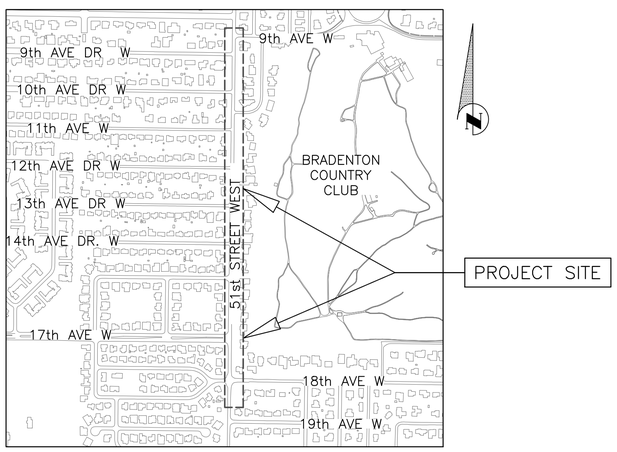
GRAVITY SEWER REPLACMENT
51st STREET WEST
404-6035782

JANUARY 2015

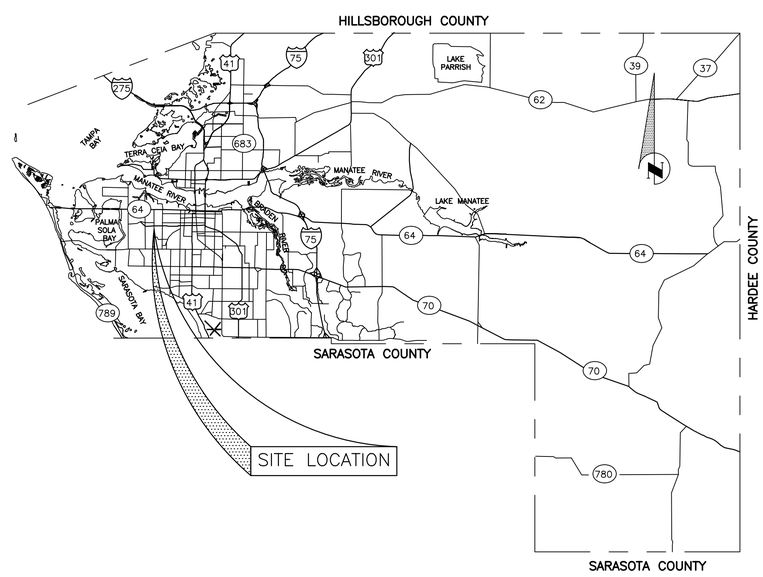
VERTICAL DATUM
NAVD 88

100% PLANS



VICINITY MAP

N.T.S.



PROJECT DESCRIPTION

REPLACE APPROX. 3,300 LF OF EXISTING 30" DUCTILE IRON GRAVITY SEWER WITH 30" PVC GRAVITY SEWER, AND REPLACE 10 SEWER MANHOLES ALONG 51ST ST W FROM 9TH AVE W TO 19TH AVE W. REPLACEMENT SHALL INCLUDE EXISTING SEWER LATERALS RECONNECTION AND ASPHALT PAVEMENT, CURB, AND DRIVEWAY REPAIRS.

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Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
COVER SHEET

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	VARIES
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA LICENSE No. 60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

SHEET 01 OF 24

COPYRIGHT 2010 MANATEE COUNTY GOVERNMENT S:\PWD_Engineering_Share\Util Eng Design\PROJ\<-SAN SWR Proj\GM-51 St Gravity Replacement\DWGS\51st ST Gravity Sewer Replacement.dwg,01, 1/13/2015 11:55 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)

GENERAL

1. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE PROJECT MANAGEMENT DIVISION. THE PROJECT MANAGER IS: BRIAN P. BATES, P.E. AND CAN BE REACHED AT (941) 708-7450; EXT. 7329

2. SITE VISITS ARE MANDATORY FOR ALL BIDDERS. THESE SITE VISITS CAN BE ARRANGED THROUGH THE PROJECT MANAGER .

3. ALL CONSTRUCTION ON THIS PROJECT SHALL BE IN ACCORDANCE WITH **THE LATEST EDITION OF MANATEE COUNTY UTILITY AND TRANSPORTATION STANDARDS** AND/OR FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" UNLESS OTHERWISE INDICATED ON THE PLANS.

4. **THE FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "COB 1049" NAVD 1988 ELEVATION 23.94' A VALUE OF (+0.98') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929.**

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL CONDITIONS AND REQUIREMENTS OF ALL PERMITS AND ALL GOVERNING FEDERAL, STATE, AND LOCAL AGENCIES. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS THAT ARE NOT PROVIDED IN THE BID DOCUMENTS, AT NO ADDITIONAL COST TO THE OWNER.

6. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATION THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS WILL BE BASED.

7. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS ON THE PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. SHOULD DISCREPANCIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO OBTAIN THE ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH CONSTRUCTION.

8. AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT SUNSHINE STATE ONE CALL OF FLORIDA AT 1-800-432-4770 OR THE NATIONAL 811 ONE CALL NUMBER WHEN APPLICABLE FOR UTILITY LOCATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL UTILITIES FOR THE POSSIBLE RELOCATION OR THE TEMPORARY MOVEMENT OF ANY EXISTING UTILITIES WITHIN THE RIGHTS-OF-WAY.

9. NO WORK, EXCEPT FOR EMERGENCY TYPE, SHALL BE PERFORMED AFTER 7:00 PM AND BEFORE 7:00 AM. FOR ADDITIONAL PROJECT RESTRAINTS, REFER TO SECTION 01310 OF THE SPECIFICATIONS.

SAFETY

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE FLORIDA TRENCH SAFETY ACT, 90-96, LAWS OF FLORIDA EFFECTIVE OCTOBER 1, 1990 AND THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION EXCAVATION SAFETY STANDARDS, 29 CFR 1926.650, SUBPART P, AS AMENDED. THE CONTRACTOR SHALL INCLUDE IN THE TOTAL BID PRICE ALL COSTS FOR COMPLIANCE WITH THESE REGULATIONS.

11. THE CONTRACTOR SHALL USE SHEET PILING, SHEETING, BRACING, ETC., AS REQUIRED IN ALL EXCAVATION AREAS AND CONFORM TO ALL OSHA REQUIREMENTS.

12. THE CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND UTILITIES, POWER LINES, ETC.

13. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. THIS EXCLUSION DOES NOT ALLEVIATE THE CONTRACTOR FOR PROVIDING A CONTINUOUS SAFE WORKSPACE.

ENVIRONMENTAL

14. WHEN A BENTONITE SPILL OR FRACK-OUT OCCURS OR THERE IS A LOSS OF RETURN INDICATING EXCESSIVE SEEPAGE OR LOSS OF DRILLING FLUID, DRILLING MUST BE STOPPED UNTIL THE LOCATION OF THE SPILL IS IDENTIFIED. UNDER NO CIRCUMSTANCES WILL DRILLING CONTINUE WHEN A SPILL IS APPARENT.

15. ONCE LOCATED, THE BENTONITE SPILL MUST BE ISOLATED AND SEEPAGE INTO ANY NEARBY WATER BODIES WILL BE BLOCKED DEPENDING ON THE DEGREE OF THE SPILL, THE ISOLATED BENTONITE MUST BE REMOVED MANUALLY OR MECHANICALLY AND DISPOSED OF BY APPROPRIATE MEANS OR REUSED.

16. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORM WATER, EROSION, AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORM WATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL". IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT TO SURFACE DRAINS AND TO DITCHES DURING CONSTRUCTION.

17. STOCKPILES SHALL BE PROTECTED AT ALL TIMES BY ON-SITE DRAINAGE CONTROLS WHICH PREVENT EROSION OF THE STOCKPILED MATERIAL. CONTROL OF DUST FROM SUCH STOCKPILES IS REQUIRED, DEPENDING UPON THEIR LOCATION AND THE EXPECTED LENGTH OF TIME THE STOCKPILES WILL BE PRESENT. IN NO CASE SHALL ANY STOCKPILED MATERIAL REMAIN AFTER THIRTY (30) CALENDAR DAYS.

18. STORM WATER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALES, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY CONSTRUCTION PROGRESS, AND WHICH MUST BE APPROVED BY THE ENGINEER BEFORE INSTALLATION. THIS WILL BE MAINTAINED TO PREVENT DEGRADATION OF THE WATERS OF THE COUNTY AND STATE.

19. SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, SEDIMENT BARRIERS, VEGETATIVE BUFFERS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING BODIES OF WATER, MUST BE INSTALLED, CONSTRUCTED, OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SUCH SYSTEMS SHALL BE FULLY OPERATIVE BEFORE ANY OTHER DISTURBANCE OF THE SITE BEGINS. EARTHEN STRUCTURES INCLUDING BUT NOT LIMITED TO BERMS, EARTH FILTERS, DAMS OR DIKES SHALL BE STABILIZED AND PROTECTED FROM DRAINAGE DAMAGE OR EROSION WITHIN ONE (1) WEEK OF INSTALLATION.

20. ALL SWALES, DITCHES, AND CHANNELS LEADING FROM THE SITE SHALL BE PROTECTED FROM SILTATION AND EROSION DURING CONSTRUCTION AND BE SODDED WITHIN THREE (3) DAYS OF EXCAVATION.

21. SOIL DISPLACED BY CONSTRUCTION WILL BE REMOVED. EROSION CONTROL SHALL BE IMPLEMENTED IN AREAS WHICH ARE CONSIDERED ENVIRONMENTALLY SENSITIVE. EROSION CONTROL SYSTEMS SHALL BE REQUIRED FOR ALL WORK WITHIN JURISDICTIONAL AREAS. THESE SYSTEMS MAY INCLUDE STAKED HAY BALES, SILT SCREENS, FILTER FABRIC, AND TURBIDITY SCREENS.

22. ALL EROSION AND POLLUTION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL AND SHALL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.

23. THE CONTRACTOR SHALL NOT ENTER UPON OR IN ANY WAY ALTER WETLAND AREAS THAT MAY BE ON OR NEAR THE CONSTRUCTION SITE. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL REGULATIONS AND/OR PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES RESULTING FROM HIS VIOLATION OF ANY REGULATIONS OR PERMIT CONDITIONS.

24. FOR MORE INFORMATION, SEE THE EROSION CONTROL DETAIL SHEET INCLUDED IN THE PLANS.

RIGHT-OF-WAY

25. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO WITHIN THE MANATEE COUNTY/FDOT RIGHT-OF-WAY AND/OR EASEMENTS SHOWN ON THE DRAWINGS.

26. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO REFERENCE AND RESTORE PROPERTY CORNER MONUMENTS, PINS, AND LANDMARKS THAT MAY BE DISTURBED BY CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER.

27. THE CONTRACTOR, PRIOR TO CONSTRUCTION AND RESTRICTING ANY TRAFFIC, MUST OBTAIN A RIGHTS-OF-WAY USE PERMIT AND A TRAFFIC CONTROL PLAN. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS FROM OTHER GOVERNMENTAL AGENCIES HAVING RELEVANT JURISDICTION. ALL MAINTENANCE AND PROTECTION OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION "MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES". A TRAFFIC CONTROL PLAN SHALL BE SUPPLIED BY THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING.

28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED STORM WATER STRUCTURES, PIPING, ENTRANCE PIPE AND HEADWALLS WHETHER SHOWN ON THE PLANS OR NOT. THE HEADWALLS SHALL BE REPLACED IN ACCORDANCE WITH F.D.O.T. STANDARDS.

29. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD THE RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO CONSTRUCT THIS PROJECT.

30. THE CONTRACTOR SHALL COORDINATE THE CUTTING OF DRIVEWAYS WITH THE PROPERTY OWNER PRIOR TO CUT. ALL DRIVEWAYS WILL BE IN PASSABLE CONDITION AT THE END OF THE WORK DAY AND FULLY RESTORED PER SECTION 02575.

31. A RIGHT OF ENTRY AGREEMENT SHALL BE OBTAINED BY THE PROJECT MANAGER FROM THE PROPERTY OWNER BEFORE ANY DRIVEWAY CONSTRUCTION WORK IS DONE OUTSIDE OF THE RIGHT-OF-WAY OR EASEMENT.

UTILITIES

32. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THERE MAY BE OTHER IMPROVEMENTS, UTILITIES, ETC. WHICH ARE WITHIN THE PROJECT AREA AND WHICH HAVE NOT BEEN LOCATED OR IDENTIFIED, MAY NOT BE IN THE EXACT LOCATION SHOWN OR RELOCATED SINCE THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES STRUCTURES AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) THAT MAY EFFECT HIS WORK. ALL EXISTING UTILITIES TO BE EXTENDED, CROSSED OR CONNECTION POINTS SHALL BE EXPOSED PRIOR TO CONSTRUCTION TO VERIFY LOCATION AND ELEVATION. ANY DISCREPANCIES OR CONFLICTS FOUND SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR RESOLUTION.

33. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, WATER AND SEWER LINES, STORM DRAINS, UTILITIES, DRIVEWAYS, SIDEWALKS, SIGNS, MAIL BOXES, FENCES, TREES, LANDSCAPING, AND ANY OTHER IMPROVEMENT OR FACILITY IN THE CONSTRUCTION AREA. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED ITEM DUE TO HIS CONSTRUCTION ACTIVITIES TO EQUAL OR BETTER THAN PRE-CONSTRUCTION CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.

34. THE CONTRACTOR SHALL USE APPROPRIATE TECHNIQUES, AS APPROVED, RECOMMENDED OR OFFERED BY FLORIDA POWER AND LIGHT TO PREVENT UNDERMINING OF POWER POLES DURING CONSTRUCTION. IF HOLDING OF POWER POLES IS RECOMMENDED OR REQUIRED BY THE UTILITY, THE CONTRACTOR SHALL COORDINATE THIS ACTIVITY WITH THE UTILITY AND BEAR ALL RELATED COSTS.

35. ANY TEMPORARY SHUTDOWNS FOR MODIFICATIONS OF EXISTING UTILITY SYSTEMS THAT MUST REMAIN IN SERVICE DURING CONSTRUCTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE COORDINATED WITH AND APPROVED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. IT IS NOTED THAT TEMPORARY SHUTDOWNS MAY BE RESTRICTED TO CERTAIN HOURS AT ANY TIME OF THE DAY OR NIGHT AND WILL BE COMPLETED AT NO ADDITIONAL COST TO THE OWNER.

36. FOR WORK BEING DONE ON EXISTING SANITARY SEWER LINES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE FLOW OF ALL SEWAGE DURING CONSTRUCTION, WHICH MAY REQUIRE BY-PASS PUMPING AND/OR PUMPER TRUCKS. THE CONTRACTOR SHALL SUBMIT A DETAILED BY-PASS PUMPING PLAN PER SECTION 02720.

RESTORATION

37. ALL RESTORATION WORK PERFORMED THROUGHOUT THE PROJECT SHALL CONFORM TO EXISTING LINES AND GRADES UNLESS SHOWN OTHERWISE.

38. ALL DISTURBED GRASSED AREAS SHALL BE SODDED OR SEEDED UNLESS OTHERWISE INDICATED. THE TYPE OF SOD USED TO REPLACE OWNER MAINTAINED AREAS IN RIGHT-OF-WAY SHALL BE COORDINATED WITH THE PROPERTY OWNER.

39. ALL CONCRETE THRUST BLOCKS INSTALLED FOR TESTING PURPOSES AND NOT REQUIRED FOR THE OPERATION OF THE PIPELINE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE, AT NO ADDITIONAL COST TO THE OWNER.

40. ASPHALT DRIVES THAT ARE CUT SHALL BE RESTORED PER SECTION 02513.

41. CONCRETE DRIVEWAYS OR SIDEWALKS THAT ARE CUT SHALL BE RESTORED TO MATCH EXISTING ACCORDING TO THE CURRENT EDITIONS OF THE F.D.O.T. SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN, SECTION 522, AND SECTION 310 OF THE F.D.O.T. DESIGN STANDARDS.

42. WHENEVER A PERMANENT ROADWAY SURFACE IS NOT PLACED IMMEDIATELY AFTER BACKFILLING AND COMPACTION OF THE NEWLY INSTALLED PIPE LINE IN AREAS WHERE TRAFFIC MUST PASS, THE CONTRACTOR SHALL INSTALL A TEMPORARY SURFACE CONSISTING OF NINE INCHES OF COMPACTED LIME ROCK BASE AND A COAT OF ASPHALT EMULSION. PERMANENT ROADWAY REPAIR SHALL BE PERFORMED A MAXIMUM OF TWENTY-ONE CALENDAR DAYS AFTER THE INITIAL OPEN CUTTING.

43. RESTORATION OF CURBS, DRIVEWAYS, SIDEWALKS, AND PLACEMENT OF SOD SHALL BE COMPLETED WITHIN FORTY-FIVE CALENDAR DAYS OF INITIAL DISTURBANCE, OR TWENTY-ONE CALENDAR DAYS OF SUBSTANTIAL COMPLETION, WHICHEVER OCCURS FIRST.

CONSTRUCTION

44. THE EXHAUST SYSTEM OF ALL GASOLINE AND DIESEL ENGINES SHALL BE EQUIPPED WITH MUFFLERS THAT MEET THE EQUIPMENT MANUFACTURER'S REQUIREMENTS FOR NOISE SUPPRESSION. THE CONTRACTOR SHALL INSTALL NOISE ABATEMENT BAFFLES POSITIONED TO BREAK LINE-OF-SITE FROM THE NOISE SOURCE TO AFFECTED RESIDENCES, AS APPROVED BY THE ENGINEER.

45. NO MATERIAL SHALL BE STOCKPILED IN ROADWAYS. ALL DIRT AND DEBRIS SHALL BE REMOVED FROM THE JOB SITE DAILY. ROADS SHALL BE SWEPT DAILY AS PART OF DAILY CLEAN UP.

46. THE CONTRACTOR IS TO CONTROL ALL FUGITIVE DUST ORIGINATING ON THIS PROJECT BY WATERING OR OTHER METHODS AS REQUIRED.

47. INGRESS AND EGRESS TO ALL THE PROPERTIES IN THE CONSTRUCTION AREA SHALL BE MAINTAINED AT ALL TIMES.

48. PRIOR APPROVAL WILL BE REQUIRED FOR REMOVAL OF ANY TREE WITHIN THE CONSTRUCTION AREA.

49. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING EQUIPMENT NECESSARY TO KEEP ALL EXCAVATIONS DRY. DEWATERING IS REQUIRED TO 18" BELOW TRENCH BOTTOM.

