The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:

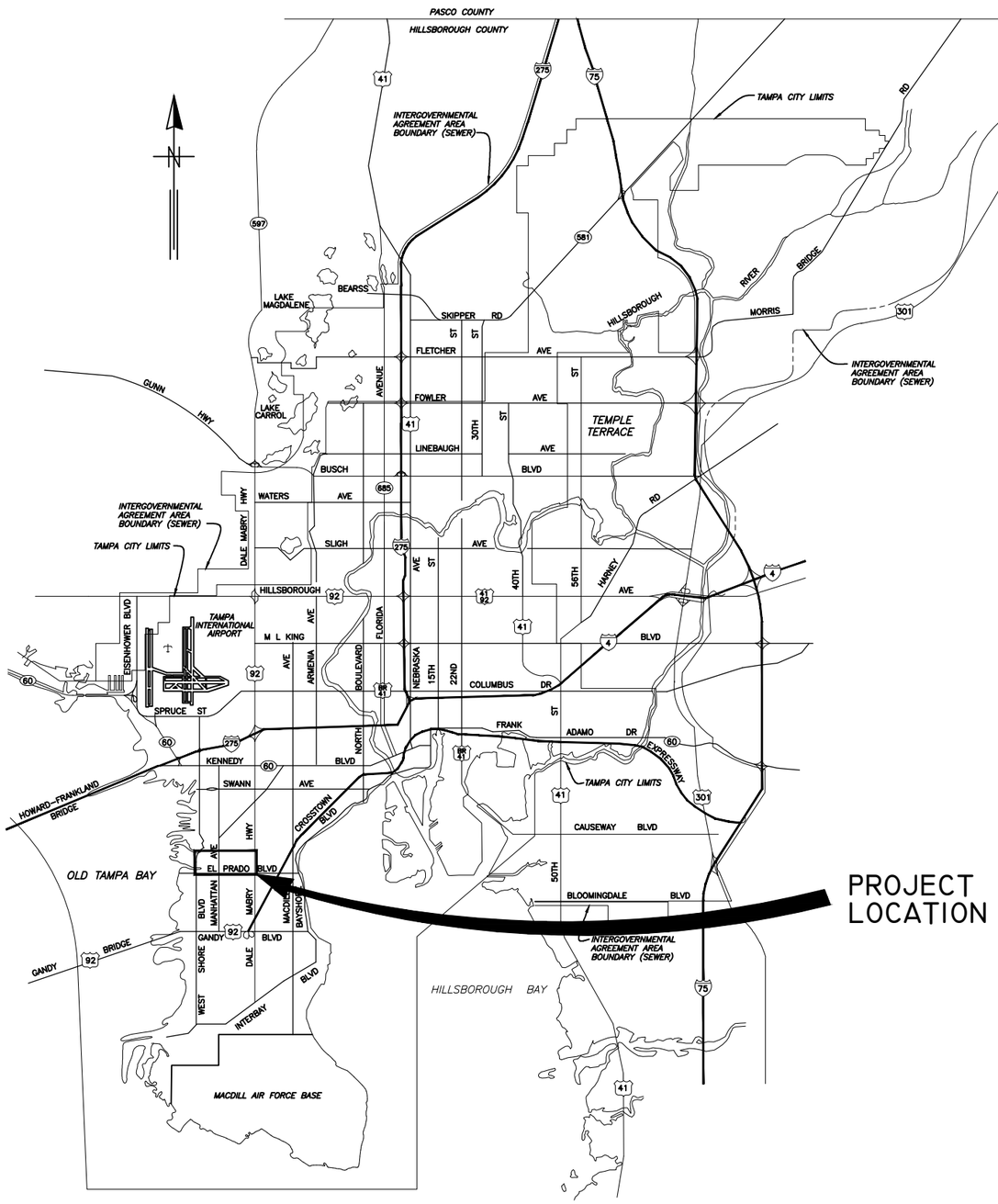
MailTo:ContractAdministration@TampaGov.net

Please Let Us Know If You Plan To Bid

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456

SW

LOCATION MAP



CITY of TAMPA

CITY OF TAMPA FLORIDA
MASCOTTE
ORGANIZED JULY 15 1887

DEPARTMENT OF TRANSPORTATION & STORMWATER SERVICES STORMWATER ENGINEERING DIVISION

PLANS FOR
UPPER PENINSULA STORMWATER IMPROVEMENTS PH II
(VASCONIA OUTFALL) CONTRACT NO. I5-C-00059

MATTHEW D. CAMPO, P.E. #53988
CAMPO ENGINEERING, INC.
FBPR CERT. OF AUTHORIZATION NO.: 26726

CAMPO ENGINEERING, INC.
FBPR CERTIFICATE OF AUTHORIZATION NO.: 26726
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TAMPA, FL. 33605 PHONE: (813) 215-7372 FAX: (813) 902-8782

DES: ALC
DRN: ASA
CKD: MDC
DATE: 12/15

No.	DATE	REVISIONS
3		
2		
1		

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

COVER SHEET

W.O. 500N
SHEET 1

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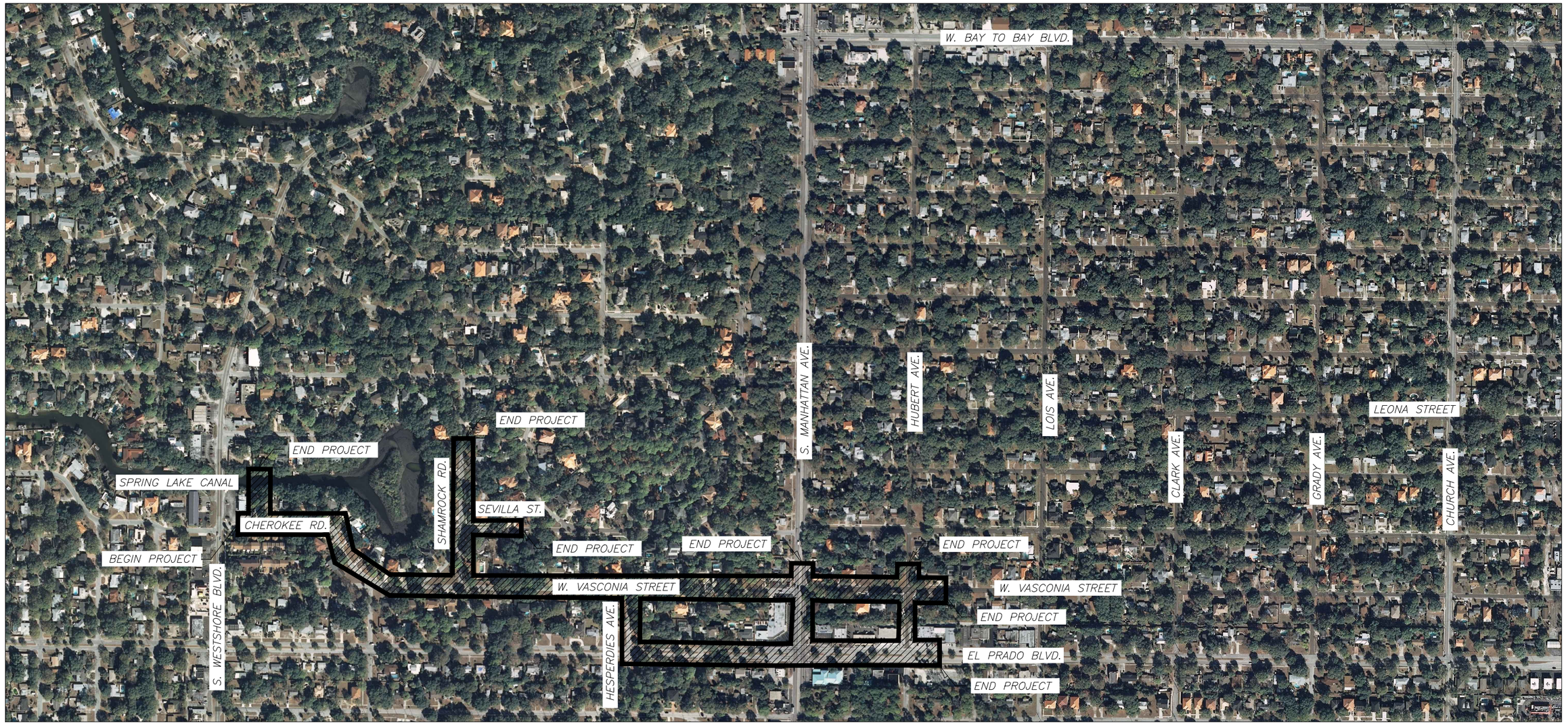

