEER IS TO BE DISPOSED BY THE CONTRACTOR IN AREAS PROVIDED BY HIM ON A DAILY BASIS AND IN A LEGAL MANNER AT THE CONTRACTOR'S EXPENSE. ACCUMULATION OF DEBRIS OR STOCKPILING OF MATERIAL WITHIN THE PROJECT LIMITS WILL NOT BE ALLOWED. ALL EXCAVATED MATERIAL SHALL BE TESTED FOR CONTAMINANTS PRIOR TO OFF-SITE DISPOSAL.

4. CONTRACTOR SHALL SECURE WORK SITE TO PROTECT THE PUBLIC HEALTH AND WELFARE.

5. THE CONTRACTOR SHALL VERIFY, PHOTOGRAPH, AND INVENTORY THE EXACT LOCATIONS OF EXISTING TREES, STRUCTURES, PAVEMENT OR OTHER FEATURES IN PROXIMITY TO THE WORK ZONE WHICH MAY BE IMPACTED. ANY EXISTING FEATURE OUTSIDE OF THE PROJECT LIMITS WHICH IS DAMAGED, EXPOSED, OR IN ANY WAY DISTURBED BY THE CONSTRUCTION OF THIS PROJECT SHALL BE RESTORED PROMPTLY TO ITS ORIGINAL CONDITIONS AT NO ADDITIONAL COST.

6. THE CONTRACTOR SHALL RESTORE ALL SODDED AREAS OF THE PROJECT WHICH ARE DISTURBED DUE TO THE CONSTRUCTION ACTIVITY.

7. ALL CONSTRUCTION LAYOUT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

8. THE CONTRACTOR SHALL PAINT VISIBLE STATION MARKS WITH STENCILED NUMBERS AS FOLLOWS:

- A. WHERE THE EXISTING CURB IS "TO REMAIN", PAINTED ON THE FACE OF CURB FROM THE BEGINNING OF THE PROJECT.
- B. AT NEW CURB LOCATIONS, PAINTED ON THE FACE OF CURB NO LATER THAN 72 HOURS FROM BEING POURED.
- C. WHERE CURB DOES NOT EXIST AND IS NOT PROPOSED, THE CONTRACTOR SHALL MAINTAIN VISIBLE STATIONING WITH SURVEYING STAKES.

9. THE CONTRACTOR SHALL NOTIFY THE CITY IN WRITING AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A PROPER STAGING AREA. THE LOCATION OF THIS STAGING AREA SHALL BE APPROVED BY THE CITY.

11. THE CONTRACTOR SHALL BE RESPONSIBLE TO SATISFY ALL REQUIREMENTS OF ANY REGULATORY AGENCY PERMIT IN REGARDS TO CONSTRUCTION ACTIVITIES AND RELATED CONDITIONS PRIOR TO THE START OF CONSTRUCTION.

12. THE CONTRACTOR SHALL MAINTAIN SAFE PEDESTRIAN AND VEHICULAR ACCESS TO ALL ADJACENT PROPERTIES. THE LEVEL OF ACCESS REQUIRED FOR THE ADJACENT BUSINESS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE CITY OF MIAMI.

13. THE CONTRACTOR SHALL NOT ENCROACH INTO PRIVATE PROPERTY WITH PERSONNEL, MATERIAL AND/OR EQUIPMENT.

14. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IN WRITING IMMEDIATELY IF ANY CONFLICT ARISES DURING CONSTRUCTION FOR ANY OF THE IMPROVEMENTS SHOWN IN THE PROJECT PLANS.

15. THE CONTRACTOR SHALL USE A STREET SWEEPER (USING WATER) OR OTHER EQUIPMENT CAPABLE OF CONTROLLING AND REMOVING DUST. APPROVAL OF THE USE OF SUCH EQUIPMENT IS CONTINGENT UPON ITS DEMONSTRATED ABILITY TO DO THE WORK.

16. IF SHEETING, SHORING, OR DEWATERING (INCLUDING IF WELL POINTS ARE NECESSARY), THE CONTRACTOR MUST MONITOR AND CONTROL ALL WORK THAT MAY CAUSE CRACKING TO ANY ADJACENT BUILDING, STRUCTURE OR PROPERTY AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES CAUSED BY THESE OPERATIONS. ASSOCIATED COSTS FOR THIS WORK SHALL BE INCLUDED IN THE RELATED BID ITEM FOR THE TYPE OF WORK BEING DONE.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A DEWATERING PERMIT IN THE EVENT IT IS REQUIRED. COST OF PERMIT AND DEWATERING ACTIVITY SHALL BE INCLUDED IN THE RELATED BID ITEM FOR THE WORK BEING DONE. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR DISCHARGE DEWATERING EFFLUENT INTO THE EXISTING DRAINAGE SYSTEM.

18. THE CONTRACTOR SHALL REMOVE ALL SEDIMENT BARRIERS, ROCK BAGS AND TURBIDITY BARRIERS AT THE COMPLETION OF THE PROJECT.

19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF STORMWATER FROM THE ROADWAY WITHIN THE PROJECT LIMITS AND BE IN COMPLIANCE WITH NPDES AND OTHER PERMIT REQUIREMENTS. PROVISIONS SHALL BE SUBMITTED TO THE CITY OF MIAMI FOR APPROVAL BEFORE USE. THIS COST SHALL BE INCLUDED IN THE MAINTENANCE OF TRAFFIC PAY ITEM.

20. SAW CUTTING OF THE EXISTING SIDEWALKS SHALL BE MADE ONLY AT THE NEAREST FLAG JOINTS.

21. THE CONTRACTOR SHALL ASSIST THE CITY WITH HANDLING OF PUBLIC INFORMATION MATERIALS, INCLUDING CITIZEN NOTIFICATION LETTERS AND PROJECT CONSTRUCTION SIGNS, PRIOR TO THE START OF EACH SIGNIFICANT PHASE OF CONSTRUCTION.

22. CLEARING & GRUBBING, GRADING, AND OTHER INCIDENTAL WORK NECESSARY FOR HARMONIZATION OUTSIDE THE R/W SHALL BE INCLUDED IN RELATED BID ITEMS.

23. THE CONTRACTOR SHALL TAKE PHOTOS OF THE EXISTING PAVEMENT MARKINGS PRIOR TO REMOVING THEM. ALL EXISTING PAVEMENT MARKINGS REMOVED DURING CONSTRUCTION SHALL BE REPLACED BY THE CONTRACTOR.

24. RADIUS ON CURB RETURNS ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

25. WHERE NEW PAVEMENT MEETS EXISTING, THE CONNECTION SHALL BE MADE IN A NEAT STRAIGHT LINE AND FLUSH WITH THE EXISTING PAVEMENT.

26. WHERE CONNECTIONS TO EXISTING SIDEWALKS AND/OR DRIVEWAYS ARE NOT INDICATED ON THE PLANS, PROPER CONNECTIONS ARE TO BE MADE AS DIRECTED BY THE ENGINEER OF RECORD. DROP CURB AND DRIVEWAY CONNECTIONS SHALL BE PROVIDED FOR ACCESS TO ALL PRIVATE PROPERTIES ADJACENT TO THE PROJECT. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE COST OF RELATED PAY ITEMS.

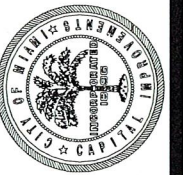
27. THE CONTRACTOR SHALL INSTALL A PREFORMED EXPANSION JOINT WHEN PROPOSED SIDEWALK IMPROVEMENTS ARE IMMEDIATELY ADJACENT TO AN EXISTING CONCRETE SLAB AND/OR BUILDING.

28. CONCRETE SIDEWALKS AT DRIVEWAY TURNOUTS SHALL BE CONSTRUCTED PER CITY OF MIAMI PUBLIC WORKS DEPARTMENT STANDARD DETAILS.

29. ALL CONCRETE SHALL DEVELOP A MINIMUM OF 3000 PSI COMPRESSIVE STRENGTH AT 28 DAYS, UNLESS OTHERWISE NOTED.

30. THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF MIAMI AND U.S. POSTAL SERVICE FOR THE RELOCATION OF ANY EXISTING U.S. POSTAL MAILBOXES IN CONFLICT WITH THE PROPOSED IMPROVEMENTS.

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
GENERAL NOTES

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. B-20723

FILES  
SEAL



No. 49513

Samuel E. Gonzalez, P.E.  
P.E. Reg. No. 49513

HORIZONTAL SCALE:

VERTICAL SCALE:

N/A  
SHEET No. 6

31. WHERE TRENCHING EXCEEDS 5 FEET IN DEPTH, THE EXCAVATION SHALL COMPLY WITH THE TRENCH SAFETY ACT AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S (OSHA) TRENCH EXCAVATION SAFETY STANDARDS, 29 C.F.R. 1926.650 SUBPART B, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THESE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES). THE CONTRACTOR SHALL CONSIDER ALL AVAILABLE GEOTECHNICAL INFORMATION IN HIS DESIGN OF THE TRENCH EXCAVATION SAFETY SYSTEM.

32. NO TRENCHES OR HOLES NEAR WALKWAYS, IN ROADWAYS OR THEIR SHOULDERS ARE TO BE LEFT OPEN DURING INACTIVE CONSTRUCTION HOURS WITHOUT THE WRITTEN PERMISSION OF THE CITY OF MIAMI.

33. THE CONTRACTOR SHALL ADHERE TO THE CITY OF MIAMI HURRICANE PLAN, AVAILABLE ONLINE AT [HTTP://WWW.MIAMIGO.COM/EMERGENCYMANAGEMENT](http://www.miamigo.com/emergencymanagement)

DRAINAGE NOTES

34. EXISTING DRAINAGE STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION SHALL REMAIN UNLESS OTHERWISE NOTED. STRUCTURES WHICH ARE NOTED AS TO BE REMOVED SHALL BE INSPECTED FOR UNFORESEEN ACTIVE CONNECTIONS (I.E. RAINWATER LEADERS) PRIOR TO REMOVAL. IN THE EVENT THAT ANY EXISTING CONNECTIONS ARE OBSERVED WHICH MUST REMAIN ACTIVE, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD PRIOR TO PROCEEDING WITH THE ACTIVITY.

35. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL INSPECT ALL EXISTING DRAINAGE STRUCTURES WHICH ARE TO REMAIN AND NOTIFY CITY OF MIAMI OF ANY STRUCTURAL DEFICIENCIES OBSERVED.

36. THERE SHALL BE NO MORE THAN THREE LATERAL DRAINAGE INSTALLATIONS WITHOUT BACKFILLING. BACKFILLING OF LATERAL DRAINAGE SHALL NOT LAG MORE THAN 72 HOURS BEHIND THE START OF EXCAVATION.

37. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EXISTING AND NEW DRAINAGE STRUCTURES/PIPE CLEAN AND FREE OF DEBRIS THROUGHOUT THE PROJECT DURATION. PRIOR TO THE SUBSTANTIAL COMPLETION WALKTHROUGH THE CONTRACTOR SHALL ENSURE THAT ALL EXISTING AND NEW DRAINAGE STRUCTURES/PIPE HAVE BEEN THOROUGHLY CLEANED OF ALL DEBRIS, SILT, SEDIMENT, VEGETATION, MILLING MATERIAL, ETC.

38. DISSIMILAR PIPE CONNECTIONS (I.E. CONCRETE TO METAL) SHALL BE SEPARATED BY COATING THE CONTACT SURFACE OF THE DISSIMILAR MATERIAL WITH BITUMASTIC MATERIAL.

40. THE CONTRACTOR SHALL PROVIDE GPS COORDINATES FOR ALL CITY OF MIAMI DRAINAGE STRUCTURES EXISTING AND/OR PROPOSED WITHIN THE PROJECT LIMITS.

41. CONTRACTOR SHALL USE RCP, HP, OR HDPE FOR ALL SIDE DRAINS AND SHALL USE CAP FOR ALL CROSS DRAINS AND FRENCH DRAINS, UNLESS OTHERWISE APPROVED BY THE CITY OF MIAMI PUBLIC WORKS DEPARTMENT. ALL DRAINAGE PIPES SHALL BE APPROVED BY THE CITY OF MIAMI PUBLIC WORKS DEPARTMENT PRIOR TO PROCUREMENT AND INSTALLATION.

42. ALL STORM WATER STRUCTURES AND PIPES TO BE ABANDONED SHALL BE REMOVED FROM THE GROUND COMPLETELY.

ENVIRONMENTAL NOTES

43. NO STAGING OR OTHER ACTIVITIES FOR THIS PROJECT SHOULD OCCUR WITHIN THE DRIPLINE OF EXISTING TREES.

44. PREVENT DAMAGEING TREES AND PLANTERS WITHIN OR IMMEDIATELY ADJACENT TO THE PROJECT'S RIGHT-OF-WAY.

45. AN ARBORIST CERTIFIED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE SHALL BE PRESENT ON SITE TO DIRECT ALL ROOT PRUNING AND/OR CANOPY TRIMMING ACTIVITIES.

46. TREE PROTECTION SHOULD BE INSTALLED AROUND TREES TO REMAIN LOCATED ADJACENT TO CONSTRUCTION ACTIVITIES.

47. THE CONTRACTOR SHALL NOT REMOVE, RELOCATE OR PRUNE ANY TREES WITHOUT PRIOR APPROVAL FROM THE CITY. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM THE CITY OF MIAMI PUBLIC WORKS DEPARTMENT PRIOR TO ANY TREE REMOVAL/RELOCATION.

48. CONTRACTOR SHALL REMOVE/CONTROL DUST USING WATER OR OTHER EQUIPMENT CAPABLE OF CONTROLLING DUST.

UTILITY NOTES

49. ALL EXISTING UTILITIES ARE TO REMAIN UNLESS OTHERWISE NOTED.

50. THE CONTRACTOR IS TO USE CAUTION WHEN WORKING IN OR AROUND AREAS OF OVERHEAD TRANSMISSION LINES OR UNDERGROUND UTILITIES.

51. TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL CALL SUNSHINE 811 AND THE UTILITY OWNER AND REQUEST UTILITY LOCATIONS. A CONTRACTOR'S REPRESENTATIVE MUST BE PRESENT WHEN UTILITY COMPANIES LOCATE THEIR FACILITIES.

52. TWO FULL BUSINESS DAYS PRIOR TO DIGGING THE CONTRACTOR SHALL NOTIFY THE CITY OF MIAMI FOR COORDINATION PURPOSES.

53. THE CONTRACTOR IS ADVISED THAT PROPERTIES ADJACENT TO THE PROJECT HAVE ELECTRIC, TELEPHONE, GAS, WATER AND/OR SEWER SERVICE LATERALS WHICH MAY NOT BE SHOWN IN THE PLANS. THE CONTRACTOR MUST REQUEST THE LOCATION OF THESE LATERAL SERVICES FROM THE UTILITY COMPANIES.

54. THE LOCATIONS OF UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATION APPLY ONLY AT THE POINT SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

55. THE CONTRACTOR SHALL MAINTAIN WATER, SEWER, ELECTRICAL, GAS AND COMMUNICATION SERVICES TO ALL ADJACENT PROPERTIES AS APPLICABLE. ANY INTERRUPTIONS IN SERVICE SHALL BE RESTORED PRIOR TO THE END OF WORKING HOURS. PRIOR NOTICE OF THE IMPENDING INTERRUPTION SHALL BE GIVEN TO THE RESPECTIVE UTILITY OWNER, AS WELL AS, THE PROPERTY OWNERS AFFECTED.

56. THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE TOPS, INLET GRATES, VALVE BOX TOPS, WATER METER TOPS, AND PULL BOX TOPS WITHIN THE PROJECT AREA TO MATCH THE PROPOSED FINISHED GRADE. THE PROJECT PLANS MAY NOT REFLECT ALL LOCATIONS WHERE ADJUSTMENTS ARE NECESSARY. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL NECESSARY UTILITY TOPS AND PERFORMING THE ADJUSTMENTS AS REQUIRED.

57. WHERE PIPE COVER IS TWO FEET OR LESS, THE CONTRACTOR SHALL PERFORM BACKFILLING OPERATIONS UTILIZING EXCAVATABLE FLOWABLE FILL (1:10 SAND CEMENT MIX) AS PER FDOT STANDARD SPECIFICATIONS.

58. ALL EXISTING UTILITIES SHOWN AS TO BE ABANDONED SHALL BE FILLED WITH FLOWABLE FILL (1:10 SAND CEMENT MIX). LARGE CHUNKS OF EXCAVATED MATERIAL SHALL BE REPLACED WITH SUITABLE MATERIAL OR PROCESSED TO MAKE THEM SUITABLE FOR BACKFILLING OR EMBANKMENT ACTIVITIES. THE COST OF THIS WORK SHALL BE INCLUDED IN THE ASSOCIATED PAY ITEMS.

UTILITY AGENCY OWNERS:

COMPANY  
AT&T / DISTRIBUTION  
COMCAST  
FPL (DISTRIBUTION)  
FPL (TRANSMISSION)  
MIAMI-DADE PUBLIC WORKS  
MIAMI-DADE WATER & SEWER  
TECO PEOPLE'S GAS

CONTACT PERSON  
STEVE LOW  
LEONARD MAXWELL-NEUBOLD  
TRACY STERN  
SEYED HAJASSADOLLAH  
OCTAVIO VIDAL  
SERGIO GARCIA  
YVONNE GOLDMAN

TELEPHONE NUMBER  
305-222-8745  
754-221-1254  
800-868-9554  
305-228-5290  
305-412-0891, EXT. 201  
786-268-5320  
954-453-0824



SUNSHINE 811  
(800) 432-4770 OR 811  
[www.callsunshine.com](http://www.callsunshine.com)



CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
GENERAL NOTES

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. B-20723

FILE:

SEAL

Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:

N/A

VERTICAL SCALE:

N/A

SHEET No. 7



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI

NW 24TH AVENUE  
IMPROVEMENTS PROJECT

SUMMARY OF QUANTITIES

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

Job No. B-30723

FILED

SEAL

NOV 19 2016

SEAL

NOV 19 2016

Samuel E. Gonzalez, P.E.

FL Reg. No. 49513

HORIZONTAL SCALE:

N/A

VERTICAL SCALE:

N/A

SHEET No. 8

PAY ITEM FOOTNOTES

102-1 INCLUDES ALL COSTS FOR FURNISHING, INSTALLING, AND REMOVING SHOULDER BASE MATERIAL TO PROTECT MOTORISTS FROM DROP-OFF CONDITIONS DURING CONSTRUCTION.  
  
INCLUDES THE COST OF TEMPORARY PAINT PAVEMENT MARKINGS.  
  
INCLUDES THE COST OF FURNISHING, INSTALLING, MAINTAINING, AND REMOVING ALL ITEMS OF MAINTENANCE OF TRAFFIC NOT PAID UNDER SEPARATE ITEMS INCLUDING BUT NOT LIMITED TO SIGNS, BARRICADES, FLASHING LIGHTS, ETC.

110-1-1 INCLUDES THE REMOVAL OF ALL EXISTING DRAINAGE FACILITIES WITHIN THE PROJECT AND INCLUDES ALL SIDEWALK RESTORATION INCIDENTALS

120-1 INCLUDES THE COST OF ADDITIONAL EXCAVATION REQUIRED WITHIN RECONSTRUCTION LIMITS AS NECESSARY TO ACCOMMODATE ADDITIONAL 1" OF ASPHALT THICKNESS. NOTE THAT PAY ITEM QUANTITY INCLUDED IN PLANS ACCOUNTS FOR 8" BASE THICKNESS BELOW PARKING AREAS AND DRIVEWAYS, WHICH MAY BE REDUCED TO 6" IF DESIRED.

160-4, 285-704, & 334-1-11 INCLUDES THE COST OF PROPOSED ASPHALT DRIVEWAYS LOCATED ADJACENT TO PROPOSED CONCRETE VALLEY GUTTER. PROPOSED ROADWAY BASE AND STABILIZATION SHALL BE PLACED BENEATH PROPOSED DRIVEWAYS. PER CITY OF MIAMI STANDARDS, THE THICKNESS OF THE PROPOSED LIMEROCK BASE MAY BE REDUCED FROM 8" TO 6" BENEATH ASPHALT DRIVEWAYS AND PARKING AREAS. SQUARE YARDAGE QUANTITIES SHOWN INCLUDE DRIVEWAY AREAS.

327-70-1 PROPOSED MILLING DEPTHS SHOWN ARE BASED ON A SINGLE PAVEMENT CORE BORING TAKEN WITHIN EACH BLOCK. ALL PAVEMENT IS TO BE MILLED. CONTRACTOR IS URGED TO VERIFY EXISTING PAVEMENT DEPTHS VIA FIELD TESTING TO DETERMINE VARIATIONS IN PAVEMENT THICKNESSES AS NECESSARY TO DEVELOP A MORE ACCURATE BID FOR THE RELATED PAY ITEMS. THE SUBJECT PAY ITEMS SHALL INCLUDE THE COSTS TO MILL ALL PAVEMENT WITHIN THE LIMITS OF MILLING AND RESURFACING.

425-1-521 THRU 425-1-524 & 430-174-115, 430-174-124 443-70-4 INCLUDES THE COST OF ALL SIDEWALK RESTORATION INCIDENTAL TO THE CONSTRUCTION OF THE PROPOSED DRAINAGE IMPROVEMENTS. ALL SIDEWALK DAMAGED/TEMPORARILY REMOVED DURING EXCAVATION, TRENCHING, AND OR SHORING FOR THE CONSTRUCTION OF THE PROPOSED DRAINAGE IMPROVEMENTS MUST BE REPLACED.

INCLUDES THE COST OF REPLACING/RESTORING ALL UTILITY VALVE BOXES/METER BOXES NOT IDENTIFIED AS NEEDING ADJUSTMENT THAT ARE DAMAGED/TEMPORARILY REMOVED DURING THE CONSTRUCTION OF THE PROPOSED DRAINAGE FACILITIES.

INCLUDES THE COST OF RESTORING ALL ROADWAY BASE AND STABILIZATION WITHIN LIMITS OF PROPOSED MILLING AND RESURFACING THAT IS DAMAGED/TEMPORARILY REMOVED DURING THE CONSTRUCTION OF THE PROPOSED DRAINAGE FACILITIES. RESTORATION SHALL CONSIST OF 12" OF TYPE B STABILIZATION (LBR 40) AND 8" OF LIMEROCK BASE.

INCLUDES THE COST OF FURNISHING AND INSTALLING SUITABLE BACKFILL MATERIAL ABOVE AND AROUND PROPOSED DRAINAGE FACILITIES RESULTING FROM REMOVAL OF UNSUITABLE MATERIAL IF ENCOUNTERED DURING CONSTRUCTION.

INCLUDES THE COST OF DESILTING ALL EXISTING AND PROPOSED DRAINAGE STRUCTURES AND PIPES PRIOR TO SUBSTANTIAL ACCEPTANCE

443-70-4 INCLUDES ALL COSTS NECESSARY TO FURNISH AND INSTALL PROPOSED FRENCH DRAIN. PROPOSED FRENCH DRAIN DEPTHS ARE 15'. HOWEVER, GEOTECHNICAL INVESTIGATIONS FOR THIS PROJECT WERE ONLY PERFORMED TO A DEPTH OF 10'. CONTRACTOR IS URGED TO PERFORM HIS/HER OWN FIELD TESTING TO DETERMINE EXISTING SOIL TYPES BETWEEN 10' AND 15' DEPTHS IN ORDER TO DEVELOP A MORE ACCURATE BID FOR THIS PAY ITEM.

443-72-11 INCLUDES ALL COST NECESSARY TO FURNISH AND INSTALL PROPOSED SWALE TRENCH DETAILS IN ACCORDANCE WITH CITY OF MIAMI STANDARD #35-86-45

522-1 THRU 522-2 INCLUDES THE COST OF REPLACING/RESTORING ALL UTILITY VALVE BOXES/METER BOXES NOT IDENTIFIED AS NEEDING ADJUSTMENT THAT ARE DAMAGED/TEMPORARILY REMOVED DURING THE CONSTRUCTION OF THE PROPOSED CONCRETE SIDEWALK.

INCLUDES THE COST OF PEDESTRIAN RAMPS, CONCRETE DRIVEWAYS, CONTROL JOINTS, EXPANSION JOINTS, AND DETECTABLE WARNING SURFACES. THE CAST-IN-PLACE YELLOW COLORED DETECTABLE WARNING SURFACES SHALL BE ARMOR-TILE OR APPROVED EQUAL THAT CAN BE SET DIRECTLY ONTO NEWLY POURED CONCRETE.

INCLUDES THE COST OF TEMPORARY REMOVAL AND RESTORATION OF EXISTING FENCING IMPACTED BY SIDEWALK RECONSTRUCTION ACTIVITIES.

PAY ITEM NO.	DESCRIPTION	UNIT	QUANTITY
101-1	MOBILIZATION	LS	1
102-1	MAINTENANCE OF TRAFFIC	LS	1
104-10-3	SEDIMENT BARRIER	LF	1505
104-18	INLET PROTECTION SYSTEM	EA	32
110-1-1	CLEARING & GRUBBING	AC	1
110-15	ARBORIST WORK	LS	1
110-4	REMOVAL OF EXISTING CONCRETE PAVEMENT	SY	326
120-1	REGULAR EXCAVATION	CY	1771
160-4	TYPE B STABILIZATION	SY	2602
285-704	OPTIONAL BASE, BASE GROUP 04	SY	639
285-706	OPTIONAL BASE, BASE GROUP 06	SY	2270
327-70-1	MILLING EXIST ASPH PAVT, 1" AVG DEPTH	SY	736
334-1-11	SUPERPAVE ASPHALTIC CONC, TRAFFIC A (SP-9.5), (1")	TN	143
337-7-80	ASPHALT CONCRETE FRICTION COURSE, TRAFFIC B, FC-9.5, PG 76-22 (1")	TN	149
425-1-203	CITY OF MIAMI INLETS TYPE "F-3" < 10' J-BOTTOM	EA	4
425-1-204	CITY OF MIAMI INLETS TYPE "F-3" > 10' J-BOTTOM	EA	1
425-1-711	CITY OF MIAMI INLETS TYPE "V" < 10' P-BOTTOM	EA	2
425-1-713	CITY OF MIAMI INLETS TYPE "V" < 10' J-BOTTOM	EA	3
425-1-714	CITY OF MIAMI INLETS TYPE "V" > 10' J-BOTTOM	EA	1
425-5	MANHOLE, ADJUST	EA	2
425-6	VALVE BOXES, ADJUST	EA	6
430-174-115	PIPE CULV, OPT MATL, ROUND, 15" SD	LF	77
430-174-124	PIPE CULV, OPT MATL, ROUND, 24" SD	LF	18
443-70-4	FRENCH DRAIN, 24"	LF	320
443-72-11	SWALE TRENCH DETAIL (CITY STANDARD #35-86-45)	SY	162
520-1-10	CONCRETE CURB, TYPE F	LF	678
520-2-4	CONCRETE CURB, TYPE D	LF	649
520-3	CONCRETE DROP CURB	LF	692
522-1	CONCRETE SIDEWALK AND DRIVEWAYS, 4"	SY	195
522-2	CONCRETE SIDEWALK AND DRIVEWAYS, 6"	SY	157
527-2	DETECTABLE WARNINGS	SF	68
570-1-2	PERFORMANCE TURF, SOD	SY	849
700-1-11	SINGLE POST SIGN F&I GM, <12SF	AS	5
700-1-60	SINGLE POST SIGN, REMOVE	AS	5
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	LF	20
711-12-221	THERMOPLASTIC, YELLOW, SOLID, 6"	LF	506
711-14-123	THERMOPLASTIC, PREFORM, WHITE SOLID, 12"	LF	461
711-14-125	THERMOPLASTIC, PREFORM, WHITE SOLID, 24"	LF	79







RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI

NW 24TH AVENUE  
IMPROVEMENTS PROJECT

SUMMARY OF DRAINAGE STRUCTURES

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: A.C.  
REVISIONS:

Job No. B-30723

FILED

SEAL

No. 65493

STATE OF

Rosario Cardenas, P.E.  
F.L. Reg. No. 65493

HORIZONTAL SCALE:

N/A

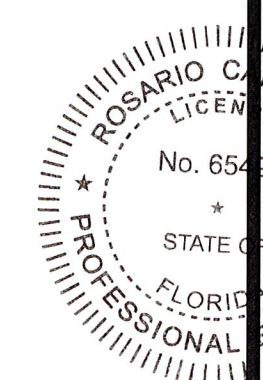
VERTICAL SCALE:

N/A

SHEET No. 9

SUMMARY OF DRAINAGE STRUCTURES

QUANTITY	STR. NO	STATION	SIDE	DESCRIPTION	BARRELS	STORM AND CROSS DRAIN OPTIONAL TYPE		FRENCH DRAIN	CATCH BASIN					REMARKS	
						ROUND SHAPE			P-BOT	V		F-3			
						15"	24"			J-BOT		J-BOT			
										<10'	<10'	>10'	<10'		>10'
P	S-1	10+48.45	RT	INLET, FD	1			132'		1					WITH J-BOTTOM (4.0' X 4.0') AND BAFFLE
F															
P	S-2	11+83.87	LT	INLET, PIPE	1	18'			1						WITH P-BOTTOM
F															
P	S-3	11+83.87	RT	INLET, FD	1			94'			1				WITH J-BOTTOM (4.0' X 6.0') AND TWO BAFFLES
F															
P	S-4	12+81.56	RT	INLET								1			WITH J-BOTTOM (4.0' X 4.0') AND BAFFLE
F															
P	S-5	13+93.60	RT	INLET, PIPE	1	6'						1			WITH J-BOTTOM (4.0' X 7.0') AND BAFFLE, CONC. JACKET
F															
P	S-6	13+93.60	LT	INLET, PIPE	1	18'			1						WITH P-BOTTOM
F															
P	S-7	14+72.72	RT	PIPE, INLET, PIPE	1	16'	6'					1			WITH J-BOTTOM (4.0' X 7.0') AND BAFFLE, CONC. JACKET
F															
P	S-8	14+72.72	LT	INLET, FD	1			94'					1		WITH J-BOTTOM (4.0' X 4.0') AND BAFFLE
F															
P	S-9	15+70.64	RT	INLET, PIPE	1	6'				1					WITH J-BOTTOM (4.0' X 5.0') AND BAFFLE, CONC. JACKET
F															
P	S-10	15+70.64	LT	INLET, PIPE	1	17'				1					WITH J-BOTTOM (4.0' X 4.0') AND BAFFLE
F															
P	S-11	16+28.78	RT	PIPE, INLET, PIPE	1	8'							1		WITH J-BOTTOM (4.0' X 5.0') AND BAFFLE, TWO CONC. JACKETS
F															
TOTALS															
PLAN QUANTITY						77'	18'	320'	2	3	1	4	1		
FINAL QUANTITY															



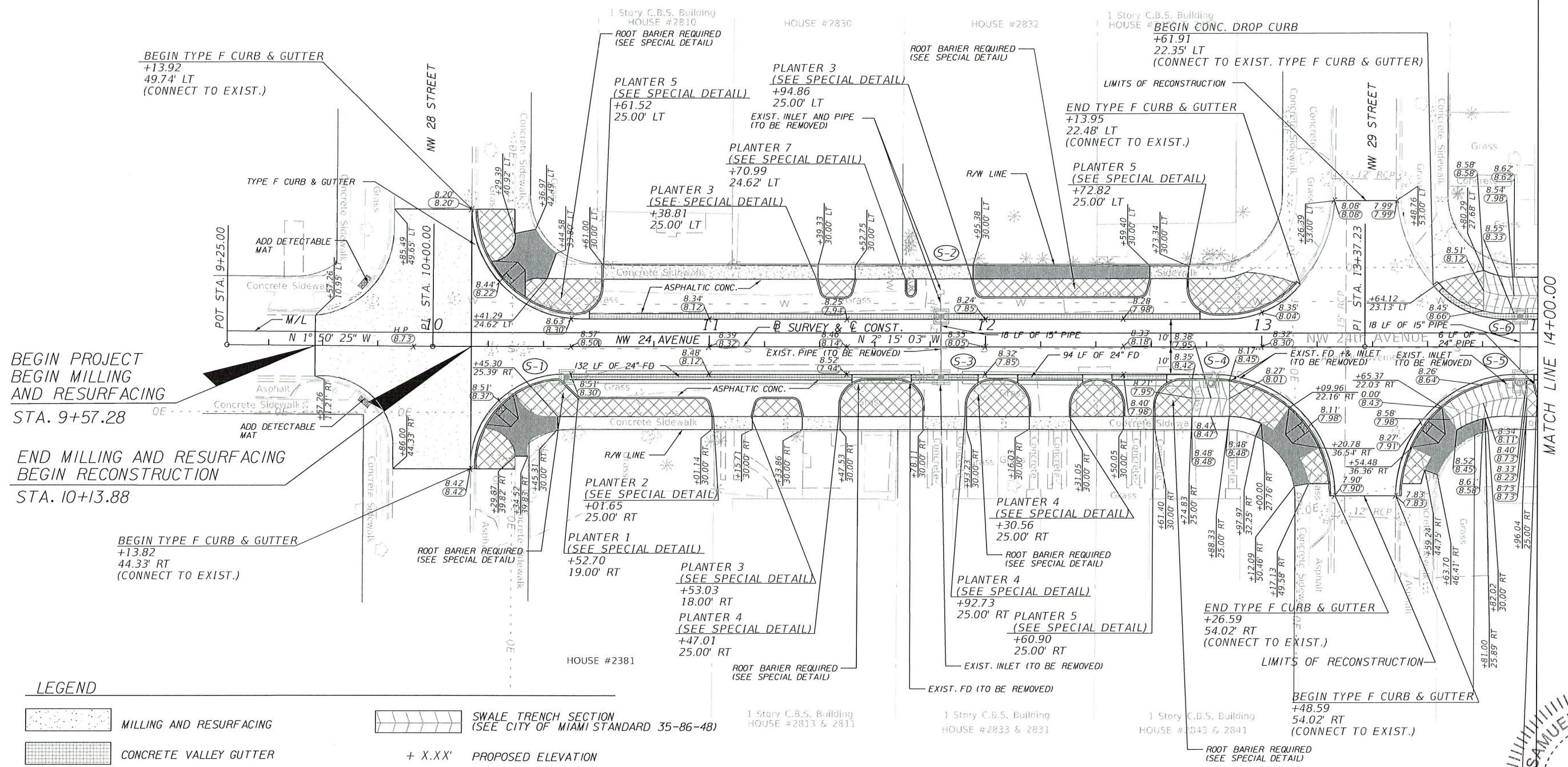
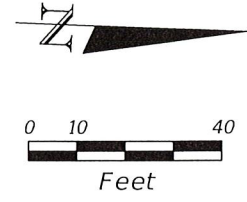


RS&H, Inc.  
Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
ROADWAY PLANS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

SAMUEL E. GONZALEZ  
No. 404  
SEAL  
STATE OF FLORIDA  
Professional Engineer  
No. 49513  
HORIZONTAL SCALE:  
1" = 40'  
VERTICAL SCALE:  
N/A  
SHEET No. 10



BEGIN TYPE F CURB & GUTTER  
+13.92  
49.74' LT  
(CONNECT TO EXIST.)

BEGIN PROJECT  
BEGIN MILLING  
AND RESURFACING  
STA. 9+57.28

END MILLING AND RESURFACING  
BEGIN RECONSTRUCTION  
STA. 10+13.88

BEGIN TYPE F CURB & GUTTER  
+13.82  
44.33' RT  
(CONNECT TO EXIST.)

END TYPE F CURB & GUTTER  
+26.59  
54.02' RT  
(CONNECT TO EXIST.)

BEGIN TYPE F CURB & GUTTER  
+48.59  
54.02' RT  
(CONNECT TO EXIST.)