50. ALL PIPING AND FITTINGS USED ON THIS PROJECT SHALL BE AS NOTED ON THE PLANS AND IN THE CONTRACT DOCUMENT AND SHALL BE INSTALLED TO THE LINES AND GRADES SHOWN ON THE PLANS AND PROFILES.

51. ALL PIPE SHALL BE COLOR CODED TO CONFORM TO MANATEE COUNTY STANDARDS.

52. ALL PIPE AND FITTINGS SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER AND ALL PIPE JOINTS SHALL BE RESTRAINED WHERE REQUIRED.

53. ALL FITTINGS FOR PRESSURE CLASS-RATED PIPE SHALL BE RESTRAINED DUCTILE IRON. RESTRAINED LENGTHS OF PIPE SHALL ADHERE TO THE REQUIREMENTS AS SHOWN ON THE DETAIL SHEETS.

54. WHERE IT IS NECESSARY TO DEFLECT PIPE EITHER HORIZONTALLY OR VERTICALLY, PIPE DEFLECTION SHALL NOT EXCEED 75% OF THE MANUFACTURER'S MAXIMUM ALLOWABLE RECOMMENDED DEFLECTION.

55. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.

56. ALL ROCKS OR STONES LARGER THAN SIX INCH DIAMETER SHALL BE REMOVED FROM THE BACKFILL MATERIAL. BACKFILL MATERIAL PLACED WITHIN ONE FOOT OF PIPING AND APPURTENANCES SHALL NOT CONTAIN ANY STONES LARGER THAN TWO INCH DIAMETER.

57. ONLY MANATEE COUNTY UTILITY OPERATIONS STAFF ARE AUTHORIZED TO OPERATE VALVES ON COUNTY OWNED AND MAINTAINED UTILITY SYSTEMS.

58. ALL PENETRATION OF EXISTING STRUCTURES SHALL BE BY THE MECHANICAL ROTARY CORE BORING METHOD.

59. ALL CONCRETE PENETRATED OR DISTURBED SHALL BE COATED WITH TWO COATS OF EPOXY.

60. THE CONTRACTOR, PRIOR TO ANY TEMPORARY WATER SHUT-OFFS DURING WATER MAIN TIE-IN, ETC., SHALL NOTIFY THE AFFECTED RESIDENTS BY POSTING INFORMATIONAL SIGNS IN THE NEIGHBORHOOD AT LEAST TWO DAYS (48 HRS) PRIOR TO THE WATER SHUT-OFF. REFERENCE SECTION 01580, PARAGRAPH 1.03 OF THE SPECIFICATIONS. WHEN FEASIBLE, "DOOR HANGERS" SHALL BE DELIVERED TO AFFECTED RESIDENCES AT LEAST TWO DAYS (48 HRS) PRIOR TO WATER SHUT-OFF. FOR LARGE PROJECTS WITH HUNDREDS OF HOMES AFFECTED, THE CONTRACTOR SHALL ALSO MAKE EXTENSIVE USE OF THE MEDIA AND SHALL HAVE PRIOR CONTACT WITH HOMEOWNER'S ASSOCIATIONS. WRITTEN NOTIFICATIONS SHALL ALSO BE FAXED TO THE TAMPA TRIBUNE, BRADENTON HERALD, SARASOTA HERALD TRIBUNE, WBRD RADIO, EMERGENCY COMMUNITY CENTERS, INSPECTIONS, WATER TREATMENT PLANT, WATER MANAGER, HELPLINE, CUSTOMER SERVICE, AND THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT.

61. ALL NEW PIPE LINES SHALL BE PIG CLEANED (4" AND LARGER), FLUSHED, PRESSURE TESTED, DISINFECTED AND CERTIFIED PRIOR TO TIE-INS TO EXISTING FACILITIES. THE CONTRACTOR WILL BE ALLOWED TO USE TEMPORARY PLUGS FOR PIG CLEANING AND PRESSURE TESTING.

62. ALL TEST POINT PIPING SHALL BE CUT LOOSE FROM THE CORPORATION STOP AND COMPLETELY REMOVED AND DISPOSED OF BY THE CONTRACTOR PRIOR TO FINAL ACCEPTANCE. A CORPORATION STOP PLUG SHALL BE INSTALLED AND THE CORPORATION STOP SHALL REMAIN IN PLACE.

63. ALL EXISTING MAINS THAT ARE BEING REPLACED SHALL BE ABANDONED IN PLACE UPON ACCEPTANCE AND ACTIVATION OF THE NEW MAINS. ABANDONED MAINS SHALL BE CUT, FILLED WITH GROUT, AND CAPPED. REFER TO SECTION 02064 OF THE SPECIFICATIONS FOR GROUTING OF ABANDONED PIPE.

64. WATER MAINS CROSSING OVER OR UNDER SANITARY SEWERS, FORCE MAINS, AND RECLAIMED WATER LINES SHALL BE LAID PER CURRENT EDITION OF "10 STATE STANDARDS" **AND MANATEE COUNTY UTILITY STANDARDS** UNLESS NOTED OTHERWISE ON THE PLANS.

65. FIELD CONDITIONS MAY NECESSITATE MINOR ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED UTILITIES TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER.

66. CONTRACTOR SHALL PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH SECTION 14 IN THE CURRENT MANATEE COUNTY UTILITY STANDARDS AT NO COST TO THE OWNER. RECORD DRAWINGS SHALL BE SIGNED & SEALED BY A SURVEYOR CURRENTLY LICENSED BY THE STATE OF FLORIDA. **ALL RECORD DRAWING INFORMATION REQUIREMENTS IN SECTION 14 SHALL BE STRICTLY ENFORCED.** A COPY OF SECTION 14 WILL BE PROVIDED UPON REQUEST.

EMERGENCY CONTACTS

MANATEE COUNTY
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vishal.kakkad@mymanatee.org.

LEGEND

EXISTING

BM	BENCH MARK
CM	CONCRETE MONUMENT
IP	IRON PIPE
IR	IRON ROD
HUB	HUB
N&D	NAIL & DISK
16.23ab	ELEVATION
1234	PARCEL ID NO.
1234 / 1234	PARCEL ID NO.
777	LOT NO.
GW	GUY WIRE
PP	POWER POLE
LP	LIGHT POLE
MB	MAIL BOX
SN	SIGN
REF	REFLECTOR
SPRK	SPRINKLER
GM	GAS MARKER
BFP	BACKFLOW PREVENTER
BO	BLOW OFF VALVE
FH	FIRE HYDRANT
WV	WATER VALVE
ARV	AIR RELEASE VALVE
WM	WATER METER
SMH	SANITARY SEWER MANHOLE
CO	SANITARY SEWER CLEAN OUT
SB#1	SOIL BORING LOCATION
TEL	TELEPHONE SERVICE BOX
UBX	UTILITY BOX
UR	UTILITY RISER
	FLOW DIRECTION
GI	GRATE INLET
	MITERED END SECTION
	STORM SEWER MANHOLE

	BUSH
	TREE
	OAK TREE
	PALM TREE
	PINE TREE
	EDGE OF VEGETATION
O O	CHAIN LINK FENCE
□ □	WOOD FENCE
X X	BARBED WIRE FENCE
FM	FORCE MAIN
PW	POTABLE WATER
RCW	RECLAIMED WATER
SS	SANITARY SEWER
S	STORM DRAIN
GAS	GAS LINE
OHTV	OVERHEAD TV
UGTV	UNDERGROUND TV
OE	OVERHEAD ELECTRIC
BE	UNDERGROUND ELECTRIC
OH VER	OVERHEAD VERIZON
UG VER	UNDERGROUND VERIZON
VER	VERIZON
UG	UNDERGROUND UTILITY
OH	OVERHEAD UTILITY
	RAIL ROAD TRACKS
	EDGE OF CONCRETE
	EDGE OF ROAD
	TOE OF SLOPE
	TOP OF BANK
	PROPERTY LINE
	RIGHT OF WAY

ABBREVIATIONS

R/W	RIGHT OF WAY
CONC	CONCRETE
ASPH	ASPHALT
DRWY	DRIVEWAY
SWK	SIDEWALK
EP	EDGE OF PAVEMENT
BOC	BACK OF CURB

PROPOSED

	MAIN
	SERVICE LINE
	PROPOSED EASEMENT
	FIRE HYDRANT
	VALVE
	SANITARY SEWER MANHOLE
	BLOW OFF ASSEMBLY
	REDUCER
	TEE
	HORIZONTAL BEND
	VERTICAL BEND
	PLUG
	MASTER METER ASSEMBLY
	SERVICE LINE & METER
	DOUBLE SERVICE

Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

NOTES & LEGEND

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	VARIES
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. No. 60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

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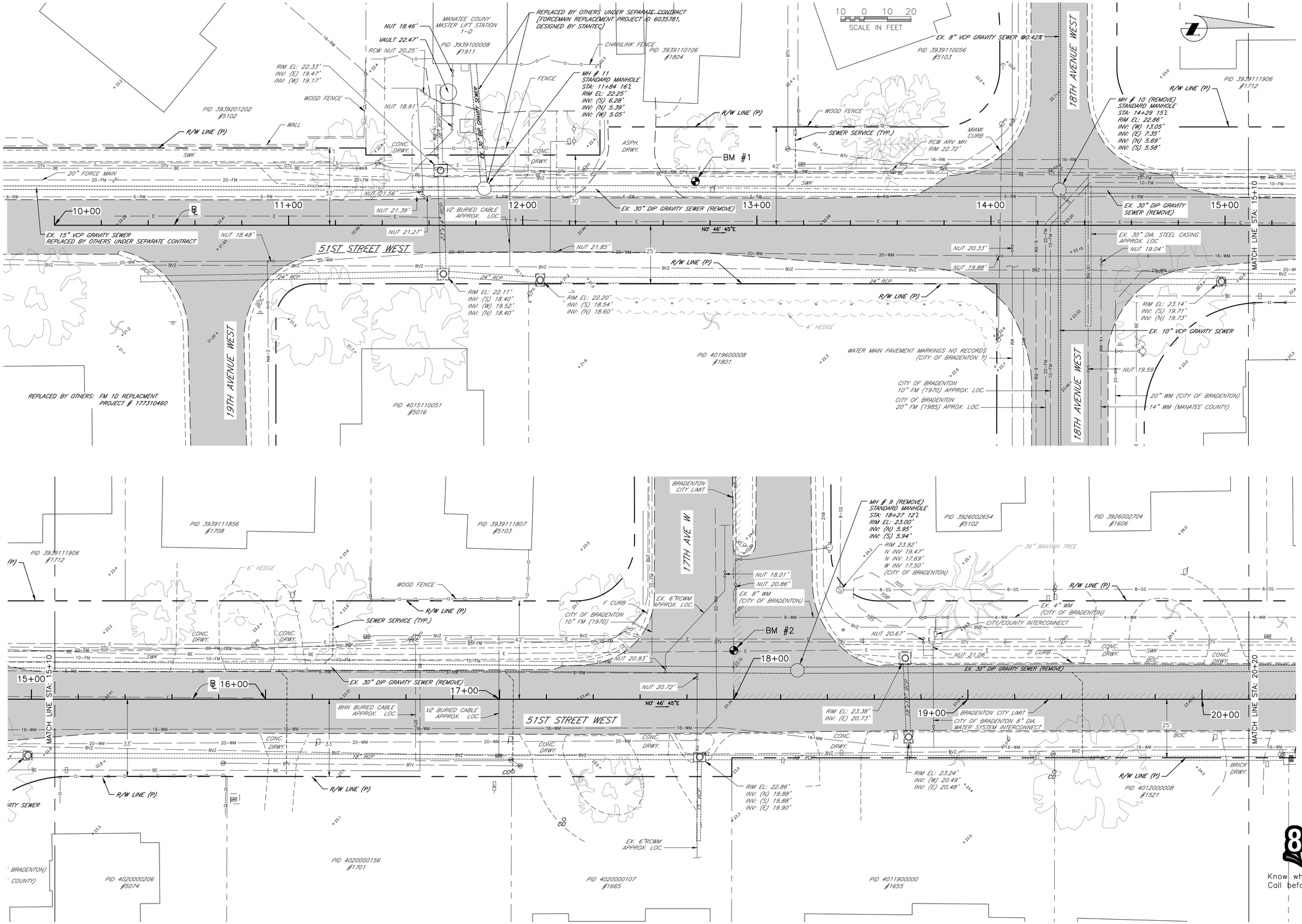

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Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

VERTICAL DATUM: NAVD 88

GRAVITY SEWER REPLACMENT

51st STREET WEST

EXISTING CONDITIONS, STA 10+00 TO 20+20

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN SHERMAN, P.E.
FLORIDA P.E. LICENSE No. 60923
STATE OF FLORIDA
4/6/15
PROFESSIONAL ENGINEER
Not valid without the raised seal

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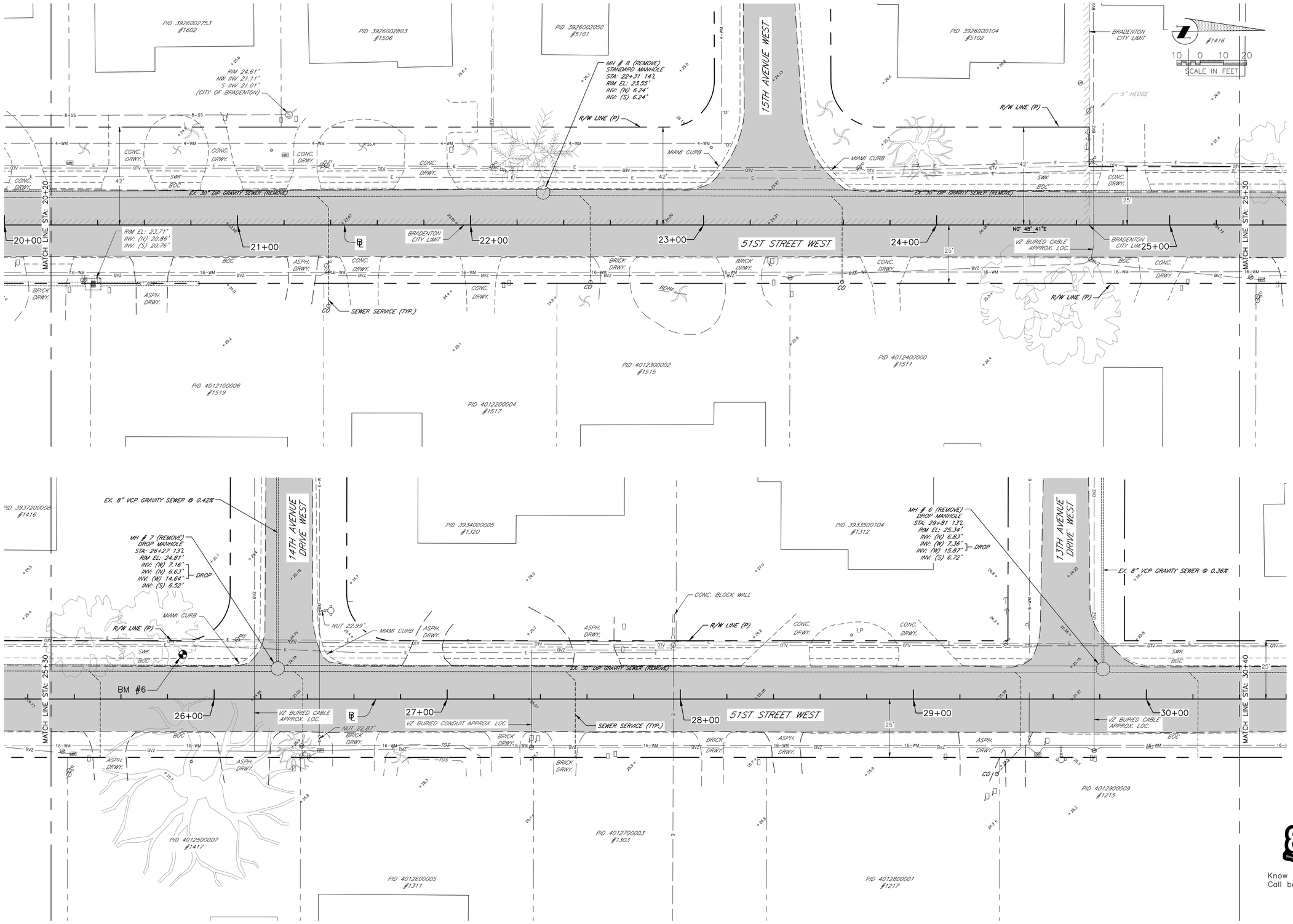