PROJECT LOCATION MAP

NTS

PROJECT AREA

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

INDEX & LOCATION MAP

SHEET 2 OF 105

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LEGEND

EX SEWERS

UP to 24" & SMALLER — 24" & LARGER

EX SAN SEWER & MANHOLES

EX STORM SEWER & MANHOLES

PROP SEWERS

PROP STORM SEWER & MANHOLES

PROP WATER PIPES AND VALVES

PROP SANITARY SEWER & MANHOLES

OTHER FEATURES

PROPOSED MILLING AND RESURFACING

PROPOSED ASPHALT

PROPOSED CONCRETE

PROPOSED SILT FENCE — EC — EC

REMOVE EXISTING TREE

SPOT ELEVATION — 6.54

FLOW ARROW

SLOPE ARROW — 2.46%

EX. WATER LINE UP 8" & LARGER

EX. WATER LINE UP TO 8" & SMALLER

GAS LINE

TELEPHONE CABLE

FENCE

BUILDING LIMIT

EXISTING SEWER SERVICE LATERAL AND REPLACEMENT

GAS METER EXISTING ON PROPERTY — M

WATER METER TO BE REPLACED — WATER

BENCH

CLEANOUT (SANITARY)

ELECTICAL OUTLET

FIRE HYDRANT

FLOOD LIGHT

GAS VALVE COVER — GAS

GUY ANCHOR

IRON PIPE

IRON ROD AND CAP

LIGHT POLE

MAILBOX

NAIL

ORNAMENTAL PLANT

PEDESTRIAN SIGN, SIGNAL

PILING, POST

POWER POLE

SHARED POLE

SHRUB

SIGN (SINGLE POST)

SIGNAL CONTROLLER

SIGNAL ON PEDESTAL

SIGNAL/ SPAN WIRE POLE

STAMPED DISK

TELEPHONE POLE

TREE

TREE (PALM)

TREE (PINE)

TREE (OAK)

TREE (RED SILK)

TURN ARROW

WATER — WATER (VALVE)

WATER — WATER VALVE COVER

WATER — WATER (METER)

WIRE PULL BOX

SPRINKLER HEAD

ABBREVIATIONS

ELEVATION	EL	DUCTILE IRON PIPE	DIP
INVERT ELEVATION	IE or INV	REINFORCED CONCRETE PIPE	RCP
RIGHT of WAY	R/W	CONCRETE PIPE	CP
MANHOLE	MH	APPROXIMATE LOCATION	AL
POLYVINYL CHLORIDE PIPE	PVC	FORCE MAIN	FM
VITRIFIED CLAY PIPE	VCP	SANITARY SEWER	SS
ADVANCED DRAINAGE SYSTEM	ADS	WATER MAIN	WM
MITERED END SECTION	M.E.S.	STORM	ST
REINFORCED CONCRETE PIPE	RCP	CORRUGATED METAL PIPE	CMP
EXISTING	EXIST	ELLIPTICAL REINFORCED CONC PIPE	ERCP
SQUARE FEET	SF	PROPOSED	PROP
CONCRETE	CONC	LINEAR FEET	LF
PROPOSED	PROP	CONSTRUCT	CONST
CITY OF TAMPA	COT	TOP OF WALL	TOW
FLORIDA DEPARTMENT OF TRANSPORTATON	FDOT	MATCH EXISTING GRADE	MEG
CLASS IV	C-IV	CENTER LINE	℄
		CONCRETE BOX CULVERT	CBC
		FIBER OBTIC CABLE	FOC

ASPH	ASPHALT
AVE.	AVENUE
BLVD.	BOULEVARD
B.M.	BENCHMARK
C & G	CURB & GUTTER
CLF	CHANI LINK FENCE
CONC	CONCRETE
DWY	DRIVEWAY
EL	ELEVATION
EOP	EDGE OF PAVEMENT
EXIST.	EXISTING
F.F.	FINISH FLOOR ELEVATION
ID	IDENTIFICATION
INV	INVERT
LB	LICENSED BUSINESS
LL	LANELINE
MBX	MAILBOX
MES	MITERED END SECTION
MHD	MANHOLE(STORM DRAINAGE)
MHS	MANHOLE (SANITARY SEWER)
MPH	MILES PER HOUR
RCP	REINFORCED CONCRETE PIPE
R/W or ROW	RIGHT OF WAY
STMD	STAMPED DISK
S/W	SIDEWALK
TOB	TOP OF BANK
TOS	TOE OF SLOPE
TP-RP	TRAVERSE POINT-REFERENCE POINT
(W)	WEST
(E)	EAST
(N)	NORTH
(NW)	NORTHWEST
(S)	SOUTH
(SE)	SOUTHEAST
(W)	WEST

SW

KEY MAP

J-8

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

LEGEND & KEY MAP

SHEET 3 OF 105

SW

GENERAL NOTES

1. ELEVATIONS BASED ON NATIONAL GEODETIC VERTICAL DATUM OF 1988.
2. LOCATIONS, ELEVATIONS AND DIMENSIONS OF THE EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF THE PREPARATION OF THESE PLANS BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS, OF ALL EXISTING UTILITIES, STRUCTURE, AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION. GAS, VERIZON, WATER MAIN, WATER SERVICES, SEWER LATERALS AND OTHER SUBSURFACE PIPING HAS NOT BEEN LOCATED. ENGINEER OF RECORD SHOWS LOCATIONS AS APPROXIMATE AS PROVIDED BY OTHERS.
3. EXISTING UTILITIES AND TOPOGRAPHIC INFORMATION DENOTED BY UPPER AND LOWER CASE. PROPOSED WORK DENOTED BY ALL UPPER CASE.
4. THE CONTRACTOR SHALL CALL SUNSHINE (1-800-432-4770) AT LEAST 72 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES.
5. WHEN IN CONFLICT, UTILITY POLES, GAS LINES, UNDERGROUND ELECTRIC, TELEPHONE AND OTHER COMMUNICATION CABLES AND CONDUIT WILL BE RELOCATED BY THE RESPECTIVE UTILITY OWNERS AT THEIR OWN EXPENSE AS DIRECTED BY THE ENGINEER.
6. PRIOR TO ANY CONSTRUCTION, CONTACT TAMPA ELECTRIC COMPANY (PH: 813-228-4111 OR 813-275-3037) FOR EXACT LOCATION OF UNDERGROUND LINES. TECO TO RELOCATE ANY CONFLICTING LINES.
7. PRIOR TO ANY CONSTRUCTION, CONTACT TECO GAS (813-275-3743) FOR EXACT LOCATION OF UNDERGROUND LINES. TECO GAS TO RELOCATE ANY CONFLICTING LINES.
8. PRIOR TO ANY CONSTRUCTION, CONTACT VERIZON (813-978-2164) FOR EXACT LOCATION OF UNDERGROUND LINES. VERIZON TO RELOCATE ANY CONFLICTING LINES.
9. STATIONS AND OFFSETS GIVEN ARE TO THE CENTER LINE OF THE INLETS AND MANHOLES, AND REFER TO THE SURVEY BASE LINES.
10. THE SOLID WASTE DEPARTMENT (813-348-1146) IS TO BE NOTIFIED PRIOR TO ANY STREET CLOSURES IN THE PROJECT AREA.
11. TREE REMOVAL CONTRACTOR IS RESPONSIBLE FOR OBTAINING SITE CLEARING PERMIT PRIOR TO START OF ANY CONSTRUCTION.
12. NECESSARY ROOT PRUNING AND TRIMMING OF BRANCHES SHALL BE DONE BY A CERTIFIED ARBORIST.
13. THE CONTRACTOR SHALL COMPLY WITH THE PROVISIONS OF THE LATEST "TREE ORDINANCE" OF THE CITY OF TAMPA. THE CONTRACTOR IS REQUIRED TO RELOCATE THE TREES REMOVED AS A PART OF THE NECESSARY CONSTRUCTION INDICATED ON PLANS. HOWEVER, NO TREE SHALL BE REMOVED WITHOUT APPROVAL OF THE PARKS DEPARTMENT.
14. SOD ALL THE DISTURBED AREAS AS DIRECTED BY THE ENGINEER AND NOTED ON PLANS.
15. WHERE CONNECTIONS TO EXISTING DRIVES AND WALKS ARE NOT INDICATED ON THE PLANS, PROPER CONNECTIONS SHALL BE MADE AT THE DIRECTION OF THE ENGINEER.
16. STREET SIGNS, STREET MARKERS AND R-O-W MARKERS SHALL BE REMOVED AND RELOCATED AS DIRECTED BY THE ENGINEER.
17. MAILBOXES SHALL BE REMOVED AND REPLACED AS NECESSARY.
18. DRIVEWAYS SHALL BE RECONSTRUCTED IN ACCORDANCE WITH CHAPTER 25 OF THE CITY CODE AND THE TRANSPORTATION TECHNICAL MANUAL. DEVIATION FROM ESTABLISHED STANDARDS SHALL BE APPROVED BY THE CITY TRAFFIC ENGINEER.
19. THE CONTRACTOR SHALL PROTECT ALL TREES IN THE VICINITY OF THE PROPOSED CONSTRUCTION IN ACCORDANCE WITH CHAPTER 13 OF THE CITY OF TAMPA CODE. NO TREES SHALL BE PRUNED WITHOUT PRIOR APPROVAL FROM THE CITY OF TAMPA PARKS & RECREATION DEPARTMENT, NATURAL RESOURCES DIVISION, AND SHALL BE COMPLETED BY A CERTIFIED ARBORIST. ROOT PRUNING MAY BE REQUIRED AT CERTAIN LOCATIONS AND SHALL BE COMPLETED IN ACCORDANCE WITH CHAPTER 13 TECHNICAL MANUAL SPECIFICATIONS.
20. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE CITY OF TAMPA DEPARTMENT ORDINANCES AND REGULATIONS.
21. THE CONTRACTOR SHALL MAINTAIN COPIES OF ALL APPLICABLE PERMITS ON-SITE AND SHALL BE RESPONSIBLE TO ADHERE TO ALL PERMIT CONDITIONS DURING CONSTRUCTION.
22. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS ON ALL PRECAST AND MANUFACTURED ITEMS TO THE ENGINEER FOR APPROVAL. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT CONTRACTOR'S EXPENSE.
23. COMPACTION FOR PIPE BACKFILL SHALL COMPLY WITH AASHTO T-99 (100%).