LEGEND

- MILLING AND RESURFACING
- CONCRETE VALLEY GUTTER
- REGRADE AND SOD
- CONST. 6" CONCRETE SIDEWALK / DRIVEWAY  
(PROVIDE A 2% CROSS-SLOPE FOR SIDEWALKS)
- CONST. 4" CONCRETE SIDEWALK
- SWALE TRENCH SECTION  
(SEE CITY OF MIAMI STANDARD 35-86-48)
- + X.XX' PROPOSED ELEVATION
- X.XX' EXISTING ELEVATION

NOTE

- EXISTING FD FROM S-5 TO S-7 (TO REMAIN)
- EXISTING FD FROM S-9 TO S-11 (TO REMAIN)
- ONLY THE PORTION OF FD FROM EXISTING INLET (STA. 15+50.58, 9.30' RT) TO S-9 WILL BE REMOVED

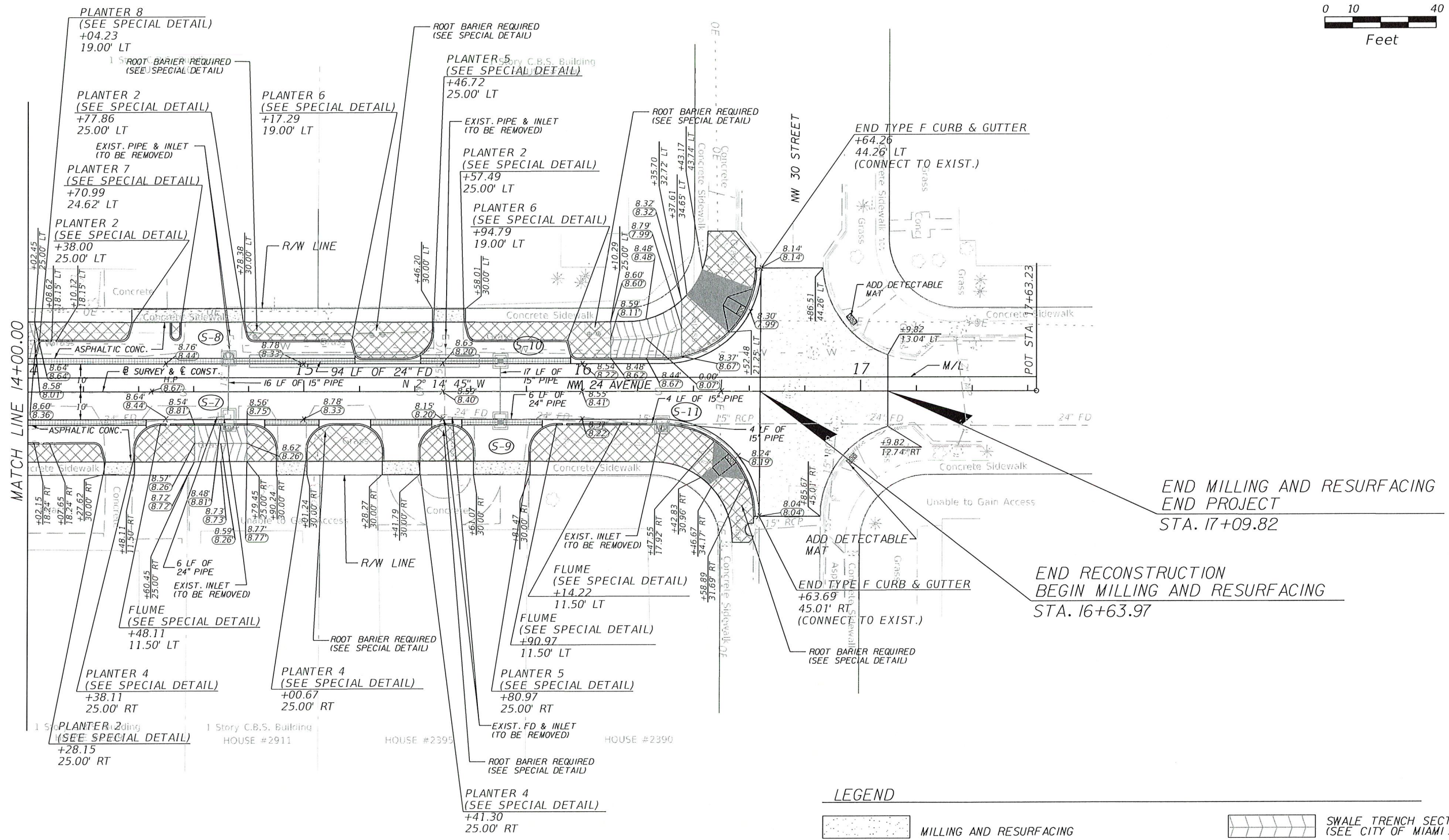
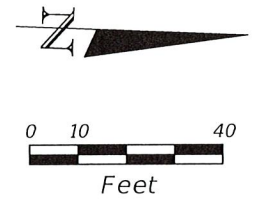


**RS&H, Inc.**  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
ROADWAY PLANS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

FILE: 35-86-4010-0919  
JOB No. 78-30123  
SEAL  
Samuel E. Gonzalez, P.E.  
Reg. No. 49513  
HORIZONTAL SCALE:  
1" = 40'  
VERTICAL SCALE:  
N/A  
SHEET No. 11



END MILLING AND RESURFACING  
END PROJECT  
STA. 17+09.82

END RECONSTRUCTION  
BEGIN MILLING AND RESURFACING  
STA. 16+63.97

**LEGEND**

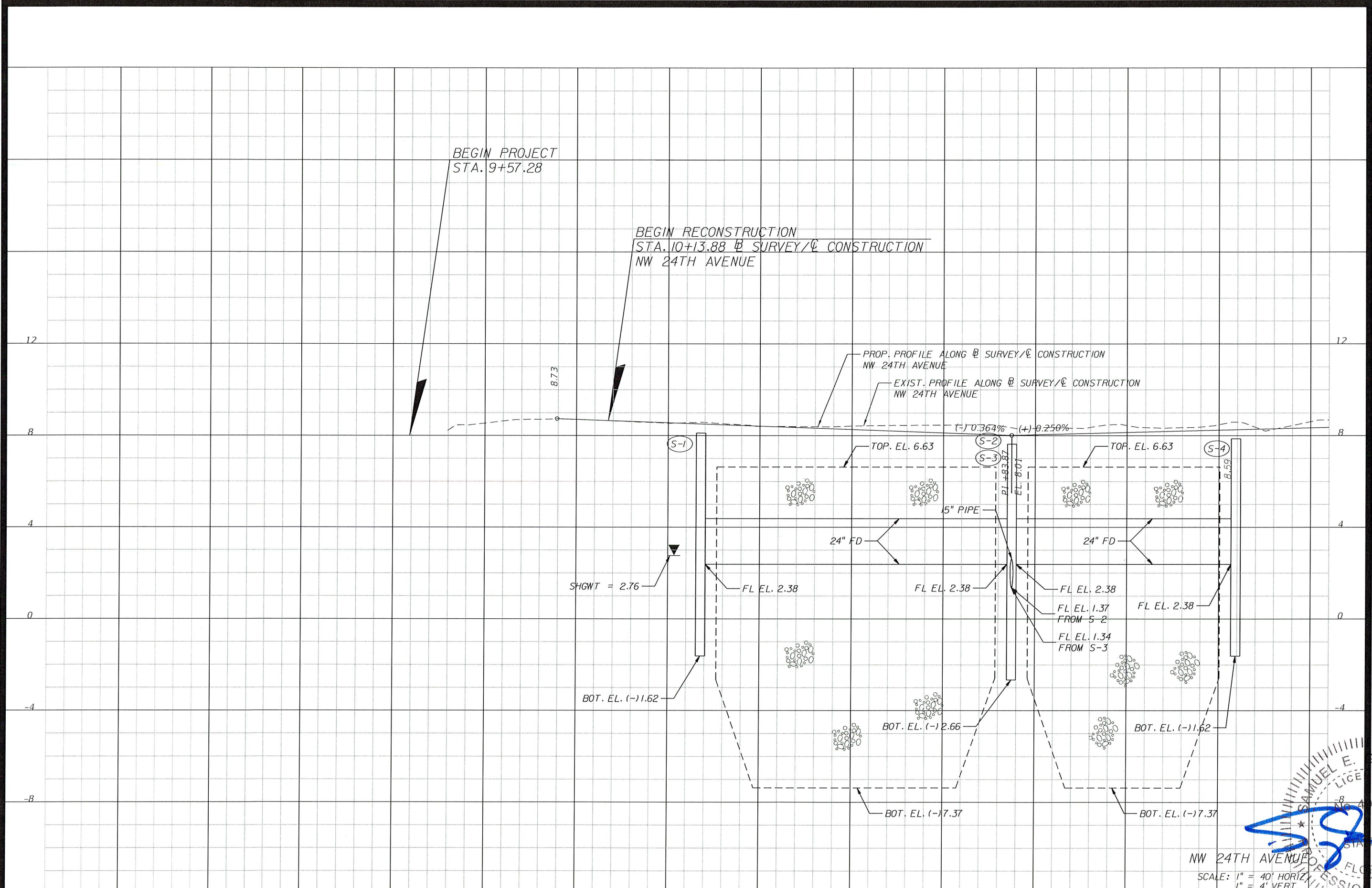
- MILLING AND RESURFACING
- CONCRETE VALLEY GUTTER
- REGRADE AND SOD
- CONST. 6" CONCRETE SIDEWALK / DRIVEWAY (PROVIDE A 2% CROSS-SLOPE FOR SIDEWALKS)
- CONST. 4" CONCRETE SIDEWALK
- SWALE TRENCH SECTION (SEE CITY OF MIAMI STANDARD 35-86-4010)
- + X.XX' PROPOSED ELEVATION
- (X.XX') EXISTING ELEVATION

**NOTE**

- EXISTING FD FROM S-5 TO S-7 (TO REMAIN)
- EXISTING FD FROM S-9 TO S-II (TO REMAIN)
- ONLY THE PORTION OF FD FROM EXISTING INLET (STA. 15+50.58, 9.30' RT) TO S-9 WILL BE REMOVED



X:\V\10000003\_AW24AV\_Roadway\PLAN\RD2.DWG 10:39:05 AM 4/19/2016



BEGIN PROJECT  
STA. 9+57.28

BEGIN RECONSTRUCTION  
STA. 10+13.88 @ SURVEY/CONSTRUCTION  
NW 24TH AVENUE

PROP. PROFILE ALONG @ SURVEY/CONSTRUCTION  
NW 24TH AVENUE

EXIST. PROFILE ALONG @ SURVEY/CONSTRUCTION  
NW 24TH AVENUE

8.73

SHGWT = 2.76

(S-1)

(S-2)

(S-3)

(S-4)

TOP. EL. 6.63

TOP. EL. 6.63

(-) 0.364%

(+) 0.250%

24" FD

5" PIPE

24" FD

FL EL. 2.38

FL EL. 2.38

FL EL. 2.38

FL EL. 1.37  
FROM S-2

FL EL. 1.34  
FROM S-3

BOT. EL. (-) 1.62

BOT. EL. (-) 2.66

BOT. EL. (-) 1.62

BOT. EL. (-) 7.37

BOT. EL. (-) 7.37

09+00

10+00

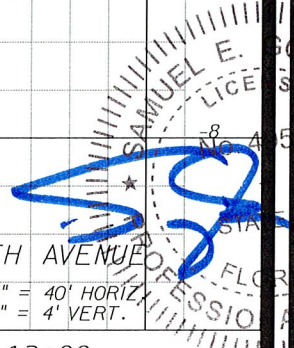
11+00

12+00

13+00

NW 24TH AVENUE

SCALE: 1" = 40' HORIZ.  
1" = 4' VERT.

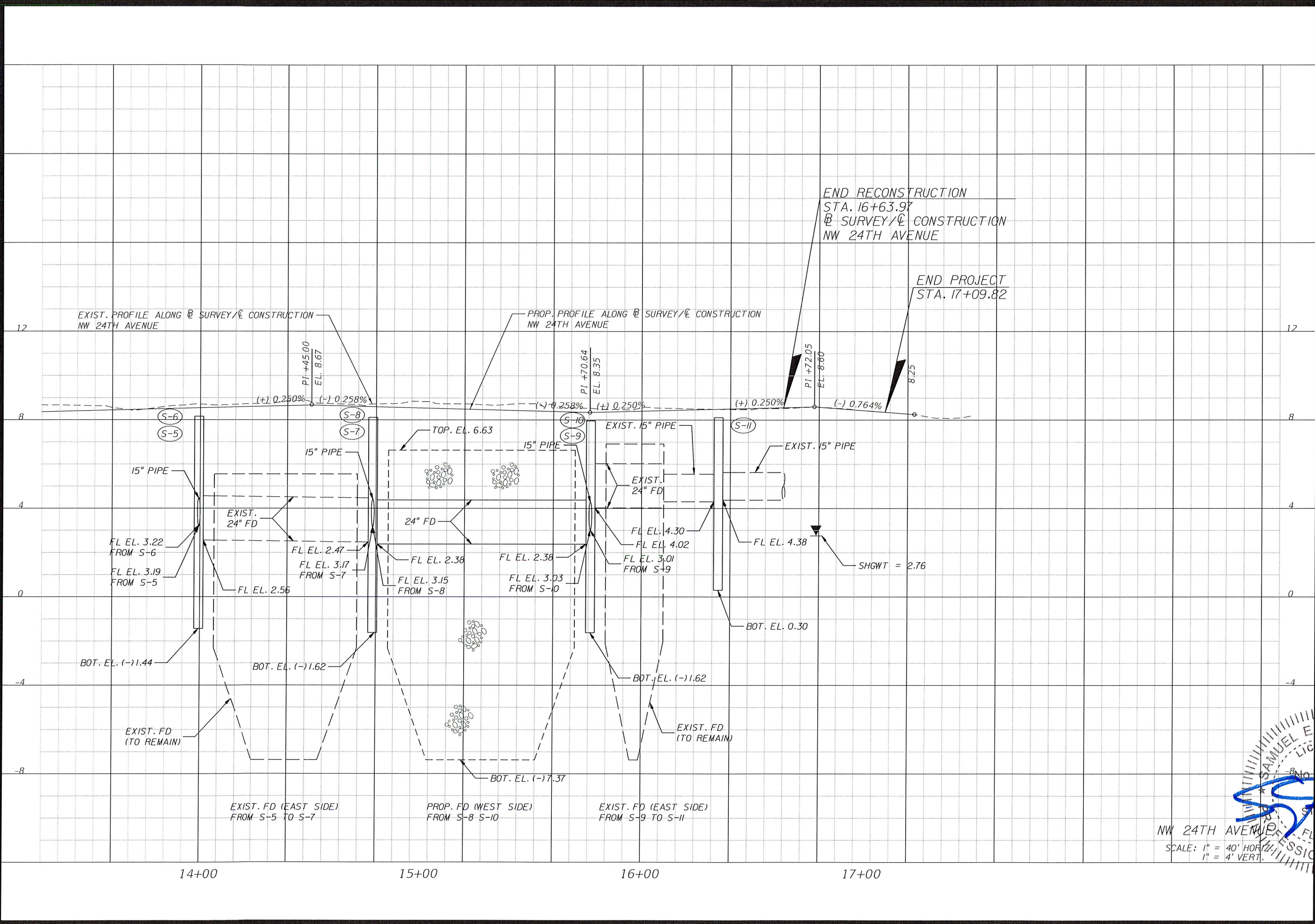


DATE: 07/19/16  
DESIGN: SG  
DRAWN: DR  
CHECKED: LM  
REVISIONS:

JOB No. B-30723  
E.L.  
SEAL

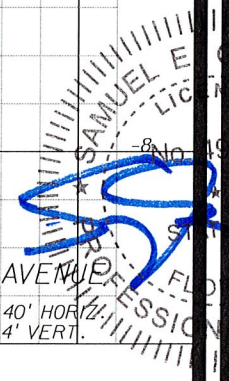
Samuel E. Gonzalez, P.E.  
FL Reg. No. 48513

HORIZONTAL SCALE:  
1" = 40'  
VERTICAL SCALE:  
1" = 4'  
SHEET No. 12

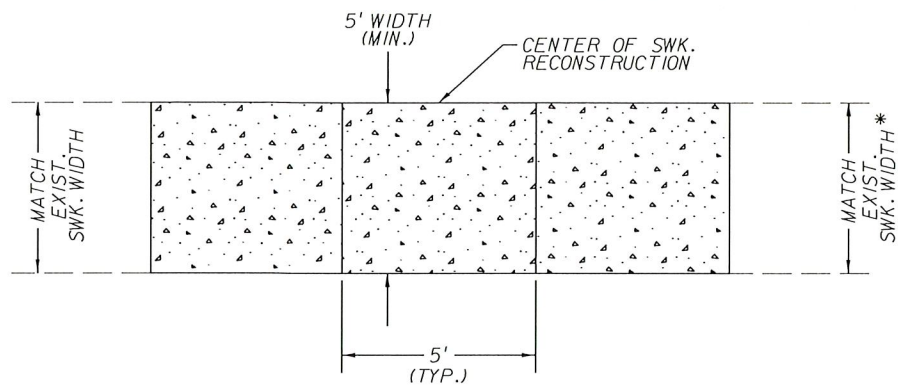


DATE: 07/19/16  
 DESIGN: S.G.  
 DRAWN: D.R.  
 CHECKED: L.M.  
 REVISIONS:

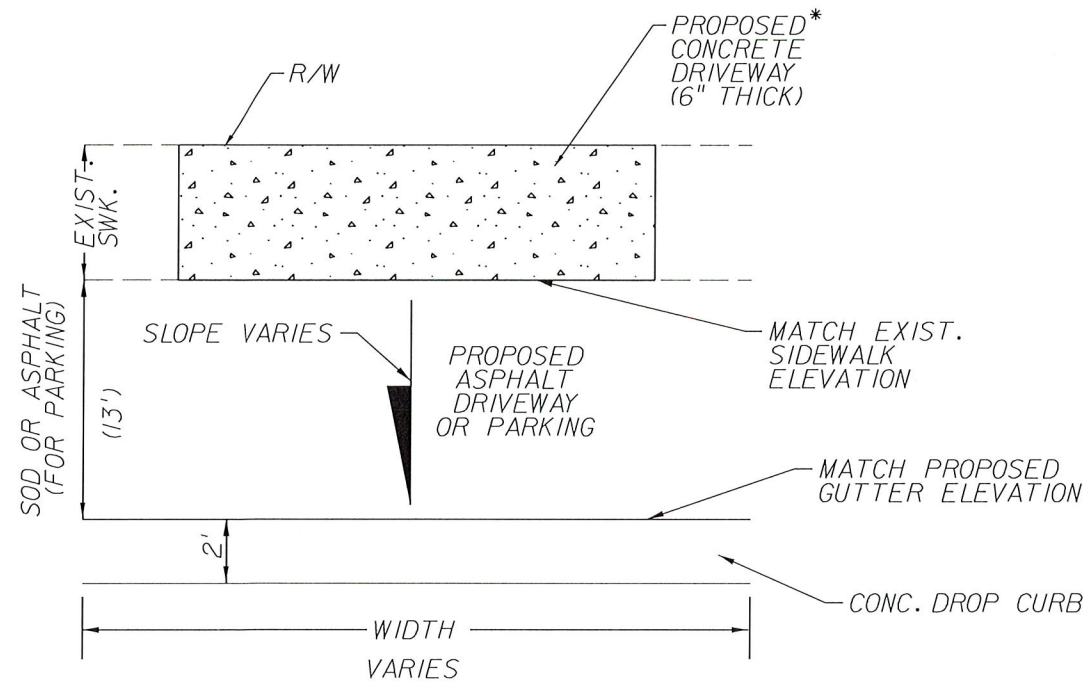
JOB No. B-3022  
 FILED  
 SEAL



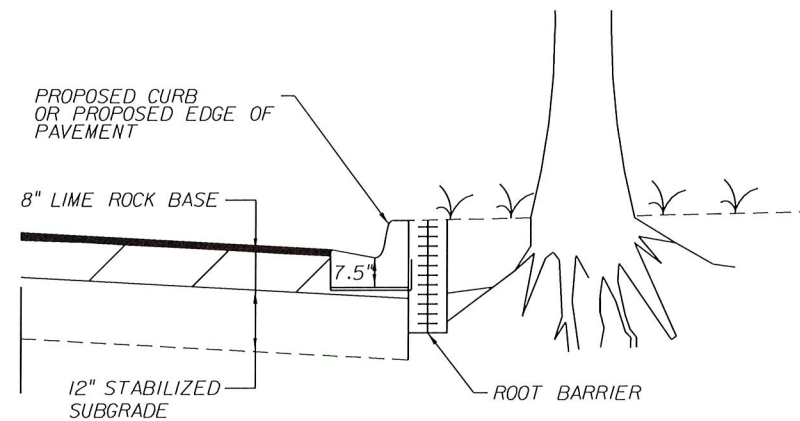
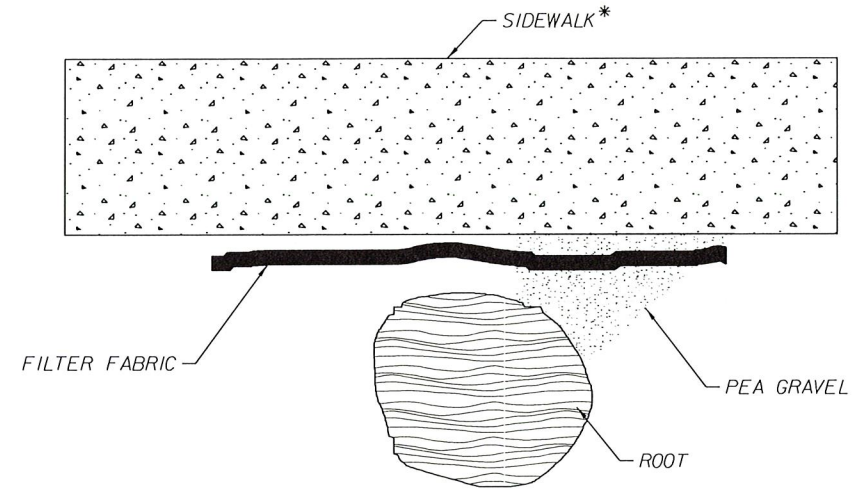
NW 24TH AVENUE  
 SCALE: 1" = 40' HORIZ.  
 1" = 4' VERT.



SIDEWALK RECONSTRUCTION DETAIL



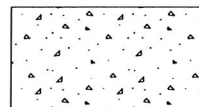
DRIVEWAY DETAIL  
(FOR DRIVEWAYS ALONG PROPOSED DROP CURB)



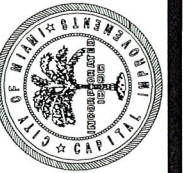
- NOTE:  
1. USE WOUND SEALANT TO PROTECT CUT ROOTS.  
2. NO CUTTING OR PRUNING OF ROOT SYSTEM WITHOUT THE REVIEW AND CONSENT OF CERTIFIED ARBORIST.  
3. ROOT BARRIER SHALL BE FROM ROOT SOLUTIONS (ROOT BARRIER LINEAR PLACEMENT) FROM VESPRO, INC. OR AN APPROVED EQUAL FROM THE CITY OF MIAMI CONSTRUCTION MANAGER. PRODUCT SHALL BE AS PER SPECIFICATIONS FOR ROOT SOLUTIONS (ROOT BARRIER LINEAR PLACEMENT)

ROOT BARRIER DETAIL  
(NTS)

\*SIDEWALK TO BE REPLACED SHALL MEET ADA REQUIREMENTS BY PROVIDING A MAXIMUM 2% CROSS SLOPE



SIDEWALK RECONSTRUCTION\*



DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. B-38723

FILE: 150

150

150

150

150

150

150

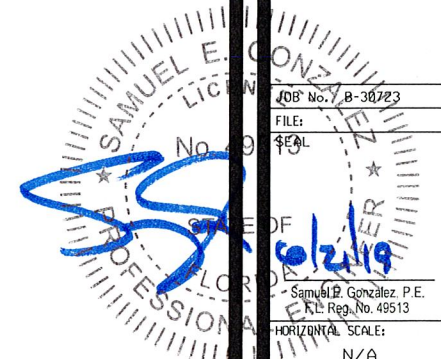
150

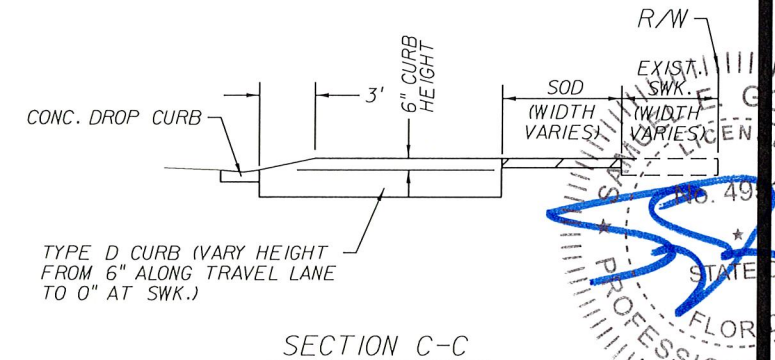
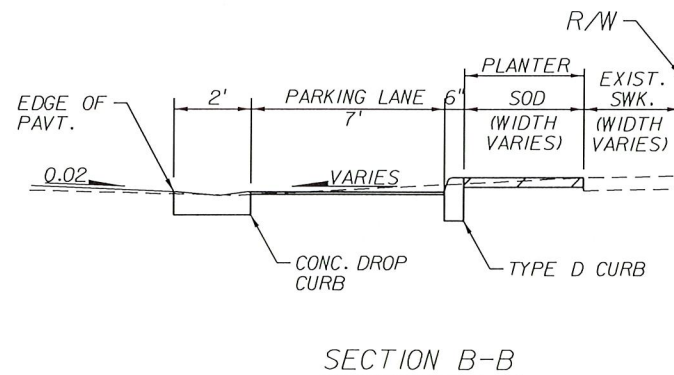
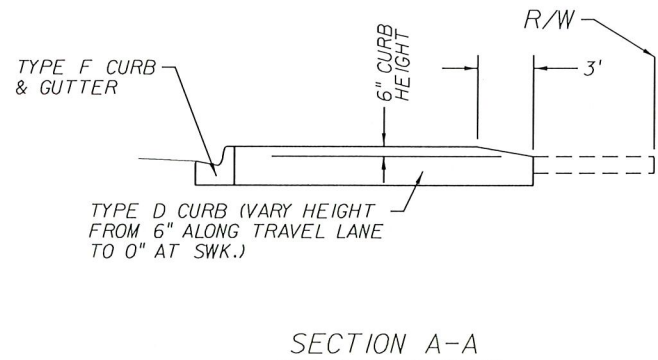
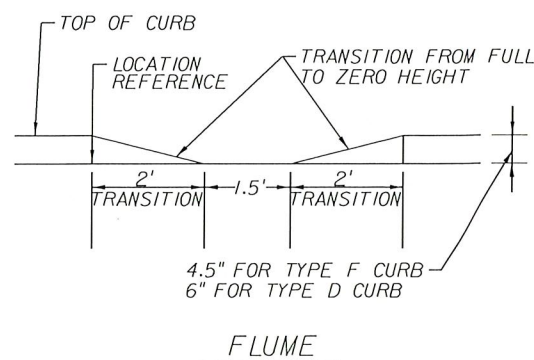
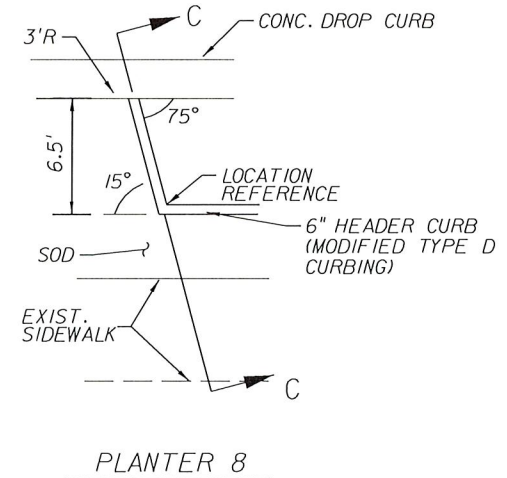
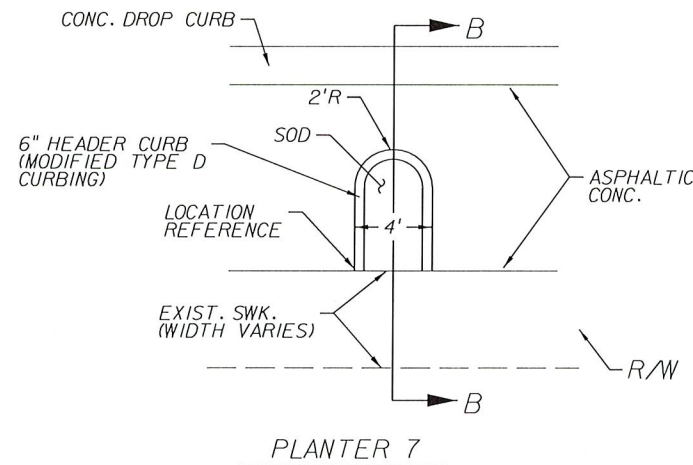
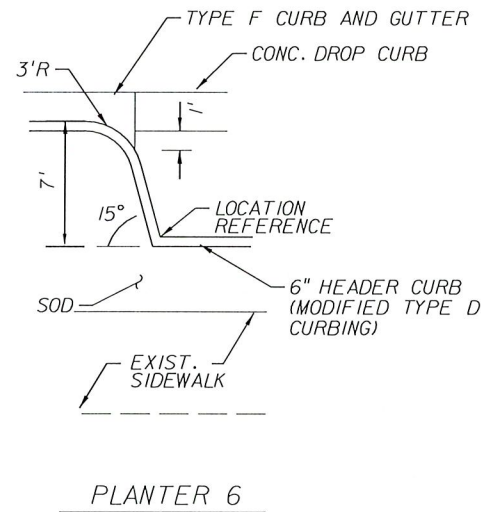
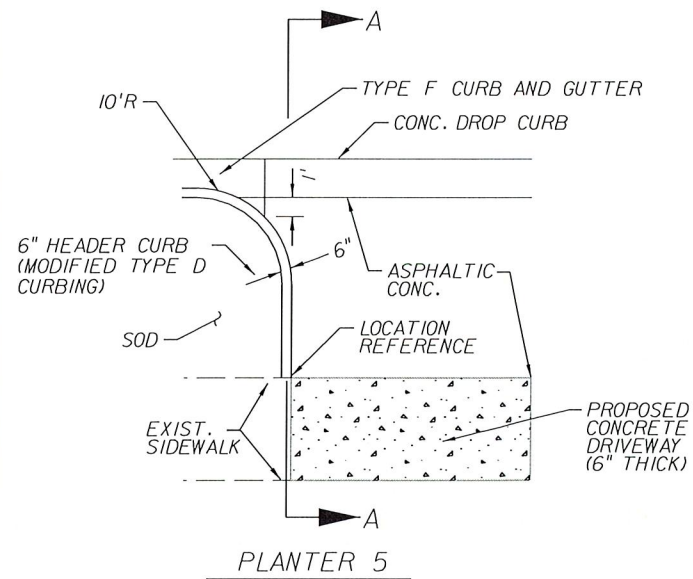
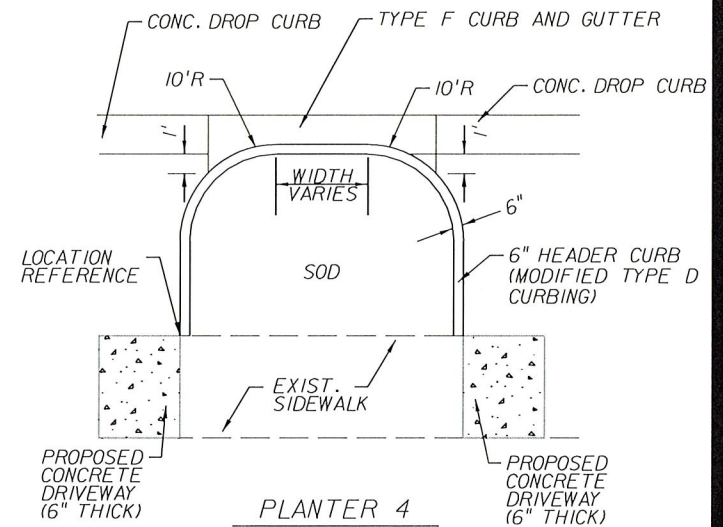
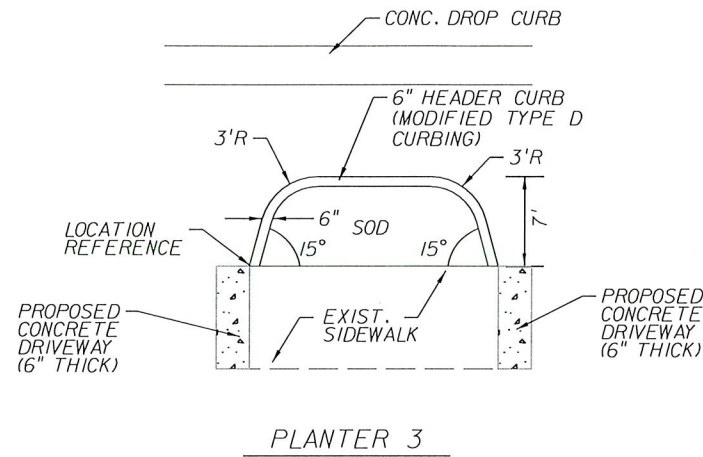
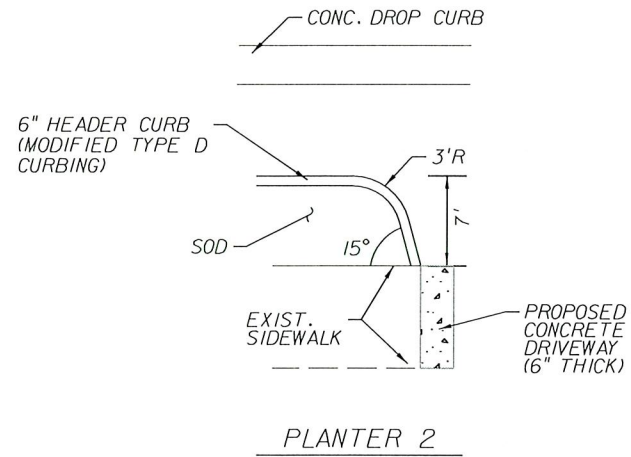
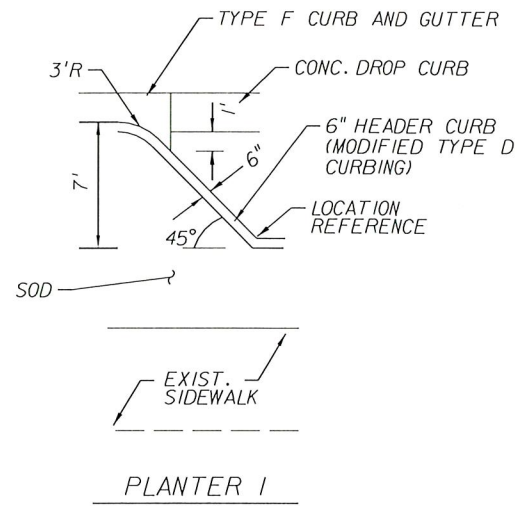
150

HORIZONTAL SCALE: N/A

VERTICAL SCALE: N/A

SHEET No. 14





CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

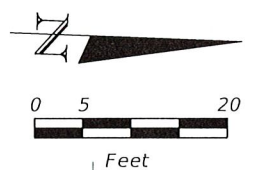
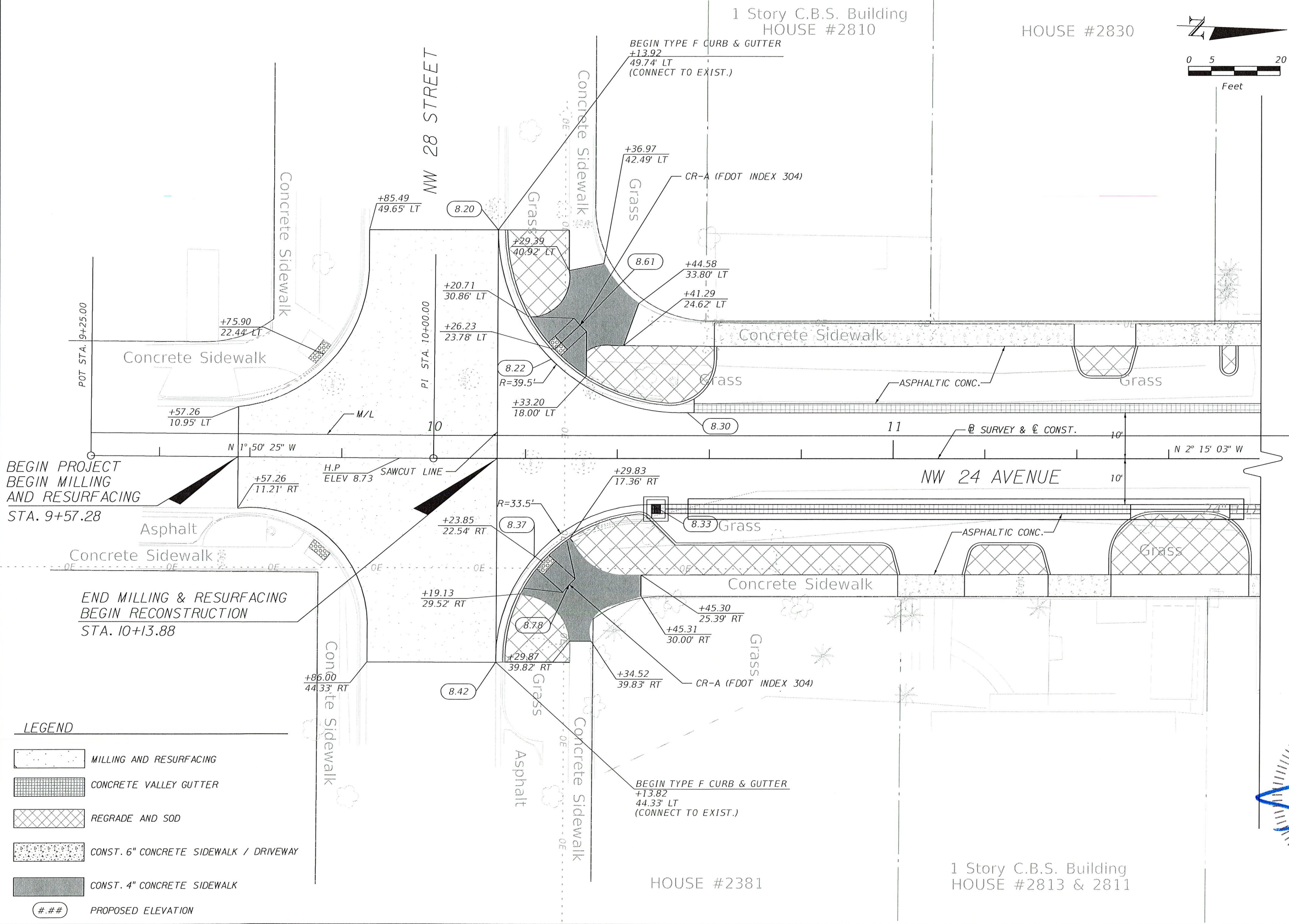
CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
SPECIAL DETAILS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. B-30723  
KILEY SEAL