ELEVATIONS BASED UPON NAVD 1988

Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

VERTICAL DATUM: NAVD 88

GRAVITY SEWER REPLACMENT

51st STREET WEST

EXISTING CONDITIONS, STA 20+20 TO 30+40

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHORT, P.E.
FLORIDA P.E. # 60923
LICENSED
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
4/6/15
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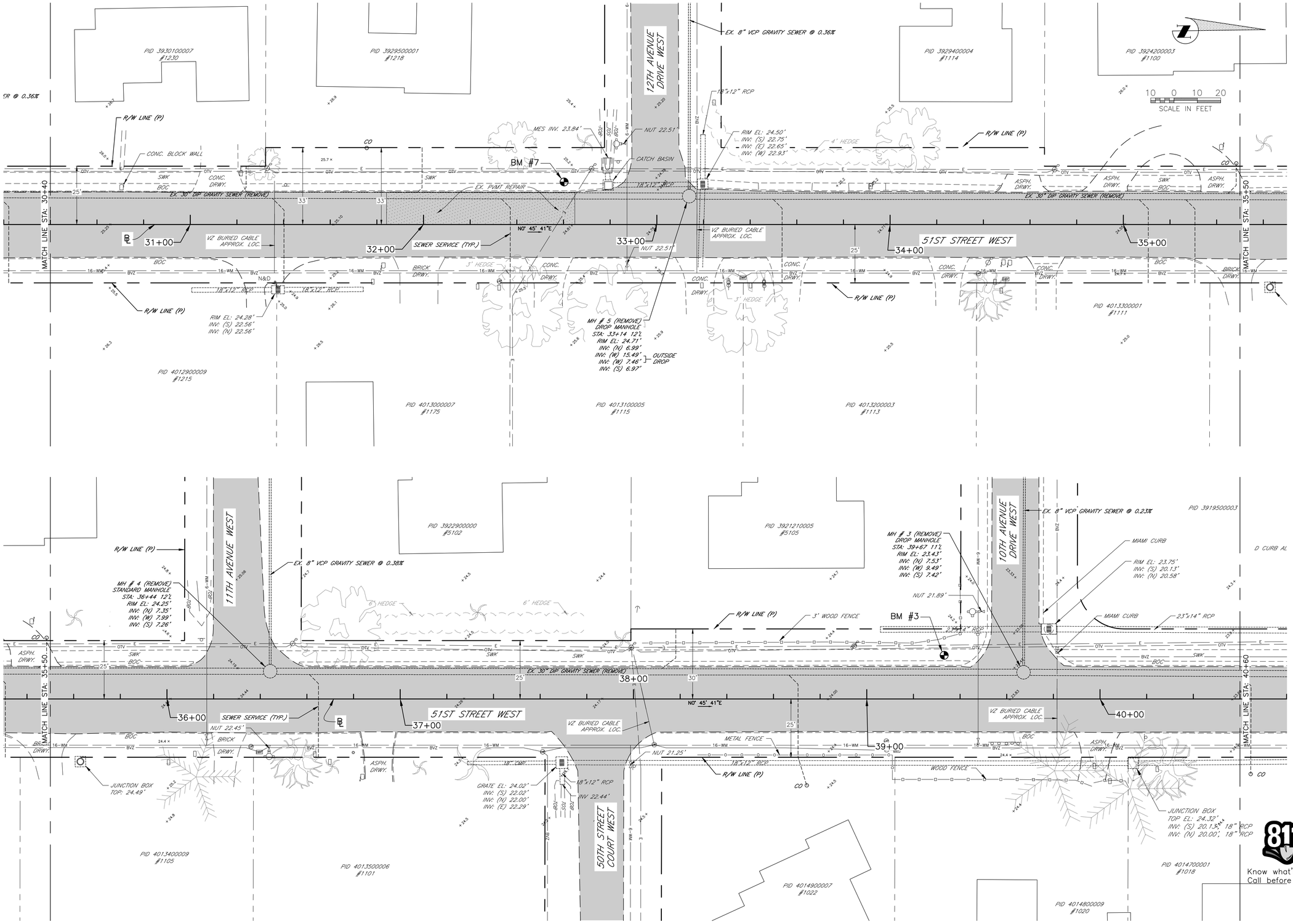

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PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

VERTICAL DATUM: NAVD 88

GRAVITY SEWER REPLACMENT

51st STREET WEST

EXISTING CONDITIONS, STA 30+40 TO 40+60

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. LICENSE No. 60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

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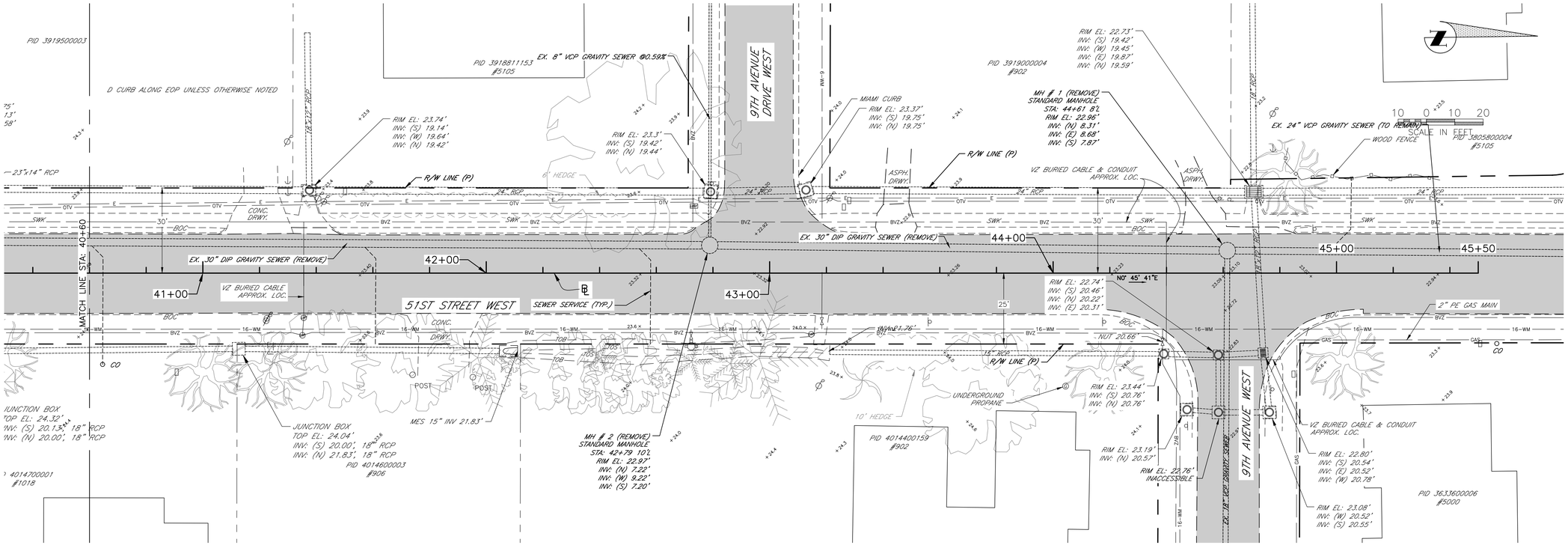

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GRAVITY SEWER REPLACMENT

51st STREET WEST

EXISTING CONDITIONS, STA 40+60 TO 45+50

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN SHEEHAN, P.E.
FLORIDA P.E. LICENSE No. 60923
JOHN S. SHEEHAN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15
SIGNATURE DATE

SHEET 06 OF 24

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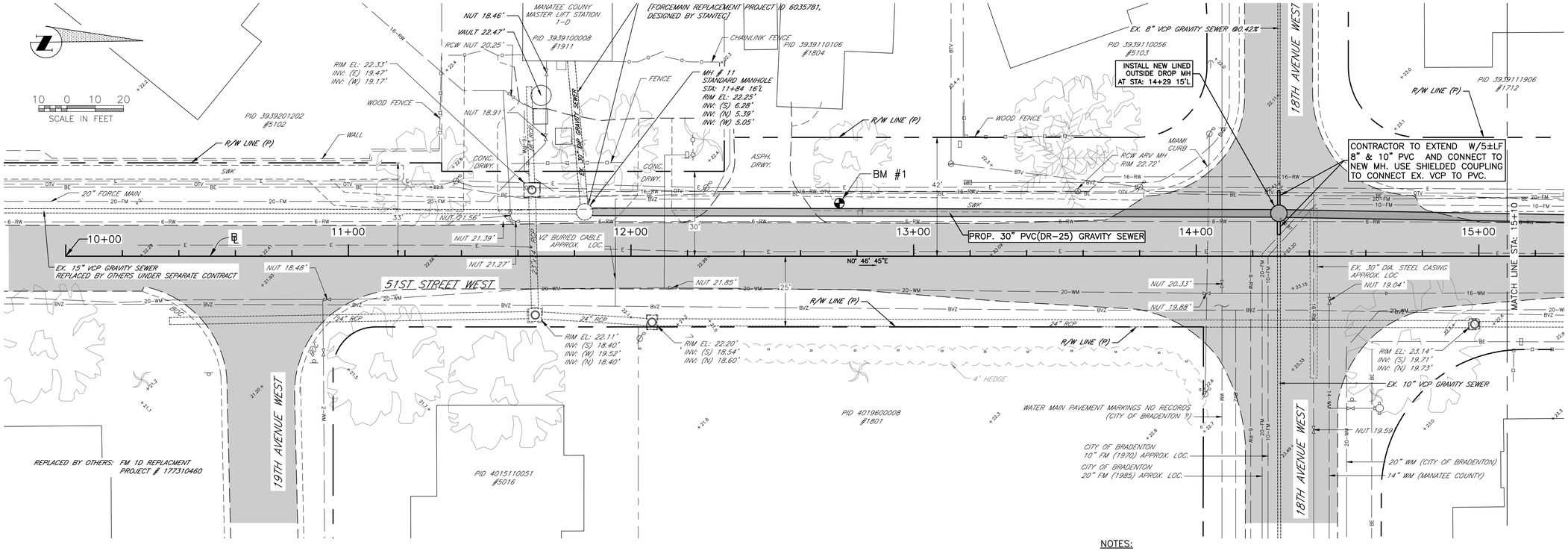

NOTES:

1. CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN @ 0.0625%.
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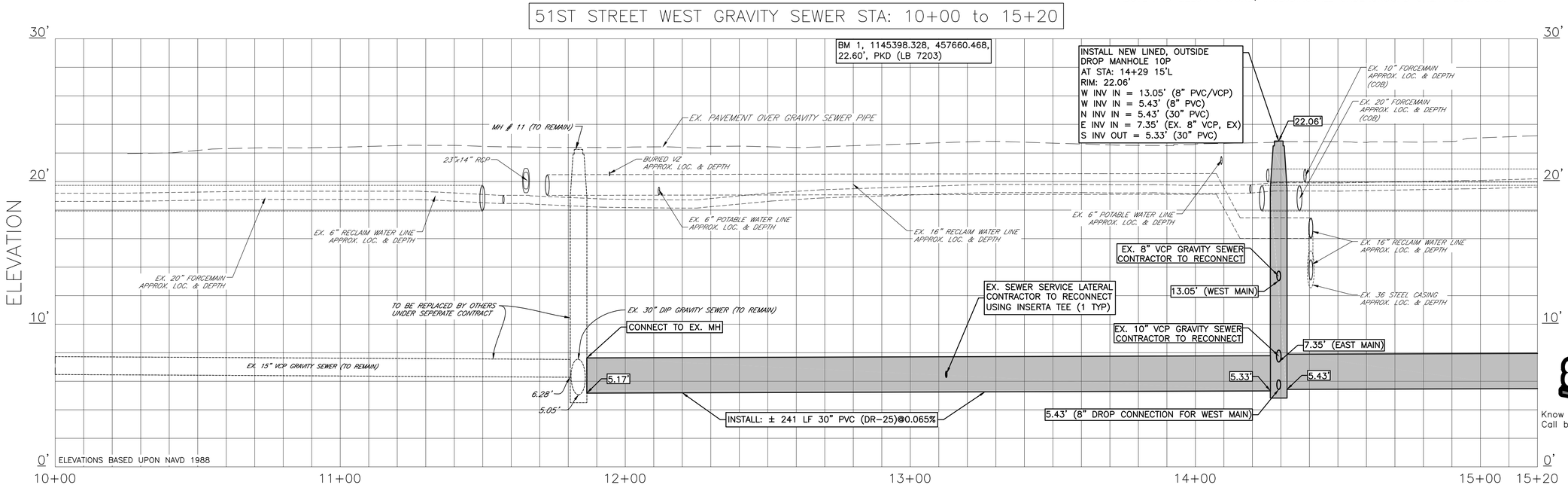
51ST STREET WEST GRAVITY SEWER STA: 10+00 to 15+20



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GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 10+00 TO 15+10

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
4/6/15
Signature Date

SHEET 07 OF 24

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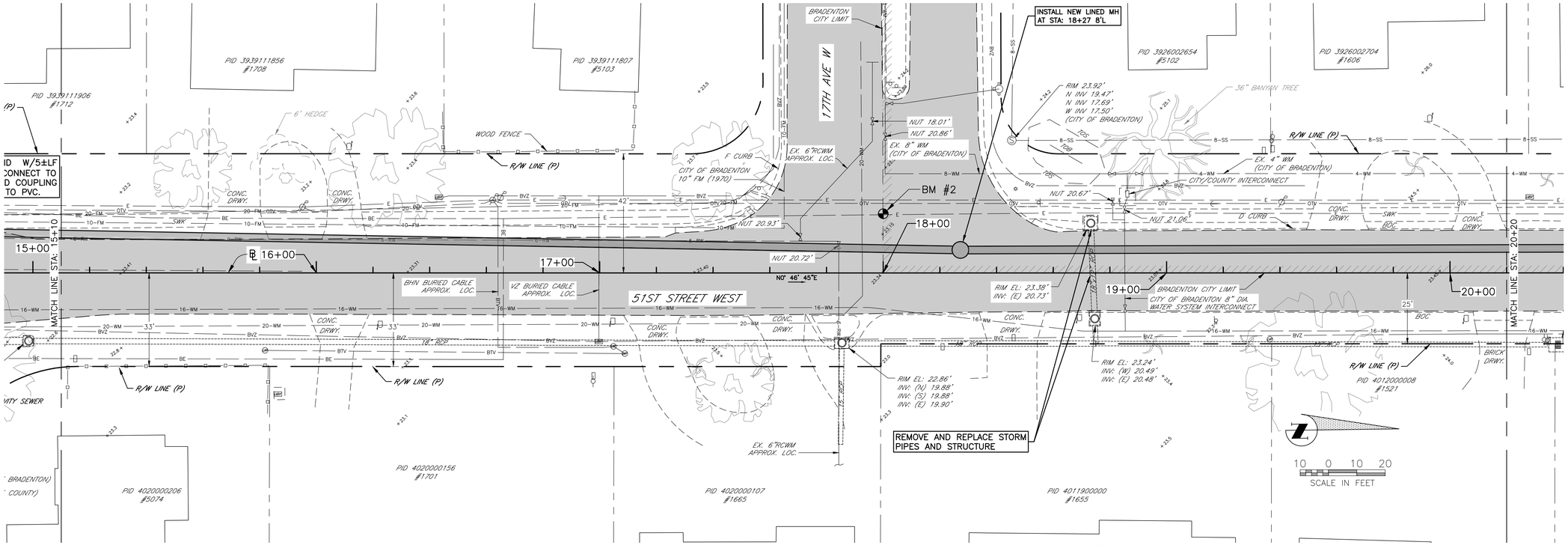

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COB: CITY OF BRADENTON

NOTES:

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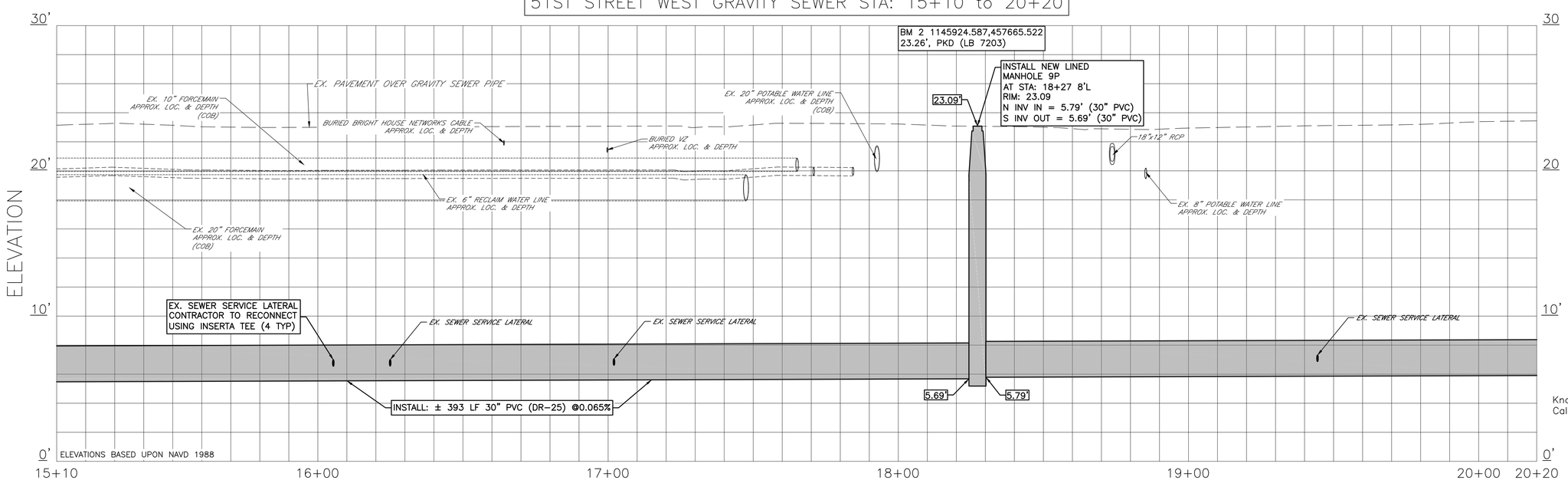
51ST STREET WEST GRAVITY SEWER STA: 15+10 to 20+20



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1022 26th Avenue East, Bradenton, FL 34208

VERTICAL DATUM: NAVD 88

GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 15+10 TO 20+20

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA REG. LICENSE No. 60923
STATE OF FLORIDA
4/6/15
Signature Date

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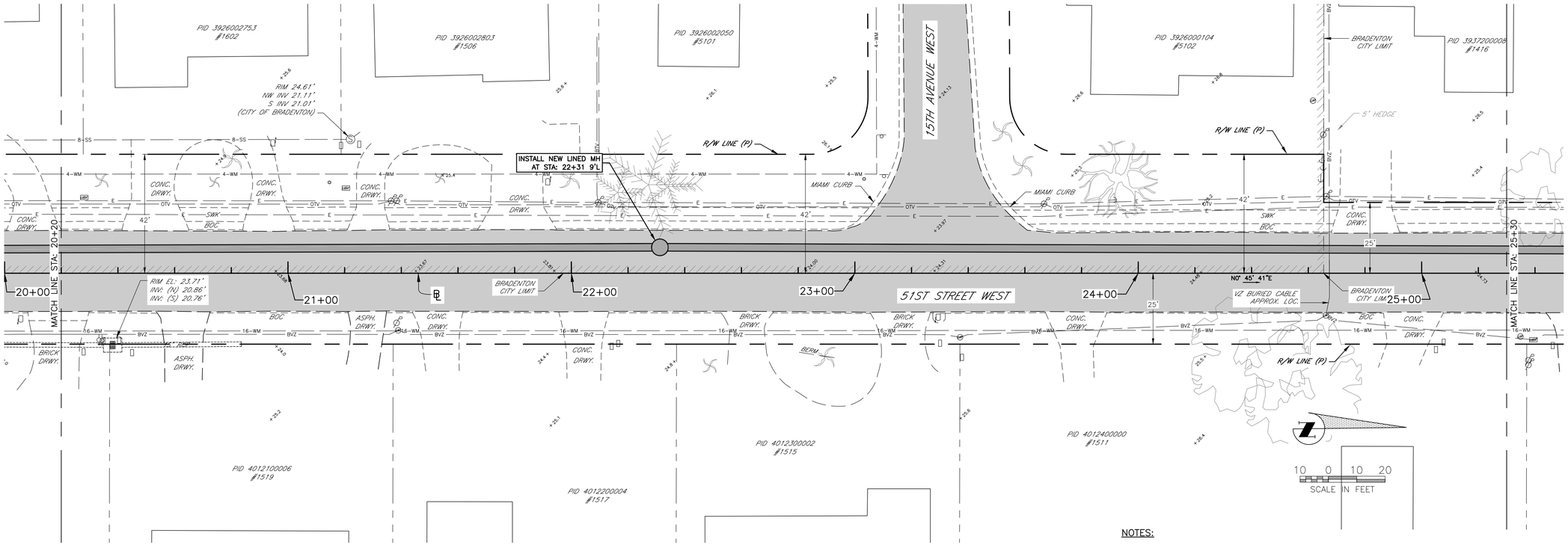