SITE NOTES

1. ALL DESIGN AND CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS SET DOWN IN CITY OF TAMPA STORMWATER TECHNICAL MANUAL, LATEST VERSION.
2. ALL RIGHT-OF-WAY INSTALLATIONS MUST COMPLY WITH THE CITY OF TAMPA STANDARDS AND TECHNICAL MANUALS.
3. IN AREAS WHERE FILL MATERIAL IS REQUIRED, THE EXISTING VEGETATION AND ROOTS SHALL BE REMOVED PRIOR TO PLACING ANY FILL MATERIAL. THE FILL SHALL BE PLACED IN LIFTS NO GREATER THAN 12 INCHES AS MEASURED LOOSE, AND COMPACTED TO A UNIFORM DENSITY ASTM D698. THE MATERIAL SHALL BE COMPACTED AT A MOISTURE CONTENT PERMITTING THE SPECIFIED COMPACTION. THE FILL SHALL BE TESTED BY THE CITY OF TAMPA THROUGH THE CITY INSPECTOR AND THE RESULTS SUPPLIED TO THE ENGINEER.
4. THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY ON ANY CONFLICTS ARISING DURING CONSTRUCTION OF ANY IMPROVEMENTS SHOWN ON THESE DRAWINGS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSULT WITH THE ENGINEER FOR MAKING ANY AND ALL REQUIRED INTERPRETATIONS OF THE PLANS. HOWEVER, THIS IN NO WAY RELIEVES THE CONTRACTOR OF HIS RESPONSIBILITY FOR CONSTRUCTING THE PROJECT TO ACCOMPLISH THE INTENT OF THE PLANS.
5. REPAIR AND REPLACEMENT OF ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE COMMENCING CONSTRUCTION UNLESS SPECIFICALLY EXEMPTED BY THE PLANS.
6. EROSION/SEDIMENTATION CONTROL: THE CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN), IF REQUIRED TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, THE CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON THE GROUND, AS REQUIRED, IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT THE SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE, EITHER BY NATURAL DRAINAGE OR BY VEHICLE TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR LOCAL AUTHORITIES. CITY DESIGNATED LOTS USED FOR STORAGE ARE AVAILABLE AT 4719 W CHEROKEE RD AND PENDING AVAILABILITY ARE LOTS AT 4411 AND 4413 W EL PRADO BLVD. USAGE OF THESE LOTS WILL REQUIRE A FDOT SOIL TRACKING PREVENTION DEVICE PER 2010 FDOX INDEX 106.
7. LOCATIONS, ELEVATIONS AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK PRIOR TO CONSTRUCTION.
8. CONTRACTOR SHALL SPRINKLE OR OTHERWISE APPLY WATER TO AFFECTED CONSTRUCTION AREA TO CONTROL BOTH SIGNIFICANT WIND EROSION OR FUGITIVE DUST.
9. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. PORTLAND CEMENT SHALL CONFORM TO ASTM C150. AGGREGATE SHALL CONFORM TO ASTM C33. READY MIXED CONCRETE SHALL CONFORM TO ASTM C-04. SUBSURFACE SHALL BE FREE FROM TROWEL OR MACHINE MARKS. SURFACE VARIATIONS SHALL NOT EXCEED 1/4 INCH UNDER TEN-FOOT (10') STRAIGHT EDGE.
10. ALL GRADING OF SIDEWALKS AND PEDESTRIAN WALKWAYS SHALL MEET MINIMUM 'ADA' STANDARDS. SIDEWALK CROSS SLOPES AND DRIVEWAY CROSSINGS FOR SIDEWALKS TO BE 2.0% MAX. SLOPE. ALL SIDEWALK RUNNING SLOPES SHALL NOT EXCEED 5% WITHOUT USE OF PROPER RAMPS FOR FDOT OR FLORIDA BUILDING CODE. CONTRACTOR SHALL FIELD-VERIFY SIDEWALK FORM BOARDS PRIOR TO CONSTRUCTING WALKWAYS.

CONSTRUCTION NOTES

1. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION EXCAVATION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICES.
2. CONTRACTOR TO SOD DISTURBED RIGHT-OF-WAY WITH BAHIA SOD AND/OR LIKE KIND OF EXISTING SOD.
3. CONTRACTOR TO RESTORE DISTURBED RESIDENTIAL YARDS WITHIN CONSTRUCTION LIMITS WITH BAHIA, ST. AUGUSTINE, AND/OR LIKE KIND OF SOD.
4. CONTRACTOR SHALL RESTORE ALL NEIGHBORING RESIDENTIAL YARDS WITH LIKE KIND OF LANSDSCAPING, MAILBOXES, WALK WAYS, DRIVEWAYS, ETC. EACH YARD SHALL BE RESTORED TO EXISTING CONDITIONS UP TO AND INCLUDING FROM BACK OF CURB TO RIGHT OF WAY LINE.
5. CONTRACTOR TO PROTECT EXISTING IRRIGATION SYSTEMS AND ANY OTHER UTILITIES IN RESIDENTIAL YARDS WITHIN CONSTRUCTION LIMITS AND/OR RESTORE ANY DAMAGED SYSTEMS DURING CONSTRUCTION BACK TO EXISTING CONDITIONS.
6. CONTRACTOR TO PROTECT EXISTING PRIVATE FENCES DURING CONSTRUCTION OR REPLACE IN LIKE KIND.
7. CONTRACTOR TO PROTECT THE EXISTING CONDUIT THAT IS TO REMAIN.
8. ALL REMOVAL WITHIN PROPOSED EXCAVATION AREAS IS PART OF PIPE, WALL, & DITCH CONSTRUCTION.
9. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICE ITEMS.
10. CONTRACTOR SHALL CONTACT SUNSHINE WITHIN 48 HOURS PRIOR TO ANY CONSTRUCTION.
11. CONTRACTOR TO PROTECT ALL POWER POLES & SUBSURFACE UTILITIES. IN THE EVENT OF A CONFLICT THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY PROVIDER RESPONSIBLE FOR THE RELOCATION.
12. ALL RCP PIPES SHALL BE CLASS III WITH MINIMUM COVER OF 18". ALL RCP PIPES WITH LESS THAN 18" OF COVER ON RESIDENTIAL ROADS SHALL BE CLASS IV. ALL RCP PIPES WITH LESS THAN 24" OF COVER ON ARTERIAL ROADS (EL PRADO AND MANHATTAN) SHALL BE CLASS IV.
13. PRIVATE UTILITIES WILL BE MOVED PRIOR TO THE CITY'S START OF CONSTRUCTION AND WILL PROVIDE THE CONTRACTOR WITH AS-BUILTS (HORIZONTAL AND VERTICAL PLACEMENT) OF THEIR RELOCATED SERVICES.
14. NO DREDGING IS TO COMMENCE UNTIL THE PLAN HAS BEEN REVIEWED BY EPC PERSONNEL AT LEAST ONE WEEK PRIOR TO CONSTRUCTION COMMENCEMENT FOR THE PLANTING OF THREE MANGROVES, COMPARABLE TO THE ONES TO BE IMPACTED ALONG THE PROJECT SHORELINE, TO BE LOCATED WITHIN PROPERTY LINES BETWEEN THE WING WALL AND THE SEAWALL REPLACEMENT OUTSIDE OF THE POTENTIAL OUTFALL SCOURING AREA.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