Samuel E. Gonzalez, P.E.  
P.E. Reg. No. 49513  
HORIZONTAL SCALE: N/A  
VERTICAL SCALE: N/A  
SHEET No. 15



- LEGEND**
- MILLING AND RESURFACING
  - CONCRETE VALLEY GUTTER
  - REGRADE AND SOD
  - CONST. 6" CONCRETE SIDEWALK / DRIVEWAY
  - CONST. 4" CONCRETE SIDEWALK
  - ### PROPOSED ELEVATION

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT

INTERSECTION DETAILS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. B-30728  
FILE: 428  
SCALE: 1/2"

Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:  
1" = 20'

VERTICAL SCALE:  
N/A

SHEET No. 16

4/15/2015



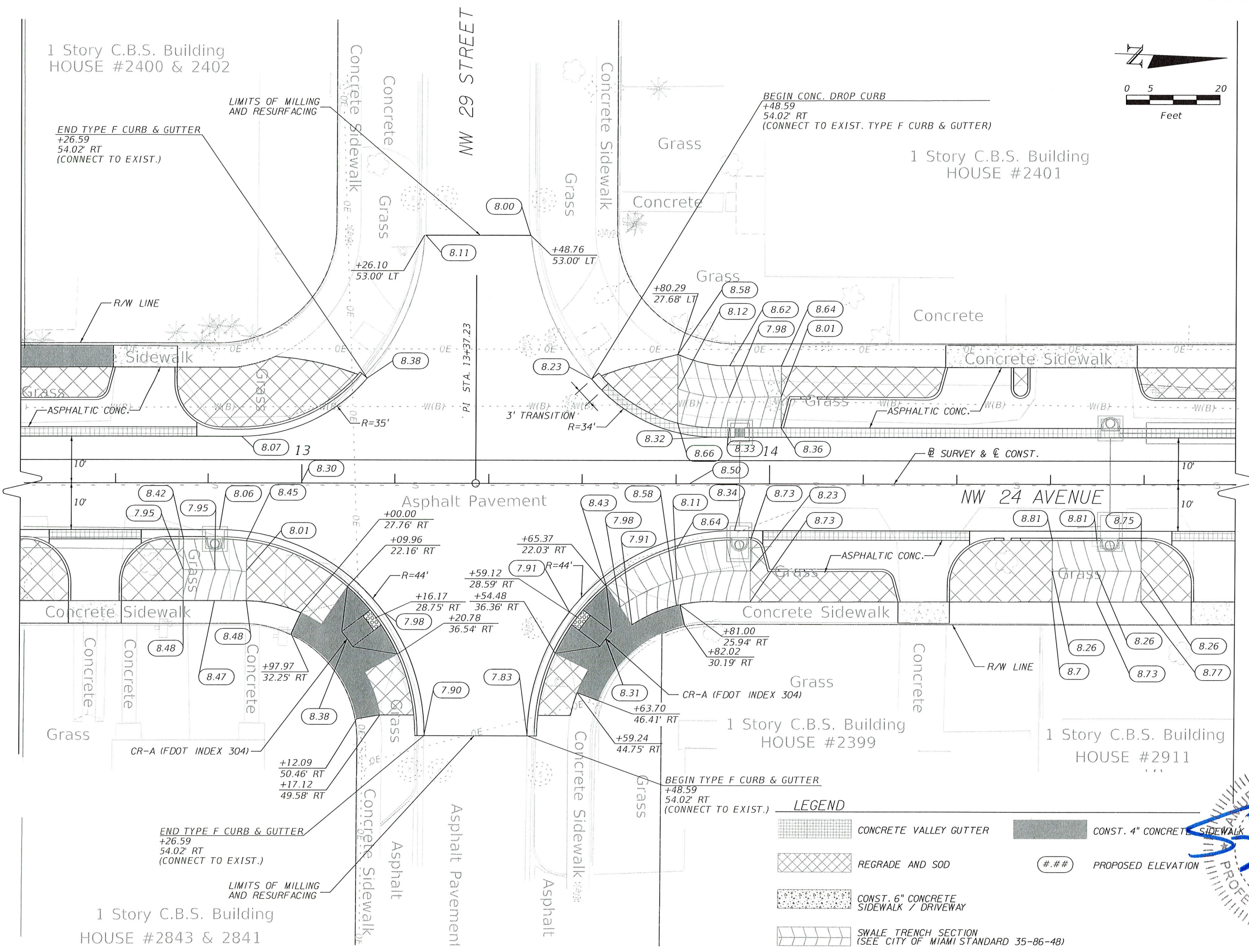
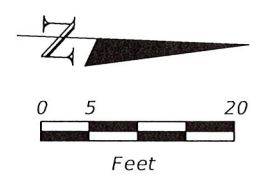


RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
INTERSECTION DETAILS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

DATE: 07/19/16  
JOB No. B-30723  
FILED  
SEAL  
13  
6/16/16  
Samuel E. Gonzalez P.E.  
F.L. Reg. No. 29513  
HORIZONTAL SCALE:  
1" = 20'  
VERTICAL SCALE:  
N/A  
SHEET No. 17





**RS&H, Inc.**  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

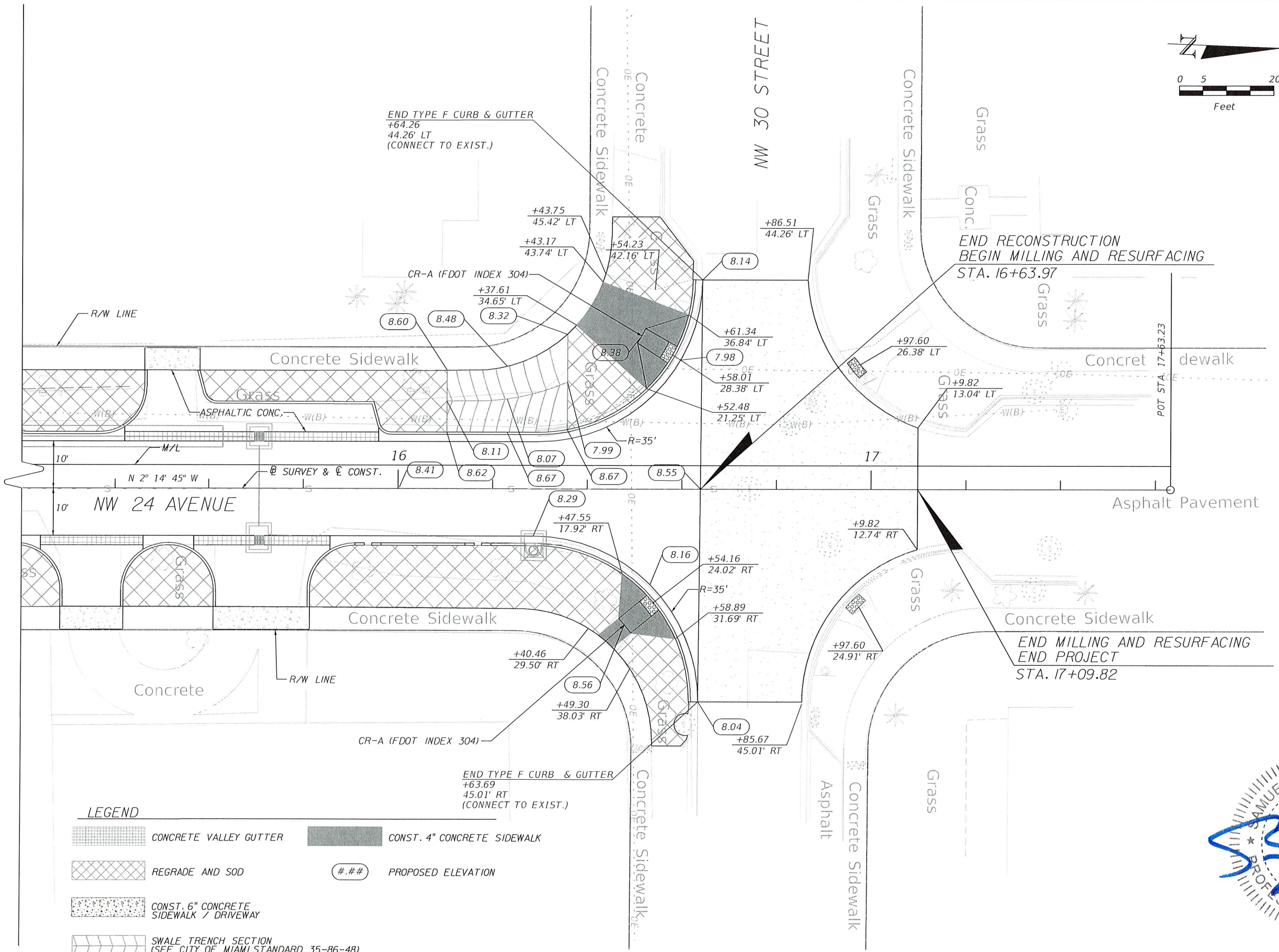
CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 INTERSECTION DETAILS

DATE: 07/19/16  
 DESIGN: S.G.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

JOB No. B-30723  
 FILE:  
 SEAL

SAMUEL E. COZALEZ  
 LICENSED PROFESSIONAL ENGINEER  
 No. 49513  
 State of Florida

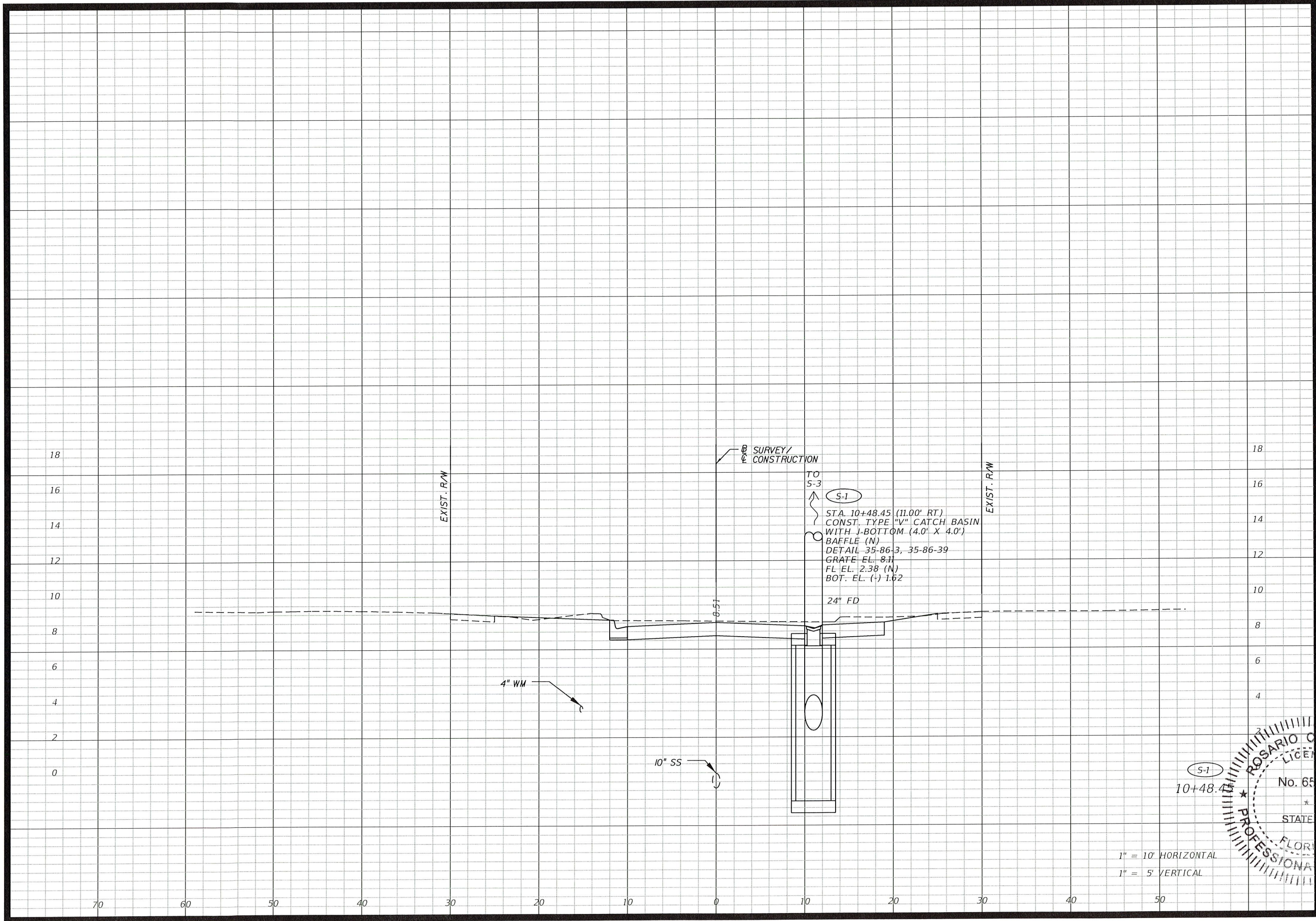
Samuel E. Cozalez, P.E.  
 License No. 49513  
 HORIZONTAL SCALE:  
 1" = 20'  
 VERTICAL SCALE:  
 N/A  
 SHEET No. 18



**LEGEND**

	CONCRETE VALLEY GUTTER		CONST. 4" CONCRETE SIDEWALK
	REGRADE AND SOD		PROPOSED ELEVATION
	CONST. 6" CONCRETE SIDEWALK / DRIVEWAY		
	SWALE TRENCH SECTION (SEE CITY OF MIAMI STANDARD 35-86-48)		





TO  
S-3  
S-1  
STA. 10+48.45 (11.00' RT)  
CONST. TYPE "V" CATCH BASIN  
WITH J-BOTTOM (4.0' X 4.0')  
BAFFLE (N)  
DETAIL 35-86-3, 35-86-39  
GRATE EL. 8.11  
FL EL. 2.38 (N)  
BOT. EL. (-) 1.62

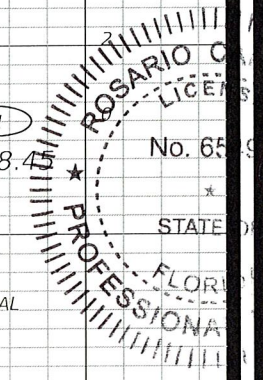
24" FD

4" WM

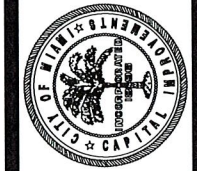
10" SS

0.51

1" = 10' HORIZONTAL  
1" = 5' VERTICAL



CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



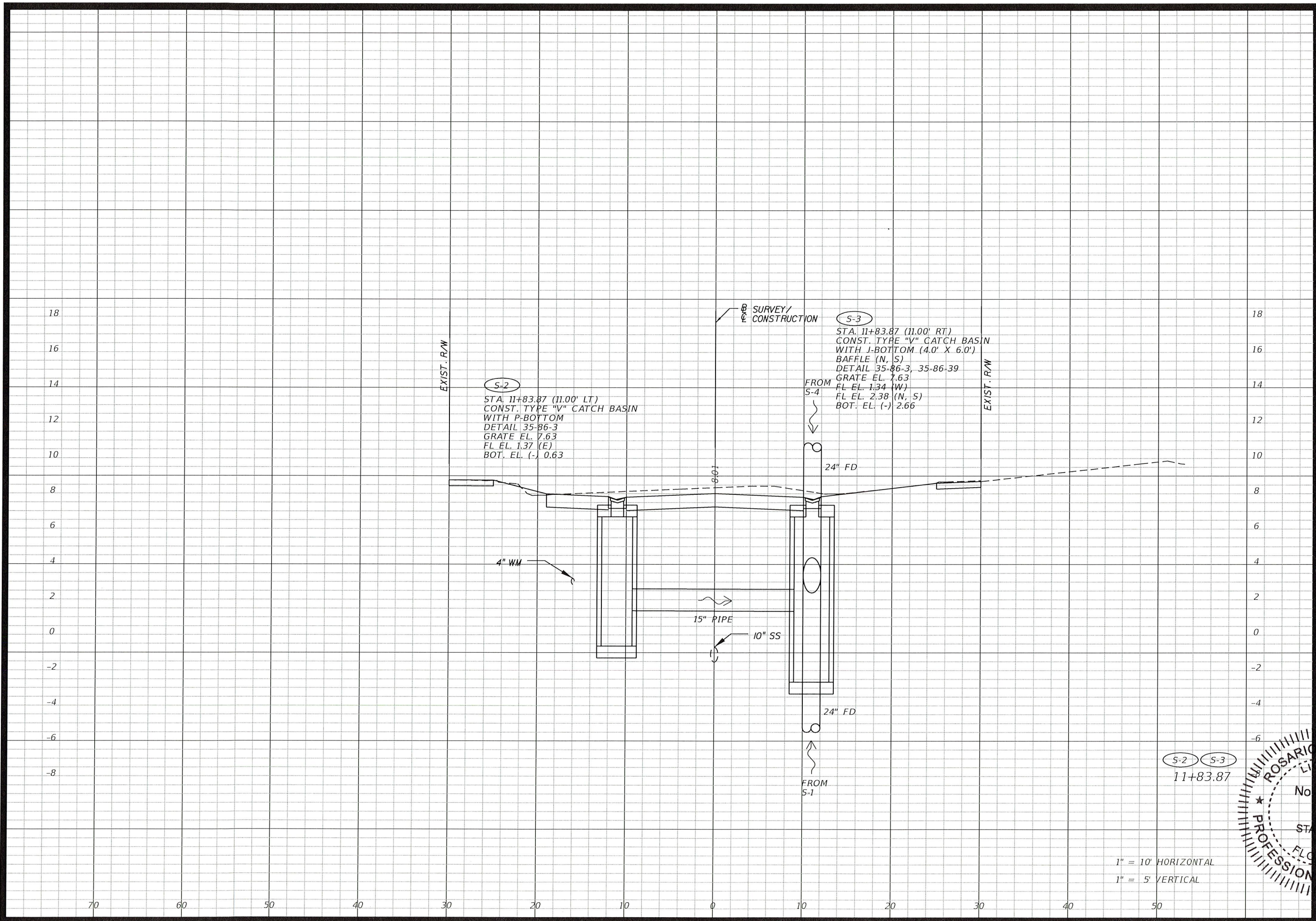
**RS&H**  
Reynolds, Smith and Hills, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE STRUCTURE

DATE: 05/31/12  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

△  
△  
△  
JOB No. B-30723  
FILE:  
SEAL  
No. 65493  
6/21/19

Rosario Cardenas, P.E.  
F.L. Reg. No. 65493  
HORIZONTAL SCALE:  
1" = 10'  
VERTICAL SCALE:  
1" = 5'  
SHEET No. 19



S-2  
 STA. 11+83.87 (11.00' LT)  
 CONST. TYPE "V" CATCH BASIN  
 WITH P-BOTTOM  
 DETAIL 35-86-3  
 GRATE EL. 7.63  
 FL EL. 1.37 (E)  
 BOT. EL. (-) 0.63

S-3  
 STA. 11+83.87 (11.00' RT)  
 CONST. TYPE "V" CATCH BASIN  
 WITH I-BOTTOM (4.0' X 6.0')  
 BAFFLE (N, S)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 7.63  
 FL EL. 1.34 (W)  
 FL EL. 2.38 (N, S)  
 BOT. EL. (-) 2.66

1" = 10' HORIZONTAL  
 1" = 5' VERTICAL

PROFESSIONAL ENGINEER  
 ROSARIO CARDENAS  
 No. 6493  
 STATE OF FLORIDA  
 ROSARIO CARDENAS, P.E.  
 F.L. Reg. No. 05493  
 6/21/19

CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



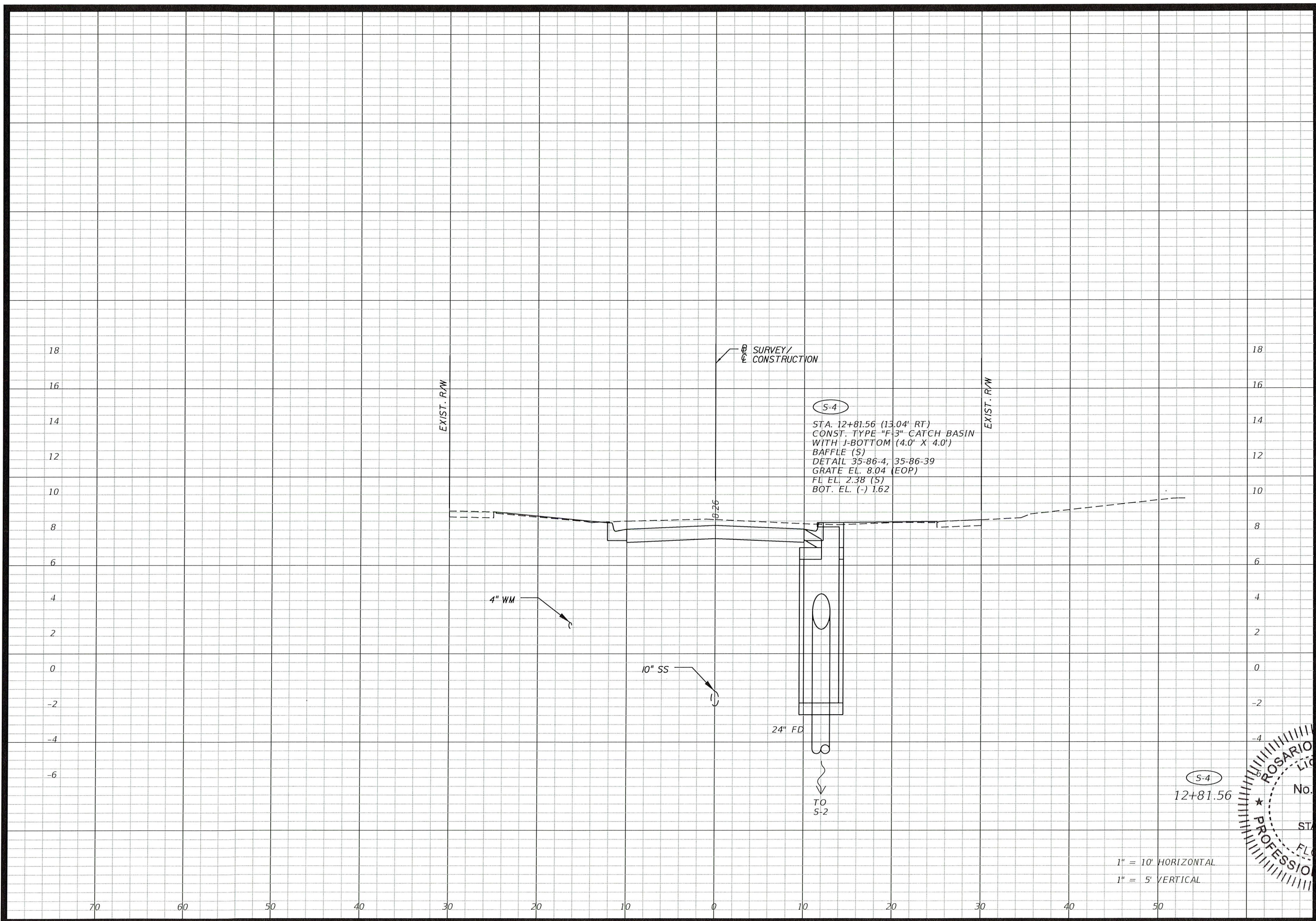
RS&H  
 Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 DRAINAGE STRUCTURE

DATE: 05/31/12  
 DESIGN: R.C.  
 DRAWN: D.R.  
 CHECKED: L.M.  
 REVISIONS:

DATE: 6/21/19  
 No. 6493  
 STATE OF FLORIDA  
 ROSARIO CARDENAS, P.E.  
 F.L. Reg. No. 05493  
 6/21/19  
 SHEET No. 20

X:\S\11020003\_1\24AV\improvements\DRS\DRS.DWG  
 6/20/2019 3:41:47 PM



CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



**RS&H**  
 Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 DRAINAGE STRUCTURE

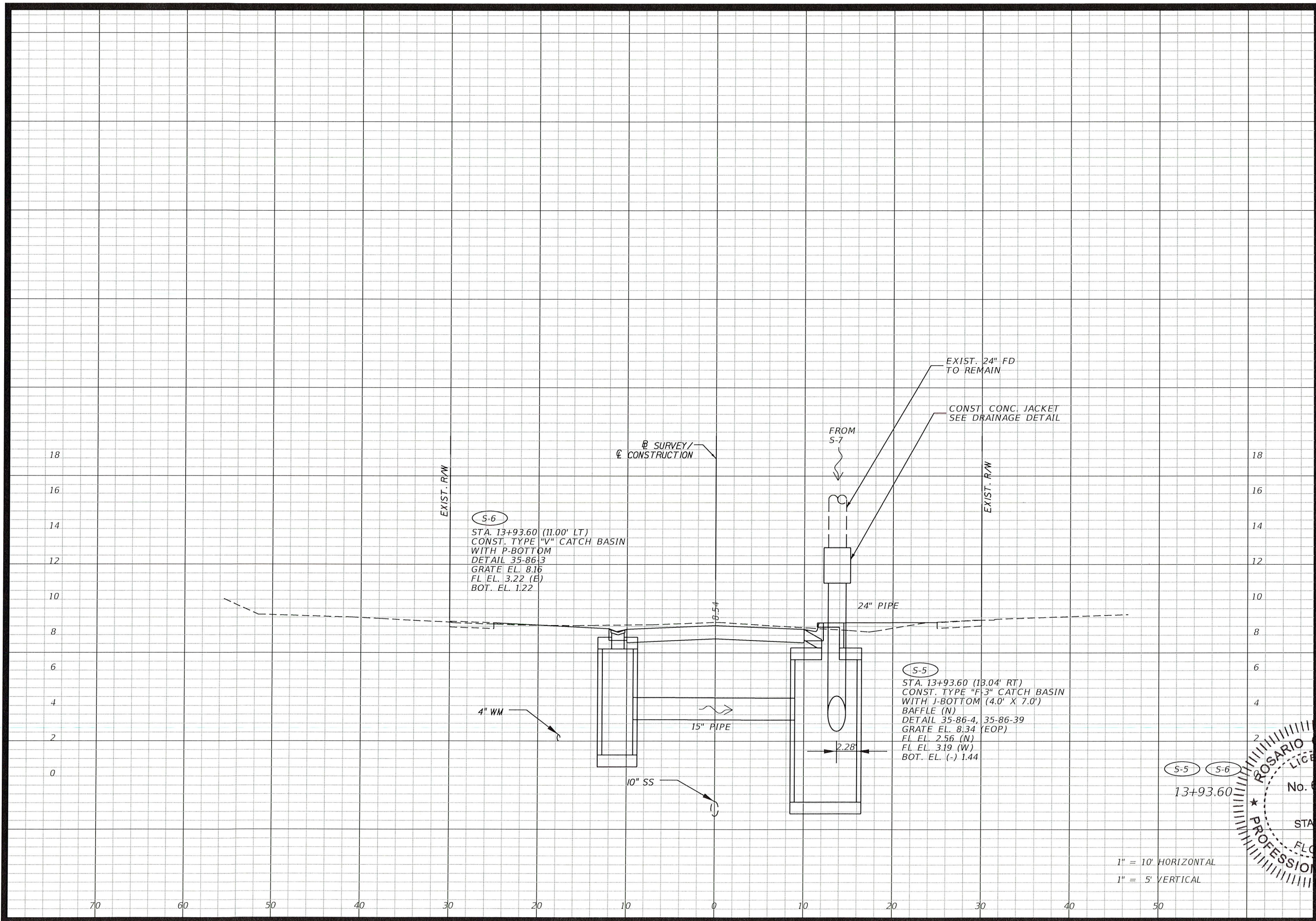
DATE: 05/31/12  
 DESIGN: R.C.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

△  
 △  
 △

108 448 30723  
 No. 6493  
 6/21/12  
 ROSARIO CARREAS  
 LICENSED PROFESSIONAL ENGINEER  
 STATE OF FLORIDA  
 No. 6493  
 ROSARIO CARREAS, P.E.  
 License No. 6493

1" = 10' HORIZONTAL  
 1" = 5' VERTICAL

SCALE:  
 HORIZONTAL SCALE:  
 1" = 10'  
 VERTICAL SCALE:  
 1" = 5'  
 SHEET No. 21



S-6  
 STA. 13+93.60 (11.00' LT)  
 CONST. TYPE "V" CATCH BASIN  
 WITH P-BOTTOM  
 DETAIL 35-86-3  
 GRATE EL. 8.16  
 FL EL. 3.22 (E)  
 BOT. EL. 1.22

S-5  
 STA. 13+93.60 (13.04' RT)  
 CONST. TYPE "F" 3" CATCH BASIN  
 WITH J-BOTTOM (4.0' X 7.0')  
 BAFFLE (N)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.34 (EOP)  
 FL EL. 2.56 (N)  
 FL EL. 3.19 (W)  
 BOT. EL. (-) 1.44

1" = 10' HORIZONTAL  
 1" = 5' VERTICAL

ROSA RIO  
 LICENSED PROFESSIONAL ENGINEER  
 No. 65493  
 STATE OF FLORIDA  
 13+93.60

CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



**RS&H**  
 Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

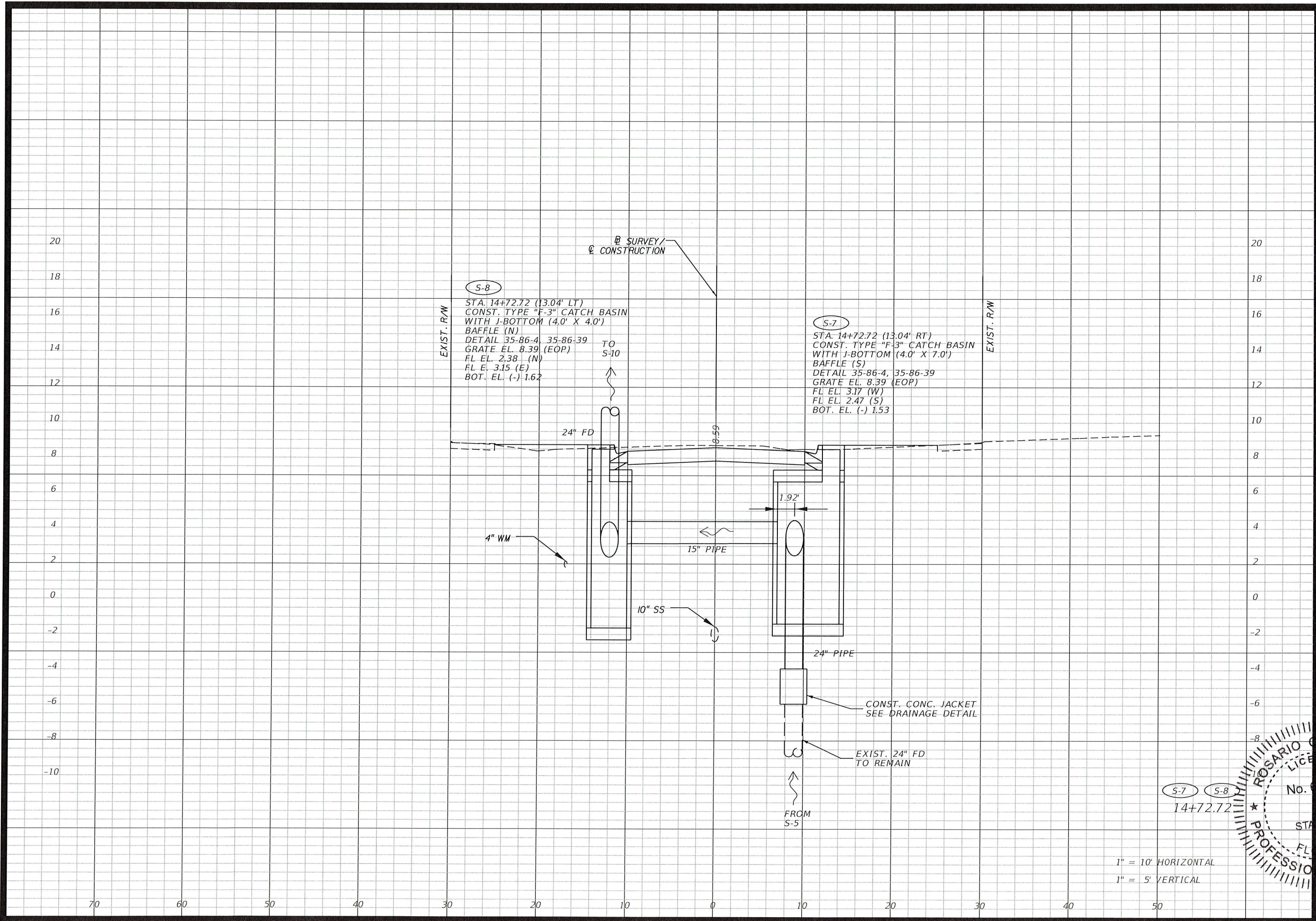
CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 DRAINAGE STRUCTURE

DATE: 05/31/12  
 DESIGN: R.C.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

REVISIONS:  
 1. 05/31/12  
 2. 06/20/12

PROFESSIONAL ENGINEER  
 No. 65493  
 STATE OF FLORIDA  
 SHEET No. 22

6/20/2015 3:44:47 PM X:\V\10200003\_1\24th\cimg\cimg\DRS57000.DWG



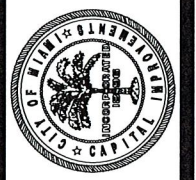
S-8  
 STA. 14+72.72 (13.04' LT)  
 CONST. TYPE "F-3" CATCH BASIN  
 WITH J-BOTTOM (4.0' X 4.0')  
 BAFFLE (N)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.39 (EOP)  
 FL EL. 2.38 (N)  
 FL EL. 3.15 (E)  
 BOT. EL. (-) 1.62

S-7  
 STA. 14+72.72 (13.04' RT)  
 CONST. TYPE "F-3" CATCH BASIN  
 WITH J-BOTTOM (4.0' X 7.0')  
 BAFFLE (S)  
 DETAIL 35-86-4, 35-86-39  
 GRATE EL. 8.39 (EOP)  
 FL EL. 3.17 (W)  
 FL EL. 2.47 (S)  
 BOT. EL. (-) 1.53

1" = 10' HORIZONTAL  
 1" = 5' VERTICAL

ROSA RIO GARDENAS  
 LICENSED PROFESSIONAL ENGINEER  
 No. 65493  
 STATE OF FLORIDA

CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



**RS&H**  
 Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 DRAINAGE STRUCTURE

DATE: 05/31/12  
 DESIGN: R.C.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

REVISIONS:  
 1. [Symbol] [Symbol] [Symbol]  
 2. [Symbol] [Symbol] [Symbol]  
 3. [Symbol] [Symbol] [Symbol]