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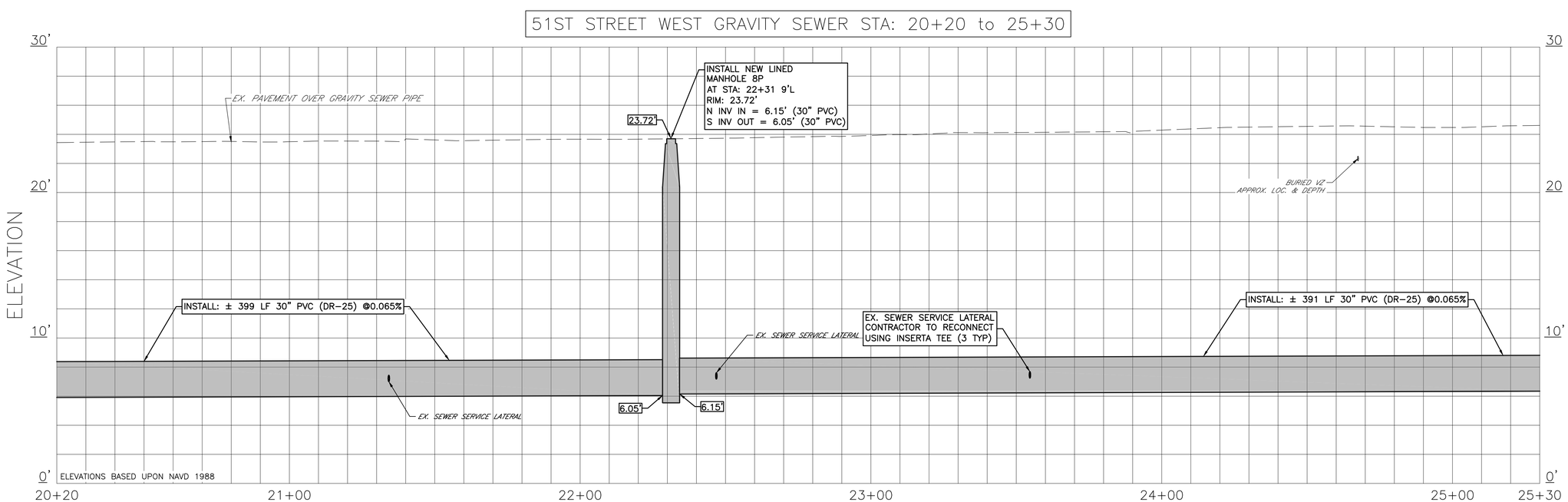

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1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 20+20 TO 25+30

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA REG. # 60923

JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15
Date

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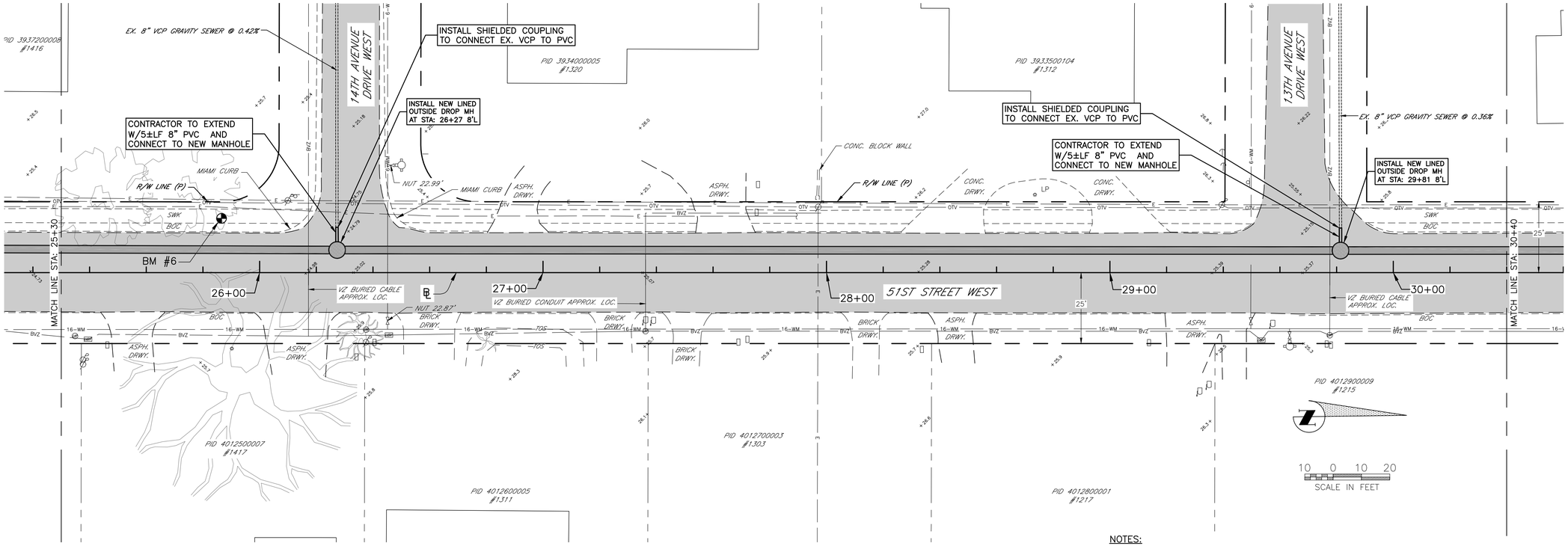

NOTES:

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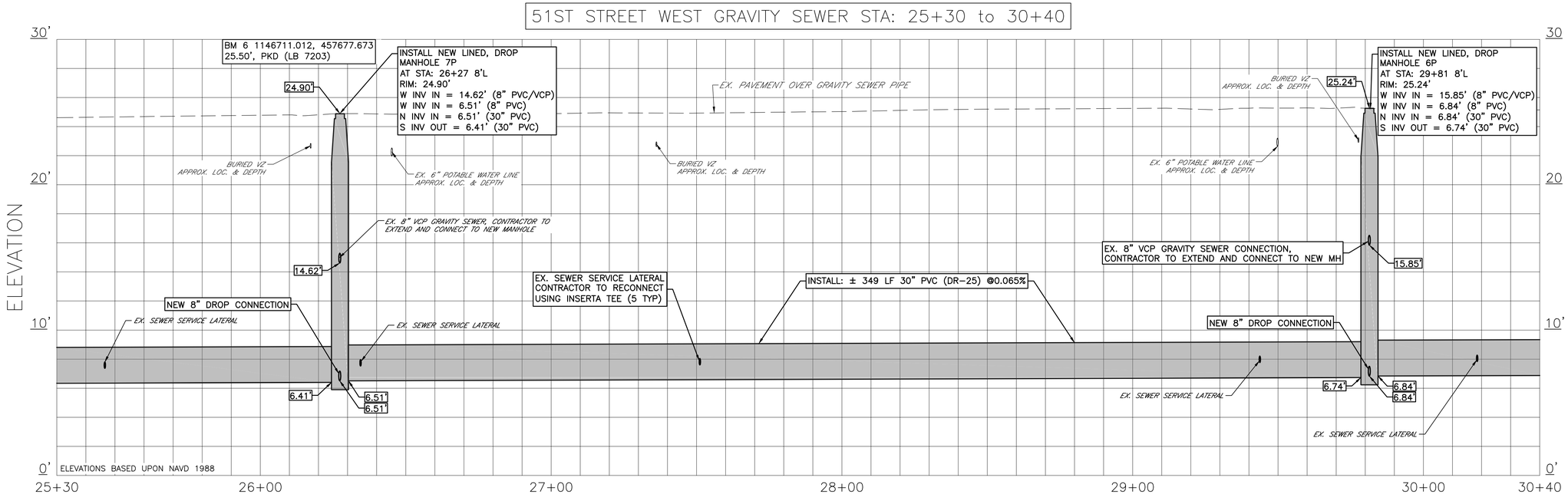
51ST STREET WEST GRAVITY SEWER STA: 25+30 to 30+40



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VERTICAL DATUM: NAVD 88

GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 25+30 TO 30+40

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN SHIRLEY P.E.
FLORIDA REG. No. 60923
STATE OF FLORIDA PROFESSIONAL ENGINEER No. 60923
4/6/15
Sign

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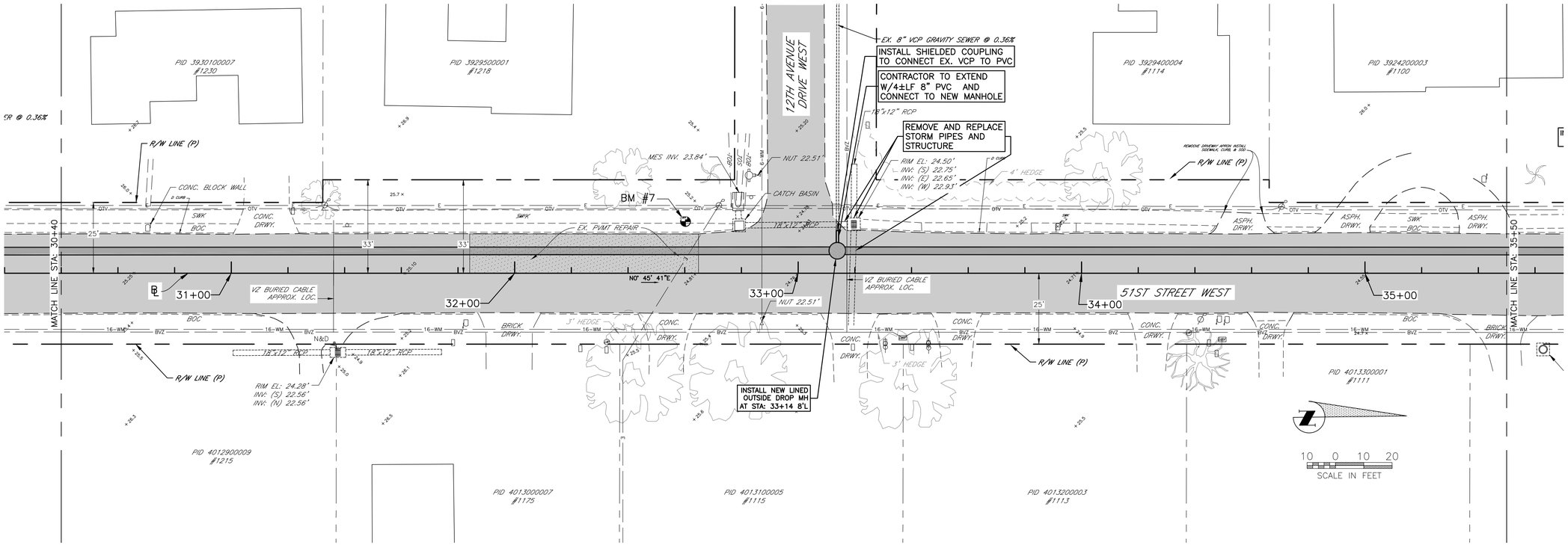

NOTES:

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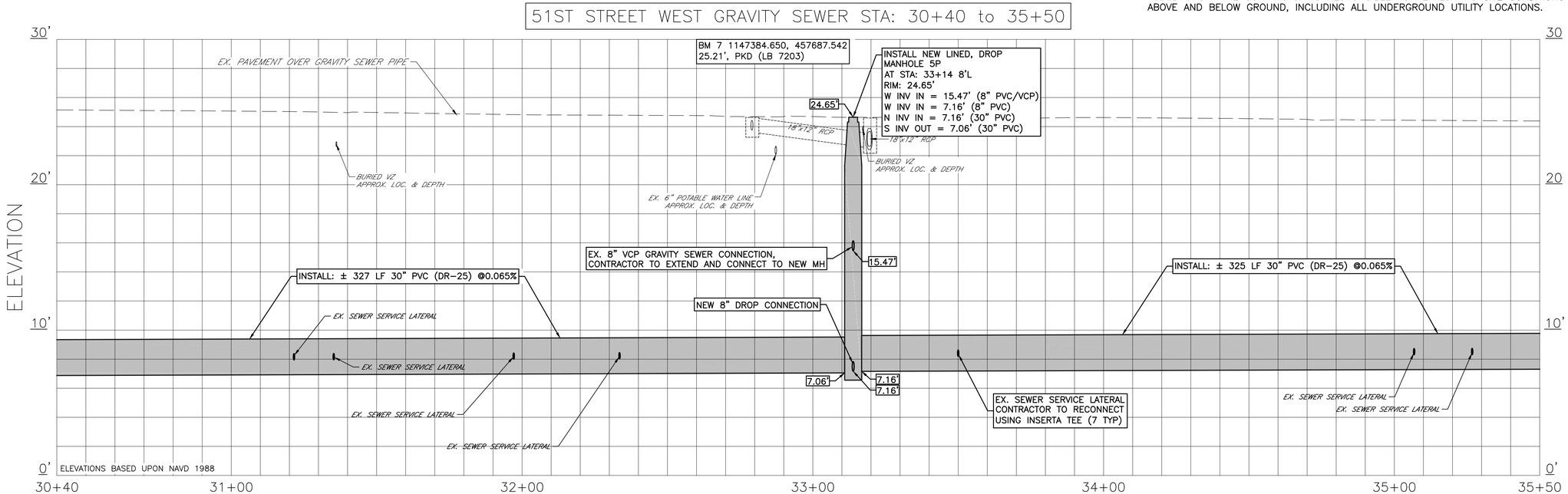
51ST STREET WEST GRAVITY SEWER STA: 30+40 to 35+50



Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 30+40 TO 35+50

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUP P.E. FLORIDA P.E. # 60923 No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER 4/6/15

Signature Date

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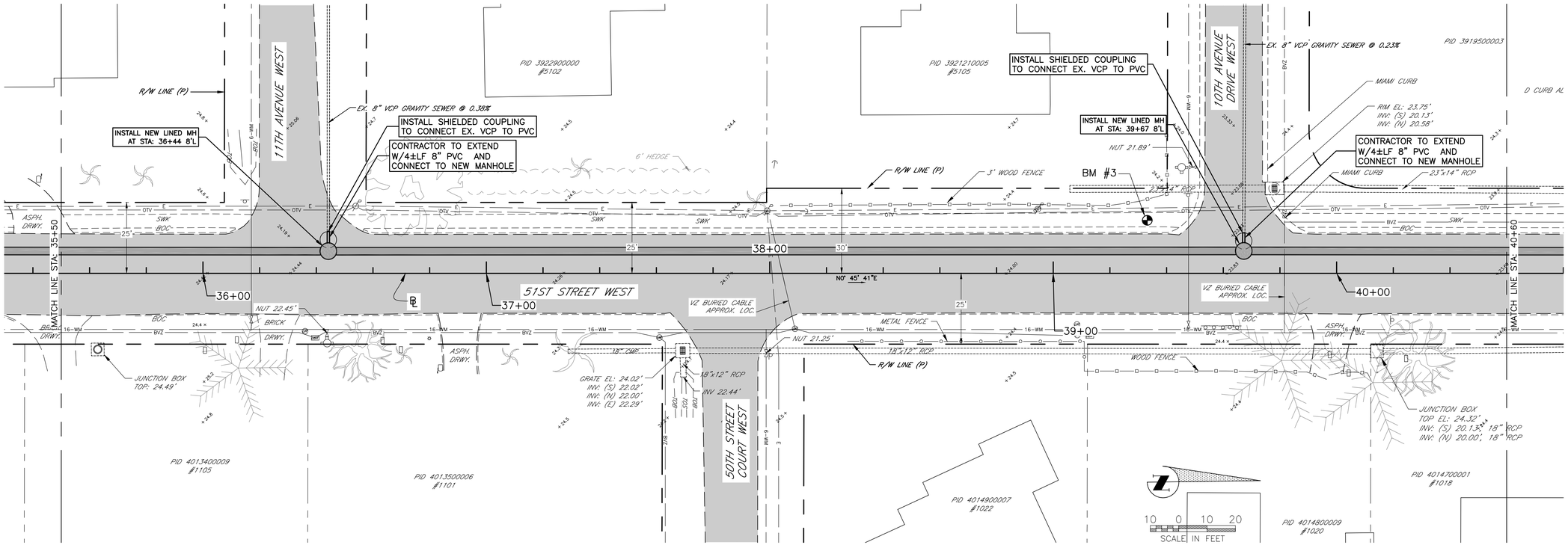