GENERAL & CONSTRUCTION NOTES

SHEET 4 OF 105

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SW

TREE PROTECTION NOTES

1. PROTECTIVE BARRICADES SHALL BE PLACED AROUND ALL PROTECTED TREES AND GRAND TREES DURING SITE CLEARING, AND SHALL REMAIN IN PLACE UNTIL LAND ALTERATION, SITE CLEARING AND CONSTRUCTION ACTIVITIES ARE COMPLETE. BARRICADES SHALL BE ERECTED AT A MINIMUM DISTANCE OF TEN FEET (10') FROM THE BARK OF PROTECTED TREES AND TWENTY FEET (20') FROM THE BARK OF GRAND TREES.
2. REQUIRED TREE BARRICADES AND EROSION CONTROL MEASURES MUST REMAIN INTACT THROUGHOUT CONSTRUCTION. ENCROACHMENT INTO OR FAILURE TO MAINTAIN TREE BARRICADES WILL RESULT IN ENFORCEMENT ACTION WHICH MAY INCLUDE CITATIONS AND/OR PERMIT REVOCATION.
3. A MINIMUM DISTANCE OF TEN FEET (10') SHALL BE MAINTAINED FROM ALL PROTECTED TREES WHEN INSTALLING UNDERGROUND UTILITIES. IF THIS RESULTS IN UNREASONABLE HARDSHIP, A SOIL AUGER SHALL BE USED TO TUNNEL UNDER THE ROOT SYSTEMS.
4. THE CONTRACTOR IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN. THE CONTRACTOR SHALL BE LIABLE FOR FINES DUE TO ALL DAMAGE OF TREES THAT ARE DESIGNATED TO BE SAVED DURING CONSTRUCTION. SPECIAL CARE IS REQUIRED TO PREVENT DAMAGE TO TREES WHICH ARE TO REMAIN.
5. INSTALLATION OF ARTIFICIAL BARRIERS SUCH AS PROTECTIVE BARRICADES, FENCES, POSTS, OR WALLS SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES AND GRAND TREES. FOOTERS FOR WALLS SHALL BE AT THE POINT WHERE LARGER ROOTS ARE ENCOUNTERED, AND THE ROOTS SHALL BE BRIDGED. POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES OR GRAND TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
6. ALL ROOTS TO BE REMOVED DURING THE SITE CLEARING PHASE SHALL BE SEVERED CLEAN AT THE PERIMETER OF THE DESIGNATED PROTECTED RADIUS AND SHALL BE DONE BY A CERTIFIED ARBORIST.
7. ALL TREES SHALL BE PROTECTED, ROOT PRUNING AND CANOPY PRUNING SHALL BE PERFORMED BY A CERTIFIED ARBORIST. ALL ROOT PRUNING AS WELL AS CANOPY PRUNING SHALL BE PERFORMED UNDER THE CITY OF TAMPA PARKS DEPARTMENT SUPERVISION.
8. A TWO-INCH (2") LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES AND GRAND TREES DURING THE SITE CLEARING PHASE.
9. CONTRACTOR SHALL COORDINATE WITH CITY ARBORIST AND APPROVAL FOR ROOT PRUNING AND LIMB TRIMMING FOR CONSTRUCTION ACTIVITIES.
10. CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS FOR TREE REMOVAL, TRIMMING, AND ROOT PRUNING, AS WELL AS ANY NECESSARY NOTICING FOR BOTH GRAND TREES AND NON GRAND TREES.

NPDES/FDEP NOTICE OF INTENT AND REPORTING NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROECTION. THE PLAN SHALL INCLUDE THE FOLLOWING:
   A. NARRATIVE: A BRIEF DESCRIPTION OF THE OVERALL STRATEGY FOR EROSION AND SEDIMENT CONTROL.
   B. MAP/SITE PLAN: SITE PLAN WHICH SHOWS THE EXISTING AND FINAL ELEVATION CONTOURS, CRITICAL AREAS WITHIN OR NEAR THE PROJECT AREA, EXISTING VEGETATION, LIMITS OF CLEARING AND GRADING, AND LOCATIONS AND NAMES OF EROSION AND SEDIMENT CONTROL MEASURES, WITH DIMENSIONS.
   C. CONSTRUCTION DETAILS
   D. CALCULATIONS: INCLUDE CALCULATIONS USED TO SIZE THE CONTROL MEASURES AND THE DESIGN ASSUMPTIONS FOR SEDIMENT BASINS AND TRAPS.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BEFORE AND AFTER EACH RAIN EVENT OF 1/4 INCH OR MORE.
3. DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO FINAL GRADE OR WHICH WILL REMAIN AT ROUGH GRADE FOR 14 DAYS OR MORE SHALL RECEIVE PERMANENT STABILIZATION IMMEDIATELY.
4. CONTRACTOR SHALL MAINTAIN ON-GOING INSPECTION REPORTS FOR EROSION & SEDIMENT CONTROL INSPECTIONS AND MAINTENANCE.
5. CONTRACTOR SHALL HAVE A CERTIFIED INSPECTOR ON STAFF AND BE RESPONSIBLE FOR ALL NPDES REPORTING.
6. ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING, OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.
7. THE CONTRACTOR SHALL SUBMIT THE REQUIRED NPDES/FDEP NOTICE OF INTENT 30 DAYS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL RAINFALL AND DISCHARGE LOGS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION SHALL BE FILED WITH FDEP.

EROSION/TURBIDITY-CONTROL NOTES

1. THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.
2. THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.
3. CONSTRUCTION OPERATIONS IN OR ADJACENT TO WETLANDS SHALL BE RESTRICTED TO THOSE AREAS IDENTIFIED IN THE PLANS AND IN THE SPECIFICATIONS.
4. EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN THE WETLANDS OR IN A POSITION CLOSE ENOUGH THERETO TO BE WASHED AWAY BY HIGH WATER OR RUNOFF.
5. WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO THE WETLANDS. TREATMENT METHODS INCLUDE AND ARE NOT LIMITED TO, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS, SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS.
6. THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND 3PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.
7. THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
8. SILT FENCE SHALL BE LOCATED AT THE PERIMETER OF CONSTRUCTION LIMITS, AS DEFINED BY FIELD CONDITIONS.
9. CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.
10. IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.