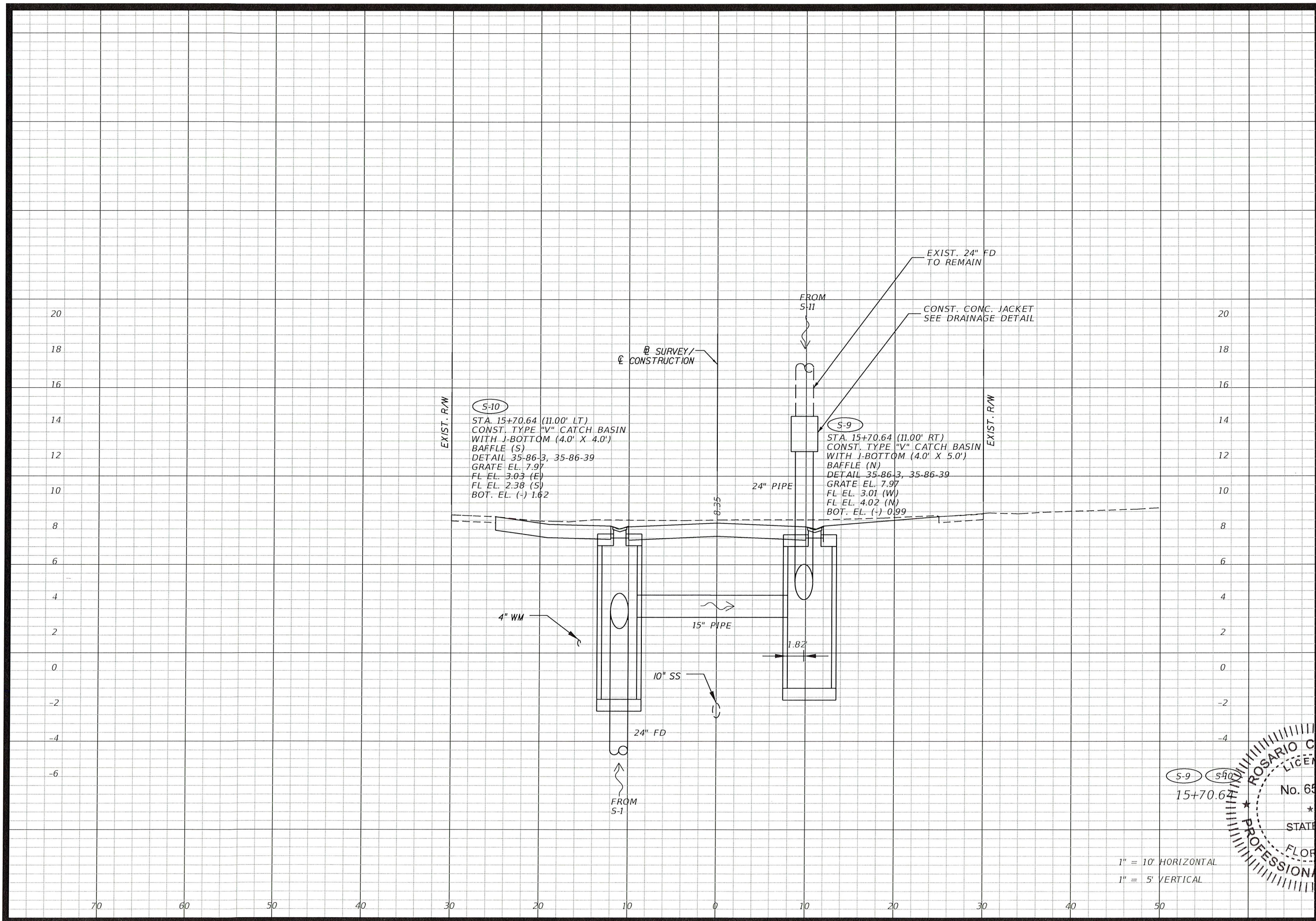
JOB No. B-30723  
 FILE:  
 SEAL  
 No. 93

Rosario Gardenas, P.E.  
 FL Reg. No. 65493

HORIZONTAL SCALE:  
 1" = 10'  
 VERTICAL SCALE:  
 1" = 5'

SHEET No. 23

X:\S\11000003\_02\24AV\c\m\rs\051119.dwg 3/14/12 PM 6/20/2019

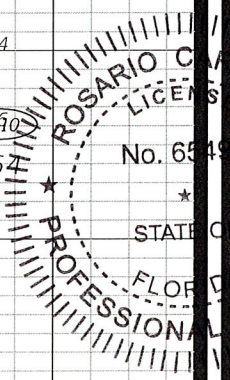


**S-10**  
 STA. 15+70.64 (11.00' LT)  
 CONST. TYPE "V" CATCH BASIN  
 WITH J-BOTTOM (4.0' X 4.0')  
 BAFFLE (S)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 7.97  
 FL EL. 3.03 (E)  
 FL EL. 2.38 (S)  
 BOT. EL. (-) 1.62

**S-9**  
 STA. 15+70.64 (11.00' RT)  
 CONST. TYPE "V" CATCH BASIN  
 WITH J-BOTTOM (4.0' X 5.0')  
 BAFFLE (N)  
 DETAIL 35-86-3, 35-86-39  
 GRATE EL. 7.97  
 FL EL. 3.01 (W)  
 FL EL. 4.02 (N)  
 BOT. EL. (-) 0.99

**S-9** **S-90**  
 15+70.64

1" = 10' HORIZONTAL  
 1" = 5' VERTICAL



CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



**RS&H**  
 Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 DRAINAGE STRUCTURE

DATE: 05/31/12  
 DESIGN: R.C.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

△  
 △  
 △

FILE No. 15-30723  
 FILE SEALS

No. 65493

STATE OF FLORIDA

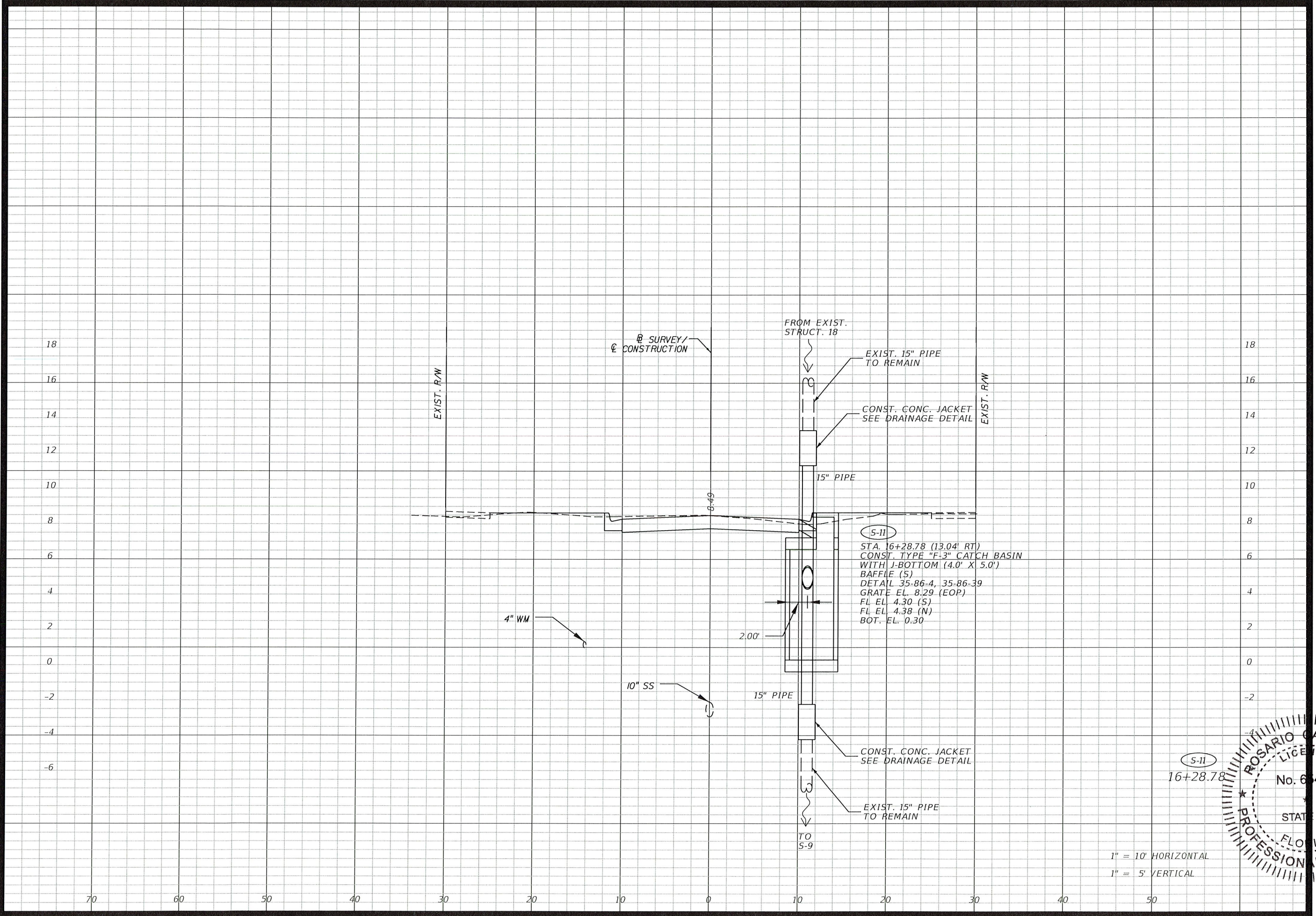
ROSARIO C. CARDENAS, P.E.  
 License No. 65493

HORIZONTAL SCALE:  
 1" = 10'  
 VERTICAL SCALE:  
 1" = 5'

SHEET No. 24

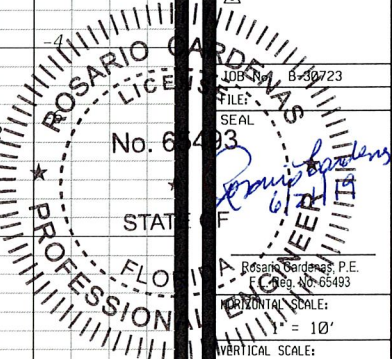
X:\p\11020003\1124\drainage\DRS15001.DWG 3:41:48 PM 6/20/2015





S-II  
STA. 16+28.78 (13.04' RT)  
CONST. TYPE "F-3" CATCH BASIN  
WITH J-BOTTOM (4.0' X 5.0')  
BAFFLE (S)  
DETAIL 35-86-4, 35-86-39  
GRATE EL. 8.29 (EOP)  
FL EL. 4.30 (S)  
FL EL. 4.38 (N)  
BOT. EL. 0.30

1" = 10' HORIZONTAL  
1" = 5' VERTICAL



CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



**RS&H**  
Reynolds, Smith and Hills, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE STRUCTURE

DATE: 05/31/12  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

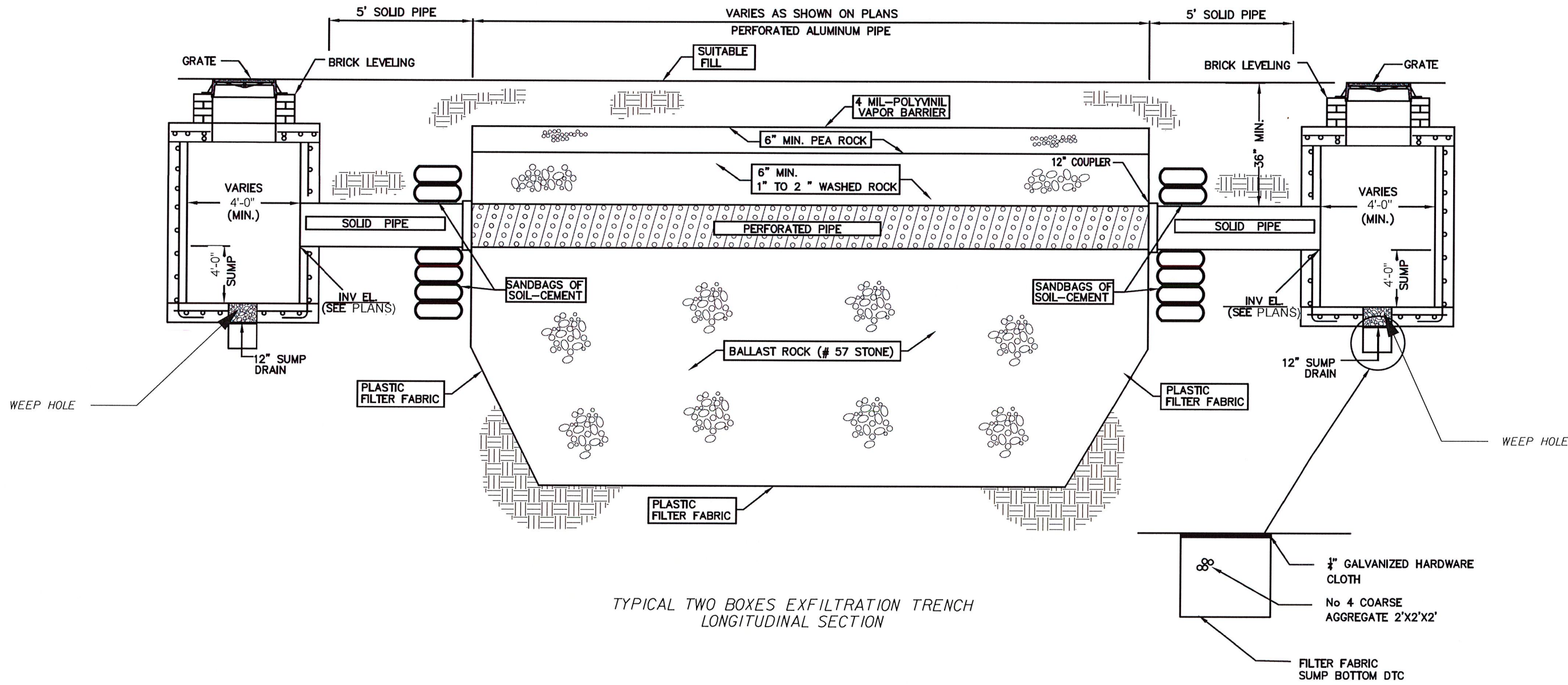
REVISIONS:  
▲  
▲  
▲

FILE: B-30723  
SEAL  
No. 64493

ROSARIO GARCIA, P.E.  
Lic. No. 64493

HORIZONTAL SCALE:  
1" = 10'  
VERTICAL SCALE:  
1" = 5'  
SHEET No. 25

X:\p\11020002\11020002.dwg  
6/20/2012 3:41:48 PM



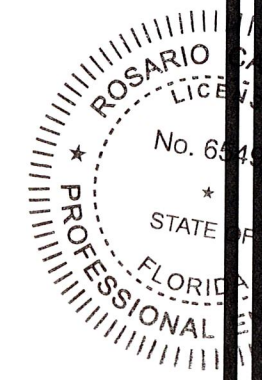
TYPICAL TWO BOXES EXFILTRATION TRENCH LONGITUDINAL SECTION

TYPICAL FRENCH DRAIN PROFILE  
CITY OF MIAMI DETAIL MISC. 35-86-26

N.T.S.

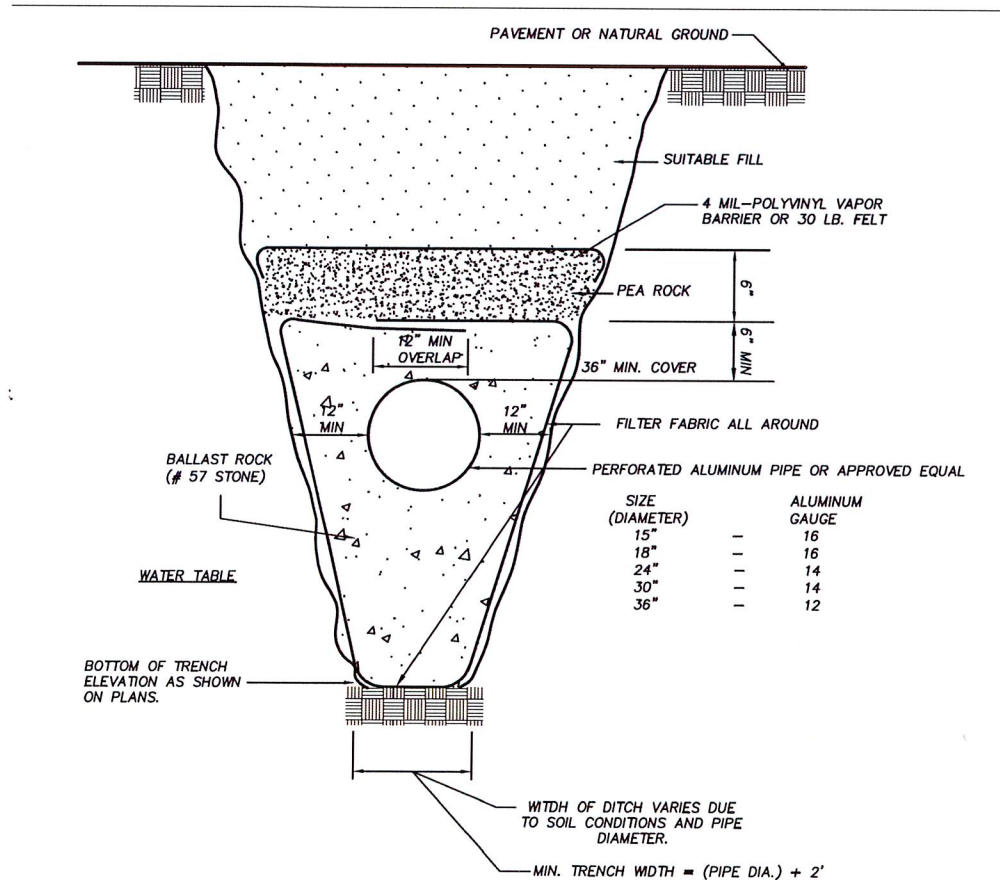
NOTES:

1. PLASTIC FILTER (AT EA. SIDE, TOP, BOTTOM) SHALL BE USED IN SANDY AREAS AS NOTED ON PLANS AND/OR AS DIRECTED BY THE ENGINEER.
2. THE BOTTOM OF THE EXFILTRATION TRENCH SHALL BE 15'-0" BELOW EXISTING GROUND ELEVATION, UNLESS CONDITIONS WARRANT OTHERWISE.
3. AFTER THE BALLAST ROCK HAS BEEN PLACED TO THE PROPER ELEVATION, IT SHALL BE CAREFULLY WASHED DOWN WITH CLEAN WATER IN ORDER TO ALLOW INITIAL SETTLEMENT THAT MAY OCCUR. IF IT DOES TAKE PLACE, ADDITIONAL BALLAST ROCK WILL BE ADDED TO RESTORE THE BALLAST ROCK TO THE PROPER ELEVATION, SO THAT THE EXFILTRATION TRENCH WILL BE COMPLETED IN ACCORDANCE WITH THE DETAILS.



DATE:	07/19/16
DESIGN:	R.C.
DRAWN:	O.R.
CHECKED:	A.C.
REVISIONS:	

DESIGNER:	Rosario Cardenas
DATE:	8-30-23
SCALE:	
PROFESSIONAL ENGINEER:	Rosario Cardenas, P.E.
FLORIDA REG. NO.:	65493
HORIZONTAL SCALE:	N/A
VERTICAL SCALE:	N/A
SHEET No.:	26

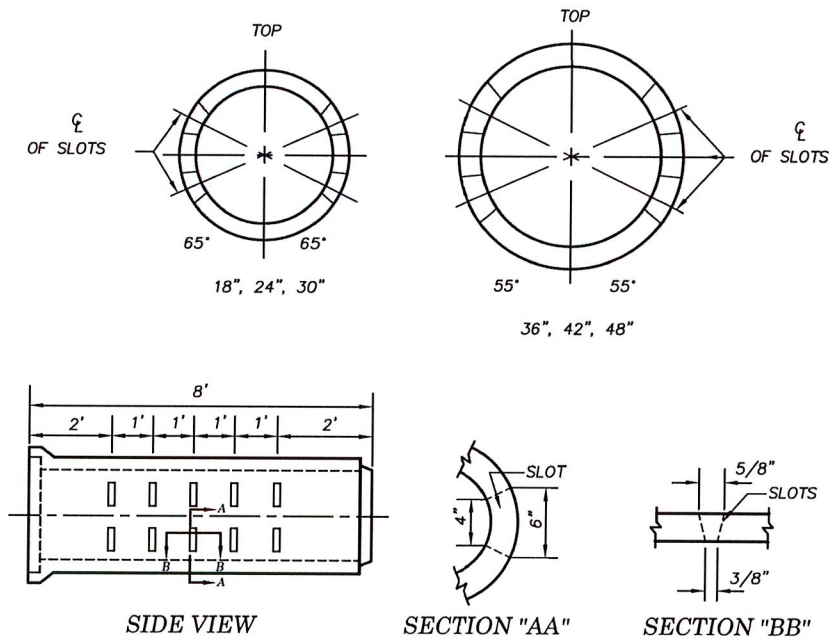


SIZE (DIAMETER)	ALUMINUM GAUGE
15"	16
18"	16
24"	14
30"	14
36"	12

- NOTES:
- 36" MIN. COVER OVER PIPE UNLESS OTHERWISE SHOWN ON THE PLANS.
  - FILTER FABRIC SHALL ENCASE ENTIRE WASHED ROCK ENVELOPE.
  - BOTTOM OF EXFILTRATION TRENCH SHALL BE 15'-0" BELOW EXISTING GROUND ELEVATION, UNLESS FIELD CONDITIONS WARRANT OTHERWISE.
  - WASHED ROCK TO EXTEND TO BOTTOM OF TRENCH.
  - PERFORATED PIPE TO BE CONSTRUCTED AT INVERT ELEVATION SHOWN ON PLANS.

TYPICAL FRENCH DRAIN CROSS SECTION  
CITY OF MIAMI DETAIL MISC. 35-86-26

N.T.S.

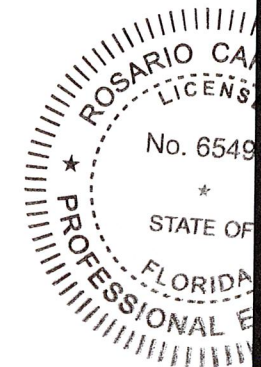


SLOTTED CONCRETE PIPE FRENCH DRAIN  
OPTION "A" CAST SLOT  
CITY OF MIAMI DETAIL MISC. 35-86-26

N.T.S.

GENERAL NOTES

- Concrete pipes shall meet the requirements of ASTM C76-70.
- Concrete pipes shall be placed with the slots positioned on the side.
- Alignment joints are standard. Gasketed joints required for 36" and larger diameter pipe. Gaskets optional for 30" diameter and below.
- The contractor may submit other methods of providing slots having equal or greater area of opening for approval by the Engineer.
- Filter fabric material is required. Joints shall lap a minimum of 1 foot. Filter fabric shall not be placed on ditch bottom.
- The Typical French Drain cross section and profile shall apply to the slotted concrete pipe French Drain.



CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE DETAILS

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: A.C.  
REVISIONS:

JOB No. B-38723  
FILE:  
GEN:  
6/21/19

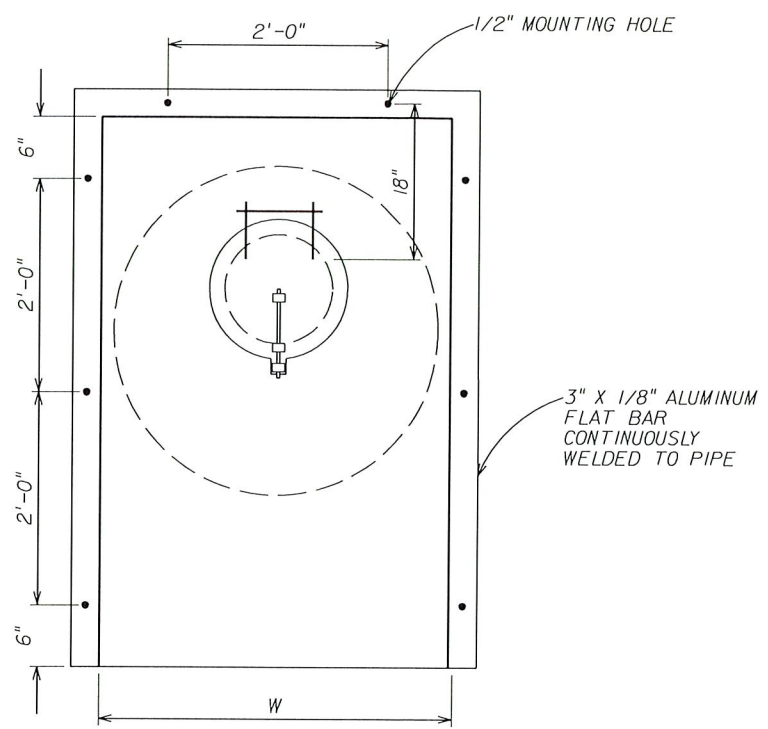
Rosario Cardenas, P.E.  
P.L. Reg. No. 65493

HORIZONTAL SCALE:  
N/A

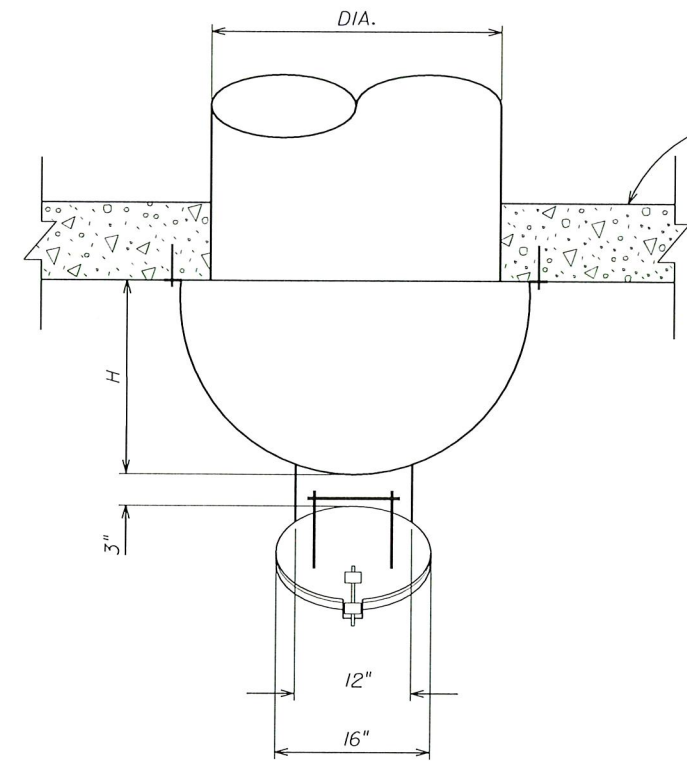
VERTICAL SCALE:  
N/A

SHEET No. 27

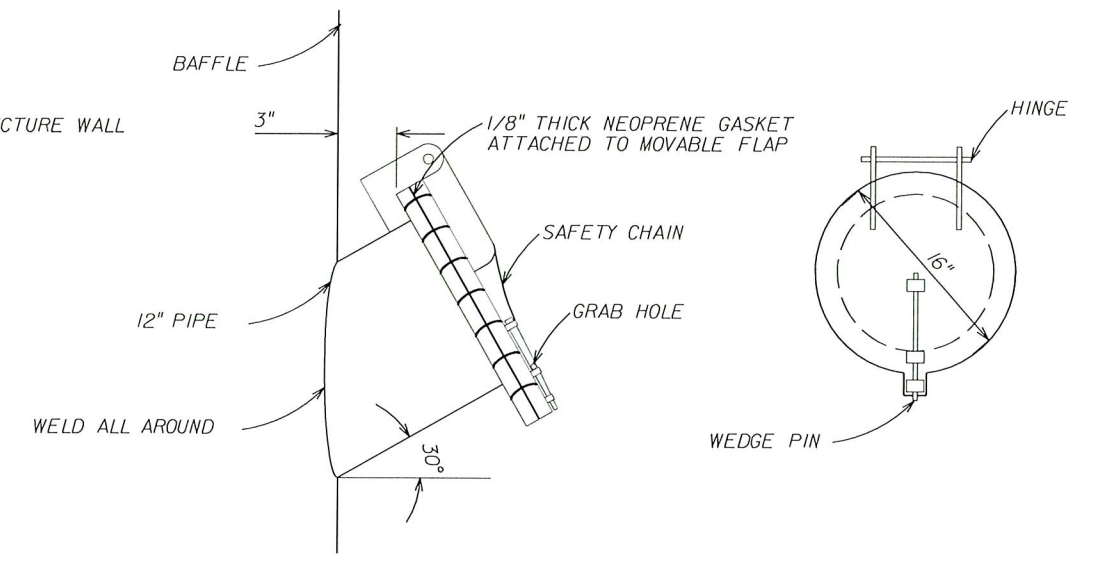
4/15/2019



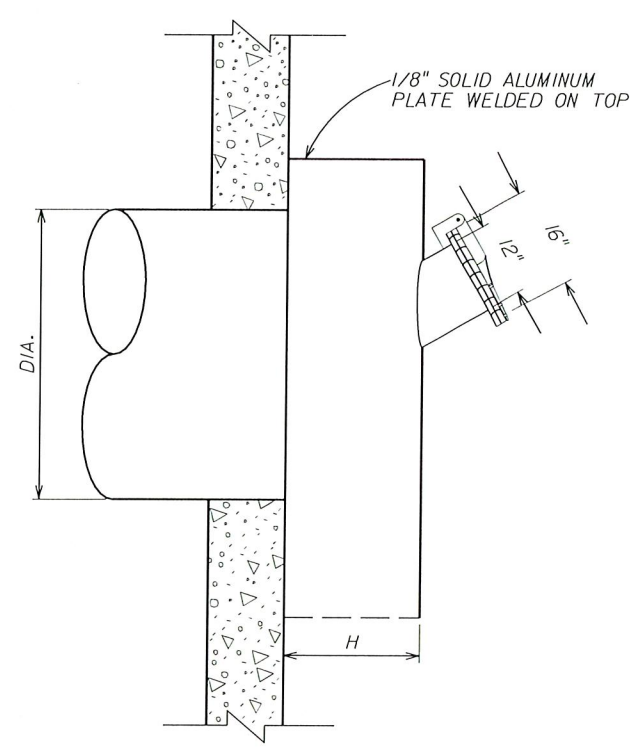
ELEVATION VIEW



PLAN VIEW

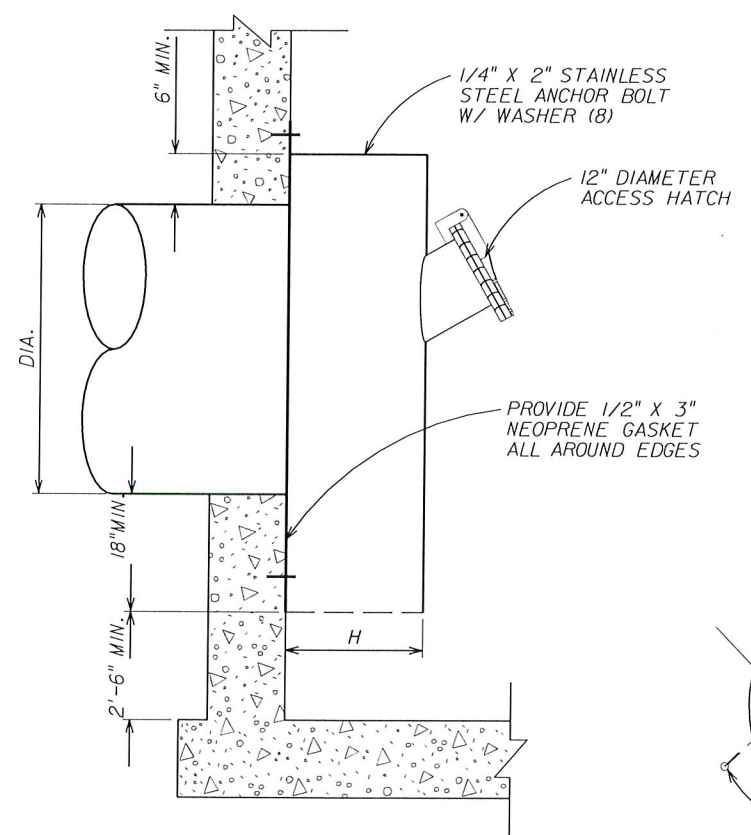


ACCESS HATCH DETAIL

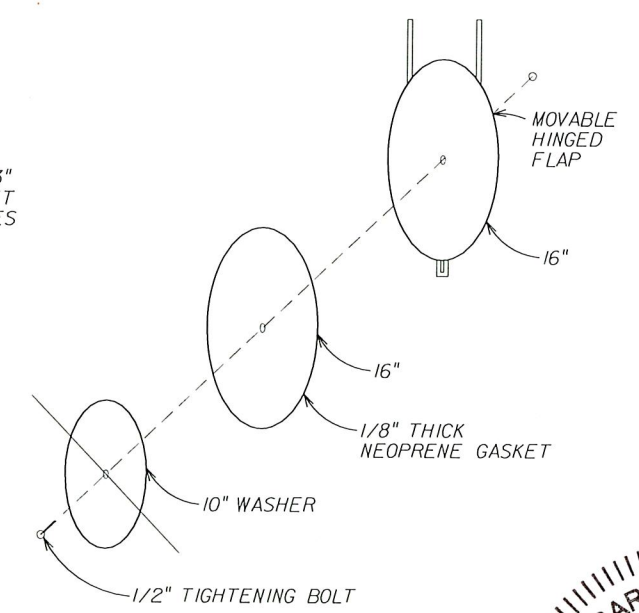


SIDE ELEVATION VIEW

TABLE OF DIMENSIONS		
PIPE DIA.	H	W
15"	10"	21"
18"	12"	24"
24"	16"	30"
30"	20"	36"
36"	24"	42"



BAFFLE INSTALLATION DETAIL

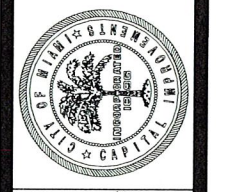


1/8" THICK NEOPRENE GASKET

STANDARD BAFFLE DETAILS  
CITY OF MIAMI DETAIL MISC. 35-86-39

N.T.S.

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

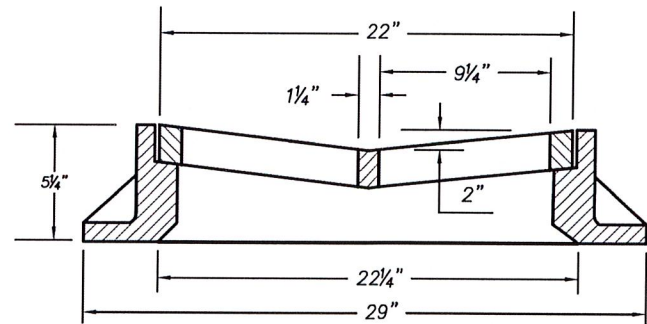
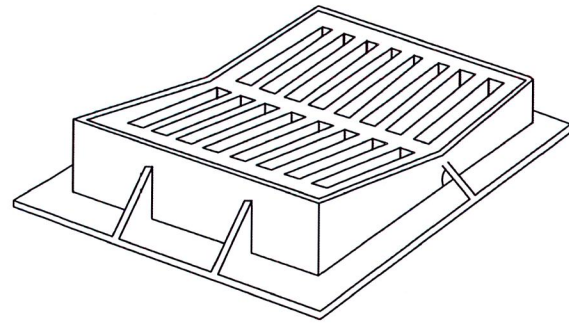
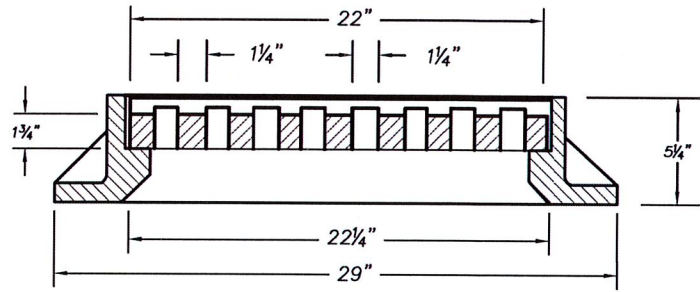
CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE DETAILS

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: A.C.  
REVISIONS:

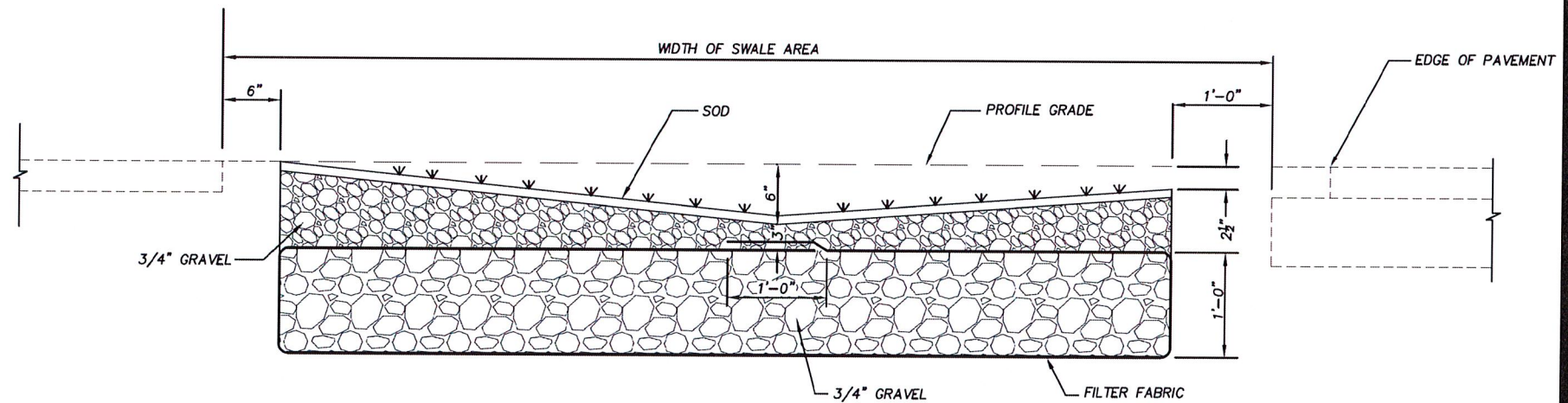


PROJECT No. B-36723  
SEAL No. 5193  
Rosario O'Donoghue, P.E.  
FL Reg. No. 65493  
HORIZONTAL SCALE: N/A  
VERTICAL SCALE: N/A  
SHEET No. 28

4/15/2019  
K:\V\0000003\_AW24\W\Drainage\ORD17003.DWG



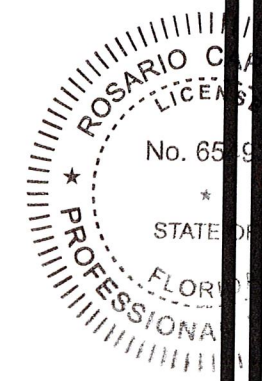
"V" TYPE CATCH BASIN FRAME & GRATE  
CITY OF MIAMI STANDARDS - MISC. 35-86-3  
(N.T.S.)