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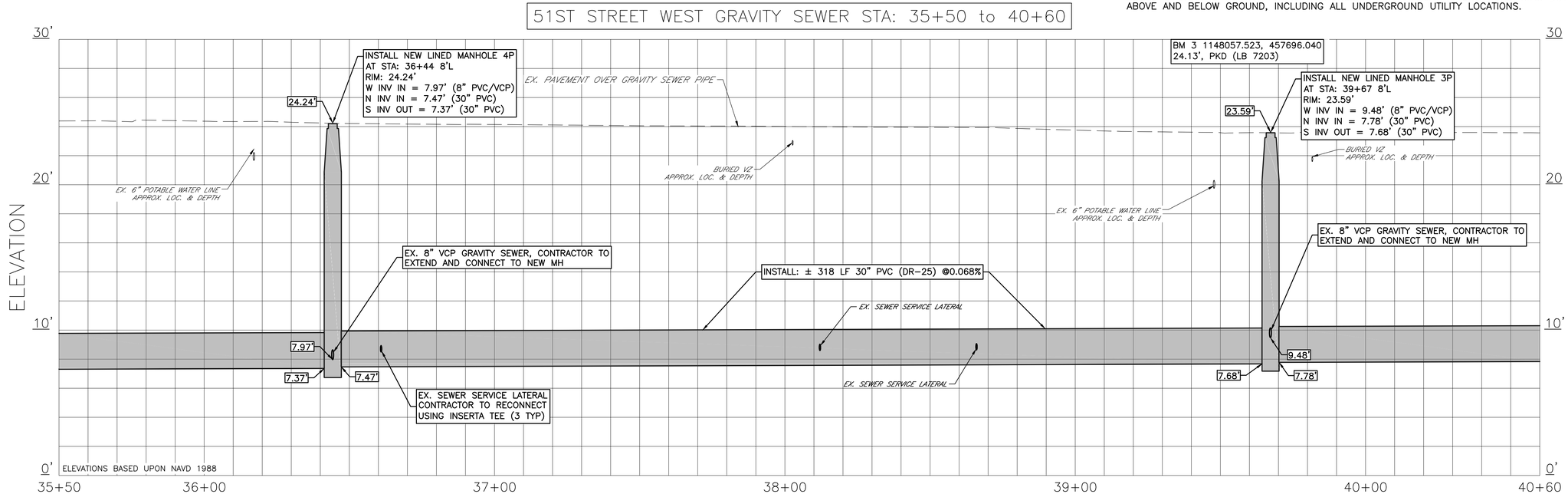
51ST STREET WEST GRAVITY SEWER STA: 35+50 to 40+60



Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 35+50 TO 40+60

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN STEPHEN SHOEMAKER, P.E.
FLORIDA LICENSE No. 60923
STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15
Signature Date

811 Know what's below. Call before you dig.

SHEET 12 OF 24

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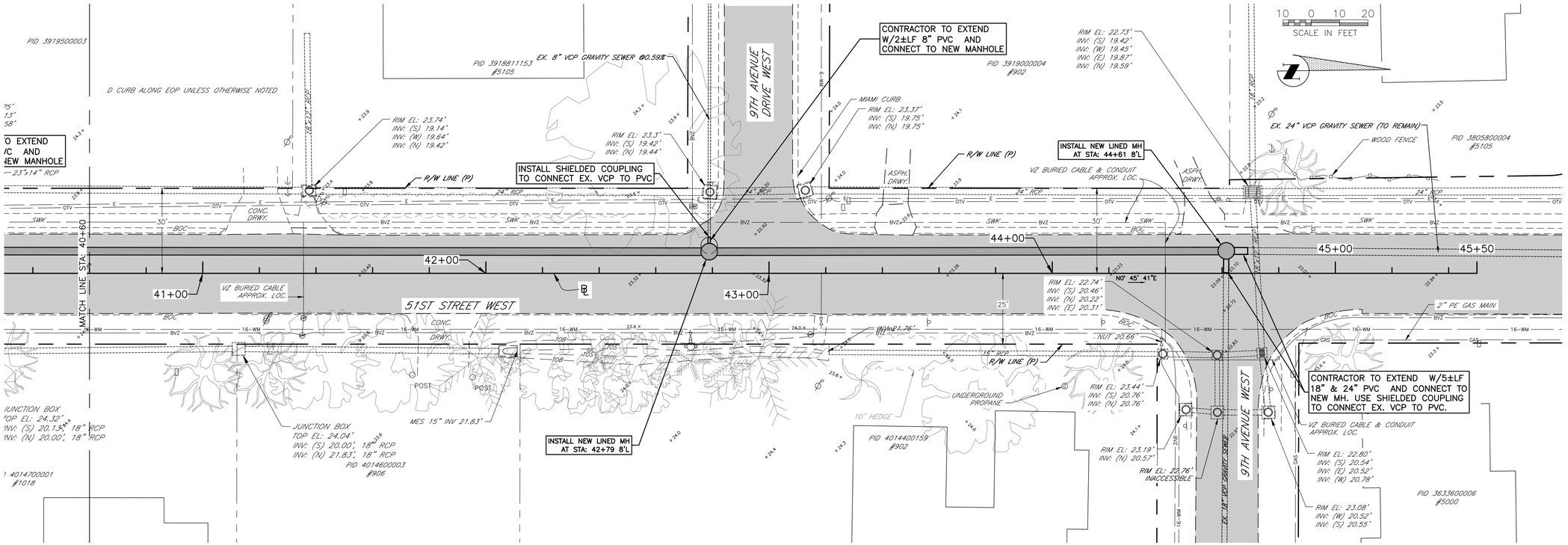
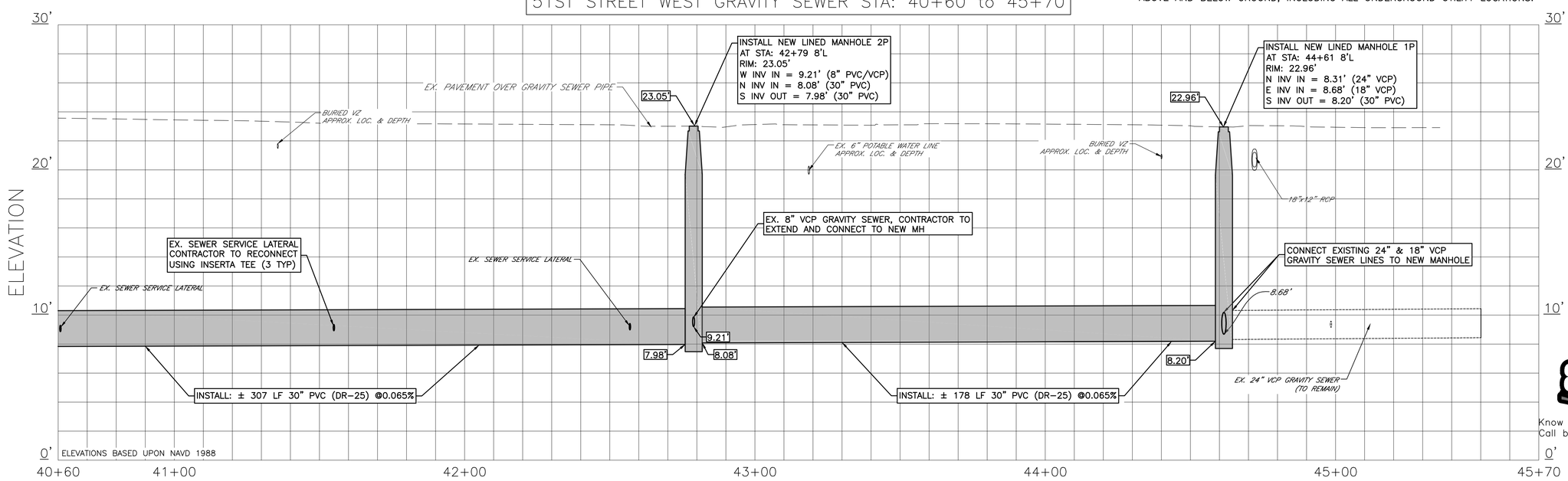


NOTES:

1. CONTRACTOR TO REMOVE EX. 30" DIP GRAVITY SEWER MAIN AND INSTALL NEW 30" PVC (DR 25) GRAVITY SEWER MAIN @ 0.0625%.
2. SLOPES OF NEW 30" PVC GRAVITY MAINS SHALL NOT BE LESS THAN 0.058% ROUNDING UP WILL NOT BE ACCEPTED. REVERSE SLOPES WILL NOT BE ACCEPTED
3. CONTRACTOR TO RE-CONNECT ALL EXISTING SEWER LATERALS W/INSERTA TEES.
4. THE LOCATION AND EXISTENCE OF NON MANATEE COUNTY OWNED UTILITIES MAY NOT BE RELIED UPON. THE CONTRACTOR IS RESPONSIBLE FOR EVALUATING SITE CONDITIONS BOTH ABOVE AND BELOW GROUND, INCLUDING ALL UNDERGROUND UTILITY LOCATIONS.

51ST STREET WEST GRAVITY SEWER STA: 40+60 to 45+70



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Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

VERTICAL DATUM: NAVD 88

GRAVITY SEWER REPLACMENT

51st STREET WEST

PROPOSED PLAN & PROFILE, STA 40+60 TO END

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
VERT. SCALE	1"=4'
HORZ. SCALE	1"=20'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA REGISTRATION
JOHN S. SHOUN
No. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
4/6/15
Signature

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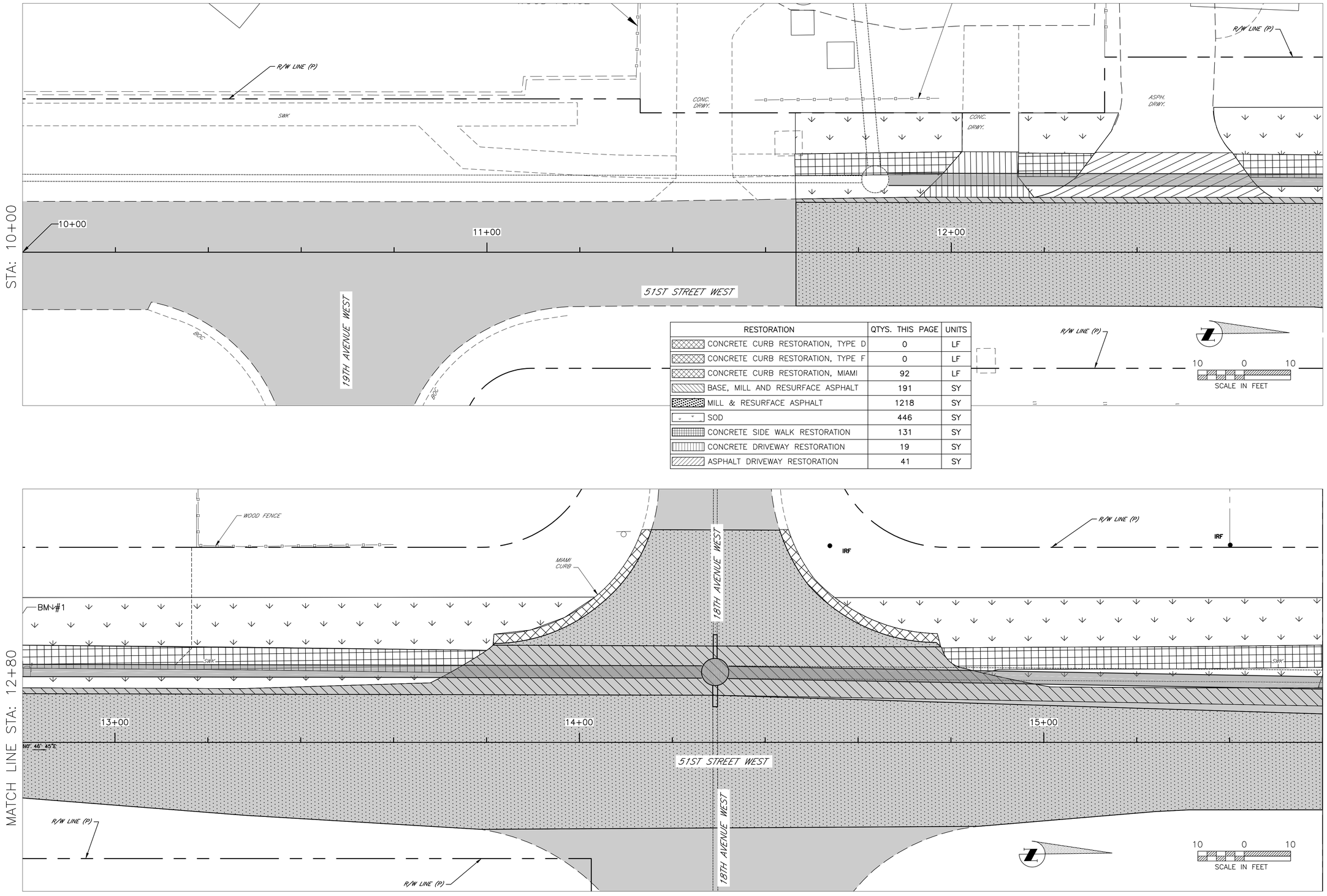

RESTORATION	QTYS. THIS PAGE	UNITS
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CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	92	LF
BASE, MILL AND RESURFACE ASPHALT	191	SY
MILL & RESURFACE ASPHALT	1218	SY
SOD	446	SY
CONCRETE SIDE WALK RESTORATION	131	SY
CONCRETE DRIVEWAY RESTORATION	19	SY
ASPHALT DRIVEWAY RESTORATION	41	SY

Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
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1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

RESTORATION AREAS, STA 10+00 TO 15+60

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
LICENSE NO. 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
4/6/15
Signature Date

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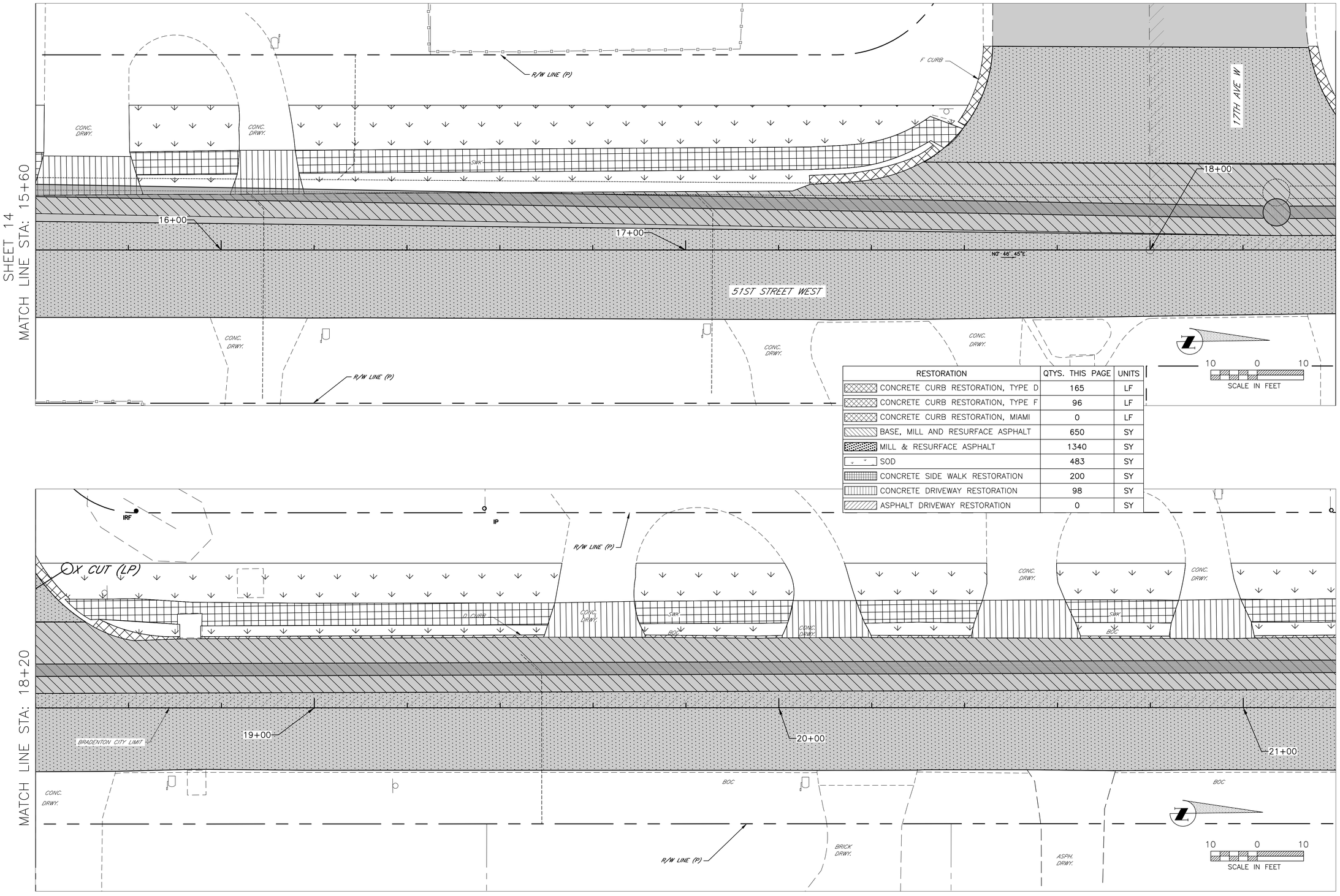

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CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	650	SY
MILL & RESURFACE ASPHALT	1340	SY
SOD	483	SY
CONCRETE SIDE WALK RESTORATION	200	SY
CONCRETE DRIVEWAY RESTORATION	98	SY
ASPHALT DRIVEWAY RESTORATION	0	SY

Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
RESTORATION AREAS, STA 15+60 TO 21+20

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
No. 60923
LICENSE
STATE OF FLORIDA
PROFESSIONAL ENGINEER
4/6/15
Date

SHEET 15 OF 24

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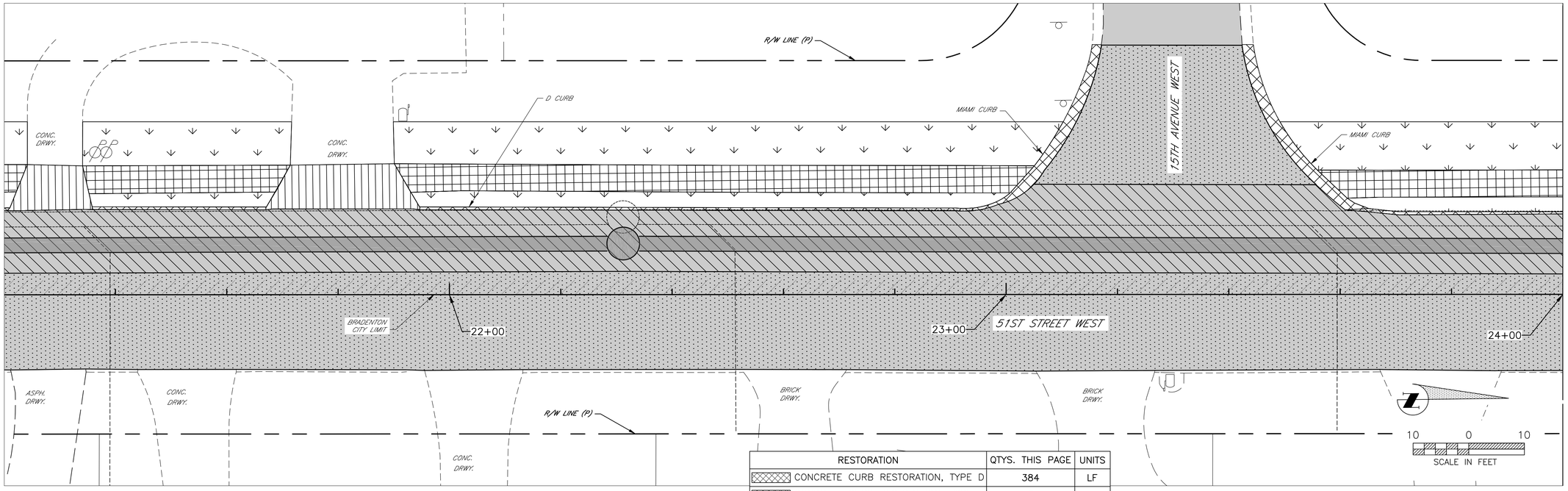