BIDDING NOTES

1. ALL PROPOSED CONSTRUCTION WITHIN LIMITS OF WORK AREAS ARE PART OF PIPE, INLET AND / OR MANHOLE CONSTRUCTION.
2. PRICE FOR ALL REMOVAL, AS SHOWN ON THE PLANS OUTSIDE OF CONSTRUCTION EXCAVATION AREA, SHALL BE INCLUDED IN THE VARIOUS ITEMS OF THE STORMWATER UNIT PRICES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMITS FOR CITY OF TAMPA.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMIT FOR HILLSBOROUGH COUNTY IF DETERMINED ONE IS NEEDED.
5. CONTRACTOR RESPONSIBLE FOR OBTAINING TREE REMOVAL PERMITS AND GRAND TREE REMOVAL NOTICING. CONTRACTOR RESPONSIBLE FOR ANY PERMITTING NECESSARY FOR TREE TRIMMING AND ROOT PRUNING FOR BOTH GRAND AND NON-GRAND TREES.
6. CONTRACTOR RESPONSIBLE FOR SUPPLYING ALL MOT PLANS.
7. PRIOR TO CONSTRUCTION CONTRACTOR TO RECORD LIMITS OF CONSTRUCTION AREA AND DOCUMENT ALL UNIQUE AND SPECIAL FEATURES OF RESIDENTIAL YARD AREAS WITHIN ROW LIMITS. CONTRACTOR SHALL AT BEST EFFORT PRESERVE ALL SPECIAL AND UNIQUE FEATURES INCLUDING BUT NOT LIMITED TO BRICK PAVERS FOR DRIVEWAYS AND WALKWAYS, MAILBOXES, LANDSCAPE PLANTERS AND OTHER FEATURES, TREES, ETC.
8. ALL BOX CULVERTS AND STORMPIPE SHALL BE WATER TIGHT. BOX CULVERT AND STORMPIPE TRENCH BACKFILLING SHALL CONFORM TO FDOT STANDARD SPECIFICATIONS 125. BOX CULVERT BACKFILLING WILL BE UNDER WET CONDITIONS AND SHALL CONFORM SPECIFICALLY TO FDOT STANDARD SPECIFICATION 125.8.3.4 WITH COARSE AGGREGATE PIPE BEDDING WRAPPED IN FILTER FABRIC.
9. LIMITS OF DISTURBED OPEN CUT AREAS MAY VARY DEPENDENT UPON CONTRACTOR MEANS AND METHODS. CONSTRUCTION OPTIONS INCLUDE BUT NOT LIMITED TO INCLUDE SHEET PILING, SLOPED OPEN CUT, AND TRENCH BOX. CONSTRUCTION PLANS AND SPECS ASSUME A SLOPED OPEN CUT TRENCH.

SANITARY NOTES

1. PROPOSED SANITARY SEWER SHALL BE CONSTRUCTED PER CITY OF TAMPA WASTEWATER DEPARTMENT TECHNICAL STANDARDS.
2. UNLESS INDICATED, ALL PROPOSED GRAVITY SEWER SHALL BE PVC ASTM D3034 SDR-35.
3. CONTRACTOR SHALL MAINTAIN CONTINUOUS SEWER SERVICE.
4. CONTRACTOR SHALL RAISE OR LOWER EXISTING MANHOLE FRAME AND COVER TO MATCH PROPOSED GRADE AS REQUIRED.
5. ALL ABANDONED SANITARY SEWERS SHALL BE REMOVED OR ABANDONED IN PLACE WITH FLOWABLE FILL.
6. OSHA STANDARD SAFETY EQUIPMENT SUCH AS SAFETY HARNESSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
7. PLASTIC SHEET LINER "T-LOCK" SHALL BE BY AMERON INTERNATIONAL OR APPROVED EQUAL.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

GENERAL & CONSTRUCTION NOTES

SHEET 5 OF 105

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SW

STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
CS-1	PROPOSED WINGWALL PER FDOT INDEX 289	102+01.52	1'LT.	1.09	-7.20 (S)	
S-1	CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER	901+74.69	7'RT.	0.25	-7.00 (E) -7.04 (N)	
S-2	MANHOLE RISER ON BOX CULVERT	904+15.23	5'RT.	4.43	0.90 (SE) 1.35 (N)	
S-3	COT TYPE 1 CURB INLET	904+16.72	14'LT.	4.81	1.43 (S)	
S-4	COT TYPE 1 CURB INLET	904+27.65	14'RT.	4.77	1.00 (NW)	
S-5	CUSTOM J-BOX W/MH RISER	905+06.00	3'RT.	0.60	-6.65 (SE) -6.67 (W)	
S-6	CUSTOM J-BOX W/MH RISER	905+51.92	6'RT.	0.65	-6.60 (S) -6.62 (NW)	
S-7	CUSTOM J-BOX W/MH RISER	906+20.47	5'RT.	0.72	-6.53 (SE) -6.54 (N)	
S-8	CUSTOM J-BOX W/MH RISER	907+29.17	0'RT.	0.84	-6.41 (SE) -6.42 (NW)	
S-9	MANHOLE RISER ON BOX CULVERT	908+40.07	0'RT.	4.17	1.30 (NE) 1.30 (S)	
S-10	COT TYPE BV-1 CURB INLET	908+42.77	16'RT.	4.45	1.40 (N)	
S-12	COT TYPE BS-1 CURB INLET	1000+20.03	16'LT.	4.39	-1.00 (E)	
S-12A	FDOT J-BOX W/MH RISER PER INDEX 200	1000+25.30	0'LT.	2.85	-1.10 (E) -1.10 (W) -1.25 (N)	
S-13	COT TYPE BR-1 CURB INLET	10+93.57	16'RT.	4.21	-3.00 (N) -0.72 (W)	
S-15	CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER	10+97.49	0'RT.	4.25	-6.22 (E) -6.25 (NW)	
S-16	COT TYPE 1 CURB INLET	908+44.50	14'LT.	4.38	1.50 (SW)	
S-17	MANHOLE RISER ON BOX CULVERT	13+75.05	2'RT.	4.22		
S-18	COT TYPE BV-1 CURB INLET	13+78.44	16'LT.	4.51	-1.74 (NW) -1.85 (S)	
S-18A	COT TYPE 1 CURB INLET	911+70.17	14'RT.	4.52	-1.00 (NW) -1.12 (SE)	
S-18B	COT TYPE 1 CURB INLET	911+70.75	14'LT.	4.52	-0.72 (SE)	

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE

SHEET 6 OF 105

STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S-19	FDOT J-BOX W/MH RISER PER INDEX 200	15+05.05	3'RT.	3.57	-5.79 (E) -5.84 (W) -0.60 (N) -0.60 (N)	
S-20	COT TYPE BV-1 CURB INLET	13+78.74	16'RT.	4.51	-1.68 (N)	
S-21	FDOT J-BOX W/MH RISER PER INDEX 200	16+62.29	4'RT.	4.76	-5.65 (E) -5.65 (W)	
S-22	MANHOLE RISER ON BOX CULVERT	17+39.37	4'RT.	4.95	1.70 (S) 1.70 (N)	
S-23	COT TYPE BV-1 CURB INLET	17+41.59	16'RT.	5.23	1.90 (N)	
S-24	COT TYPE BV-1 CURB INLET	17+41.50	16'LT.	5.23	1.90 (S)	
S-25	MANHOLE RISER ON BOX CULVERT	19+57.42	4'RT.	5.48		
S-26	MANHOLE RISER ON BOX CULVERT	23+09.31	4'RT.	4.80		
S-27	COT TYPE 1 CURB INLET	23+15.88	32'RT.	5.03	-1.40 (E) -1.50 (N)	
S-29	COT TYPE 1 CURB INLET	23+43.54	32'LT.	4.81	0.80 (W)	
S-30	COT TYPE 1 CURB INLET	23+15.60	32'LT.	4.81	0.55 (E) -3.36 (S)	
S-32	COT TYPE 1 CURB INLET	23+43.61	32'RT.	5.03	-1.00 (W)	
S-34	COT TYPE BV-1 CURB INLET	25+71.30	16'RT.	5.17	-1.00 (NW)	
S-34A	MANHOLE RISER ON BOX CULVERT	25+65.90	4'RT.	4.82		
S-36	COT TYPE BV-1 CURB INLET	25+67.25	16'LT.	5.18	-1.91 (S)	
S-37	COT TYPE 1 CURB INLET	28+37.40	14'LT.	5.58	-1.70 (S)	
S-37A	COT TYPE 1 CURB INLET	28+39.62	14'RT.	5.61	-1.05 (NW)	
S-38	MANHOLE RISER ON BOX CULVERT	28+35.89	5'RT.	5.23		
S-39	FDOT J-BOX W/MH RISER PER INDEX 200	29+54.43	5'RT.	3.39	-3.36 (W) -3.36 (E)	
S-39A	COT TYPE "T" GRATE INLET	29+63.06	14'RT.	5.63	-1.00 (N)	