**NOTES:**

1. SWALE TRENCH SHALL BE CONSTRUCTED WHEN WIDTH OF DRIVEWAY APPROACH EXCEEDS 10'-0".
2. SWALE TRENCH CONSTRUCTION SHALL COVER REMAINING UNPAVED SWALE AREA ADJACENT TO PROPERTY BUT NOT EXCEED 34 PERCENT OF TOTAL LINEAR FOOTAGE WIDTH OF THE ABUTTING OWNER'S PRIVATE PROPERTY.
3. FIELD INSPECTION SHALL BE PERFORMED WHEN FILTER FABRIC IS INSTALLED, GRAVEL LAYER IS IN PLACE AND PRIOR TO BACKFILLING EXCAVATED AREA WITH FINAL GRAVEL LAYER.
4. CONTRACTOR IS RESPONSIBLE TO LOCATE AND PROTECT ALL EXISTING UTILITIES.

SWALE TRENCH DETAIL  
CITY OF MIAMI STANDARDS - MISC. 35-86-45  
(N.T.S.)



CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

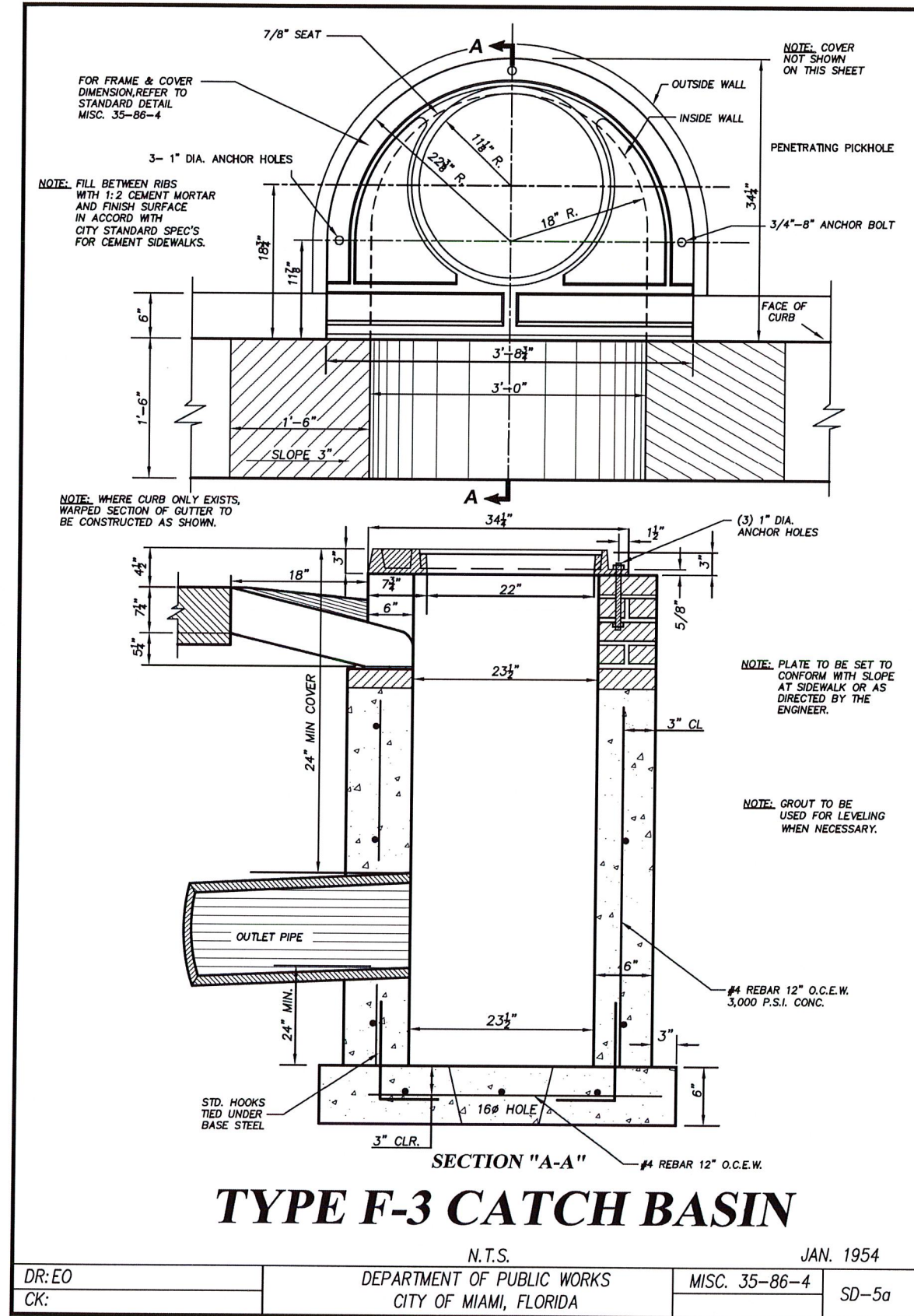
CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE DETAILS

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: A.C.  
REVISIONS:

DR. No. B-30723  
FILED  
SEAL  
No. 65493  
Rosario Cardenas  
6/21/19  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
Rosario Cardenas, P.E.  
F.L. Reg. No. 65493

HORIZONTAL SCALE: N/A  
VERTICAL SCALE: N/A  
SHEET No. 29

10/25/2019 AM 4:15:00 PM 003\_JM2414\_V1\_rainage\_QR017R004.DWG 4/15/2019



# TYPE F-3 CATCH BASIN

N.T.S. JAN. 1954

DR:EO	DEPARTMENT OF PUBLIC WORKS	MISC. 35-86-4	SD-5a
CK:	CITY OF MIAMI, FLORIDA		

TYPE "F-3" CATCH BASIN  
CITY OF MIAMI STANDARDS - MISC. 35-86-4  
(N.T.S.)

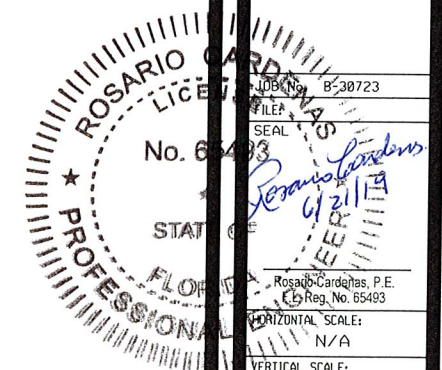
CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



**RS&H, Inc.**  
Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

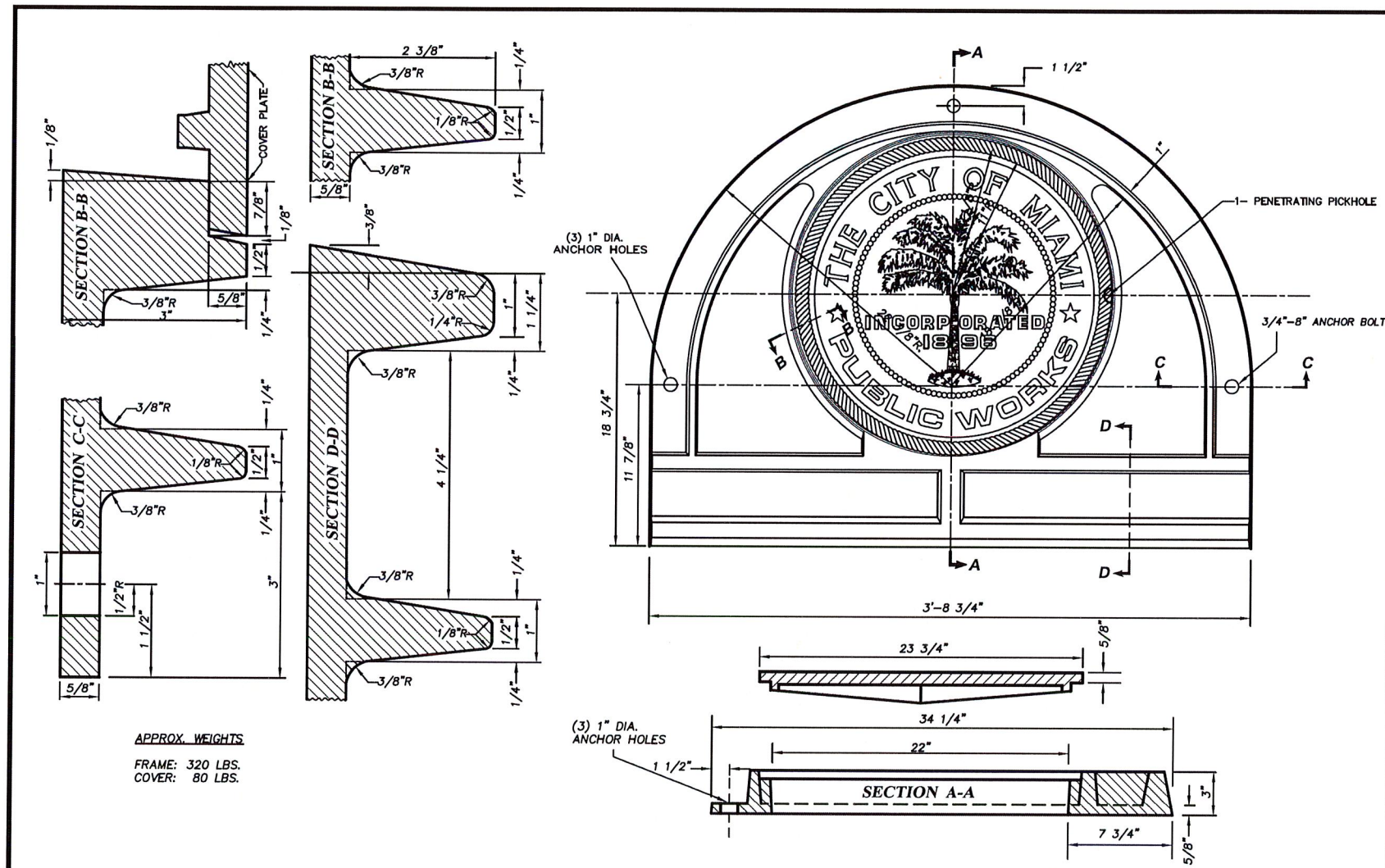
CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE DETAILS

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: A.C.  
REVISIONS:



FILE NO. B-20723  
SEAL  
No. 65493  
STAT. ENGINEER  
Rosario Cardenas, P.E.  
Reg. No. 65493  
HORIZONTAL SCALE: N/A  
VERTICAL SCALE: N/A  
SHEET No. 30

4/19/2019 10:55:50 AM x:\p\10000003\_JM24\4\drainage\Q1017005.dwg



APPROX. WEIGHTS  
 FRAME: 320 LBS.  
 COVER: 80 LBS.

### TYPE "F-3" CATCH BASIN FRAME & COVER

N.T.S.

JAN. 1954

DR: EO	DEPARTMENT OF PUBLIC WORKS CITY OF MIAMI, FLORIDA	MISC. 35-86-4	SD-5b
CK:			

TYPE "F-3" CATCH BASIN FRAME & COVER  
 CITY OF MIAMI STANDARDS - MISC. 35-86-4  
 (N.T.S.)

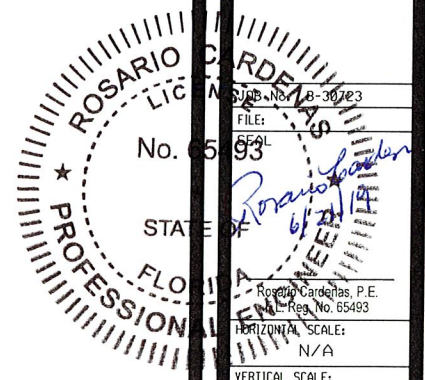
CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



RS&H, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 DRAINAGE DETAILS

DATE: 07/19/16  
 DESIGN: R.C.  
 DRAWN: O.R.  
 CHECKED: A.C.  
 REVISIONS:

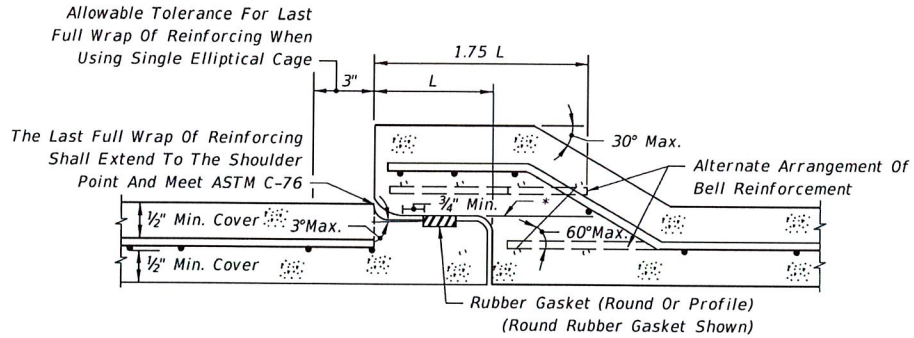


Horizontal Scale: N/A  
 Vertical Scale: N/A  
 SHEET No. 31

4/15/2019 10:55:54 AM X:\V\000003\_JWZ\AV\Drainage\Q10717006.DWG

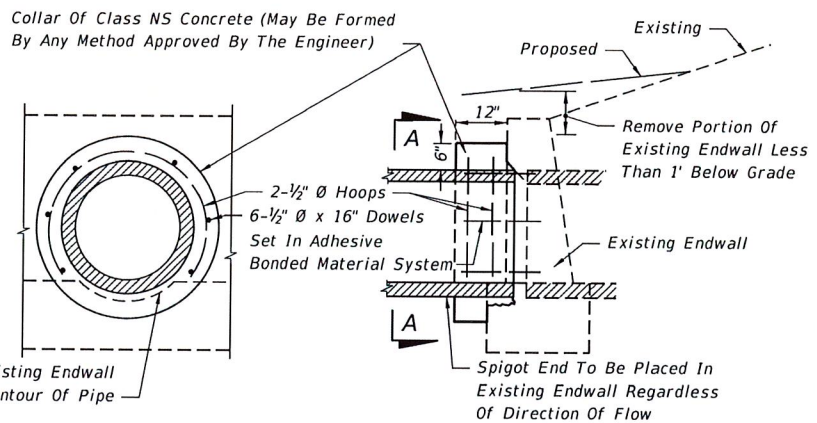
**SCHEDULE OF BELL REINFORCEMENT**  
Classes II,III,IV,V; Wall A,B,C

Nominal Pipe Diameter	Design Bell Reinforcement in <sup>2</sup> per foot	Maximum Reinforcement Under Tolerance in <sup>2</sup> per foot
15"	0.07	0.010
18"	0.07	0.010
24"	0.09	0.010
30"	0.12	0.010
36"	0.14	0.010
42"	0.16	0.010
48"	0.19	0.011
54"	0.21	0.012
60"	0.23	0.0135
66"	0.26	0.015
72"	0.28	0.0165
78"	0.30	0.018
84"	0.33	0.0195
90"	0.35	0.021
96"	0.37	0.0225
102"	0.40	0.024
108"	0.42	0.0255



\*All circumferential steel located above this line within 1.75 L is defined as bell reinforcement.

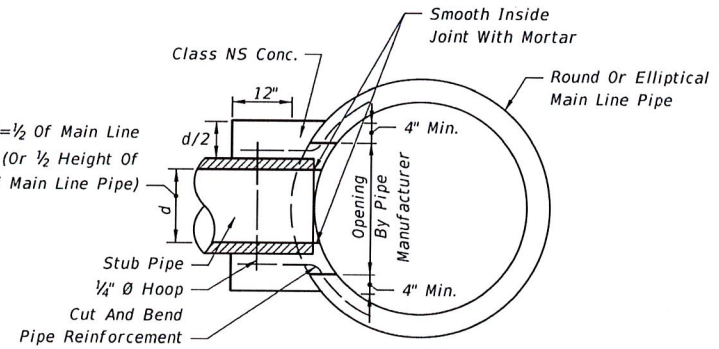
**ROUND RUBBER GASKET SHOWN  
DETAIL OF BELL & SPIGOT CONCRETE PIPE JOINT  
USING ROUND OR PROFILE RUBBER GASKET**



**SECTION AA LONGITUDINAL SECTION**

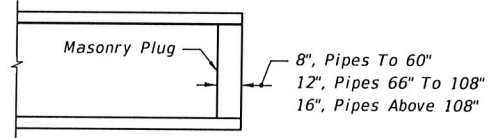
Note: Cost for removal and disposal of portions of top and toe of existing endwall and cost of concrete, reinforcing steel and construction of collar to be included in the contract unit price for pipe culvert.

**CONCRETE COLLAR FOR EXTENSION OF EXISTING PIPE CULVERTS**



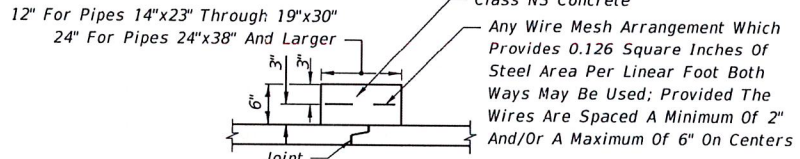
Cost of concrete and steel to be included in contract unit price for pipe culvert.

**CONCRETE COLLAR FOR JOINING MAINLINE PIPE AND STUB PIPE**



Note: Unless otherwise called for in the plans, the cost of plugging pipes to be included in contract unit price for new pipe.

**PIPE PLUG**



**CONCRETE JACKET**

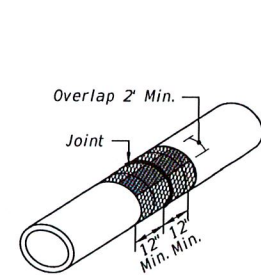


Filter Fabric Jacket Required **PREFORMED PLASTIC JOINT (BEFORE PULL-UP)**

Filter Fabric Jacket Required **PROFILE RUBBER GASKET (BEFORE PULL-UP)**

Cost of concrete jacket or filter fabric jacket to be included in cost of elliptical concrete pipe culverts.

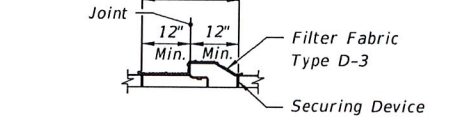
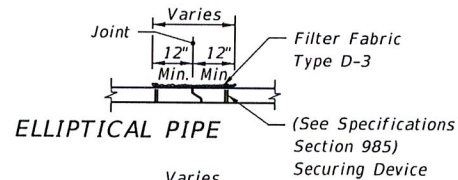
**ELLIPTICAL CONCRETE PIPE JOINTS**



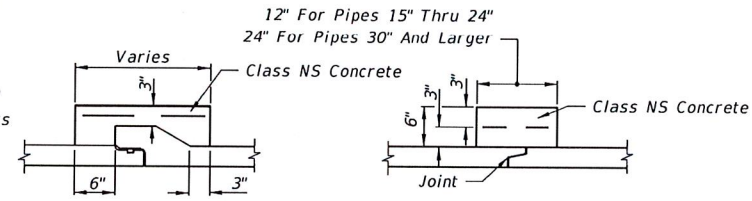
**ELLIPTICAL PIPE SHOWN ISOMETRIC VIEW**

Cost of filter fabric jacket to be included in cost of pipe culverts.

**FOR ALL PIPE TYPES - CONCRETE PIPE SHOWN FILTER FABRIC JACKET**

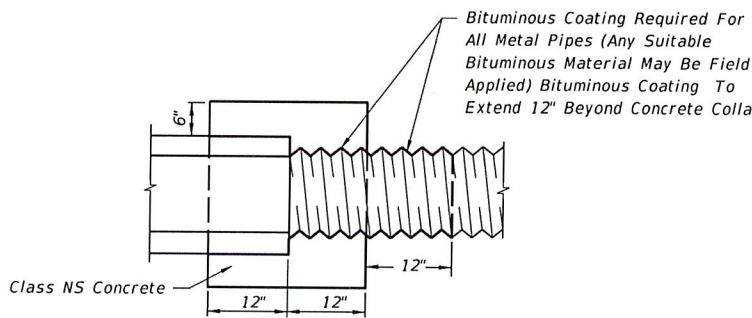


**ROUND PIPE PIPE SECTIONS**



Note: For reinforcement see elliptical pipe concrete jacket. (All Pipe Sizes)

**BELL AND SPIGOT TONGUE & GROOVE DISSIMILAR JOINTS**



Note: Cost of concrete and bituminous coating to be included in contract unit price for either new pipe or Mitered End Section.

Alternate connection must be approved by the State Drainage Engineer.

Do not use a concrete jacket to join metal pipes of dissimilar materials.

**DISSIMILAR TYPES**

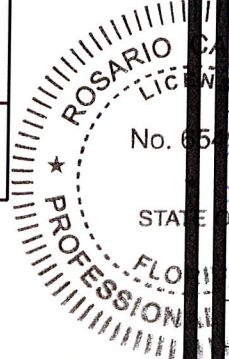
**CONCRETE JACKET FOR CONNECTING DISSIMILAR TYPES OF PIPE AND CONCRETE PIPES WITH DISSIMILAR JOINTS**

10/16/2017 8:59:11 AM

LAST REVISION 11/01/17	DESCRIPTION:	FDOT FY 2018-19 STANDARD PLANS	MISCELLANEOUS DRAINAGE DETAILS	INDEX 430-001	SHEET 1 of 3
---------------------------	--------------	--------------------------------------	--------------------------------	------------------	-----------------

CONCRETE JACKET FOR CONNECTING DISSIMILAR TYPES OF PIPE AND CONCRETE PIPES WITH DISSIMILAR JOINTS  
FDOT STANDARD PLANS - INDEX 430-001, SHEET 1 OF 3

(N.T.S.)



CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS & TRANSPORTATION DEPARTMENT

RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
DRAINAGE DETAILS

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: A.C.  
REVISIONS:

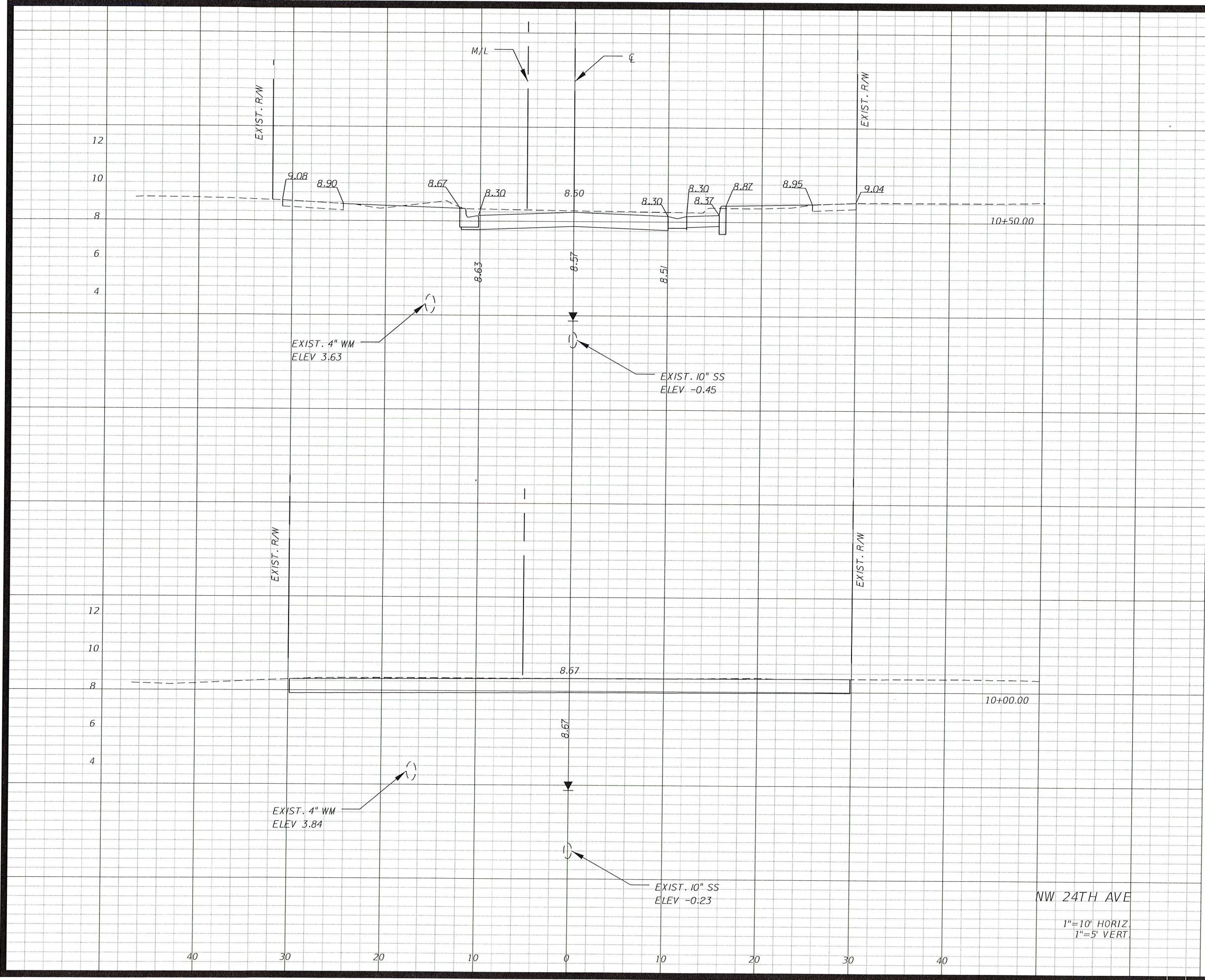
FILE: 430-001-18-0023  
SEAL: [Signature]  
No. 65493  
DATE: 6/21/19

Rosario Cardenas, P.E.  
E.L. Reg. No. 65493

HORIZONTAL SCALE: N/A  
VERTICAL SCALE: N/A

SHEET No. 32





Regular Exc.		Embankment	
A	V	A	V

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
CROSS SECTIONS

**RS&H**  
Reynolds, Smith and Hills, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

DATE: 05/31/12  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

No. 513  
FILE: 513  
SEAL: 513

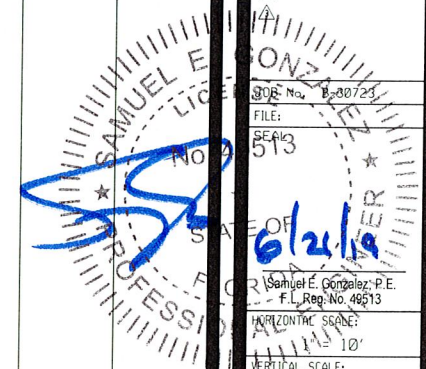
Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:  
1" = 10'

VERTICAL SCALE:  
1" = 5'

SHEET No. 33

NW 24TH AVE  
1" = 10' HORIZ  
1" = 5' VERT

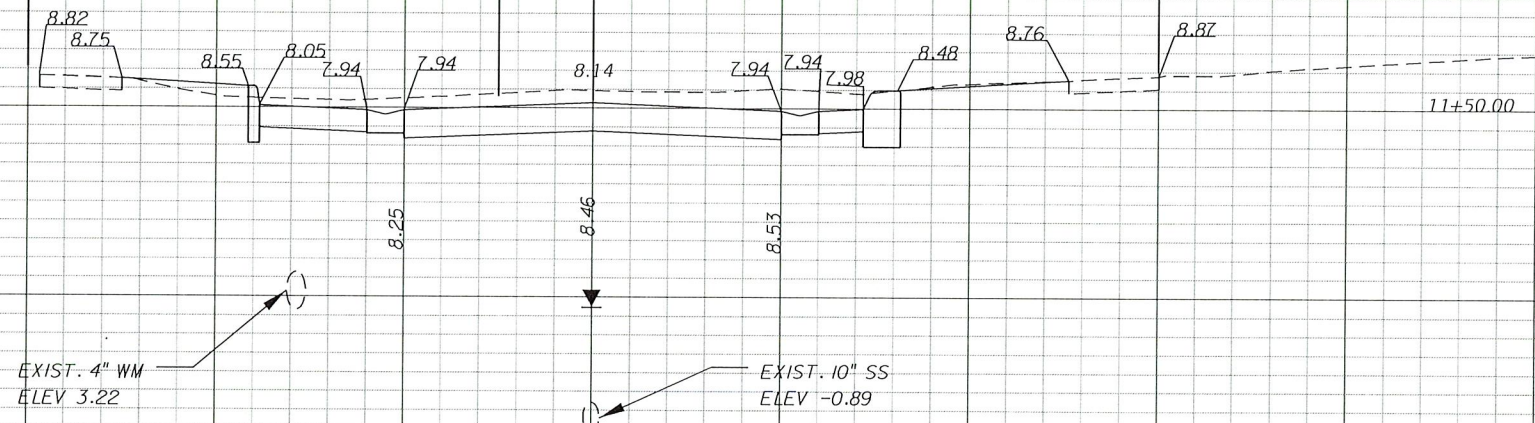


Regular Exc.    Embankment  
 A    V    A    V

12  
10  
8  
6  
4

EXIST. R/W

EXIST. R/W



11+50.00

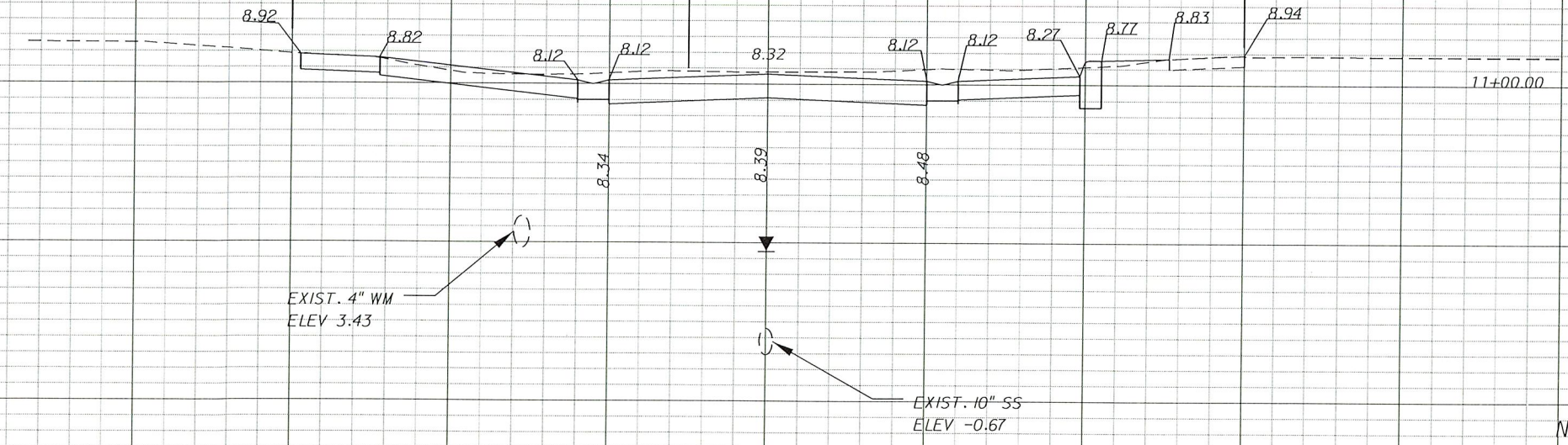
EXIST. 4" WM  
ELEV 3.22

EXIST. 10" SS  
ELEV -0.89

12  
10  
8  
6  
4

EXIST. R/W

EXIST. R/W



11+00.00

EXIST. 4" WM  
ELEV 3.43

EXIST. 10" SS  
ELEV -0.67

NW 24TH AVE

1" = 10' HORIZ.  
1" = 5' VERT.