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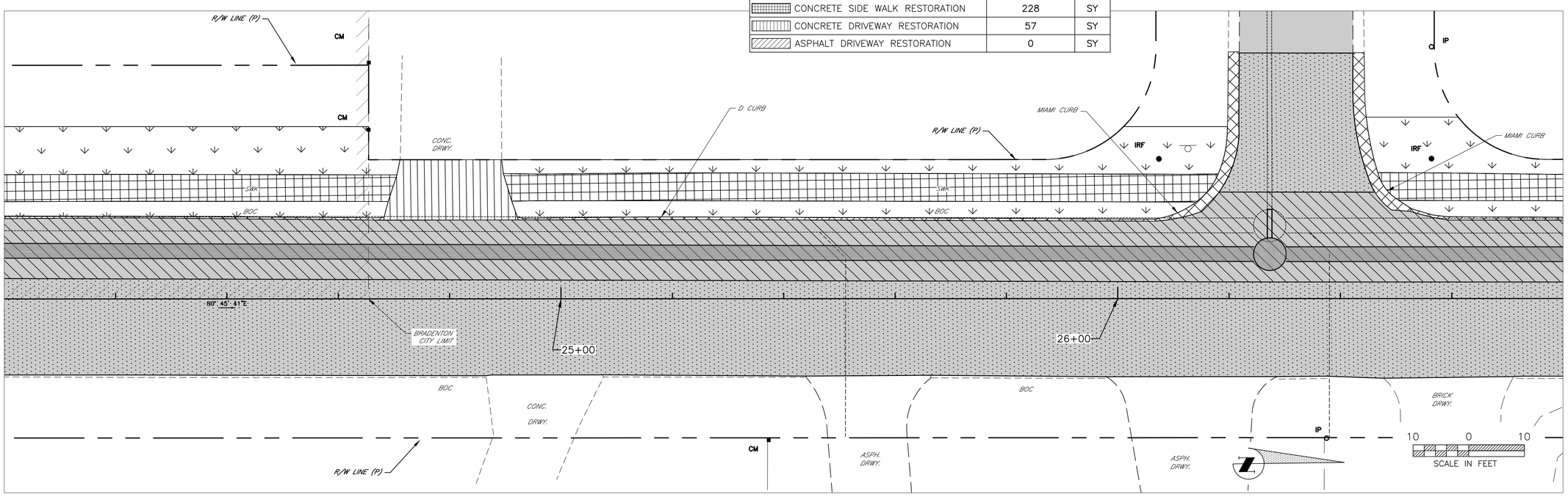
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	152	LF
BASE, MILL AND RESURFACE ASPHALT	735	SY
MILL & RESURFACE ASPHALT	1233	SY
SOD	450	SY
CONCRETE SIDE WALK RESTORATION	228	SY
CONCRETE DRIVEWAY RESTORATION	57	SY
ASPHALT DRIVEWAY RESTORATION	0	SY



Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

RESTORATION AREAS, STA 21+20 TO 26+80

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. No. 60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15
Date

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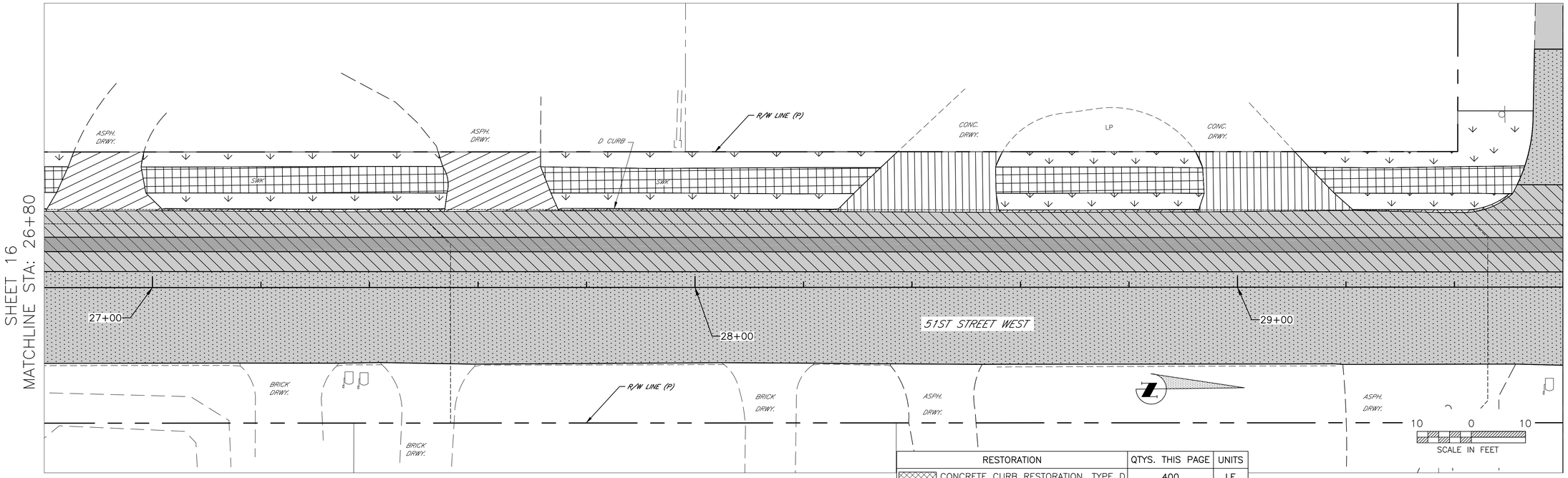

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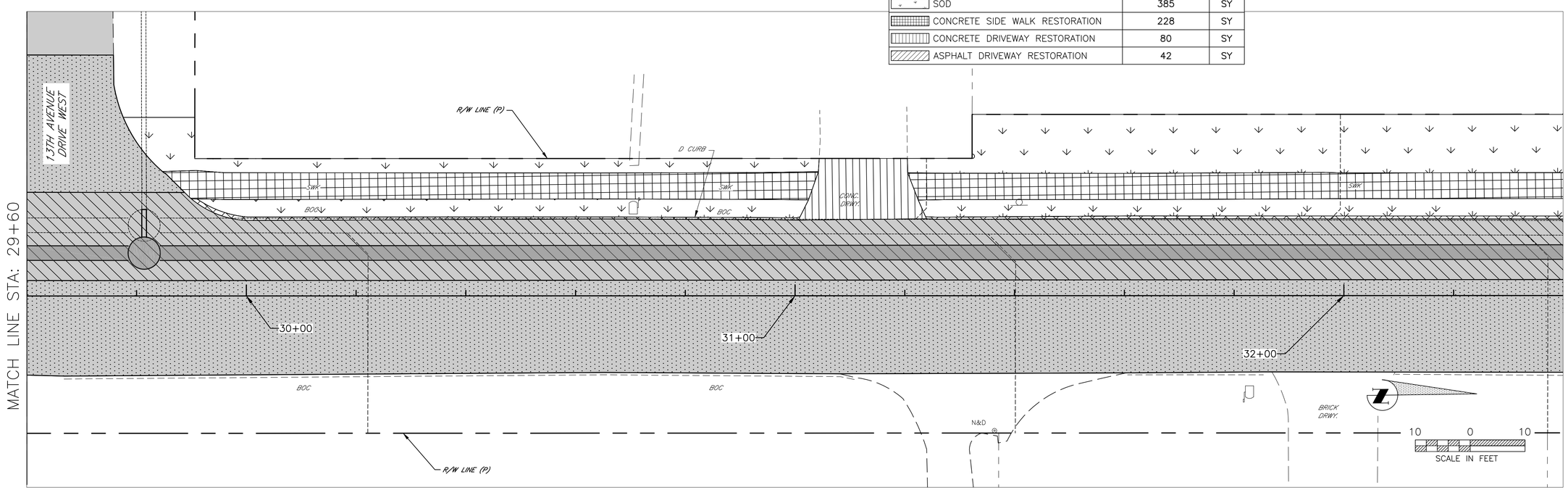
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	713	SY
MILL & RESURFACE ASPHALT	1127	SY
SOD	385	SY
CONCRETE SIDE WALK RESTORATION	228	SY
CONCRETE DRIVEWAY RESTORATION	80	SY
ASPHALT DRIVEWAY RESTORATION	42	SY



Manatee County FLORIDA
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ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
RESTORATION AREAS, STA 26+80 TO 32+40

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOHAN, P.E.
FLORIDA REGISTERED PROFESSIONAL ENGINEER
LICENSE No. 60923
STATE OF FLORIDA
4/6/15

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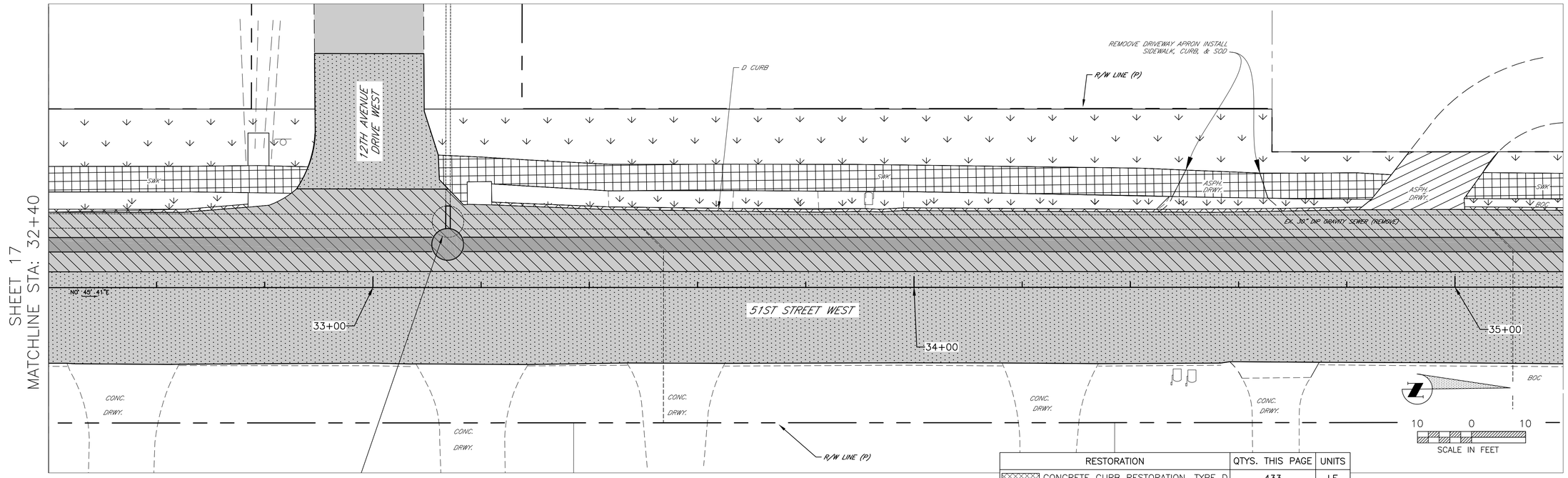

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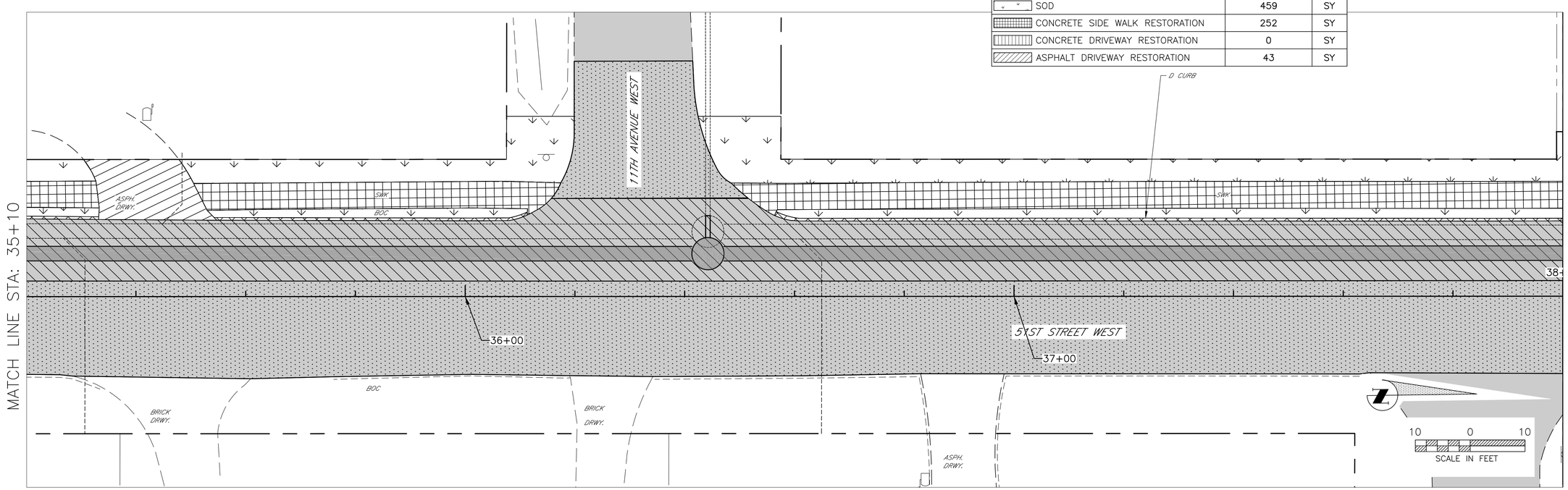
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	726	SY
MILL & RESURFACE ASPHALT	1190	SY
SOD	459	SY
CONCRETE SIDE WALK RESTORATION	252	SY
CONCRETE DRIVEWAY RESTORATION	0	SY
ASPHALT DRIVEWAY RESTORATION	43	SY



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ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

RESTORATION AREAS, STA 32+40 TO 38+00

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. No. 60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

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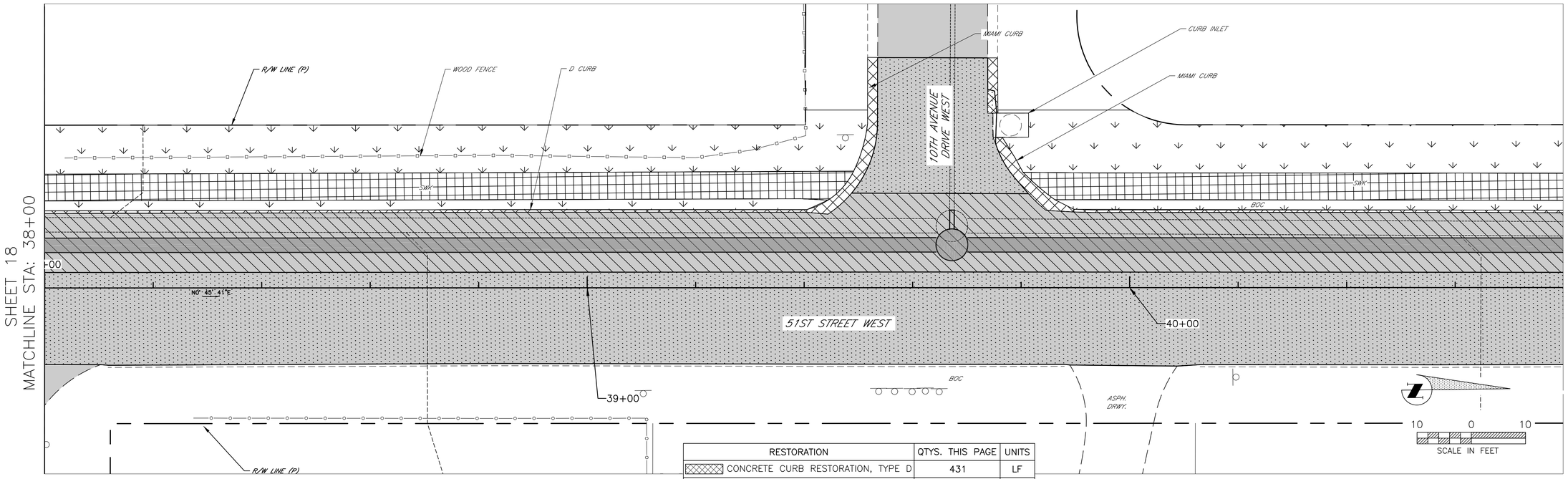