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE 2

STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S-40	FDOT J-BOX/CONFLICT STRUCTURE W/MH RISER PER INDEX 292	31+40.72	3'LT.	3.15	-3.10 (E) -3.10 (W)	
S-41	FDOT J-BOX W/MH RISER PER INDEX 200	31+59.75	1'LT.	3.57	-3.07 (N) -2.60 (E) -3.07 (W)	
S-42	FDOT J-BOX W/MH RISER PER INDEX 200	32+10.42	0'RT.	3.71	-2.46 (E) -2.48 (W)	
S-43	COT TYPE BS-1 CURB INLET	33+97.26	16'LT.	5.15	-0.06 (S)	
S-43A	MANHOLE RISER ON BOX CULVERT	33+93.46	0'RT.	4.89		
S-45	COT TYPE BS-1 CURB INLET	33+97.06	16'RT.	5.15	-0.06 (N)	
S-47	FDOT J-BOX W/MH RISER PER INDEX 200	36+85.03	0'RT.	4.57	-1.60 (E) -0.50 (S) -1.60 (W)	
S-48	COT TYPE BS-1 CURB INLET	36+57.30	16'LT.	6.09	0.45 (SW)	
S-48A	MANHOLE RISER ON BOX CULVERT	36+51.95	0'RT.	5.80		
S-50	COT TYPE BS-1 CURB INLET	37+18.62	16'LT.	6.19	0.03 (S)	
S-50A	FDOT J-BOX W/MH RISER PER INDEX 200	37+15.60	0'RT.	3.93	-0.06 (S) -0.15 (N) -1.54 (W)	
S-52	COT TYPE BV-1 CURB INLET	36+56.57	16'RT.	6.08	0.82 (N)	
S-52A	COT TYPE 1 CURB INLET	702+90.65	15'LT.	6.13	1.75 (E)	
S-52B	FDOT J-BOX W/MH RISER PER INDEX 200	702+95.46	2'LT.	4.29	1.50 (E) 1.50 (W) 1.00 (S) 1.00 (N)	
S-54	COT TYPE BS-1 CURB INLET	37+16.89	16'RT.	6.11	0.11 (N)	
S-54A	COT TYPE 1 CURB INLET	702+90.65	14'RT.	6.03	1.75 (W)	
S-55	FDOT J-BOX W/MH RISER PER INDEX 200	703+57.85	3'LT.	3.67	-0.16 (S) -0.16 (N)	
S-56A	COT TYPE BS-1 CURB INLET	700+23.43	37'RT.	5.44	2.00 (N)	
S-56B	COT TYPE BS-1 CURB INLET	701+01.49	37'RT.	5.14	1.88 (S) 1.88 (NW)	
S-56C	FDOT J-BOX W/MH RISER PER INDEX 200	701+17.94	19'RT.	5.07	1.78 (SE) 1.78 (W) 1.78 (N)	

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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE 3

SW

STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S-56E	COT TYPE BS-1 CURB INLET	700+23.15	36'LT.	5.14	2.00 (N)	
S-56F	COT TYPE "H" GRATE INLET	700+98.27	48'LT.	4.94	1.90 (S) 1.90 (NE)	
S-56G	FDOT J-BOX W/MH RISER PER INDEX 200	701+18.39	17'LT.	4.65	1.84 (SW) 1.84 (E)	
S-92	COT TYPE BS-1 CURB INLET	200+31.06	16'RT.	5.01	0.50 (NW)	
S-92A	MANHOLE RISER ON BOX CULVERT	200+37.08	0'LT.	4.77		
S-93	COT TYPE BS-1 CURB INLET	14+74.11	16'LT.	4.91	-2.12 (S)	
S-93A	MANHOLE RISER ON BOX CULVERT	14+71.46	2'RT.	4.60		
S-96	FDOT J-BOX W/MH RISER PER INDEX 200	202+91.02	3'LT.	4.37	-0.80 (S) -0.75 (E) -0.80 (S) -0.80 (N) -0.80 (N)	
S-96A	COT TYPE 1 CURB INLET	300+32.39	14'RT.	5.70	2.02 (N)	
S-96B	COT TYPE 1 CURB INLET	300+33.61	14'LT.	5.77	2.24 (SW)	
S-96C	FDOT J-BOX W/MH RISER PER INDEX 200	300+27.45	7'LT.	4.19	-0.73 (E) 2.17 (NE) 1.83 (S) -0.73 (W)	
S-97	CUSTOM J-BOX W/MH RISER	205+84.33	3'LT.	6.12	-0.95 (W) -0.95 (W)	
S-97A	COT TYPE 1 CURB INLET	205+63.24	14'RT.	5.39	0.23 (W)	
S-97B	MANHOLE RISER ON BOX CULVERT	205+64.87	0'LT.	5.06		
S-98	TYPE "T" RISER ON TOP OF FDOT J-BOX	301+59.90	8'LT.	5.40	0.74 (S) -0.64 (W)	
S-99	COT TYPE 1 CURB INLET	301+56.40	14'RT.	5.82	1.48 (N)	
S-100	COT TYPE BR-1 CURB INLET	31+25.34	20'RT.	4.97	-1.17 (N)	
S-100A	MANHOLE RISER ON BOX CULVERT	31+19.27	4'LT.	4.89		
S-101	COT TYPE 1 CURB INLET MODIFIED	608+23.59	33'LT.	5.16	1.38 (E)	
S-101A	FDOT J-BOX W/MH RISER PER INDEX 200	608+14.51	3'LT.	3.74	0.99 (W) 1.36 (E) -2.93 (S)	

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE 4

SHEET 7B

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STORM STRUCTURE TABLE

STRUCTURE NUMBER	STRUCTURE TYPE	STATION	OFFSET	RIM ELEV./ TOP SLAB	INVERTS	COMMENTS
S–102	COT TYPE 1 CURB INLET	607+59.55	31'RT.	5.02	1.55 (S) –0.23 (N)	
S–102A	MANHOLE RISER ON BOX CULVERT	31+83.12	2'RT.	4.99		
S–102B	COT TYPE "T" GRATE INLET	606+88.94	36'RT.	4.73	2.25 (N)	
S–103	COT TYPE 1 CURB INLET	31+94.79	32'LT.	5.11	1.73 (W)	
S–1429	FDOT TYPE 'J' STORM MANHOLE	506+43.25	37'LT.	6.04	1.58 (E) 1.58 (N)	
S–1430	COT TYPE "H" GRATE INLET	507+37.13	38'LT.	5.33	2.00 (S) 1.75 (W) 2.00 (E)	
S–1430A	FDOT J–BOX W/MH RISER PER INDEX 200	508+19.67	27'LT.	4.49	1.68 (W) 1.68 (N) 1.68 (E)	
S–1431	COT TYPE BV–1 CURB INLET	508+19.95	40'LT.	5.51	1.70 (S)	
S–1432	FDOT J–BOX W/MH RISER PER INDEX 200	605+03.10	28'LT.	4.39	1.58 (W) 1.34 (S) 1.34 (N)	
S–1434	FDOT J–BOX W/MH RISER PER INDEX 200	604+49.26	29'LT.	4.24	1.49 (S) 1.49 (SW) 1.49 (N)	
S–1434A	COT TYPE BV–1 CURB INLET	508+15.61	40'RT.	2.08	1.90 (NE)	
S–1438	COT TYPE BV–1 CURB INLET	509+23.95	39'LT.	5.34	1.85 (S) 1.85 (N)	
S–1439	COT TYPE BV–1 CURB INLET	509+24.89	39'RT.	5.59	2.32 (N)	
S–1440	COT TYPE BV–1 CURB INLET	507+17.80	40'RT.	5.40	2.15 (N)	
S–1444	COT TYPE BR–2 CURB INLET	601+86.27	36'LT.	6.50	1.90 (S) 1.90 (N)	