40    30    20    10    0    10    20    30    40

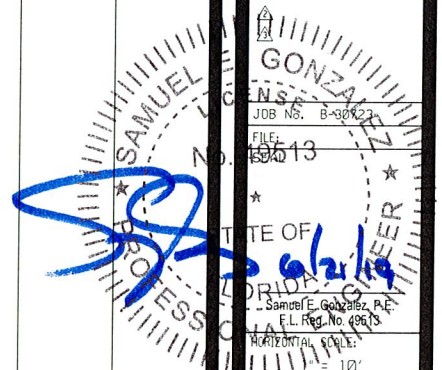
CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



**RS&H**  
 Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 CROSS SECTIONS

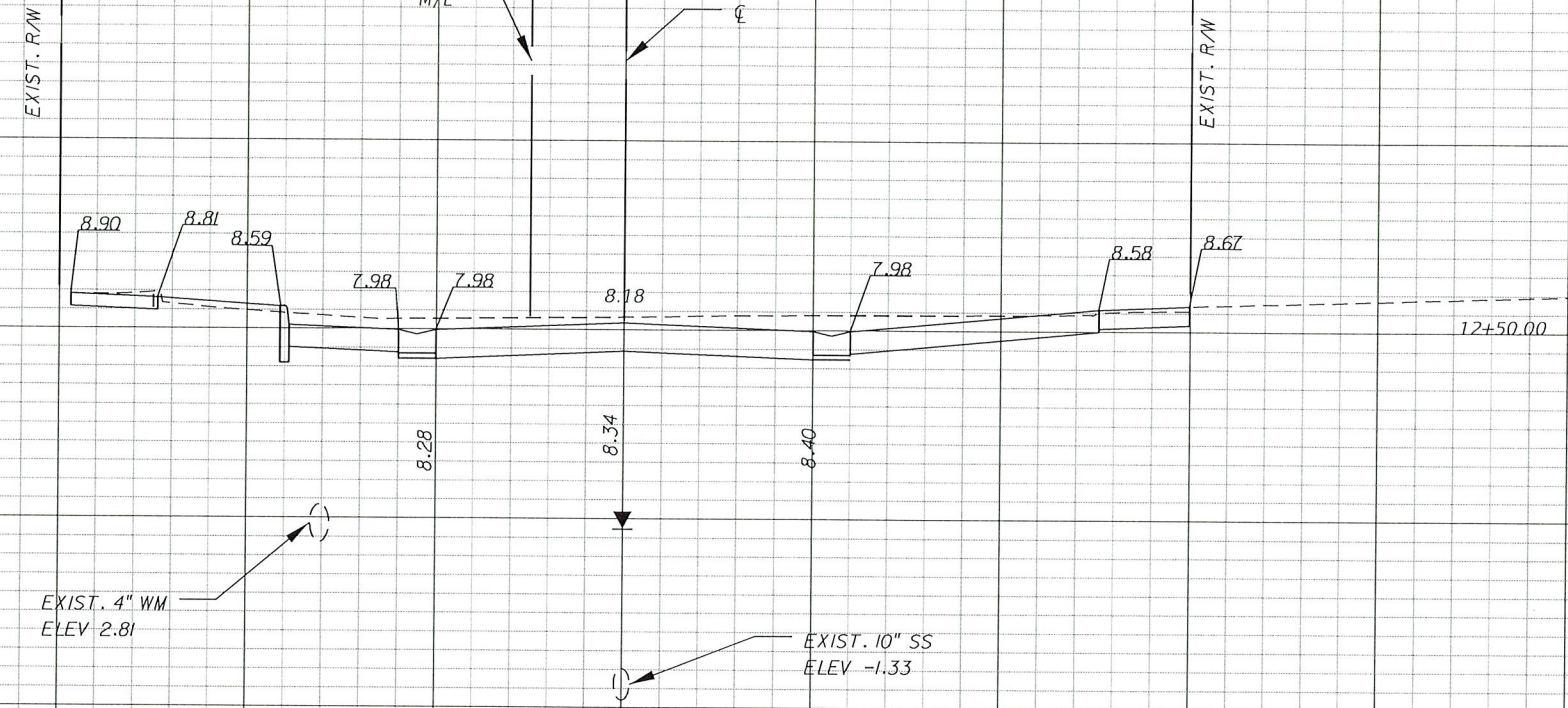
DATE: 05/31/12  
 DESIGN: S.G.  
 DRAWN: D.R.  
 CHECKED: L.M.  
 REVISIONS:



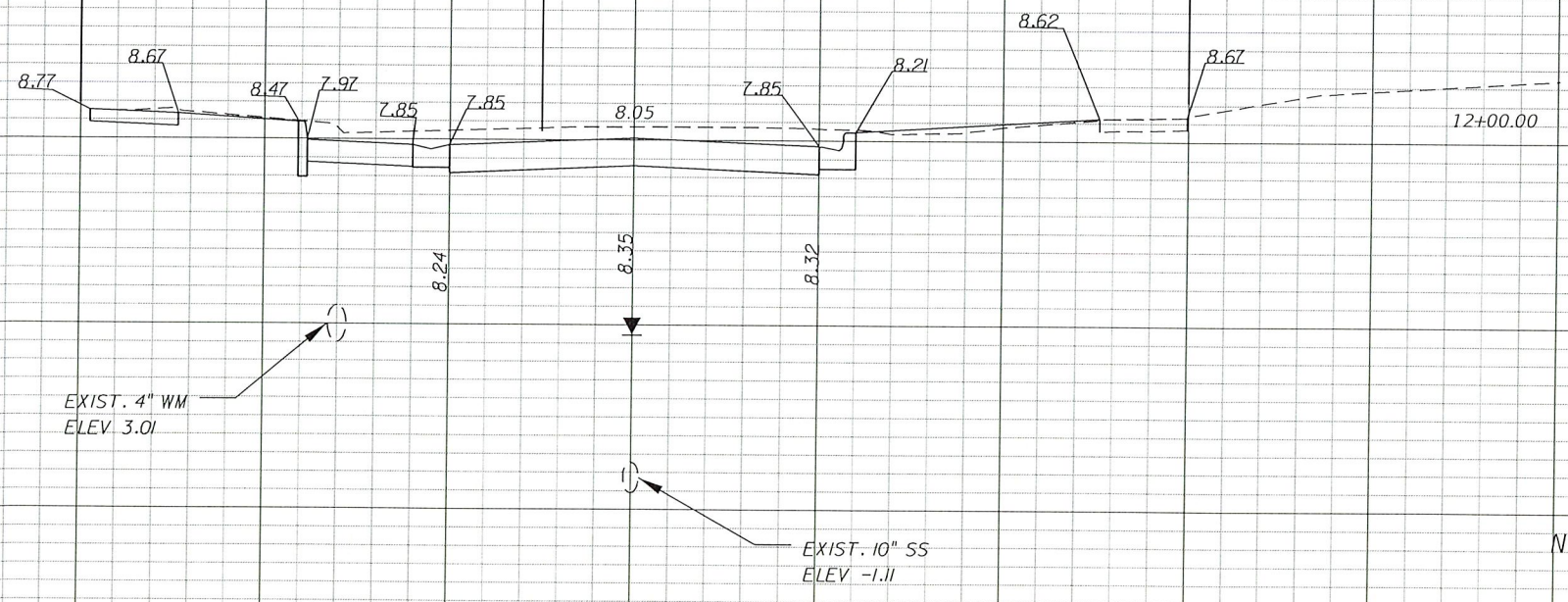
FILE: 110613  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 SAMUEL E. GONZALEZ, P.E.  
 F.L. Reg. No. 130613  
 HORIZONTAL SCALE:  
 1" = 10'  
 VERTICAL SCALE:  
 1" = 5'  
 SHEET No. 34

Regular Exc.		Embankment	
A	V	A	V

12  
10  
8  
6  
4



12  
10  
8  
6  
4



NW 24TH AVE  
1"=10' HORIZ.  
1"=5' VERT.

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

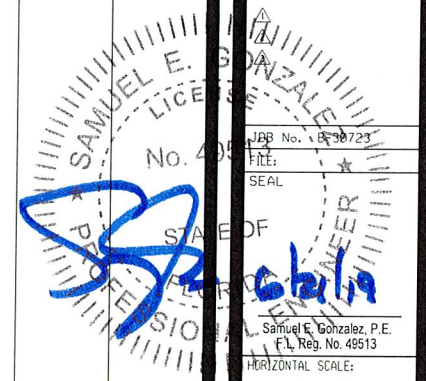


**RS&H**

Reynolds, Smith and Hills, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
CROSS SECTIONS

DATE: 05/31/12  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:



JOB No. 12-0723  
FILE:  
SEAL

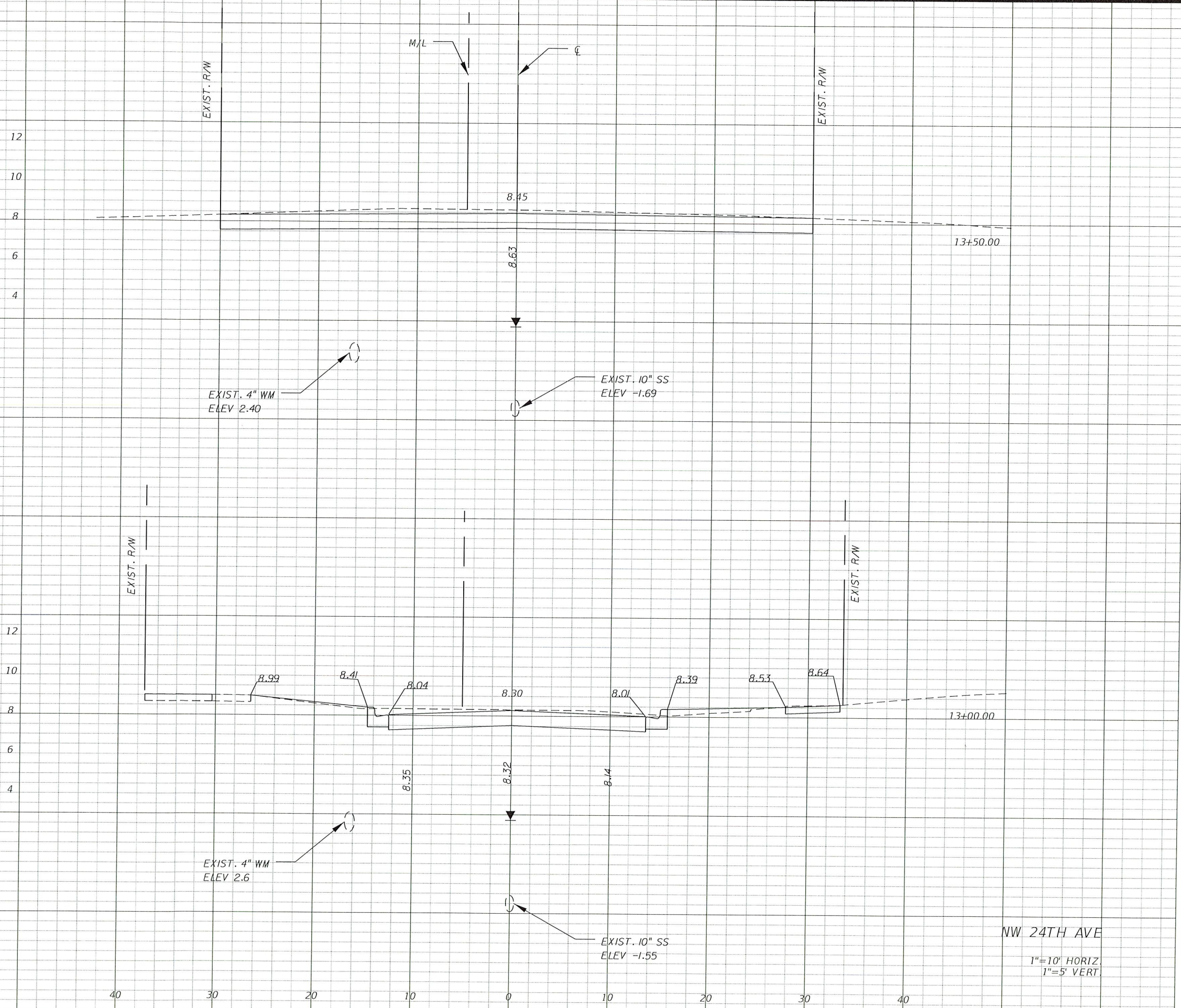
Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:  
1" = 10'

VERTICAL SCALE:  
1" = 5'

SHEET No. 35

Regular Exc.		Embankment	
A	V	A	V



CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT

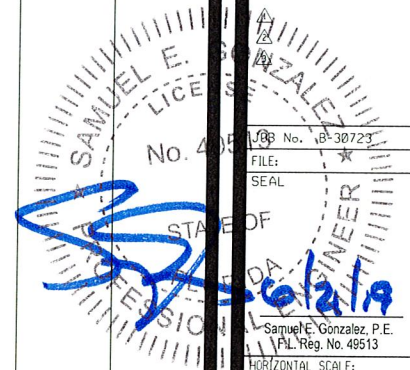


**RS&H**

Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 CROSS SECTIONS

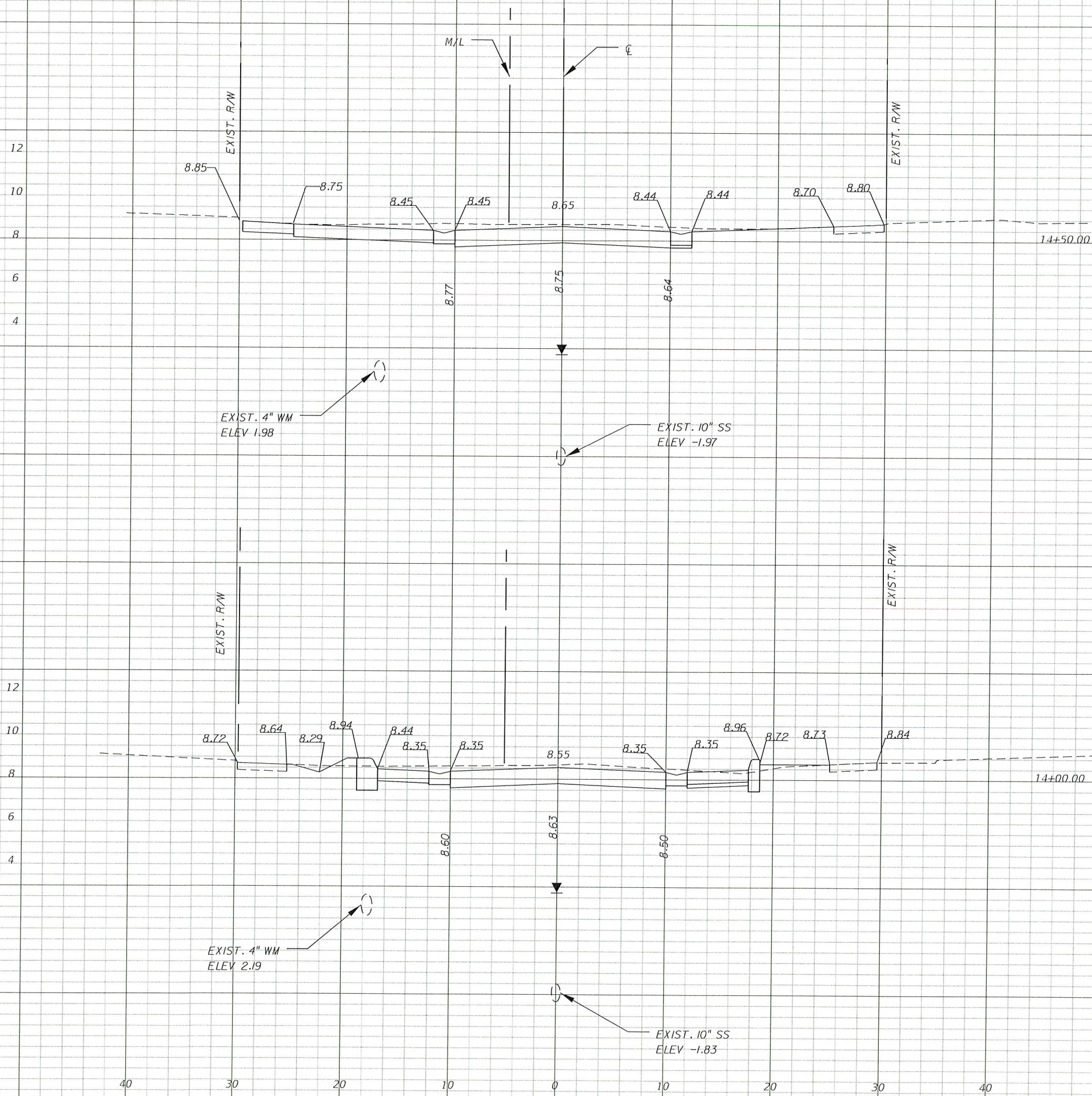
DATE: 05/31/12  
 DESIGN: S.G.  
 DRAWN: D.R.  
 CHECKED: L.M.  
 REVISIONS:



NW 24TH AVE  
 1" = 10' HORIZ.  
 1" = 5' VERT.

JOB No. 08-30723  
 FILE: No. 48513  
 SEAL  
 STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 Samuel E. Gonzalez, P.E.  
 P.L. Reg. No. 48513  
 HORIZONTAL SCALE:  
 1" = 10'  
 VERTICAL SCALE:  
 1" = 5'  
 SHEET No. 36

Regular Exc.		Embankment	
A	V	A	V



NW 24TH AVE  
 1"=10' HORIZ.  
 1"=5' VERT.

CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT

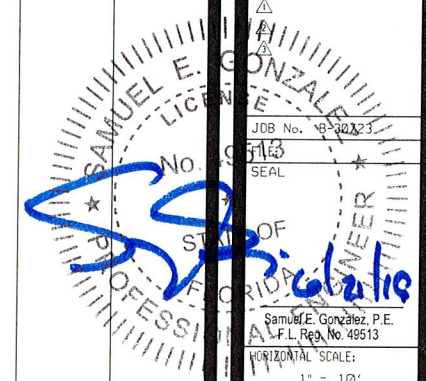


**RS&H**

Reynolds, Smith and Hills, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 CROSS SECTIONS

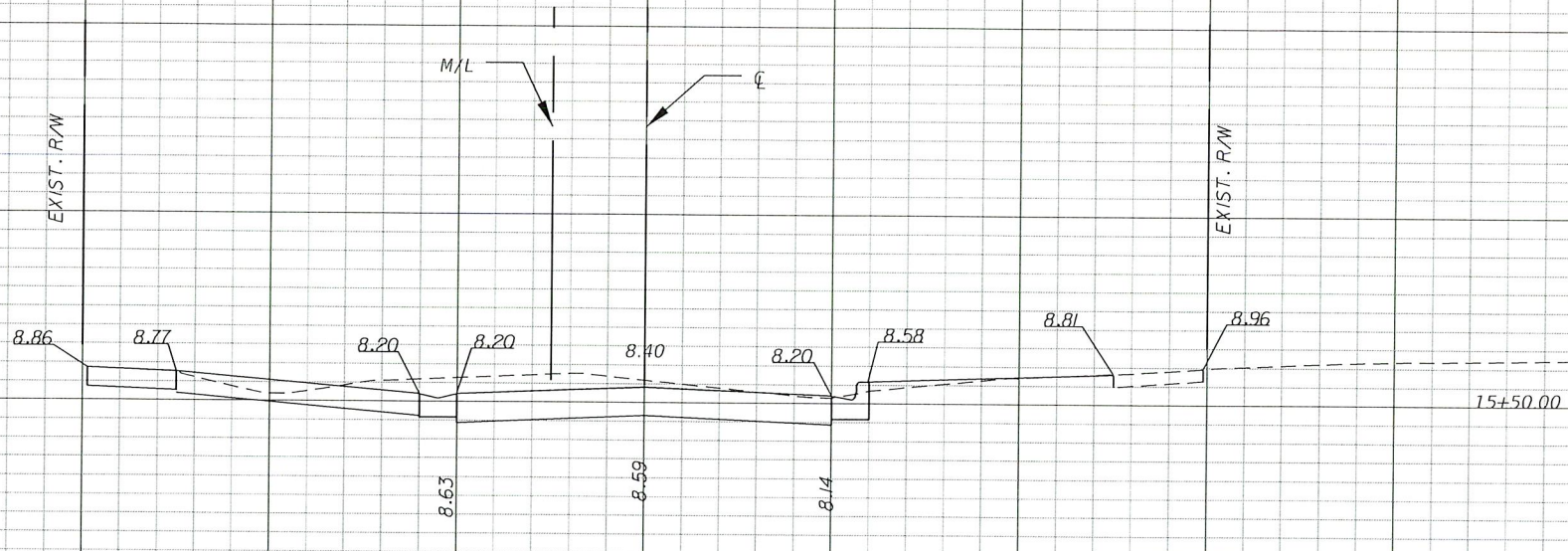
DATE: 05/31/12  
 DESIGN: S.G.  
 DRAWN: D.R.  
 CHECKED: L.M.  
 REVISIONS:



JOB No. 12-002  
 SEAL  
 Samuel E. Gonzalez, P.E.  
 F.L. Reg. No. 49513  
 HORIZONTAL SCALE:  
 1" = 10'  
 VERTICAL SCALE:  
 1" = 5'  
 SHEET No. 37

Regular Exc.		Embankment	
A	V	A	V

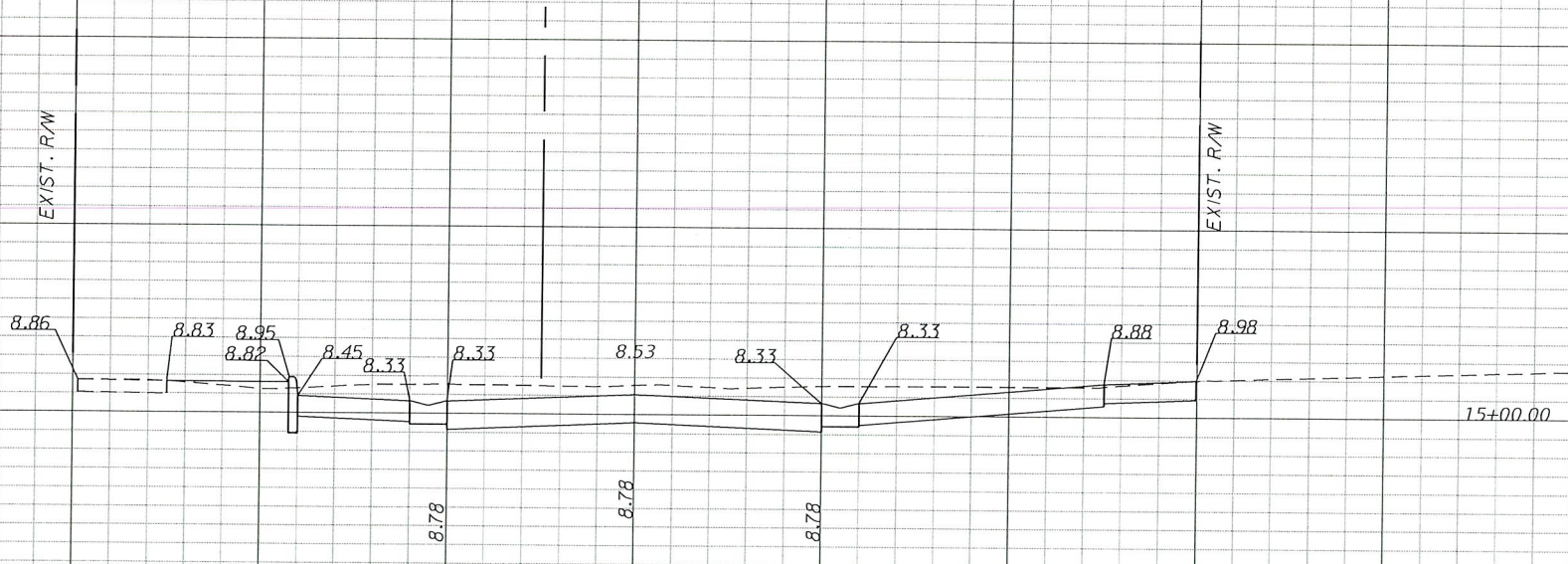
12  
10  
8  
6  
4



EXIST. 4" WM  
ELEV 1.56

EXIST. 10" SS  
ELEV -2.25

12  
10  
8  
6  
4



EXIST. 4" WM  
ELEV 1.78

EXIST. 10" SS  
ELEV -2.11

NW 24TH AVE

1"=10' HORIZ.  
1"=5' VERT.

40 30 20 10 0 10 20 30 40

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

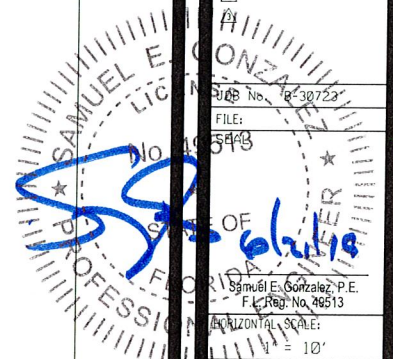


**RS&H**

Reynolds, Smith and Hills, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
CROSS SECTIONS

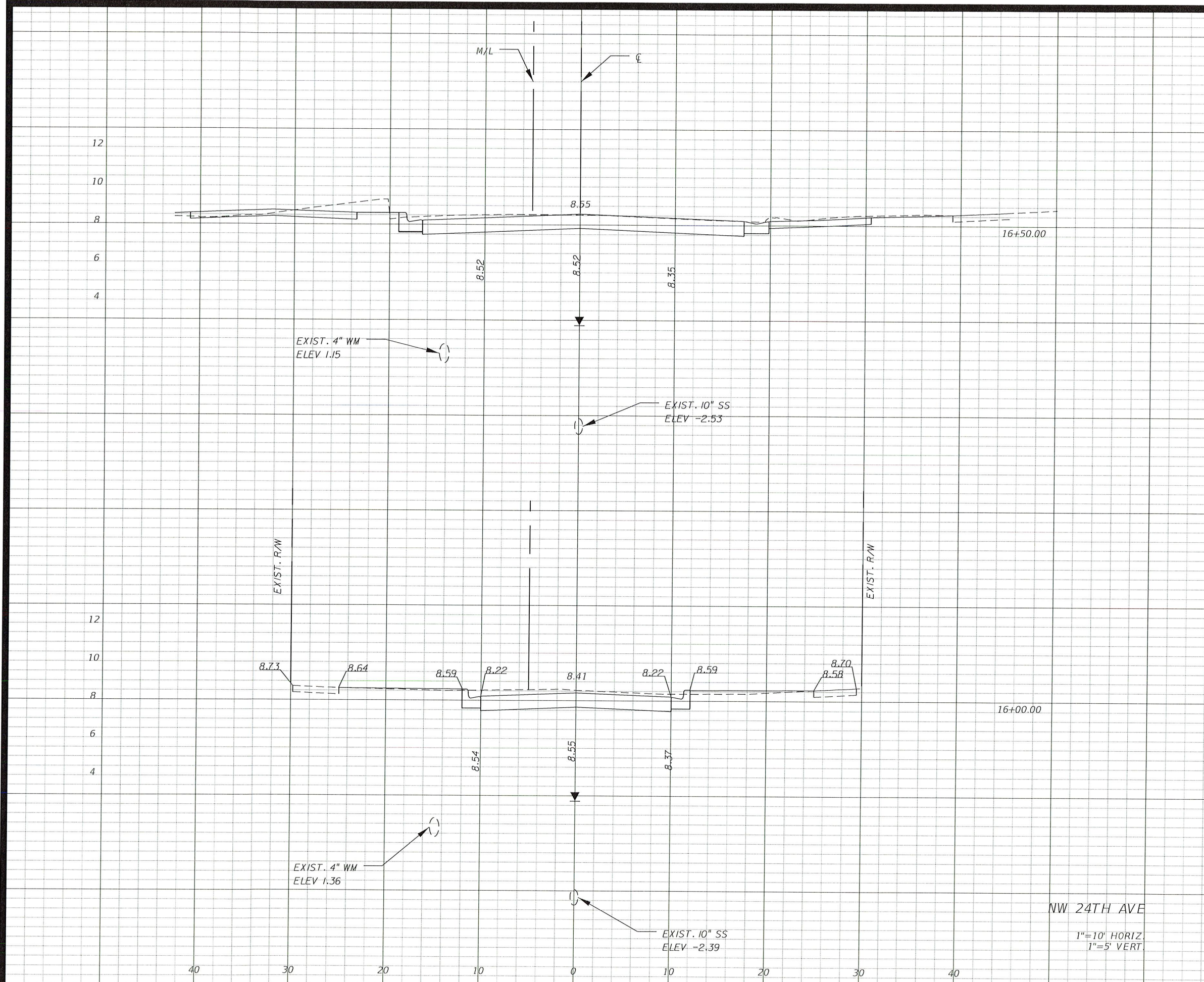
DATE: 05/31/12  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:



FILE: 10-5443  
Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 48513  
HORIZONTAL SCALE:  
VERTICAL SCALE:  
1" = 5'  
SHEET No. 38

Regular Exc.    Embankment

A    V    A    V



16+50.00

16+00.00

NW 24TH AVE

1" = 10' HORIZ.  
1" = 5' VERT.

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



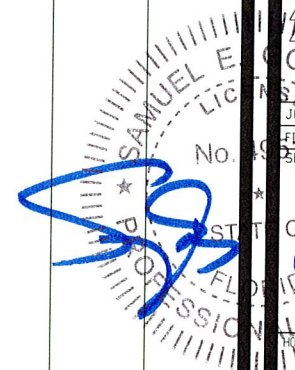
**RS&H**

Reynolds, Smith and Hills, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
CROSS SECTIONS

DATE: 05/31/12  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. 120723  
Files  
Date



Samuel E. Gonzalez, P.E.  
FL Reg. No. 49513

HORIZONTAL SCALE:  
1" = 10'

VERTICAL SCALE:  
1" = 5'

SHEET No. 39

THE FOLLOWING NARRATIVE OF THE STORMWATER POLLUTION PREVENTION PLAN CONTAINS REFERENCES TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE DESIGN STANDARDS, AND OTHER SHEETS OF THESE CONSTRUCTION PLANS. THE FIRST SHEET OF THE CONSTRUCTION PLANS (CALLED THE KEY SHEET) CONTAINS AN INDEX TO THE OTHER SHEETS. THE COMPLETE STORMWATER POLLUTION PREVENTION PLANS INCLUDES SEVERAL ITEMS: THIS NARRATIVE DESCRIPTION, THE DOCUMENTS REFERENCED IN THIS NARRATIVE, THE CONTRACTOR'S APPROVED EROSION CONTROL PLANS REQUIRED BY FDOT SPECIFICATION SECTION 104, AND REPORTS OF INSPECTIONS MADE DURING CONSTRUCTION.

1.0 SITE DESCRIPTION:

1.a NATURE OF CONSTRUCTION ACTIVITIES:

THE NW 24TH AVENUE IMPROVEMENTS PROJECT IS BOUNDED BY NW 28TH STREET TO THE SOUTH AND NW 30TH STREET TO THE NORTH. THE PROJECT INVOLVES ROADWAY AND DRAINAGE IMPROVEMENTS, REPLACEMENT OF DAMAGED SIDEWALK, ADA PEDESTRIAN RAMPS, AND SIGNING AND PAVEMENT MARKING IMPROVEMENTS.

1.b SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:

IN THE SECTION 104 EROSION CONTROL PLAN OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION FOR ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF MAJOR ACTIVITIES DESCRIBED BELOW, UNLESS THE CONTRACTOR PROPOSES A DIFFERENT SEQUENCE THAT IS EQUAL OR BETTER AT CONTROLLING EROSION AND TRAPPING SEDIMENT AND IS APPROVED BY THE ENGINEER.

FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER UPSTREAM AREAS ARE STABILIZED.

1. CLEARING, GRUBBING, AND EARTHWORK, ASSOCIATED WITH DRAINAGE CONSTRUCTION.
2. CLEARING, GRUBBING AND EARTHWORK, ASSOCIATED WITH ROADWAY RECONSTRUCTION.

1.c AREA ESTIMATES:

TOTAL SITE AREA: 0.85 AC  
TOTAL AREA TO BE DISTURBED: 0.76 AC

1.d QUALITY OF EXISTING STORMWATER DISCHARGE:

THE EXISTING STORMWATER RUNOFF FROM THE PROJECT SITE AREA IS COLLECTED THRU DITCH BOTTOM INLETS CONNECTED TO EXISTING FRENCH DRAINS.

SOILS DATA: THE RESULTS OF THE SOIL BORINGS ARE PRESENTED IN THE GEOTECHNICAL REPORT PREPARED BY HR ENGINEERING SERVICES, INC. (JULY 2016).

1.e SITE MAP:

THE CONTRACT PLANS ARE BEING USED AS THE SITE MAPS. THE LOCATION OF THE REQUIRED INFORMATION IS DESCRIBED BELOW. THE SHEET NUMBERS FOR THE SHEETS REFERENCED ARE IDENTIFIED ON THE KEY SHEET OF THE CONTRACT PLANS SET.

DRAINAGE PATTERNS:

THE DRAINAGE BASIN DIVIDES AND FLOW AREAS ARE SHOWN ON THE DRAINAGE MAP.

APPROXIMATE SLOPES:

THE SLOPES OF THE SITE CAN BE SEEN IN THE ROADWAY TYPICAL SECTION AND CROSS SECTION SHEETS.

AREAS OF SOIL DISTURBANCE:

THE AREAS TO BE DISTURBED ARE INDICATED ON THE ROADWAY PLANS AND CROSS SECTIONS SHEETS. ANY AREAS WHERE PERMANENT FEATURES ARE SHOWN TO BE CONSTRUCTED ABOVE OR BELOW GROUND WILL BE DISTURBED.

AREAS NOT TO BE DISTURBED:

APPROXIMATELY THE ENTIRE PROJECT WILL BE DISTURBED DURING CONSTRUCTION.

LOCATIONS OF TEMPORARY AND PERMANENT CONTROLS:

TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AND THEIR LOCATIONS ARE NOTED IN THE EROSION CONTROL DETAILS. PERMANENT EROSION AND SEDIMENT CONTROL DEVICES AND THEIR LOCATIONS ARE SHOWN ON THE ROADWAY PLANS.

AREAS TO BE STABILIZED:

TEMPORARY STABILIZATION PRACTICES ARE SHOWN IN THE SAME LOCATION AS THE TEMPORARY CONTROLS MENTIONED ABOVE. PERMANENT STABILIZATION IS SHOWN ON THE ROADWAY PLANS.

SURFACE WATERS:

THERE IS NO SURFACE WATER WITHIN THE PROJECT VICINITY.

DISCHARGE POINTS TO SURFACE WATERS:

THERE IS NO DISCHARGE POINT TO SURFACE WATERS WITHIN THE PROJECT LIMITS.

1.f RECEIVING WATERS:  
THERE IS NO RECEIVING WATER.

2.0 CONTROLS:

2.a EROSION AND SEDIMENT CONTROL:

IN FDOT SPECIFICATION SECTION 104 EROSION CONTROL PLANS, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STABILIZATION AND STRUCTURAL PRACTICES BASED ON THE CONTRACTOR'S PROPOSED TRAFFIC CONTROL PLAN.

2.a.1 STABILIZATION PRACTICES

IN FDOT SPECIFICATION SECTION 104 EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE STABILIZATION PRACTICES OTHERWISE PREVENT THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE. SEDIMENT CONTROLS SHALL BE IN PLACE BEFORE DISTURBING SOIL UPSTREAM OF THE CONTROL. THE STRUCTURAL PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY:

SILT FENCE, SYNTHETIC BALES, AND INLET PROTECTION SYSTEMS IN ACCORDANCE WITH CITY OF MIAMI EROSION AND SEDIMENT CONTROL FOR CONSTRUCTION SITE DETAILS \*MISC 35-89-6

PERMANENT:

\* SOD

2.b STORMWATER MANAGEMENT

THE STORMWATER SYSTEM CONSISTS OF CITY OF MIAMI CATCH BASINS, PIPES, AND ISOLATED FRENCH DRAIN SYSTEM.

2.c OTHER CONTROLS

THE CONTRACTOR SHALL PRACTICE GOOD HOUSEKEEPING BY INSTITUTING A CLEAN, ORDERLY, CONSTRUCTION SITE. THE FOLLOWING CONTROLS SHALL BE IMPLEMENTED TO FURTHER REDUCE POLLUTION AT THE PROJECT SITE:

2.c.1 DISCHARGE OF MATERIALS TO SURFACE WATERS

NO CONSTRUCTION MATERIAL SHALL BE DISCHARGED TO WATERS OF THE STATE UNLESS AUTHORIZED BY A SECTION 404 PERMIT AND/OR THE STATE OF FLORIDA ENVIRONMENTAL RESOURCE PERMIT. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF IN AN APPROVED UPLAND LOCATION. BUILDING MATERIAL SHALL NOT BE DISPOSED OF IN WETLANDS, PONDS, OR CANALS.

2.c.2 OFF-SITE VEHICLE TRACKING & DUST CONTROL

THE CONTRACTOR SHALL TAKE MEASURES TO INSURE THE CLEANUP OF SEDIMENTS THAT HAVE BEEN TRACKED BY VEHICLES OR HAVE BEEN TRANSPORTED BY WIND OR STORM WATER ABOUT THE SITE OR ONTO NEARBY ROADWAYS. STABILIZED CONSTRUCTION ENTRANCES AND CONSTRUCTION ROADS SHALL BE IMPLEMENTED IN ORDER TO REDUCE OFFSITE TRACKING. LOADED HAUL TRUCKS SHALL BE COVERED WITH TARPAULIN. EXCESS DIRT ON THE ROAD SHALL BE REMOVED DAILY. CONTRACTOR SHALL ABIDE BY ALL FEDERAL, STATE, AND LOCAL LAWS PERTAINING TO DUST CONTROL.

2.c.3 WASTE DISPOSAL

THE CONTRACTOR SHALL DEMONSTRATE THE PROPER DISPOSAL OF ALL CONSTRUCTION WASTE GENERATED WITHIN THE PROJECT LIMITS. WASTE MAY INCLUDE, BUT NOT BE LIMITED TO, VEGETATION FROM CLEARING AND GRUBBING ACTIVITIES, PACKAGING MATERIALS, SCRAP BUILDING MATERIALS, LITTER, SEWAGE FROM SANITARY FACILITIES, HERBICIDES AND PESTICIDES AND THEIR CONTAINERS, AND HYDROCARBON PRODUCTS. CONTRACTOR SHALL DESIGNATE A WASTE COLLECTION AREA ONSITE AND DELINEATE THE AREA ON THE STORMWATER POLLUTION PREVENTION PLANS (SWPPP) SITE MAP. STOCKPILED MATERIAL SHALL NOT BE LEFT IN EROSION PRONE AREAS UNLESS PROTECTED BY COVER OR ROCK BAGS. ANY OFFSITE SEDIMENT DISCHARGE TO A MUNICIPAL SEPARATE STORMWATER SYSTEM ARISING FROM THE CONTRACTOR'S ACTIVITIES IS NOT ALLOWED. REFER TO CITY OF MIAMI - PUBLIC WORKS DEPARTMENT BULLETIN NO. 25.