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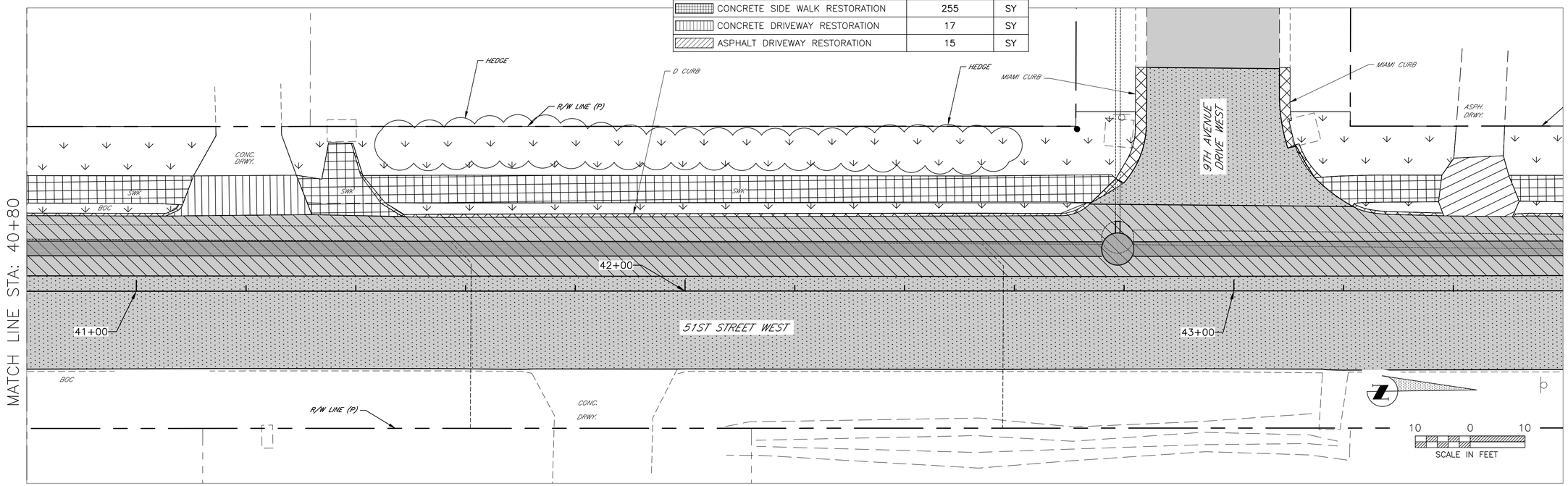
CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	123	LF
BASE, MILL AND RESURFACE ASPHALT	708	SY
MILL & RESURFACE ASPHALT	1201	SY
SOD	569	SY
CONCRETE SIDE WALK RESTORATION	255	SY
CONCRETE DRIVEWAY RESTORATION	17	SY
ASPHALT DRIVEWAY RESTORATION	15	SY



Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

RESTORATION AREAS, STA 38+00 TO 43+60

NAVD 88

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN SHAW JOHN, P.E.
LICENSE NUMBER 60923
STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 60923
4/6/15
Date

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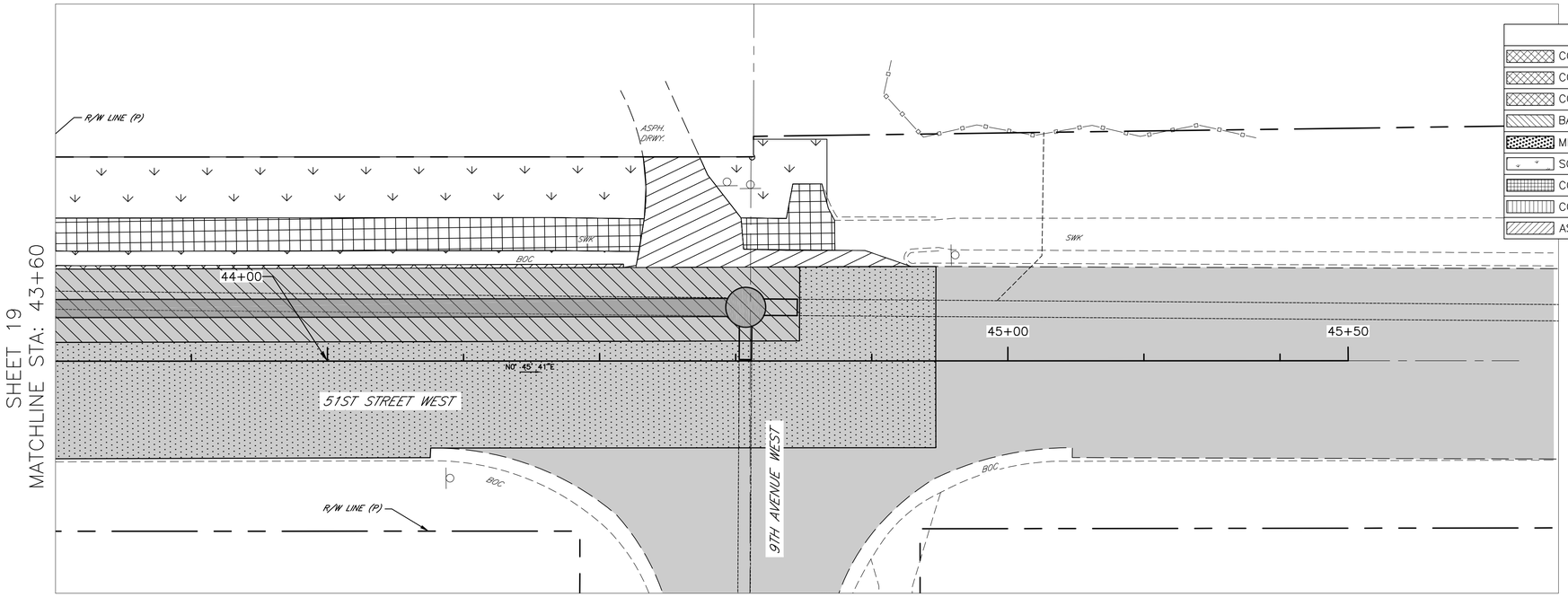

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CONCRETE CURB RESTORATION, TYPE F	0	LF
CONCRETE CURB RESTORATION, MIAMI	0	LF
BASE, MILL AND RESURFACE ASPHALT	131	SY
MILL & RESURFACE ASPHALT	258	SY
SOD	122	SY
CONCRETE SIDE WALK RESTORATION	57	SY
CONCRETE DRIVEWAY RESTORATION	0	SY
ASPHALT DRIVEWAY RESTORATION	29	SY

10 0 10
SCALE IN FEET

Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
RESTORATION AREAS, STA 43+60 TO END

VERTICAL DATUM: NAVD 88

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=10'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. NO. 60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
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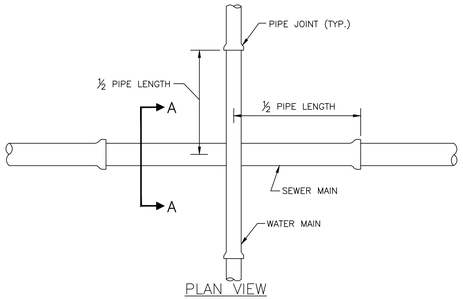
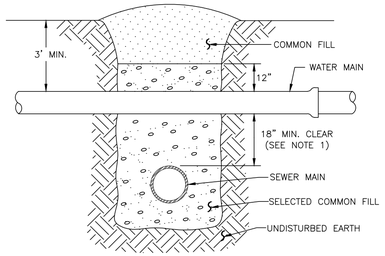


PLAN VIEW



SECTION A–A

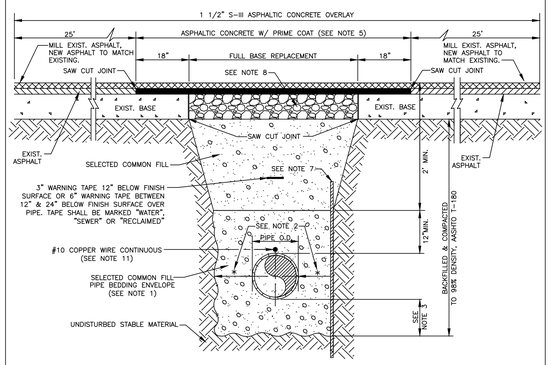
NOTES:

1. CLEARANCE MAY BE REDUCED TO 6" FOR GRAVITY SEWER WHERE WATER MAIN IS DUCTILE IRON OR 3" FOR FORCE MAIN WHERE FORCE MAIN IS ENCASED A MINIMUM OF 10" EACH SIDE OF CROSSING.
2. WHERE NO ENCASEMENT IS REQUIRED, PIPE SECTIONS SHALL BE FULL–LENGTH AND SHALL BE ADJUSTED HORIZONTALLY SO THAT THE CROSSING IS AT EACH PIPE SECTION'S MIDPOINT REGARDLESS OF THE VERTICAL CLEARANCE.
3. REFER TO THE JACK & BORE CROSSING DETAIL FOR CASING AND SPACER REQUIREMENTS.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	TYPICAL NEW WATER & SEWER LINE CROSSING	UG–2
CLB/BR	11/10	JANUARY 7, 2014	
		DATE OF APPROVAL	

NOTES:

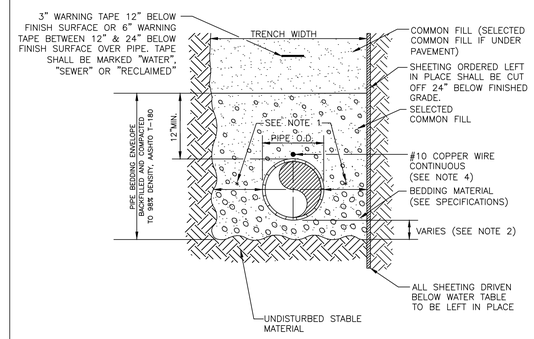
1. USE OF TYPE A–2 AND A–3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
6. MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE. BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCERNABLE "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
7. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
8. BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
9. TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
10. RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
11. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
12. NOTES 5. THRU 10. ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



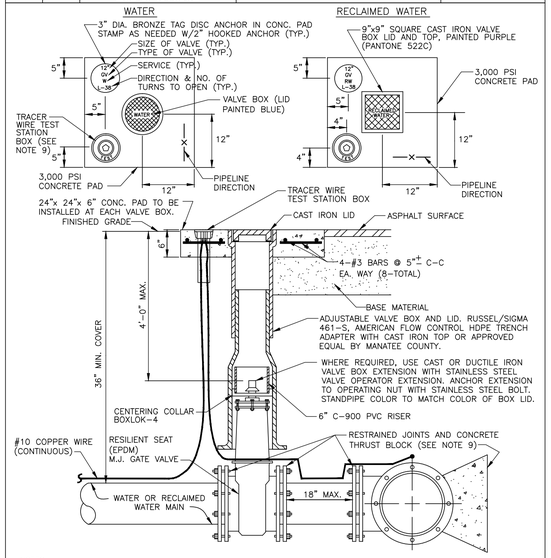
MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A–1 PIPE BEDDING	UG–12
WRT/KE	03/11	JANUARY 7, 2014	
		DATE OF APPROVAL	

NOTES:

1. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
2. TYPICALLY 4" TO 6".
3. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



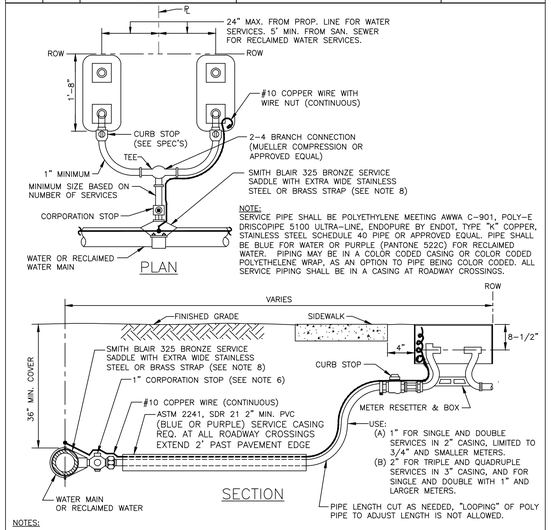
MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	TRENCH WITH TYPE A–2 PIPE BEDDING	UG–15
CLB/BR	11/10	JANUARY 7, 2014	
		DATE OF APPROVAL	



NOTES:

1. "WV" OR "RWV" TO BE IMPRESSED INTO THE NEWLY–POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A BLUE DISC WITH "WV" OR PURPLE DISC WITH "RWV" AND A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS DETERMINED IN THE FIELD.
3. WATER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
4. PRECAST CONCRETE PADS & THRUST BLOCKS SHALL NOT BE USED.
5. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
6. PIPELINE DIRECTION TO BE IMPRESSED INTO NEWLY POURED CONCRETE PAD.
7. TRACER WIRE TEST STATION BOX IS NOT REQUIRED IN VALVE BOX PAD IF THE GATE VALVE IS LOCATED WITHIN 200 FEET OF A WATER SERVICE, BLOW–OFF, BACKFLOW PREVENTER OR FIRE HYDRANT THAT HAS A TRACER WIRE BOX.
8. WHERE THRUST BLOCK NOT USED, RESTRAINED JOINTS MUST THEN EXTEND FROM TEE FULL LENGTH SPECIFIED FOR "TEES."
9. BINGHAM & TAYLOR P200NFG FOR NORMAL YARD SERVICE. WHERE VALVE WILL BE IN STREET OR PARKING UNDER VEHICLE TRAFFIC, USE P525RO CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	GATE VALVE, BOX, LID AND TAG	UW–2
CLB/KE	11/10	JANUARY 7, 2014	
		DATE OF APPROVAL	



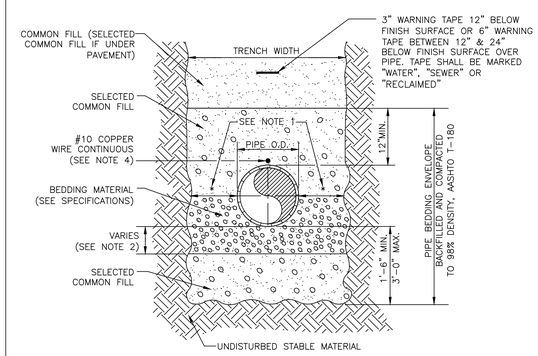
NOTES:

1. ALL SERVICE TAPS TO BE LOCATED IN THE FIELD. TAPS SHALL BE NO CLOSER THAN 2'–0" STAGGERED INTERVALS OR WITHIN 2'–0" FROM BELL OR SPIGOT ENDS.
2. METER BOXES & RESETTERS ARE TO BE INSTALLED BY THE INFRASTRUCTURE CONTRACTOR AND SHALL NOT BE SET IN DRAINAGE SWALES, SIDEWALKS OR DRIVEWAYS.
3. "WM" OR "RWM" TO BE IMPRESSED INTO THE NEWLY POURED CONCRETE CURB ALONG WITH DISTANCE IN FEET TO THE METER. IF NO CURB, INSTALL A BLUE DISC WITH "WM" OR A PURPLE DISC WITH "RWM" AND A 1/8"x 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE DISTANCE (IN FEET) FROM THE DISC TO THE METER.
4. #10 COPPER WIRE SHALL BE INSTALLED WITH WATER AND RECLAIMED MAIN AND ALL SERVICES. SERVICE WIRE SHALL BE CONNECTED TO THE TRACER WIRE ALONG THE MAIN.
5. WATER AND RECLAIMED WATER SERVICE LINES TO BE 5' MINIMUM FROM SEWER SERVICE PIPES.
6. FOR 2" SERVICES REPLACE CORPORATION STOP WITH 2" RESILIENT WEDGE FIP GATE VALVE W/BOX, LID & TAG.
7. WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK AND THE ROW IS ONE FOOT (CUL–DE–SAC W/MEDIAN) A 10–FOOT–WIDE PUBLIC UTILITY EASEMENT SHALL BE LOCATED IN THE FRONT OF THE LOTS, ADJACENT TO THE ROW.
8. FOR HDPE MAINS, USE ROMAC 306H SS OR CENTRAL PLASTICS ELECTRO FUSION CORP OR EQUIVALENT SADDLE.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	TYPICAL SERVICE CONNECTION	UW–19
CLB/BR	11/10	JANUARY 7, 2014	
		DATE OF APPROVAL	

NOTES:

2. PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
3. TYPICALLY 4" TO 6".
4. PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.
5. TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.



MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	TRENCH WITH TYPE A–3 PIPE BEDDING	UG–16
CLB/BR	11/10	JANUARY 7, 2014	
		DATE OF APPROVAL	

Manatee County FLORIDA

PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
DETAILS 1

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404–6035782	
SURVEY #	13–1816	
SEC./TWN./RGE	28,29,32,33–3417	
SCALE		
VERTICAL DATUM	NAVD 1988	
	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA LICENSE No. 60923
STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

SHEET 21 OF 24

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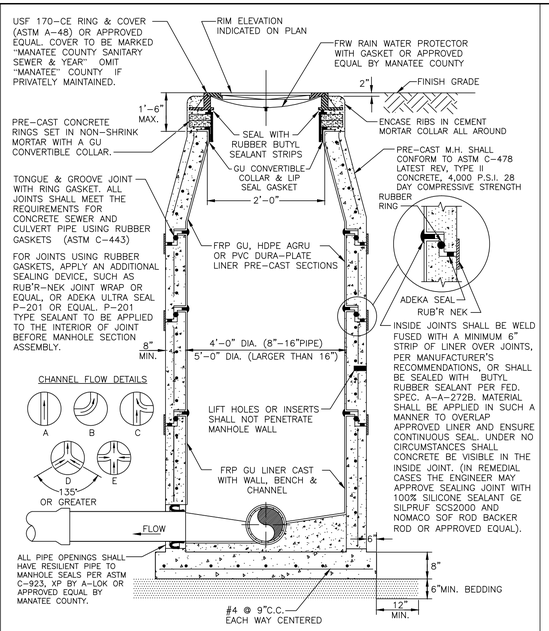
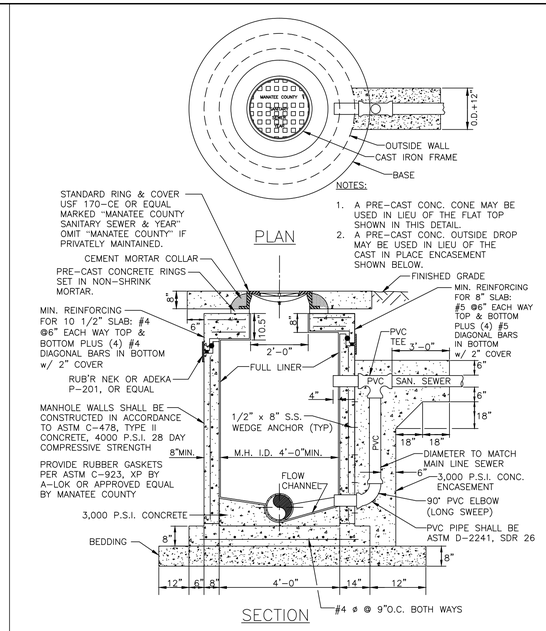
S:\PWD_Engineering_Share\Util Eng Design\PROJ\<>SAN SWR Proj\GM–51 St Gravity Sewer Replacement\DWGS\51st ST Gravity Sewer Replacement.dwg,21, 1/13/2015 11:57 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 Inches)



NOTE:
DROP MANHOLES, MANHOLES WITH OPPOSING FLOW (DETAILS D & E), MANHOLES IMMEDIATELY UPSTREAM OF A LIFT STATION WET WELL, MANHOLES WITH GRAVITY SEWERS GREATER THAN 12 INCHES IN DIAMETER, MANHOLES RECEIVING A FORCE MAIN AND THE FIRST TWO GRAVITY MANHOLES DOWNSTREAM OF MANHOLES RECEIVING A FORCE MAIN SHALL HAVE AN APPROVED LINER.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR TURBULENT FLOW	US-3
CLB/CB	11/10	JANUARY 7, 2014	
		DATE OF APPROVAL	



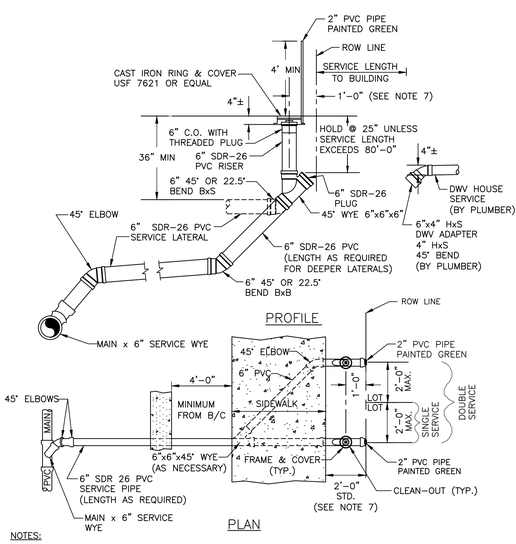
NOTES:

1. A PRE-CAST CONC. CONE MAY BE USED IN LIEU OF THE FLAT TOP SHOWN IN THIS DETAIL.
2. A PRE-CAST CONC. OUTSIDE DROP MAY BE USED IN LIEU OF THE CAST IN PLACE ENCASEMENT SHOWN BELOW.