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM STRUCTURE TABLE 5

SHEET 7C

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
	S-96	5'X3' CONCRETE BOX CULVERT	84	0.07%	-0.74	-0.80	0.06
	S-96	5'X3' CONCRETE BOX CULVERT	84	0.07%	-0.74	-0.80	0.06
S-19		5'X3' CONCRETE BOX CULVERT	203	0.07%	-0.60	-0.74	0.14
S-19		5'X3' CONCRETE BOX CULVERT	202	0.07%	-0.60	-0.74	0.14
	S-97	5'X4' CONCRETE BOX CULVERT	17	0.00%	-0.95	-0.95	0.00
	S-97	5'X4' CONCRETE BOX CULVERT	17	0.00%	-0.95	-0.95	0.00
		5'X4' CONCRETE BOX CULVERT	122	0.05%	-0.88	-0.94	0.06
S-96		5'X4' CONCRETE BOX CULVERT	159	0.05%	-0.80	-0.88	0.08
		5'X4' CONCRETE BOX CULVERT	122	0.05%	-0.88	-0.94	0.06
S-96		5'X4' CONCRETE BOX CULVERT	159	0.05%	-0.80	-0.88	0.08
	S-47	6'X5' CONCRETE BOX CULVERT	85	0.18%	-1.76	-1.60	0.16
		6'X5' CONCRETE BOX CULVERT	250	0.18%	-2.22	-1.76	0.46
S-42		6'X5' CONCRETE BOX CULVERT	140	0.17%	-2.46	-2.22	0.24
S-41	S-42	6'X5' CONCRETE BOX CULVERT	50	0.24%	-2.60	-2.48	0.12
	S-39	9'X5' CONCRETE BOX CULVERT	96	-0.14%	-3.23	-3.36	0.13
	S-40	9'X5' CONCRETE BOX CULVERT	90	0.14%	-3.23	-3.10	0.13
	S-39	9'X5' CONCRETE BOX CULVERT	104	0.18%	-3.55	-3.36	0.19
		9'X5' CONCRETE BOX CULVERT	250	0.18%	-5.05	-4.61	0.44
S-40	S-41	9'X5' CONCRETE BOX CULVERT	19	0.16%	-3.10	-3.07	0.03
		9'X5' CONCRETE BOX CULVERT	300	0.18%	-5.58	-5.05	0.53
		9'X5' CONCRETE BOX CULVERT	300	0.18%	-4.61	-4.08	0.53
		9'X5' CONCRETE BOX CULVERT	300	0.18%	-4.08	-3.55	0.53
S-21		9'X5' CONCRETE BOX CULVERT	38	0.18%	-5.65	-5.58	0.07
S-15		9'X6' CONCRETE BOX CULVERT	88	0.10%	-6.25	-6.34	0.09
S-19		9'X6' CONCRETE BOX CULVERT	105	0.09%	-5.84	-5.94	0.10
	S-15	9'X6' CONCRETE BOX CULVERT	96	0.09%	-6.13	-6.22	0.09
	S-8	9'X6' CONCRETE BOX CULVERT	64	0.11%	-6.34	-6.41	0.07
	S-5	9'X6' CONCRETE BOX CULVERT	9	0.12%	-6.64	-6.65	0.01
	S-1	9'X6' CONCRETE BOX CULVERT	143	0.10%	-6.85	-7.00	0.15
		9'X6' CONCRETE BOX CULVERT	200	0.09%	-5.94	-6.13	0.19

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
S-1	CS-1	9'X6' CONCRETE BOX CULVERT	161	0.10%	-7.04	-7.20	0.16
S-5		9'X6' CONCRETE BOX CULVERT	172	0.10%	-6.67	-6.85	0.18
S-6		9'X6' CONCRETE BOX CULVERT	16	0.12%	-6.62	-6.64	0.02
S-7	S-6	9'X6' CONCRETE BOX CULVERT	52	0.11%	-6.54	-6.60	0.06
S-8	S-7	9'X6' CONCRETE BOX CULVERT	97	0.11%	-6.42	-6.53	0.10
S-21	S-19	10'X5' CONCRETE BOX CULVERT	157	0.09%	-5.65	-5.79	0.14
S-1430	S-1440	14"X23" ERCP	80	0.19%	2.00	2.15	0.15
S-39A		15" RCP	5	4.62%	-1.00	-1.25	0.25
S-37A		15" RCP	5	3.27%	-1.05	-1.21	0.16
S-37		15" RCP	14	3.90%	-1.70	-2.24	0.54
	S-97A	15" RCP	11	-2.98%	-0.10	0.23	0.33
S-102B	S-102	15" RCP	71	0.99%	2.25	1.55	0.70
S-1434A	S-1434	15" RCP	31	1.31%	1.90	1.49	0.41
S-96B	S-96C	15" RCP	6	1.00%	2.24	2.17	0.06
S-96A	S-96C	15" RCP	18	1.00%	2.02	1.83	0.18
S-18B	S-18A	15" RCP	28	1.00%	-0.72	-1.00	0.28
S-99	S-98	15" RCP	22	3.38%	1.48	0.74	0.75
S-102		15" RCP	28	1.40%	-0.23	-0.62	0.39
	S-100	15" RCP	20	1.44%	-1.45	-1.17	0.28
S-52		15" RCP	13	1.54%	0.82	0.62	0.20
S-54	S-50A	15" RCP	12	1.50%	0.11	-0.06	0.17
S-50	S-50A	15" RCP	12	1.48%	0.03	-0.15	0.18
S-48		15" RCP	13	1.48%	0.45	0.25	0.20
S-45		15" RCP	13	1.55%	-0.06	-0.26	0.20
S-43		15" RCP	13	1.54%	-0.06	-0.26	0.20
S-4	S-2	15" RCP	16	0.63%	1.00	0.90	0.10
S-23	S-22	15" RCP	12	1.73%	1.90	1.70	0.20
S-20		15" RCP	10	2.51%	-1.68	-1.92	0.24
S-93		15" RCP	13	1.03%	-2.12	-2.26	0.14
S-92		15" RCP	14	3.54%	0.50	0.00	0.50

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM PIPE TABLE

SHEET 8 OF 105

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STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
S-36		15" RCP	15	1.29%	-1.91	-2.11	0.20
S-34		15" RCP	7	5.52%	-1.00	-1.40	0.40
S-29	S-30	15" RCP	28	0.90%	0.80	0.55	0.25
S-32	S-27	15" RCP	28	1.44%	-1.00	-1.40	0.40
S-103	S-101A	15" RCP C-IV	32	1.15%	1.73	1.36	0.37
S-2	S-3	15" RCP C-IV	19	0.43%	1.35	1.43	0.08
S-24	S-22	15" RCP C-IV	20	0.99%	1.90	1.70	0.20
S-10	S-9	15" RCP C-IV	16	0.64%	1.40	1.30	0.10
S-16	S-9	15" RCP C-IV	15	1.32%	1.50	1.30	0.20
S-18A	S-18	18" RCP	25	2.50%	-1.12	-1.74	0.63
S-1444		18" RCP	156	0.20%	1.90	2.21	0.31
S-54A	S-52B	18" RCP	17	1.50%	1.75	1.50	0.25
S-52A	S-52B	18" RCP	13	1.87%	1.75	1.50	0.25
S-18		18" RCP	13	2.46%	-1.85	-2.17	0.32
S-30		18" RCP	32	0.44%	-3.36	-3.50	0.14
S-27		18" RCP	24	1.26%	-1.50	-1.80	0.30
	S-1430A	19"X30" ERCP	70	0.38%	1.95	1.68	0.27
S-1438	S-1439	19"X30" ERCP	78	0.60%	1.85	2.32	0.47
S-1430		19"X30" ERCP	13	0.38%	2.00	1.95	0.05
S-56E	S-56F	19"X30" ERCP C-IV	76	0.13%	2.00	1.90	0.10
S-56A	S-56B	19"X30" ERCP C-IV	78	0.15%	2.00	1.88	0.12
	S-1438	24" RCP	90	0.41%	1.48	1.85	0.37
	S-1444	24" RCP	114	0.18%	1.70	1.90	0.20
S-1434		24" RCP	149	0.14%	1.49	1.70	0.21
S-1429	S-1430	24" RCP	94	0.18%	1.58	1.75	0.17
	S-1429	24" RCP	111	0.39%	1.15	1.58	0.43
S-12A	S-12	24" RCP	17	0.60%	-1.10	-1.00	0.10
S-12A	S-13	24" RCP	25	1.50%	-1.10	-0.72	0.38
S-13		24" RCP	17	5.81%	-3.00	-4.00	1.00
		24" RCP C-IV	21	0.41%	1.40	1.48	0.08