SANITARY/SEPTIC FACILITIES SHALL BE PROVIDED AND MAINTAINED IN A NEAT AND SANITARY CONDITION, FOR THE USE OF THE CONTRACTOR'S EMPLOYEES AS NECESSARY TO COMPLY WITH THE REQUIREMENTS AND REGULATIONS OF THE STATE AND LOCAL BOARDS OF HEALTH. A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS WILL COLLECT ALL SANITARY WASTE FROM PORTABLE UNITS. THE USE OF SANITARY SEWERS, FRENCH DRAINS, COVER DITCHES AND/OR ROCK DRAINS FOR THE DISPOSAL OF WASTEWATER IS EXPRESSLY PROHIBITED. REFER TO CITY OF MIAMI - PUBLIC WORKS DEPARTMENT BULLETIN NO. 25. STABILIZATION PRACTICES PROPOSED TO CONTROL EROSION. THE CONTRACTOR SHALL INITIATE ALL STABILIZATION MEASURES AS SOON AS PRACTICAL, BUT IN NO CASE MORE THAN 7 DAYS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. THE STABILIZATION PRACTICES SHALL INCLUDE AT LEAST THE FOLLOWING, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

TEMPORARY:

\* ARTIFICIAL COVERINGS IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 104

PERMANENT:

\* ASPHALT OR CONCRETE SURFACE  
\* SOD, VEGETATION, OR LANDSCAPE

2.a.2 STRUCTURAL PRACTICES

IN FDOT SPECIFICATION SECTION 104 EROSION CONTROL PLAN, THE CONTRACTOR SHALL DESCRIBE THE PROPOSED STRUCTURAL PRACTICES TO CONTROL OR TRAP SEDIMENT AND

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

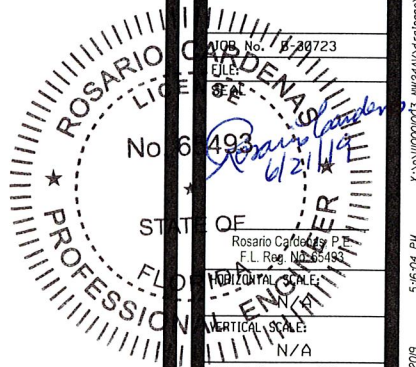


RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
STORMWATER POLLUTION  
PREVENTION PLAN

DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: A.C.  
REVISIONS:

Proj. No. 12-20723



VERTICAL SCALE:  
N/A  
SHEET No. 40



THE CONTRACTOR SHALL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT LIMITS DURING CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL PROVIDE AN ADEQUATE NUMBER OF LITTER CONTAINERS WITH LIDS AT THE STAGING, STOCKPILE AND FIELD OFFICE AREAS. WASTE COLLECTION SHALL BE SCHEDULED SO THAT CONTAINERS ARE EMPTIED PRIOR TO OVERFLOW. SPILLED LITTER CONTAINERS SHALL BE CLEANED UP IMMEDIATELY.

2.c.4 FERTILIZERS AND PESTICIDES  
THE APPLICATION AND HANDLING OF HERBICIDES AND PESTICIDES SHALL BE IN COMPLIANCE WITH THE MANUFACTURER RECOMMENDED METHOD AND IN ACCORDANCE WITH FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. HERBICIDE AND PESTICIDES SHALL BE STORED ONSITE IN THEIR ORIGINAL CONTAINERS WITH PRODUCT LABEL INTACT. COPY OF MSD SHEETS AS WELL AS A COPY OF FLORIDA LICENSE FOR HERBICIDE APPLICATOR WITH PROPER ENDORSEMENTS FOR CHEMICAL USED AS WELL AS AQUATICS MUST BE PROVIDED.

2.c.5 TOXIC/HAZARDOUS MATERIAL HANDLING  
CONTRACTOR SHALL PROVIDE THE EQUIPMENT NECESSARY TO CONTAIN AND CLEAN UP SPILLS OF HAZARDOUS MATERIALS, INCLUDING PETROLEUM PRODUCTS. SPILLS SHALL BE CONTAINED AND CLEANED UP IMMEDIATELY AFTER THEY OCCUR. SPILLED MATERIAL AND THE EQUIPMENT USED TO CLEAN UP THE SPILL SHALL NOT COME IN CONTACT WITH SURFACE WATERS OR BE INTRODUCED INTO STORM WATER. DISPOSAL OF SURPLUS PRODUCT WILL BE DONE ACCORDING TO MANUFACTURER RECOMMENDED METHOD.

CONTRACTOR SHALL PROVIDE A PROJECT SPECIFIC HAZARDOUS MATERIALS SPILL CONTROL PLAN IN ORDER TO ADDRESS THE HANDLING OF HYDROCARBON AND HAZARDOUS MATERIALS. PETROLEUM PRODUCTS SHALL BE STORED IN COVERED AREAS WITH SECONDARY CONTAINMENT SURROUNDING CONTAINER.

TOXIC/HAZARDOUS MATERIALS EXPOSED DURING CONSTRUCTION ACTIVITIES SHALL BE HANDLED AS PER THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

2.d APPROVED STATE AND LOCAL PLANS AND PERMITS:  
\* COURTESY COPY OF PLANS AND DRAINAGE REPORT FOR THE MIAMI-DADE REGULATORY AND ECONOMIC RESOURCES (RER).

3.0 MAINTENANCE  
THE CONTRACTOR WILL BE RESPONSIBLE FOR THE MAINTENANCE AND REPAIRS OF EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE MAINTENANCE OF THESE DEVICES WILL OCCUR UNTIL THE ENGINEER HAS DEEMED AN AREA PERMANENTLY STABILIZED. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ONCE THEY HAVE SERVED THEIR PURPOSE. THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE SITE. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT. THE CONTRACTOR SHALL PROVIDE A CONTACT NAME AND TELEPHONE NUMBER FOR 24-HOUR RESPONSE FOR REPAIRS AFTER HOURS DUE TO EMERGENCIES THAT MAY ARISE.

IN SECTION 104 EROSION & SEDIMENT CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE A PLAN FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROLS THROUGHOUT CONSTRUCTION.

THE FOLLOWING PRACTICES WILL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROLS:  
\* SILT FENCE: MAINTAIN PER SPECIFICATION SECTION 104. THE CONTRACTOR SHOULD ANTICIPATE REPLACING SILT FENCE EVERY 12 MONTHS.  
\* SYNTHETIC BALES OR STRAW: REMOVE SEDIMENT WHEN IT REACHES 1/2 HEIGHT OF BALES OR WHEN WATER PONDS IN UNACCEPTABLE AMOUNTS OR AREAS.

4.0 INSPECTIONS  
INSPECTION OF EROSION CONTROL MEASURES AND CONDITION OF ADJACENT PROPERTIES, SHALL BE PERFORMED DAILY BY THE CONTRACTOR'S REPRESENTATIVE AND THE PROJECT ENGINEER. DEFICIENCIES SHALL BE NOTED AND CORRECTED. QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.50 INCHES OR GREATER. WHERE SITES HAVE BEEN PERMANENTLY STABILIZED, INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH. THE CONTRACTOR SHALL ALSO INSPECT THAT CONTROLS INSTALLED IN THE FIELD AGREE WITH THE LATEST STORMWATER POLLUTION PREVENTION PLAN. THE FOLLOWING ITEMS WILL BE INSPECTED:  
\* POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES  
\* POINTS OF DISCHARGE TO MUNICIPAL SEPARATED STORM SEWER SYSTEMS  
\* POINTS OF DISCHARGE TO WATERS OF THE UNITED STATES  
\* POINTS OF DISCHARGE TO MUNICIPAL SEPARATED STORM SEWER SYSTEMS  
\* DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED  
\* AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION  
\* STRUCTURAL CONTROLS  
\* STORMWATER MANAGEMENT SYSTEMS  
\* LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE

THE CONTRACTOR SHALL INITIATE REPAIRS WITHIN 24 HOURS OF INSPECTIONS THAT INDICATE ITEMS ARE NOT IN GOOD WORKING ORDER.

IF INSPECTIONS INDICATE THAT THE INSTALLED STABILIZATION AND STRUCTURAL PRACTICES ARE NOT SUFFICIENT TO MINIMIZE EROSION, RETAIN SEDIMENT, AND PREVENT DISCHARGING POLLUTANTS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES, AS APPROVED BY THE ENGINEER.

5.0 NON-STORM WATER DISCHARGES  
IF UNFORESEEN CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR IS TO CEASE OPERATIONS IN THAT AREA. THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER WHO WILL NOTIFY THE CITY CONSTRUCTION MANAGER.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP A DEWATERING SYSTEM THAT PROVIDES PRETREATMENT OF EFFLUENT PRIOR TO DISCHARGE INTO ADJACENT SURFACE WATERS.

THE CONTRACTOR'S DEWATERING METHOD MUST MEET ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING THIS PRACTICE INCLUDING THE USE OF PERMITTED OUTFALL STRUCTURES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND APPLY FOR A DEWATERING PERMIT WITH THE APPROPRIATE WATER MANAGEMENT DISTRICT.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO DESIGNATE AN AREA WITHIN THE PROJECT LIMITS FOR CONCRETE TRUCK WASHOUT ACTIVITIES. THIS AREA SHALL PROVIDE EROSION CONTROL DEVICES THAT PREVENT CONTACT BETWEEN CONCRETE WASHOUT MATERIALS AND STORMWATER AND/OR SURFACE WATERS.

6.0 CONTRACTOR SUBMITTAL  
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DEVELOP AN EROSION CONTROL PLAN THAT PROVIDES A DETAILED DESCRIPTION OF ALL EROSION AND SEDIMENT CONTROLS, BEST MANAGEMENT PRACTICES, AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE FOR EACH ACTIVITY IDENTIFIED IN SECTION 1.b. SEQUENCE OF SOIL DISTURBING ACTIVITIES. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TIMEFRAMES IN WHICH THE CONTROLS WILL BE IMPLEMENTED, MAINTAINED AND REMOVED. THIS INFORMATION SHALL BE KEPT AT THE PROJECT FIELD OFFICE IN ORDER FOR THE PROJECT TO BE CONSIDERED IN COMPLIANCE WITH THE FDEP GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION SITES.

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE FOLLOWING ITEMS ARE ON SITE:

1. COPY OF THE STORMWATER POLLUTION PREVENTION PLAN WITH THE ORIGINAL CERTIFICATION SIGNATURES.
2. COPY OF THE CONTRACTOR'S EROSION CONTROL PLAN.
3. HAZARDOUS SPILL CONTROL PLAN WITH GUIDELINES ON CONTACTING THE 24 HOUR EMERGENCY RESPONSE PROGRAM FOR HAZARDOUS MATERIAL SPILLS. THIS SHALL INCLUDE COPIES OF DISCHARGE NOTIFICATIONS THAT HAVE OCCURRED WITHIN THE PROJECT LIMITS.
4. COMPLETED INSPECTION FORMS.

7.0 FINAL NPDES INSPECTION  
ALL STORM SEWER SYSTEMS WITHIN THE BOUNDARIES OF THIS CONSTRUCTION MUST BE DESILTED/JETTED WITH A VACTOR TRACTOR IN THE PRESENCE OF A NPDES INSPECTOR.



DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: A.C.  
REVISIONS:

JOB No. / P-30723

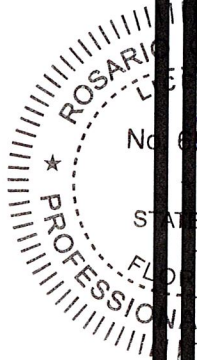
6/20/2016  
6/20/2016

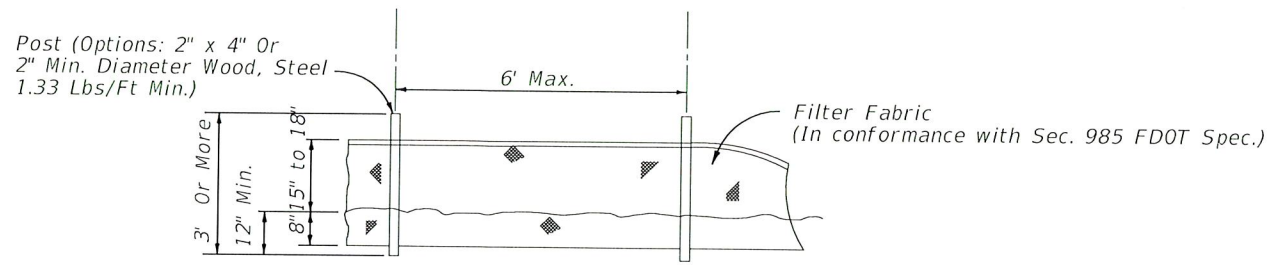
Osario Cardenas  
F.L. Reg. No. 29663

HORIZONTAL SCALE

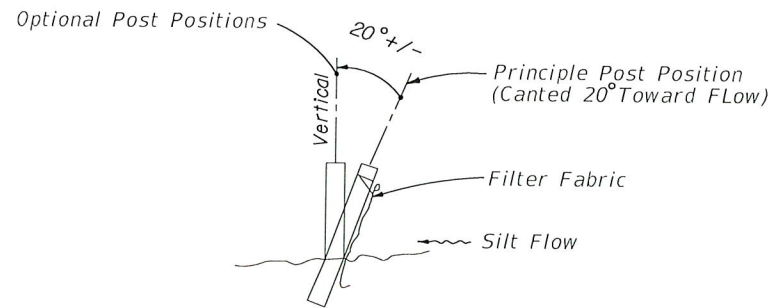
VERTICAL SCALE

SHEET No. 41





ELEVATION



SECTION

NOTES:

1. PROTECT EXISTING AND PROPOSED INLETS WITH DOUBLE FILTER FABRIC DURING CONSTRUCTION PHASE. THIS PROTECTION WILL BE MAINTAINED UNTIL THE FINAL INSPECTION HAS BEEN COMPLETED BY PUBLIC WORK
2. SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR SEDIMENT BARRIER (LF), PAY ITEM NO. 104-10-3.
3. SPACING FOR TYPE III SILT FENCE TO BE IN ACCORDANCE WITH CHART I.
4. SILT FENCE SHALL BE INSTALLED ALONG FRONT OF SIDEWALK AVOIDING PROPOSED DRIVEWAYS. AT CURB RETURNS, SILT FENCE SHALL BE INSTALLED AT BACK OF SIDEWALK. SILT FENCE MAY BE TEMPORARILY REMOVED FROM SIDEWALK RECONSTRUCTION AREAS AS NECESSARY TO ALLOW FOR RECONSTRUCTION OF SIDEWALK BUT SHALL BE IMMEDIATELY RESTORED UPON COMPLETION OF THE SUBJECT WORK.

TYPE III SILT FENCE

INFORMATION ADAPTED FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS

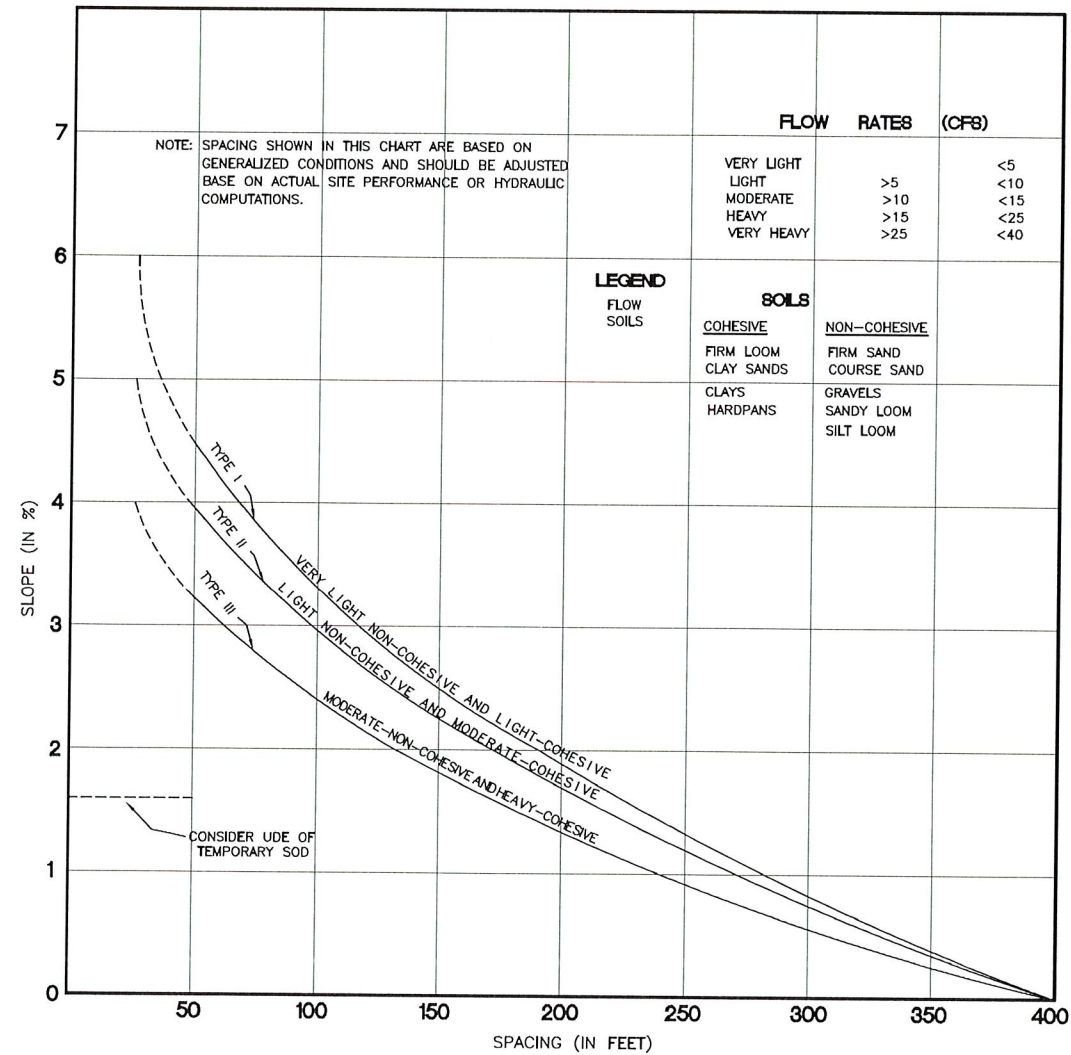


CHART I

RECOMMENDED SPACING FOR TYPE I AND TYPE II SYNTHETIC BALE BARRIERS AND TYPE III SILT FENCES

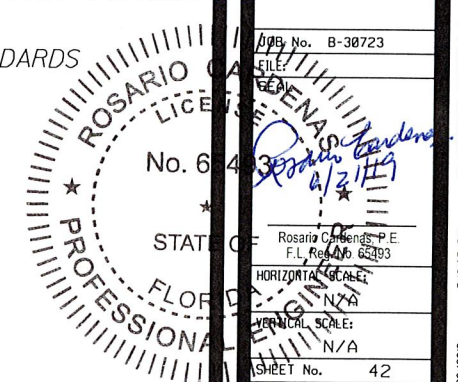
INFORMATION ADAPTED FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS

EROSION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES  
CITY OF MIAMI STANDARDS - MISC. 35-89-6



DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: O.R.  
CHECKED: A.C.  
REVISIONS:

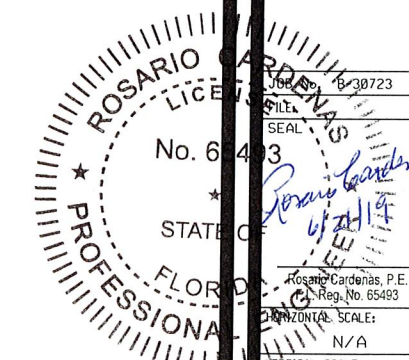
DES No. B-38723



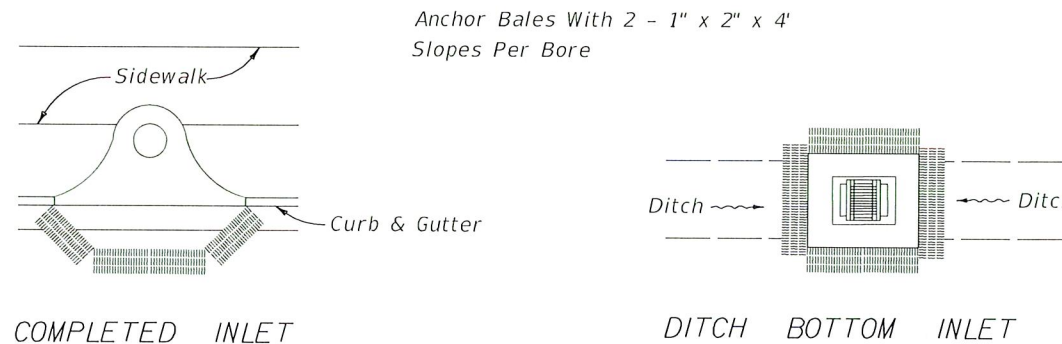
FILED  
No. 6443  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
Rosario Casanova, P.E.  
F.L. Reg. No. 65393  
HORIZONTAL SCALE:  
VERTICAL SCALE:  
SHEET No. 42



DATE: 07/19/16  
DESIGN: R.C.  
DRAWN: D.R.  
CHECKED: A.C.  
REVISIONS:



Job No. 16-30723  
Scale: N/A  
Horizontal Scale: N/A  
Vertical Scale: N/A  
SHEET No. 43



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES  
INFORMATION ADAPTED FROM THE FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS

EXISTING DRAINAGE STRUCTURE	STATION	SIDE	TYPE OF PROTECTION	REMARKS
1	11+83.25	12.87' RT	BALES	NW 24TH AVENUE
2	11+82.93	19.51' LT	BALES	NW 24TH AVENUE
3	12+90.08	12.16' RT	BALES	NW 24TH AVENUE
4	13+23.57	60.81' LT	BALES	NW 24TH AVENUE
6	13+51.58	60.50' LT	BALES	NW 24TH AVENUE
7	13+23.61	61.34' RT	BALES	NW 24TH AVENUE
9	13+51.44	62.19' RT	BALES	NW 24TH AVENUE
10	13+89.45	13.94' RT	BALES	NW 24TH AVENUE
11	14+71.53	08.92' RT	BALES	NW 24TH AVENUE
12	14+72.70	19.18' LT	BALES	NW 24TH AVENUE
13	15+24.17	12.00' LT	BALES	NW 24TH AVENUE
14	15+50.21	19.64' LT	BALES	NW 24TH AVENUE
15	16+27.90	12.00' RT	BALES	NW 24TH AVENUE
16	16+60.71	49.72' RT	BALES	NW 24TH AVENUE
17	16+88.51	48.26' RT	BALES	NW 24TH AVENUE
19	17+34.54	21.17' RT	BALES	NW 24TH AVENUE
21	17+34.37	20.81' LT	BALES	NW 24TH AVENUE

PROPOSED DRAINAGE STRUCTURE	STATION	SIDE	TYPE OF PROTECTION	REMARKS
S-1	10+48.45	11.00' RT	BALES	NW 24TH AVENUE
S-2	11+83.87	11.00' LT	BALES	NW 24TH AVENUE
S-3	11+83.87	11.00' RT	BALES	NW 24TH AVENUE
S-4	12+81.56	11.00' RT	BALES	NW 24TH AVENUE
S-5	13+93.60	11.00' RT	BALES	NW 24TH AVENUE
S-6	13+93.60	11.00' LT	BALES	NW 24TH AVENUE
S-7	14+72.72	11.00' RT	BALES	NW 24TH AVENUE
S-8	14+72.72	11.00' LT	BALES	NW 24TH AVENUE
S-9	15+70.64	11.00' RT	BALES	NW 24TH AVENUE
S-10	15+70.64	11.00' LT	BALES	NW 24TH AVENUE
S-11	16+28.78	11.00' RT	BALES	NW 24TH AVENUE

NOTE: ALL EXISTING AND PROPOSED INLETS MUST BE PROTECTED WITH DOUBLE FILTER FABRIC DURING CONSTRUCTION PHASE

EROSION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES  
CITY OF MIAMI STANDARDS - MISC. 35-89-6

GENERAL NOTES

GENERAL:

1. TRAFFIC CONTROLS SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS, THE CURRENT EDITION OF THE FDOT DESIGN STANDARD INDEXES (600 SERIES), THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AS THE MINIMUM CRITERIA.
2. TEMPORARY PAVEMENT SHALL CONSIST OF A MINIMUM OF 6 INCHES OF LIMEROCK BASE, PRIME COAT AND 1 INCH OF TYPE S ASPHALT. THE BASE LAYER SHALL BE PLACED OVER A FIRM, UNYIELDING, WELL-COMPACTED SUBGRADE. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE PAVEMENT FOR THE LIFE OF ITS USE.
3. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ALL POTHOLES THAT DEVELOP WITHIN THE PROJECT LIMITS AND WILL MAINTAIN A SUPPLY OF COLD MIX ON THE PROJECT SITE TO EXPEDITE THOSE REPAIRS. COST OF REPAIR TO BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.
4. THE TRAFFIC AND TRAVEL WAYS SHALL NOT BE ALTERED BY THE CONTRACTOR TO CREATE A WORK ZONE UNTIL ALL LABOR AND MATERIAL ARE AVAILABLE FOR THE CONSTRUCTION IN THAT AREA.
5. REGULATORY SPEED ESTABLISHED WITHIN WORK ZONE TRAVEL WAYS SHALL BE 25 M.P.H. REDUCED SPEED AND REGULATORY SPEED SIGNS SHALL BE INSTALLED ON SEPARATE POSTS IN ACCORDANCE WITH THE STANDARD INDEXES.
6. AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL COVER WORK ZONE SIGNS WHEN CONDITIONS NO LONGER WARRANT THEIR USE. COST OF COVERING AND UNCOVERING THE SIGNS SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.
7. CONTRACTOR SHALL REMOVE, RELOCATE OR COVER ANY EXISTING AND PROPOSED SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS. WHEN THE CONFLICT NO LONGER EXISTS, THE CONTRACTOR SHALL RESTORE THE SIGNS TO THEIR ORIGINAL POSITION. COST OF TEMPORARILY REMOVING, RELOCATING, COVERING AND RESTORING THE SIGNS SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.
8. EACH EXISTING STREET NAME AND STOP SIGN AFFECTED BY CONSTRUCTION SHALL BE RELOCATED AND MAINTAINED IN AN APPROPRIATE LOCATION FOR THE DURATION OF THE PROJECT. WHEN NO LONGER AFFECTED BY CONSTRUCTION, THESE SIGNS SHALL BE RESTORED TO THEIR ORIGINAL POSITION. COST OF TEMPORARILY RELOCATING AND RESTORING THE SIGNS SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REMOVAL OF STORM WATER FROM ROADWAYS UTILIZED FOR MAINTAINING TRAFFIC IN A MANNER APPROVED BY THE ENGINEER. COST FOR REMOVING THE WATER SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.
10. AT THE DISCRETION OF THE ENGINEER, IF A LANE CLOSURE CAUSES EXTENDED CONGESTION OR DELAY, THE CONTRACTOR SHALL BE DIRECTED TO REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME THAT THE TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.
11. LANE CLOSURES SHALL OCCUR ONLY DURING NON-PEAK HOURS ON NON-EVENT DAYS/WEEKENDS. NON-PEAK HOURS ARE 9:00 AM TO 3:30 PM WEEKDAYS AND WEEKENDS. TIME OF LANE CLOSURE SHALL BE IN ACCORDANCE WITH PUBLIC WORKS ROAD/LANE CLOSURE AND MIAMI POLICE DEPARTMENT SPECIAL EVENT PERMITS CONDITIONS.
12. NOT PERMIT FROM PUBLIC WORKS AND SPECIAL EVENTS PERMIT FROM THE CITY OF MIAMI POLICE DEPARTMENT SPECIAL EVENTS UNIT SHALL BE OBTAINED PRIOR TO ANY CLOSURE OF RIGHT OF WAY.

DROP-OFFS:

13. FOR DROPOFFS, THE CONTRACTOR'S ATTENTION IS DIRECTED TO STANDARD INDEX NO. 600, SHEET 9 OF 12. THE CONTRACTOR SHALL USE SHOULDER TREATMENT DETAIL WHEN NO BARRIERS ARE REQUIRED IN THE PLANS.

MARKINGS:

14. THE CONTRACTOR SHALL REMOVE ANY EXISTING OR TEMPORARY PAVEMENT MARKINGS THAT CONFLICT WITH THE TRAFFIC CONTROL PLANS. GRINDING OR MILLING SHALL ONLY BE PERMITTED IN NON-TRAFFIC AREAS. COST OF REMOVAL OF TEMPORARY PAVEMENT MARKINGS, REGARDLESS OF METHOD, IS INCLUDED IN THE RELATED PAVEMENT MARKING PAY ITEMS. USE OF BLACK PAINT TO COVER EXISTING AND/OR TEMPORARY MARKINGS IS PROHIBITED.
15. TEMPORARY LANE TRANSITIONS, SHIFTS, AND CROSSOVERS SHALL HAVE SOLID LANE AND EDGE LINES FOR THE LENGTH OF THE TRANSITION, SHIFT OR CROSSOVER. IN ADDITION, SOLID LANE AND EDGE LINES SHALL EXTEND 100 FT ON TANGENT BEYOND EACH END OF THE TRANSITION, SHIFT, OR CROSSOVER. EXCEPTION SHALL BE THROUGH INTERSECTIONS WHERE 2 - 4 FT SKIP LINES WILL BE PLACED.
16. TEMPORARY RAISED PAVEMENT MARKERS (RPM'S) SHALL BE INSTALLED ON THE EDGE, CENTER, AND LANE LINES OF ALL CROSSOVERS, TRANSITION, AND TANGENT SECTIONS WITHIN THE WORK ZONE WHERE THE VEHICLE PATHS ARE ALTERED. THE SPACING FOR THESE RPM'S SHALL BE 40 FT ON CENTERS FOR TANGENT SECTIONS AND 5 FT FOR TRANSITIONS, CURVES, AND CROSSOVERS. THE RPM'S SHALL EXTEND 100 FT ON THE TANGENT SECTION BEYOND EACH END OF THESE CROSSOVERS OR TRANSITION AREAS. COST OF TEMPORARY RPM'S SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.

WORK ZONE LIMITS:

17. THE LENGTH OF AN OPEN TRENCH SHALL NOT EXCEED 500 FT. PROPERTY ACCESS SHALL BE MAINTAINED IN ACCORDANCE TO ARTICLE 102-5.5 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
18. ALL MILLED SURFACES SHALL BE PAVED PRIOR TO OPENING TO TRAFFIC.

INTERSECTIONS:

19. ADJACENT INTERSECTIONS SHALL NOT BE CONSTRUCTED SIMULTANEOUSLY UNLESS DIRECTED BY THE ENGINEER.
20. INTERSECTIONS SHALL BE CONSTRUCTED BY WORKING ON A CONTINUOUS DAILY BASIS UNTIL COMPLETE AND UNTIL THE STRUCTURAL COURSE IS PLACED.
21. M.O.T. TRANSITIONS AND TEMPORARY INTERSECTION CROSSOVERS, WHERE CONSTRUCTION HAS CAUSED GRADE DIFFERENCES BETWEEN THE EXISTING AND NEW ROADWAYS, SHALL BE CONSTRUCTED USING A 1:20 TYPE S ASPHALT SLOPE TO ACCOMMODATE VEHICULAR TRAFFIC FROM ANY DIRECTION. ALL MATERIAL AND WORK, INCLUDING ITS REMOVAL, SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.

PEDESTRIANS, BICYCLES, AND WHEELCHAIRS:

22. AT THE END OF EACH WORK DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE, ANY DROP OFF GREATER THAN 6 INCHES ADJACENT TO THE PEDESTRIAN, BICYCLE, AND WHEELCHAIR TRAVEL PATHS SHALL BE BACKFILLED FLUSH WITH THE SAID PATHS OR PROTECTED WITH TEMPORARY FENCE, CONCRETE BARRIER WALL OR APPROVED HANDRAIL. COST SHALL BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.
23. THROUGHOUT THE PROJECT LIMITS, PEDESTRIAN, BICYCLE AND WHEELCHAIR TRAFFIC WILL BE MAINTAINED AT ALL TIMES. THE TRAVELWAY SHALL BE A MINIMUM OF 4 FEET WIDE, SMOOTH BUT NOT SLICK, WITH A WATERPROOF SURFACE, WALKABLE PLANKS TO BE INSTALLED FOR BUSINESSES IN CONSTRUCTION AREA.
24. PEDESTRIAN, BICYCLE AND WHEELCHAIR TRAFFIC SHALL BE GUIDED AND MAINTAINED USING APPROVED WARNING LIGHTS, SIGNING AND CHANNELIZATION DEVICES FOR GUIDANCE, SUCH CONTROL DEVICES SHALL BE INSPECTED AND MAINTAINED IN ACCORDANCE WITH FDOT SPECIFICATIONS (2016 EDITION) AND THE MUTCD SECTION ON WORK ZONE TRAFFIC CONTROL.

LIGHTING:

25. THE CONTRACTOR SHALL MAINTAIN THE EXISTING LIGHTING SYSTEM. THIS WILL INCLUDE BUT NOT BE LIMITED TO ROUTINE MAINTENANCE OF AND REPLACEMENTS RESULTING FROM ANY DAMAGE BY THE CONTRACTOR OR HIS/HER SUBCONTRACTORS TO LUMINARIES, FUSES, BALLAST, POLES, BASES, OR ANY INCIDENTAL PARTS. COST TO BE INCLUDED IN PAY ITEM NO. 102-1, MAINTENANCE OF TRAFFIC.

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



RS&H, Inc.