NOTES:

1. THIS IS AN INTERCEPT MANHOLE AND MUST BE LINED WITH AN APPROVED LINER.
2. DROP MANHOLES ARE REQUIRED WHEN THE VERTICAL DISTANCE BETWEEN THE LOWEST EXISTING MANHOLE INVERT AND THE HIGHEST PIPE INVERT IS 2'-0" OR GREATER.

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	GRAVITY SEWER STANDARD DROP CONNECTION	US-6
CLB/KE	11/10	JANUARY 7, 2014	
WT/BR	4/13	DATE OF APPROVAL	



NOTES:

1. RUBBER DONUTS ARE NOT TO BE USED.
2. "SCO" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE CLEAN-OUT. IF NO CURB INSTALL A GREEN DISC WITH "SCO" AND ⅛" X 1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE CLEAN-OUT.
3. SANITARY SEWER CLEAN-OUTS SHALL NOT BE LOCATED IN DRAINAGE SWALES, EASEMENTS, SIDEWALKS OR DRIVEWAYS.
4. NO SERVICE CONNECTIONS TO BE MADE TO THE CLEAN-OUT RISER. ALL DOMESTIC CONNECTIONS SHALL BE MADE TO THE STUB-OUT PROVIDED.
5. SEWER SERVICE SHALL BE 5' MIN. FROM WATER SERVICE OR FIRE HYDRANT.
6. CLEAN-OUT ADAPTER TO BE SOLVENT-WELDED TO RISER TOP. CLEAN-OUT THREADS SHALL BE WRAPPED WITH TEFLON PLUMBERS TAPE TO SEAL PLUG WATERTIGHT.
7. WHEN THE DISTANCE BETWEEN THE EDGE OF THE SIDEWALK & THE ROW LINE IS ONE FOOT (CUL-DE-SAC W/MEDIAN) THE DISTANCE BETWEEN THE CENTER OF THE CO RISER & THE ROW LINE SHALL BE 6".

MANATEE COUNTY PUBLIC WORKS DEPARTMENT			
REV.BY	DATE	SINGLE AND DOUBLE SERVICE CONNECTION	US-13
CLB/DOM	11/10	JANUARY 7, 2014	
WT/BR	6/13	DATE OF APPROVAL	

Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT

51st STREET WEST

DETAILS 2

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA REGISTRATION NO. 60923

JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

SHEET 24 OF 24

S:\PWD_Engineering_Share\Util Eng Design\PROJ\~SAN SWR Proj\GM-51 St Gravity Replacement\DWGS\51st ST Gravity Sewer Replacement.dwg,22, 1/13/2015 11:57 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 inches)
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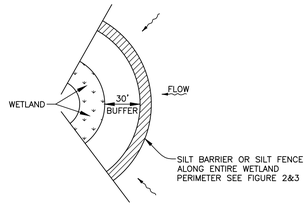
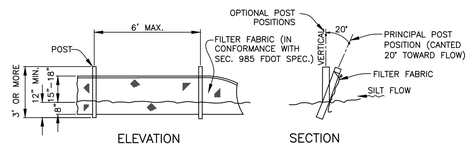
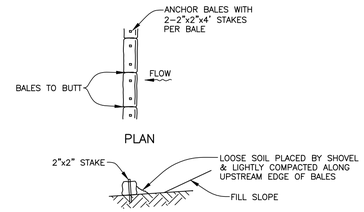


WETLAND BUFFER
FIGURE 1

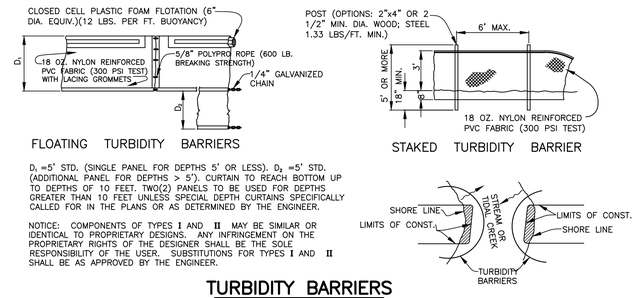


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

TYPICAL SILT FENCE
FIGURE 2



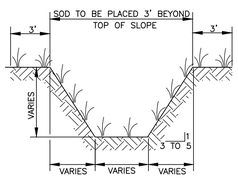
TYPICAL BALE SILT BARRIER
FIGURE 3



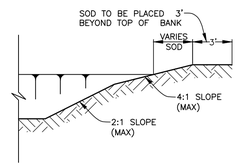
D_1 =5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS). D_2 =5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5'). CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET. TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPES **I** AND **II** MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES **I** AND **II** SHALL BE AS APPROVED BY THE ENGINEER.

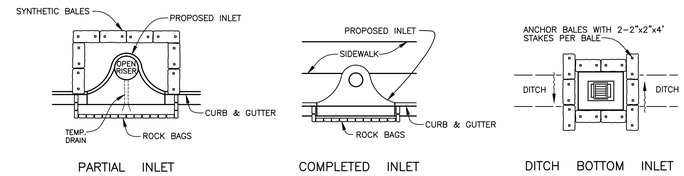
TURBIDITY BARRIERS
FIGURE 4



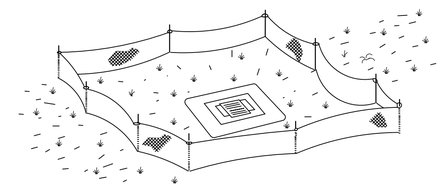
TYPICAL SWALE SECTION
FIGURE 5



TYPICAL RETENTION/DETENTION POND SECTION
FIGURE 6

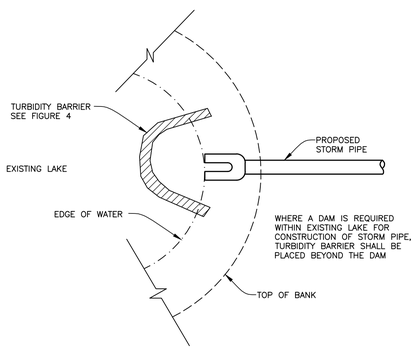


SYNTHETIC BALE PROTECTION AROUND INLETS OR SIMILAR STRUCTURES
FIGURE 7

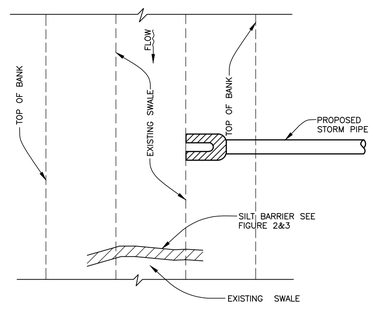


TYPE **III** SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

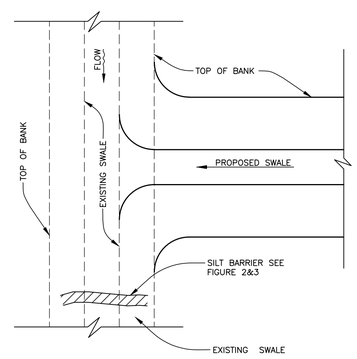
STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS
FIGURE 8



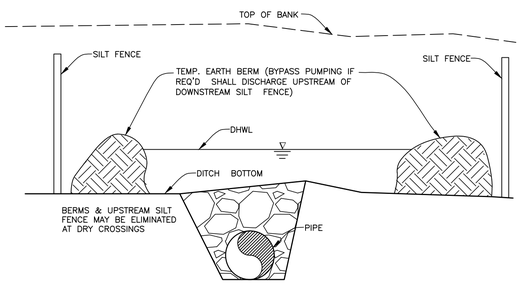
TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE
FIGURE 9



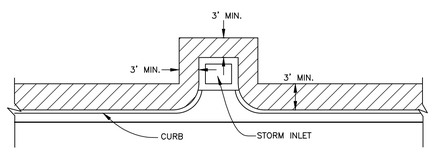
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE
FIGURE 10



SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE
FIGURE 11

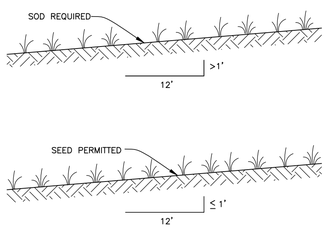


UNDERGROUND PIPE CROSSING
FIGURE 12

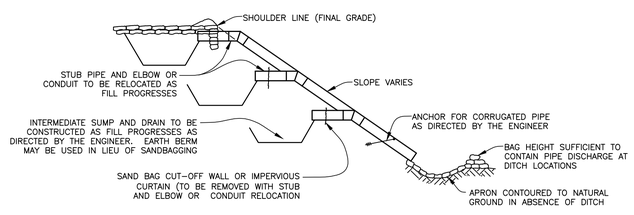


SOD ALONG CURB AND AROUND INLET
FIGURE 14

NOTE:
REFERENCE THE FDOT DESIGN STANDARDS LATEST EDITION FOR ALL TEMPORARY EROSION CONTROL MEASURES.

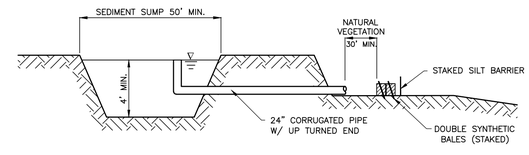


GRASS SLOPES
FIGURE 13



SECTION AA

TEMPORARY SLOPE DRAIN
FIGURE 15



SEDIMENT SUMP SECTION
FIGURE 16

Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
EROSION CONTROL

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782	
SURVEY #	13-1816	
SEC./TWN./RGE	28,29,32,33-3417	
SCALE	VARIES	
VERTICAL DATUM	NAVD 1988	
	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. #60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
4/6/15

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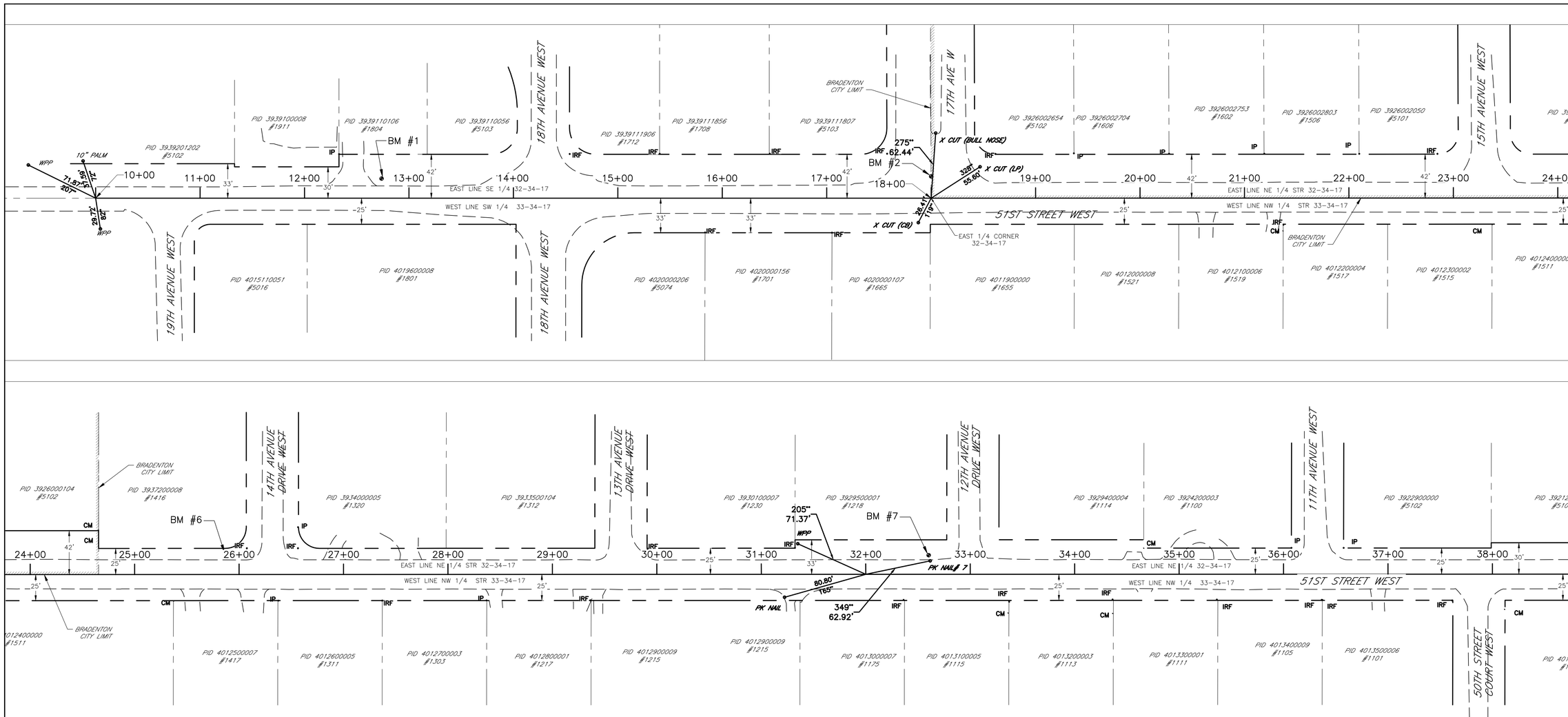

SURVEYOR'S NOTES:

1. THE FOLLOWING NGS VERTICAL CONTROL MONUMENT WAS RECOVERED AND UTILIZED FOR THE ELEVATIONS SHOWN HEREIN: "COB 1049" NAVD 1988 ELEVATION 23.94'. A VALUE OF (+0.98') SHOULD BE APPLIED TO ALL ELEVATIONS FOR A CONVERSION TO NGVD 1929.

2. THIS SURVEY IS REFERENCED TO A PROJECTION OF THE FLORIDA STATE PLANE COORDINATE SYSTEM (WEST ZONE NAD 1983/2007 ADJUSTMENT).

3. TITLE WORK WAS NOT PROVIDED FOR THIS SURVEY. RIGHT-OF-WAY LINES SHOWN HEREIN ARE BASED ON FOUND BOUNDARY MONUMENTATION TOGETHER WITH PUBLIC INFORMATION AVAILABLE ON MANATEE COUNTY CLERKS WEBSITE.

4. THIS SURVEY IS SUBJECT TO PERTINENT EASEMENTS, RIGHTS-OF-WAY AND RESTRICTIONS OF RECORD, IF ANY.

5. THIS SURVEY DRAWING WAS PREPARED FOR THE EXCLUSIVE USE OF THE PARTY OR PARTIES CERTIFIED TO BELOW FOR THE EXPRESS PURPOSE STATED HEREON AND/OR CONTAINED IN THE CONTRACT BETWEEN HYATT SURVEY SERVICES, INC. AND THE CLIENT FOR THIS PROJECT. COPYING, DISTRIBUTING AND/OR USING THIS DRAWING, IN WHOLE OR IN PART FOR ANY PURPOSE OTHER THAN ORIGINALLY INTENDED WITHOUT WRITTEN CONSENT FROM HYATT SURVEY SERVICES, INC. IS STRICTLY PROHIBITED AND RENDERS THE SURVEYOR'S CERTIFICATION, SIGNATURE AND SEAL NULL AND VOID. ANY QUESTIONS CONCERNING THE CONTENT OR PURPOSE OF THIS DRAWING SHOULD BE DIRECTED TO HYATT SURVEY SERVICES, INC.

SITE CONTROL

DESIGNATION	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 1	1145398.328	457660.468	22.60'	PKD (LB 7203)
BM 2	1145924.587	457665.522	23.26'	PKD (LB 7203)
BM 3	1148057.523	457696.040	24.13'	PKD (LB 7203)
BM 6	1146711.012	457677.673	25.50'	PKD (LB 7203)
BM 7	1147384.650	457687.542	25.21'	PKD (LB 7203)

Manatee County FLORIDA
PUBLIC WORKS DEPARTMENT
ENGINEERING SERVICES
1022 26th Avenue East, Bradenton, FL 34208

GRAVITY SEWER REPLACMENT
51st STREET WEST
SURVEY CONTROL

NO.	REVISION DESCRIPTION	BY	DATE

PROJECT #	404-6035782
SURVEY #	13-1816
SEC./TWN./RGE	28,29,32,33-3417
SCALE	1"=50'
VERTICAL DATUM	NAVD 1988

	BY	DATE
SURVEYED	HYATT	01/2014
DESIGNED	JSS	04/2014
DRAWN	BLR	04/2014

JOHN S. SHOUN, P.E.
FLORIDA P.E. #60923
JOHN S. SHOUN LICENSE No. 60923 STATE OF FLORIDA PROFESSIONAL ENGINEER
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SHEET 21 OF 24

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S:\PWD_Engineering_Share\Util Eng Design\PROJ\~SAN SWR Proj\GM-51 St Gravity Replacement\DWGS\51st ST Gravity Sewer Replacement.dwg,24, 1/13/2015 11:57 AM Bruce Robertson, 1:1, ANSI full bleed D (34.00 x 22.00 Inches)