6303 Blue Lagoon Drive, Suite 305  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
TRAFFIC CONTROL PLAN

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

FILE: B-30723

SEAL  
9513

Samuel E. Gonzalez, P.E.  
-FL Reg. No. 49513

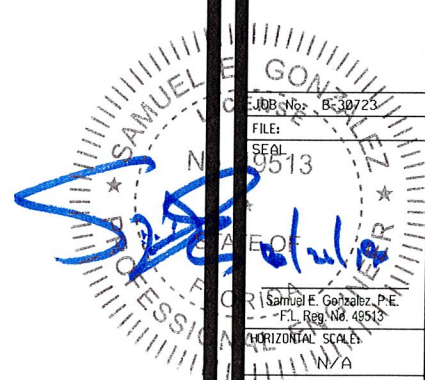
HORIZONTAL SCALE:

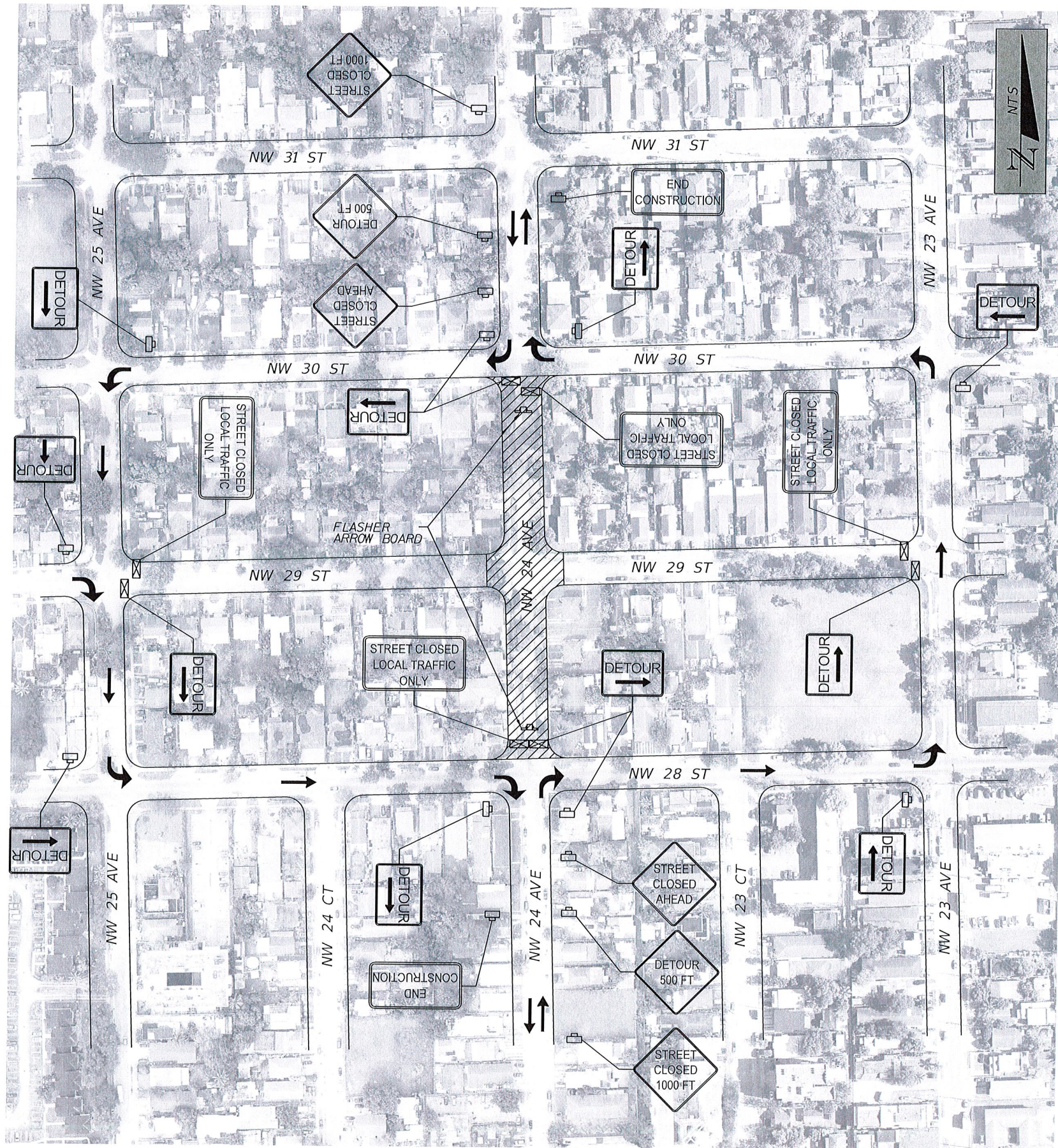
N/A

VERTICAL SCALE:

N/A

SHEET No. 44





TYPICAL TRAFFIC CONTROL DETOUR

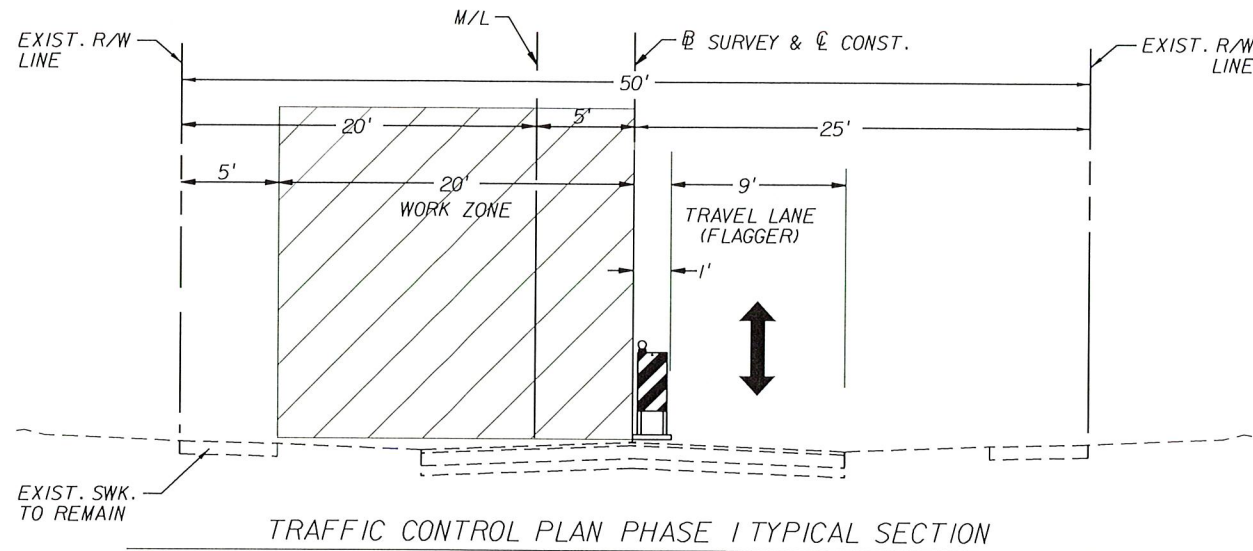


DATE:	07/19/16
DESIGN:	S.G.
DRAWN:	O.R.
CHECKED:	L.M.
REVISIONS:	

JOB No.	0-30723
FILE:	35AD

Samuel E. Gonzalez, P.E.  
 FL Reg. No. 49513

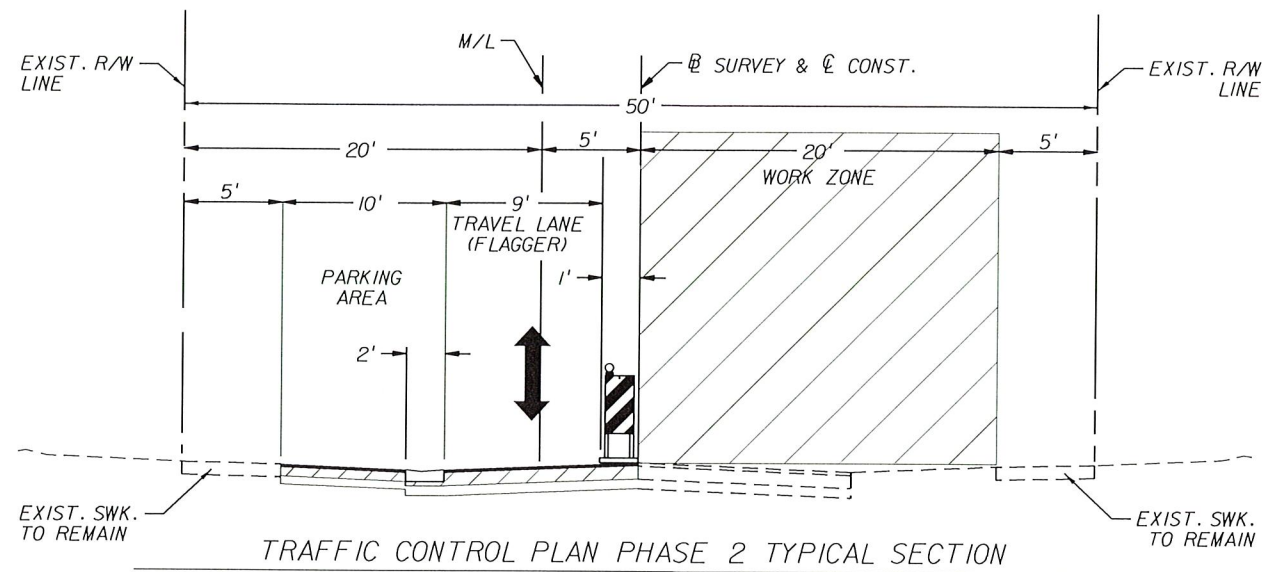
HORIZONTAL SCALE:	N/A
VERTICAL SCALE:	N/A
SHEET No.	45



\* DROP-OFF PROTECTION REQUIRED WHEN DROP-OFF IS GREATER THAN 3" PER FDOT STANDARD INDEX NO. 600.

**PHASE 1 NOTES**

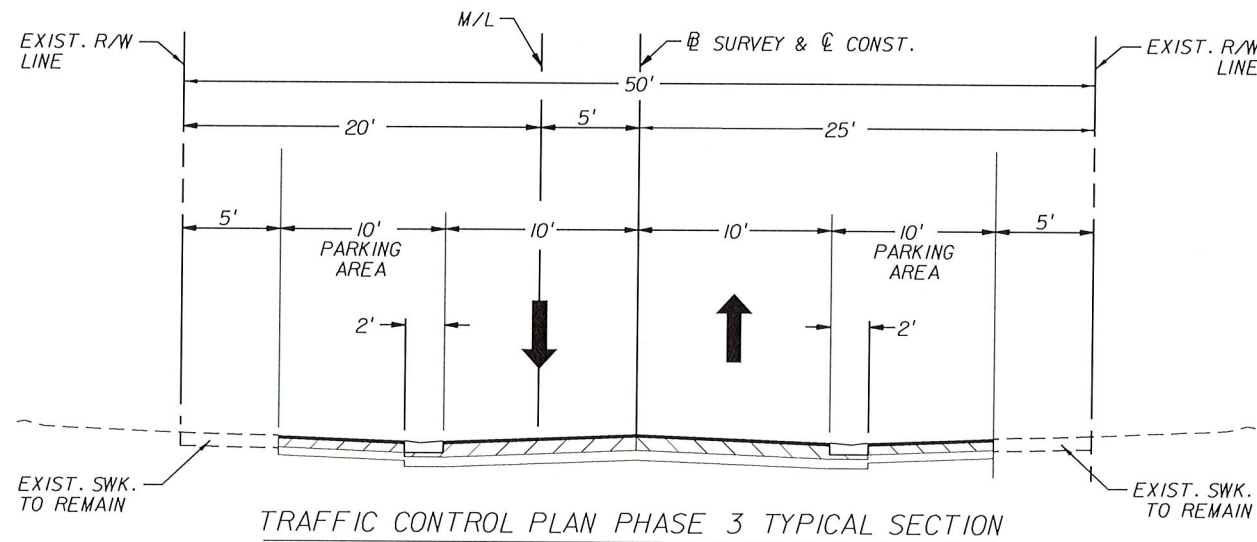
1. INSTALL CHANNELING DEVICES AND SIGNING AS PER DETOUR PLAN FOR THE FULL CLOSURE OF THE SOUTHBOUND ROADWAY IN ACCORDANCE WITH FDOT DESIGN STANDARD INDEX 600.
2. MAINTAIN TWO WAY LOCAL TRAFFIC ON THE NORTHBOUND ROADWAY
3. CONSTRUCT PROPOSED IMPROVEMENTS ON THE SOUTHBOUND ROADWAY INCLUDING DRAINAGE, DROP CURBS, SIDEWALKS AND FINAL ROADWAY CONFIGURATIONS



\* DROP-OFF PROTECTION REQUIRED WHEN DROP-OFF IS GREATER THAN 3" PER FDOT STANDARD INDEX NO. 600.

**PHASE 2 NOTES**

1. MAINTAIN DETOURS
2. INSTALL CHANNELING DEVICES AND SIGNING FOR THE FULL CLOSURE OF THE NORTHBOUND ROADWAY IN ACCORDANCE WITH FDOT DESIGN STANDARD INDEX 600.
3. MAINTAIN TWO WAY LOCAL TRAFFIC ON THE SOUTHBOUND ROADWAY
4. CONSTRUCT PROPOSED IMPROVEMENTS ON THE NORTHBOUND ROADWAY INCLUDING DRAINAGE, DROP CURBS, SIDEWALKS AND FINAL ROADWAY CONFIGURATIONS



\* DROP-OFF PROTECTION REQUIRED WHEN DROP-OFF IS GREATER THAN 3" PER FDOT STANDARD INDEX NO. 600.

**PHASE 3 NOTES**

1. OPEN FULL ROADWAY TO LOCAL TRAFFIC
2. CONDUCT MILLING AND RESURFACING OPERATIONS
3. CONSTRUCT FINAL LIFT OF ASPHALT LAYERS
4. PLACE PAVEMENT MARKINGS



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
TRAFFIC CONTROL PLAN

DATE: 07/19/16  
DESIGN: S.C.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

JOB No. 0-30723

SCALE



Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:

N/A

VERTICAL SCALE:

N/A

SHEET No. 46



**RS&H, Inc.**  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
UTILITY ADJUSTMENT PLAN

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:

JOB No: B-30723

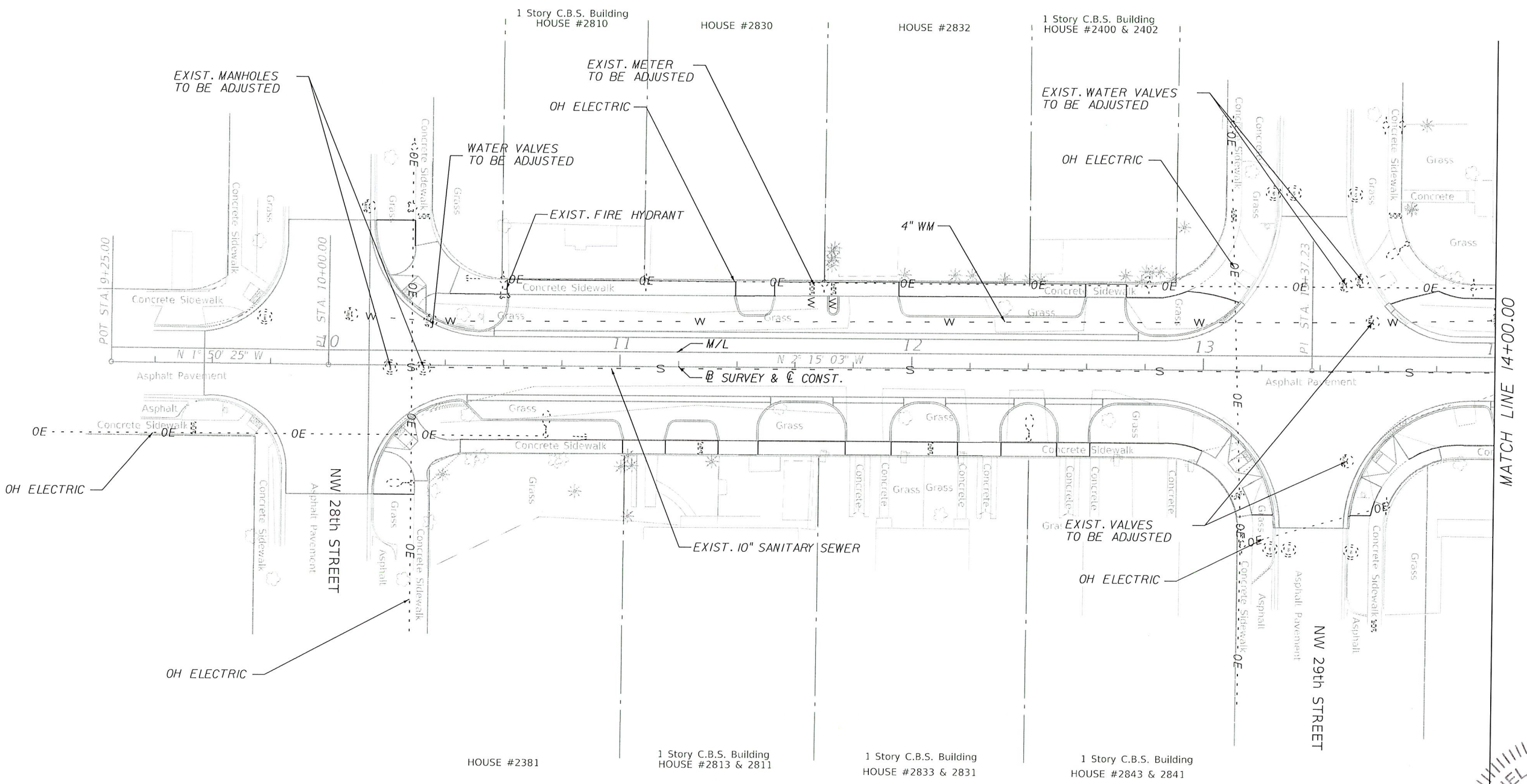
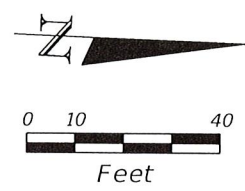
FILE:  
SEAL

Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:  
1" = 40'

VERTICAL SCALE:  
N/A

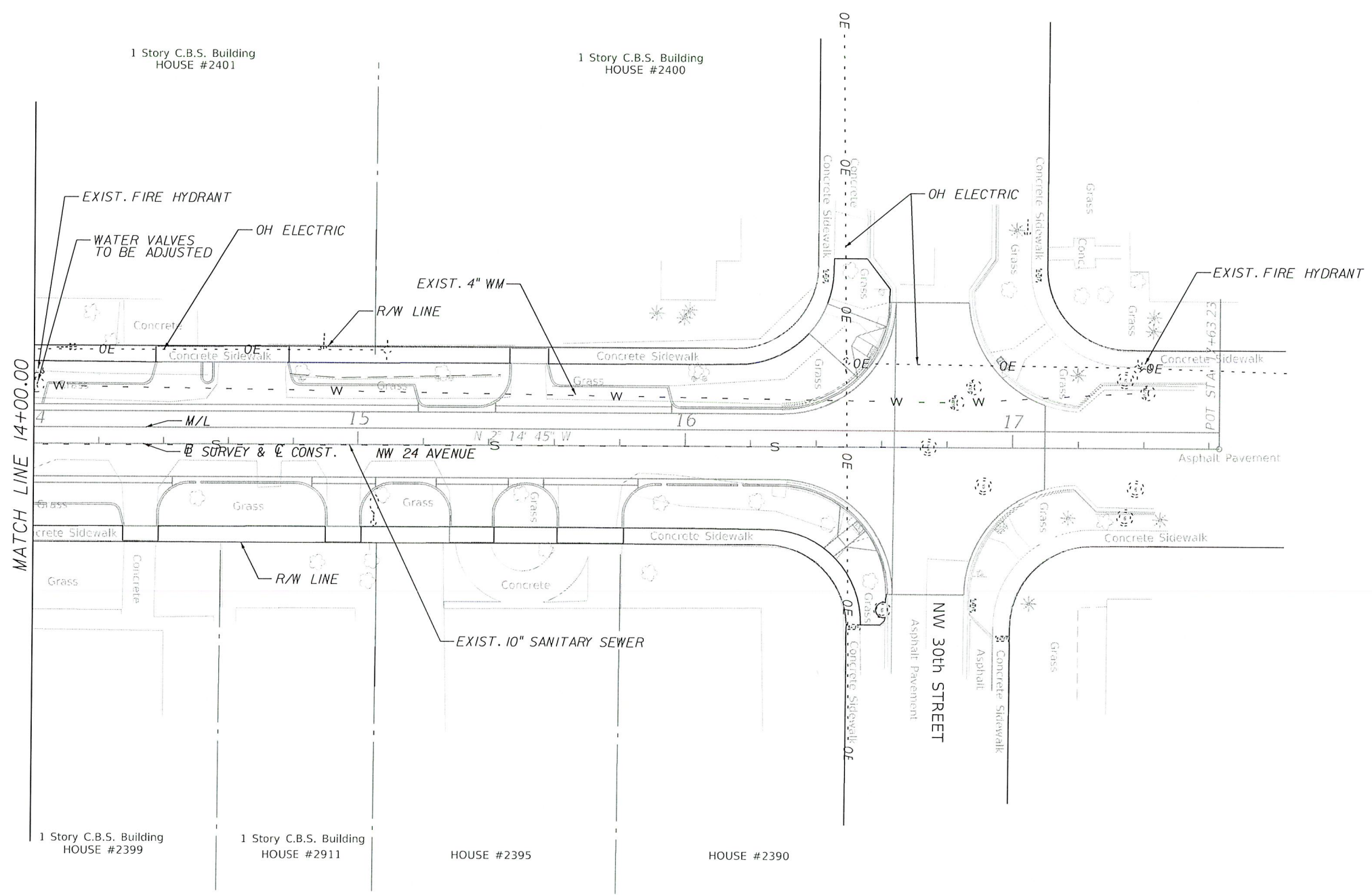
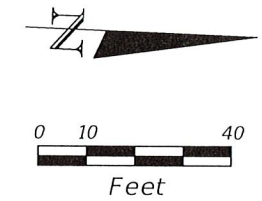
SHEET No. 47



- NOTE**
- EXISTING MANHOLE COVERS, AND VALVE BOXES TO BE ADJUSTED BY CONTRACTOR PAYMENT SHOULD BE INCLUDED IN PAY ITEM 425-5 OR 425-6
  - M-DWASD WILL SUPPLY NEW WATER METER BOXES FREE OF CHARGE TO ROADWAY CONTRACTOR TO PROVIDE DAMAGED BOXES. COORDINATION WITH M-DWASD WILL BE REQUIRED



4/15/2019 10:06:47 AM K:\V\00000003\_0824\N\16\17\ADP001.dwg



**NOTE**

1. EXISTING MANHOLE COVERS, AND VALVE BOXES TO BE ADJUSTED BY CONTRACTOR. PAYMENT SHOULD BE INCLUDED IN PAY ITEM 425-5 OR 425-6
2. M-DWASD WILL SUPPLY NEW WATER METER BOXES FREE OF CHARGE TO ROADWAY CONTRACTOR TO PROVIDE DAMAGED BOXES. COORDINATION WITH M-DWASD WILL BE REQUIRED

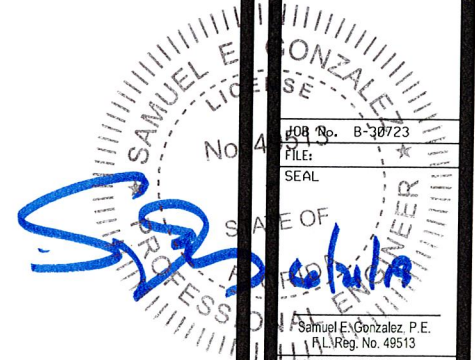
CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



**RS&H, Inc.**  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
UTILITY ADJUSTMENT PLANS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:



JOB No. B-30723  
FILE:

Samuel E. Gonzalez, P.E.  
Professional Engineer  
FL Reg. No. 49513

HORIZONTAL SCALE:  
1" = 40'

VERTICAL SCALE:  
N/A

SHEET No. 48

4/15/2019 10:56:48 AM X:\V\00000003\_LW24\N\15\174DR02.dwg



TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS														TOTAL THIS SHEET		GRAND TOTAL	
			S-37		S-38												PLAN	FINAL	PLAN	FINAL
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL				
700-1-11	SINGLE POST SIGN F&I GM, <12SF	AS	3		2														5	
700-1-60	SINGLE POST SIGN, REMOVE	AS	3		2														5	
706-3	RETRO-REFLECTIVE PAVEMENT MARKERS	EA	12		8														20	
711-12-221	THERMOPLASTIC, YELLOW, SOLID, 6"	LF	306		200														506	
711-14-123	THERMOPLASTIC, PREFORM, WHITE, SOLID, 12" FOR CROSSWALK	LF	315		146														461	
711-14-125	THERMOPLASTIC, PREFORM, WHITE, SOLID, 24" FOR STOP LINE	LF	53		26														79	

CITY OF MIAMI  
 FLORIDA  
 CAPITAL IMPROVEMENTS  
 & TRANSPORTATION  
 DEPARTMENT



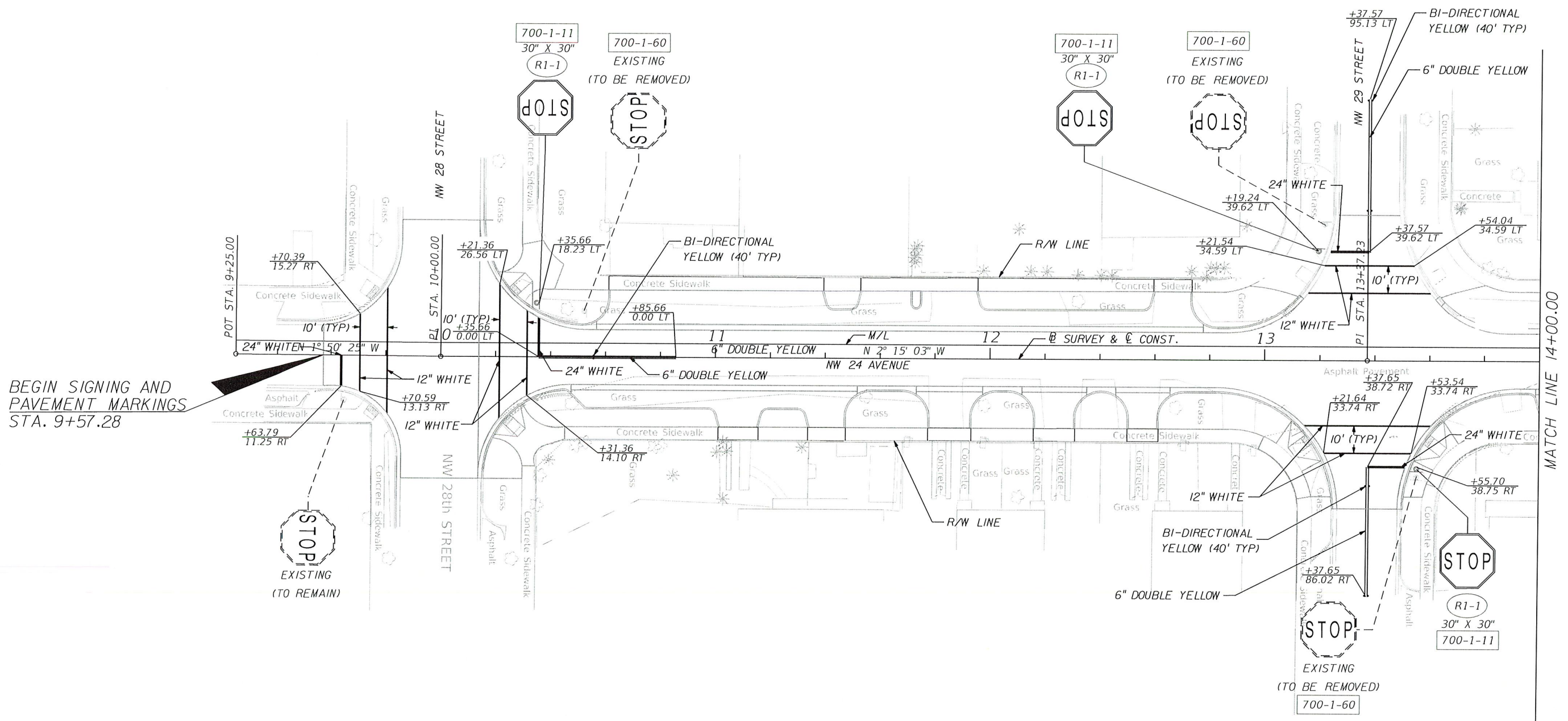
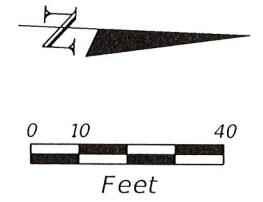
RS&H, Inc.  
 6303 Blue Lagoon Drive, Suite 325  
 Miami, Florida 33126

CITY OF MIAMI  
 NW 24TH AVENUE  
 IMPROVEMENTS PROJECT  
 SIGNING AND PAVEMENT MARKING  
 QUANTITIES

DATE: 07/19/16  
 DESIGN: S.G.  
 DRAWN: O.R.  
 CHECKED: L.M.  
 REVISIONS:

Samuel E. Gonzalez, P.E.  
 Lic. Reg. No. 49513

JOB No. B-30723  
 FILE:  
 SEAL  
 HORIZONTAL SCALE:  
 N/A  
 VERTICAL SCALE:  
 N/A  
 SHEET No. 49



BEGIN SIGNING AND PAVEMENT MARKINGS STA. 9+57.28

MATCH LINE 14+00.00

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT



RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

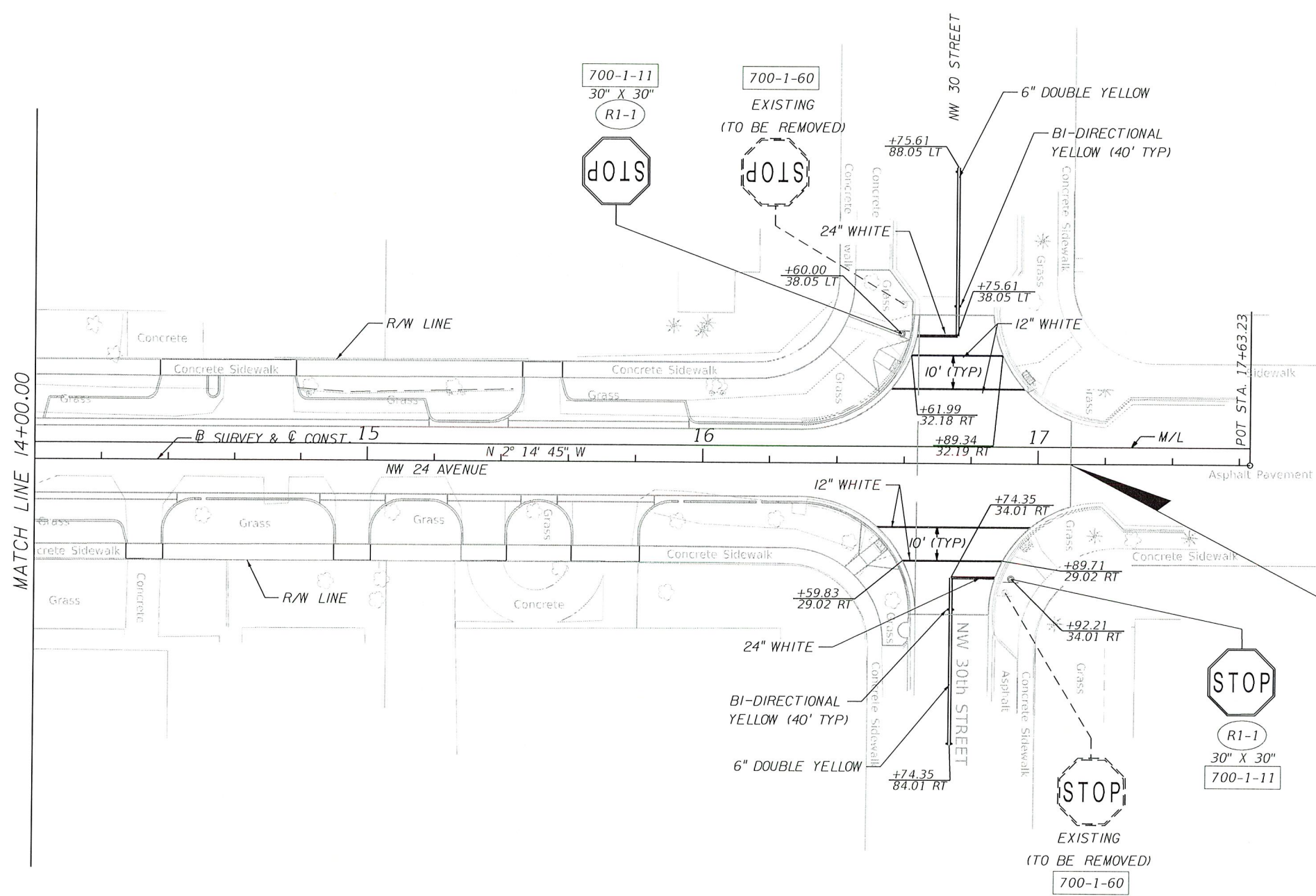
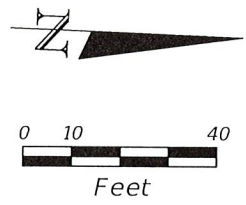
CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
SIGNING & PAVEMENT MARKING PLANS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: O.R.  
CHECKED: L.M.  
REVISIONS:



JOB No. B-30723  
FILE:  
SEAL  
No. 49513

Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513  
HORIZONTAL SCALE:  
1" = 40'  
VERTICAL SCALE:  
N/A  
SHEET No. 50



END SIGNING AND  
PAVEMENT MARKINGS  
END PROJECT  
STA. 17+09.86

CITY OF MIAMI  
FLORIDA  
CAPITAL IMPROVEMENTS  
& TRANSPORTATION  
DEPARTMENT

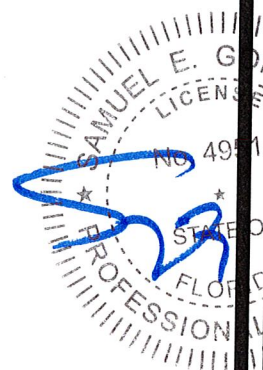


RS&H, Inc.  
6303 Blue Lagoon Drive, Suite 325  
Miami, Florida 33126

CITY OF MIAMI  
NW 24TH AVENUE  
IMPROVEMENTS PROJECT  
SIGNING & PAVEMENT MARKING PLANS

DATE: 07/19/16  
DESIGN: S.G.  
DRAWN: D.R.  
CHECKED: L.M.  
REVISIONS:

Job No. B-30723  
FILE:  
SEAL



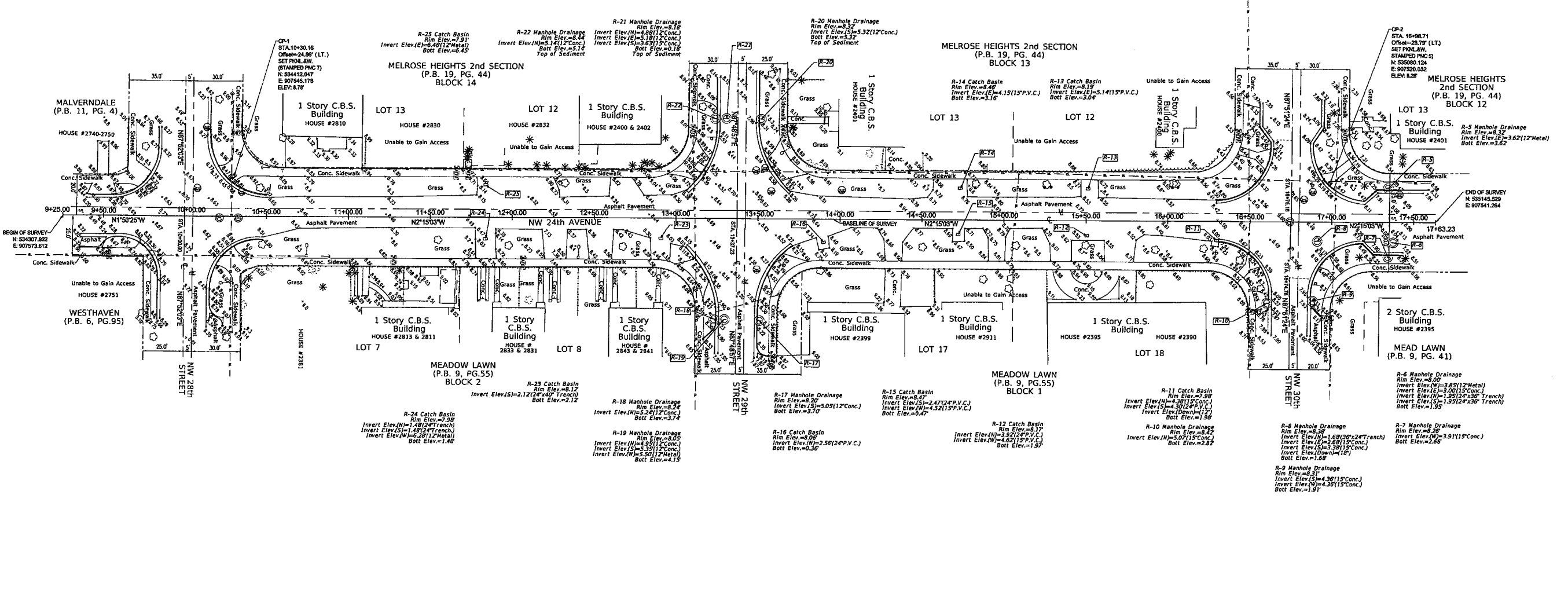
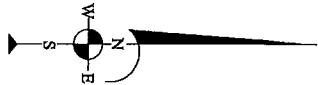
Samuel E. Gonzalez, P.E.  
F.L. Reg. No. 49513

HORIZONTAL SCALE:  
1" = 40'  
VERTICAL SCALE:  
N/A

SHEET No. 51

4/15/2019 10:16:51 AM K:\V\00000031\_JW24W\_Signing&PAVEMENT\PLAN502.DWG

# SKETCH OF TOPOGRAPHIC SURVEY



**LEGEND:**

- ⊙ SEWER MANHOLE
- ⊙ STORM MANHOLE
- ⊙ TELEPHONE MANHOLE
- ⊙ WATER VALVE
- ⊙ SEWER VALVE
- ⊙ WATER METER
- ⊙ CENTER LINE
- ⊙ CATCH BASIN
- ⊙ FIRE HYDRANT
- ⊙ POWER POLE (CONCRETE)
- ⊙ SIGN
- ⊙ WIRING PULL BOX
- ⊙ SERVICE CABINET
- ⊙ GUARD POST
- ⊙ MONUMENT LINE
- ⊙ TREE
- ⊙ TREE PALM
- ⊙ ORNAMENTAL PLANT
- ⊙ GUY ANCHOR
- ⊙ LIGHT POLE

**ABBREVIATIONS:**

- C.B.S. = DENOTES CONCRETE BLOCK STUCCO
- FD. = DENOTES FOUND
- IP. = DENOTES IRON PIPE
- P.B. = DENOTES PLAT BOOK
- PG. = DENOTES PAGE
- T.B.M. = DENOTES TEMPORARY BENCH MARK
- N & D = DENOTES NAIL AND DISC
- D.M. = DENOTES DRILL HOLE
- RAW = DENOTES RIGHT-OF-WAY
- PL. = DENOTES PLANTER OR LANDSCAPED AREA
- ELEV. = DENOTES ELEVATION
- P.M.L. = DENOTES P.K. NAIL & WASHER
- Conc. = DENOTES CONCRETE
- Chalk = DENOTES CHALK FENCE
- CP = DENOTES CONTROL POINT
- N.G.V.D. = DENOTES NATIONAL GEODETIC VERTICAL DATUM
- Bot. = DENOTES BOTTOM
- RT. = DENOTES RIGHT
- LT. = DENOTES LEFT
- STA. = DENOTES STATION
- PVC = DENOTES POLYVINYL CHLORIDE

**LINES TYPE:**

- EL — OVERHEAD ELECTRIC LINE
- X-X-X-X- FENCE
- - - - LOT LINE
- - - - EASEMENT
- - - - CENTER LINE
- - - - MONUMENT LINE
- Z — CONCRETE CURB & GUTTER
- - - - RIGHT OF WAY LINE

LB 2439

<p><b>MANUEL G. VERA &amp; ASSOCIATES, INC.</b> ENGINEERS • SURVEYORS • MAPPERS 13690 SW 47th Street • Miami, FL 33175 • Phone (305) 221-8210 P.O. BOX 850378 • Miami, FL 33288 • Fax (305) 221-1295 www.mgvera.com • e-mail: srubin@mgvera.com</p>	DATE:	REVISIONS:
	DATE 3-30-2016	DRAWN BY JCF
F.B. - PG. 618, 896, 906	JOB No. 16-029	SHEET No. 02 OF 03
TOPOGRAPHIC SURVEY		

2439039 2016/03/30 1:30 PM 2439039.dwg 2016/03/30 1:30 PM 2439039.dwg 2016/03/30 1:30 PM 2439039.dwg