STORM PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
S-1432	S-1434	24" RCP C-IV	54	0.28%	1.34	1.49	0.15
S-101	S-101A	24" RCP C-IV	27	1.42%	1.38	0.99	0.39
S-1430A	S-1432	24"X38" ERCP	25	0.40%	1.68	1.58	0.10
S-56F	S-56G	24"X38" ERCP	34	0.18%	1.90	1.84	0.06
S-56B	S-56C	24"X38" ERCP	25	0.40%	1.88	1.78	0.10
S-1431	S-1430A	24"X38" ERCP	13	0.16%	1.70	1.68	0.02
S-56G	S-56C	24"X38" ERCP C-IV	36	0.17%	1.84	1.78	0.06
		24"X38" ERCP C-IV	20	0.17%	1.18	1.15	0.03
S-1432		24"X38" ERCP C-IV	97	0.17%	1.34	1.18	0.16
S-56C		29"X45" ERCP	90	0.09%	1.78	1.70	0.08
S-55	S-52B	29"X45" ERCP	62	1.86%	-0.16	1.00	1.16
S-52B		29"X45" ERCP C-IV	78	0.83%	1.00	1.65	0.65
	S-12A	30" RCP	43	6.76%	-4.18	-1.25	2.93
S-47	S-55	36" RCP	27	1.27%	-0.50	-0.16	0.34
S-96C	S-98	48" RCP	132	0.07%	-0.73	-0.64	0.09
S-96	S-96C	48" RCP	31	0.06%	-0.75	-0.73	0.02
S-41	S-101A	54" RCP	29	0.48%	-3.07	-2.93	0.14
S-47	S-50A	54" RCP	31	0.19%	-1.60	-1.54	0.06

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

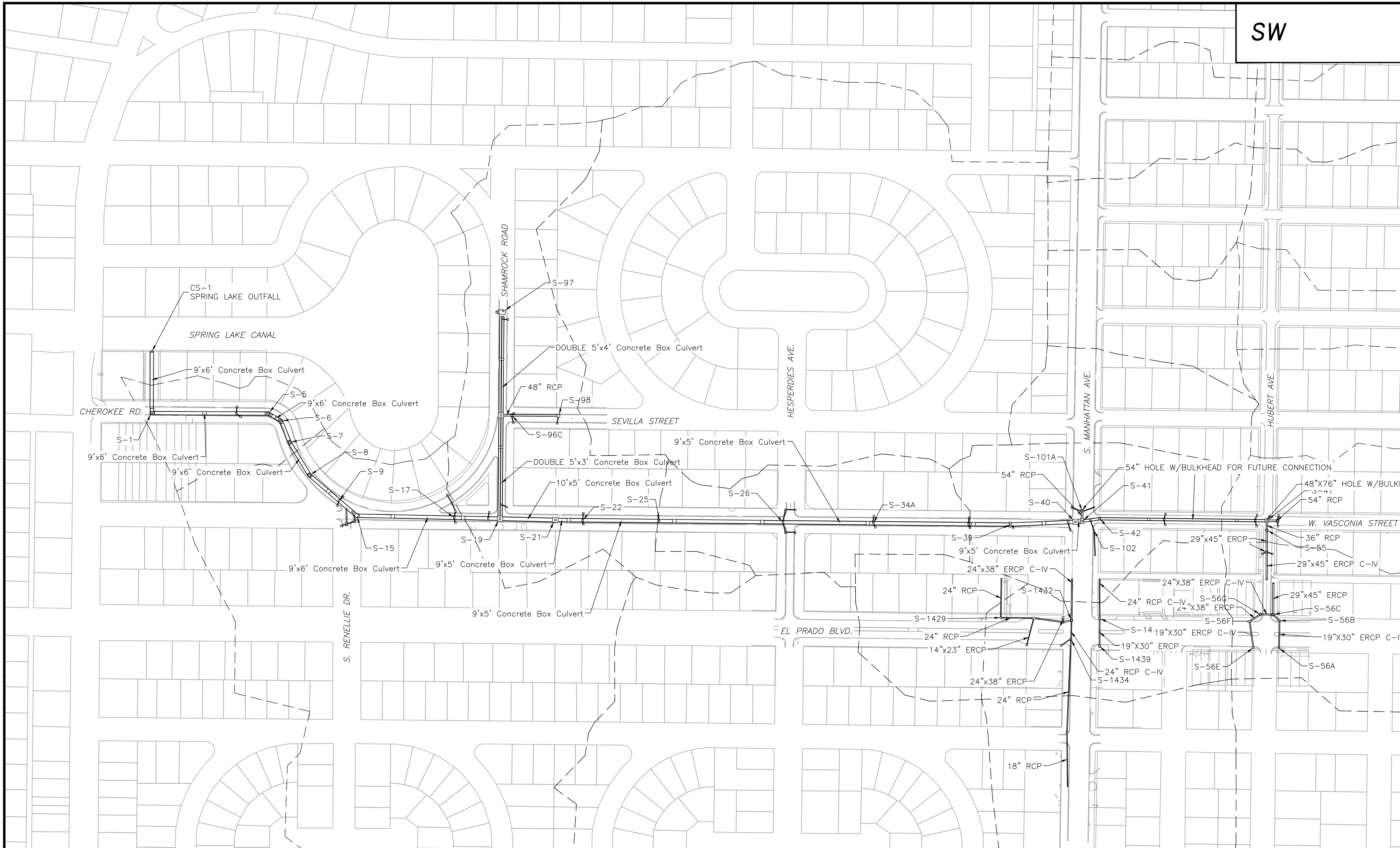
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

STORM PIPE TABLE 2

SHEET 9 of 105



No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
STORM SEWER LAYOUT

SHEET 10
105

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SW

0 20

1"=20'

CHEROKEE RD.

STA. 100+33.16
STA. 901+75.85

CAUTION: 2" GAS PROTECT OR RELOCATE BY UTILITY COMPANY
+65.88
23.94' LT.

BOLLARDS AND CHAIN LINK FENCE (6' HEIGHT) W/ MIN. 8' WIDE GATE

PROPOSED INTERLOCKING BLOCK WALL

℄ OF CONSTRUCTION

PROP 9'X6' CONCRETE BOX CULVERT

NO PARKING SIGN

PROPOSED INTERLOCKING BLOCK WALL

PROPOSED RUBBLE RIP-RAP OVER FILTER FABRIC APPROX. 29 CU. YDS.

Shots Taken On Center of 6' Wide Seawall

±50' SHORELINE LENGTH AFFECTED

SPRING LAKE CANAL

Asphalt Parking Lot

Asphalt Drive

Concrete Drive

Brick Paver

Concrete

3' Evergreen

Verizon Fiber Optic

Speed Limit

6' Wood Board

Planter

3342

4717

100+00

101+00

102+00

102+80

902+00

4730

4728

4726

4724

4722

4.43 4.61 4.42 4.55 4.79 4.70 4.69 4.93

2.76 TOW 5.72 TOW

MEG −3.57 MEG −5.37 −7.60 −7.60 MEG −5.71 MEG −5.42 MEG −3.43 2.76 TOW

S−1

STA. 901+74.69, 6.81' RT.
PROP CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (E) = −7.00
INV EL: 9'X6' CONCRETE BOX CULVERT (N) = −7.04
TOP SLAB EL: −0.291
MH RISER RIM: 4.62
SEE STRUCTURE DETAILS SHEET
FOR SIZING AND MORE INFORMATION

CS−1

STA. 102+01.52, 0.89' LT.
PROPOSED WINGWALL PER FDOT INDEX 289
INV EL: 9'X6' CONCRETE BOX CULVERT (S) = −7.20
NO MANATEE GRATE REQUIRED FOR 9X6 OUTFALL

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

NO.	DATE	REVISIONS	NO.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

OUTFALL - STORMWATER - PLAN

SHEET 11 OF 105

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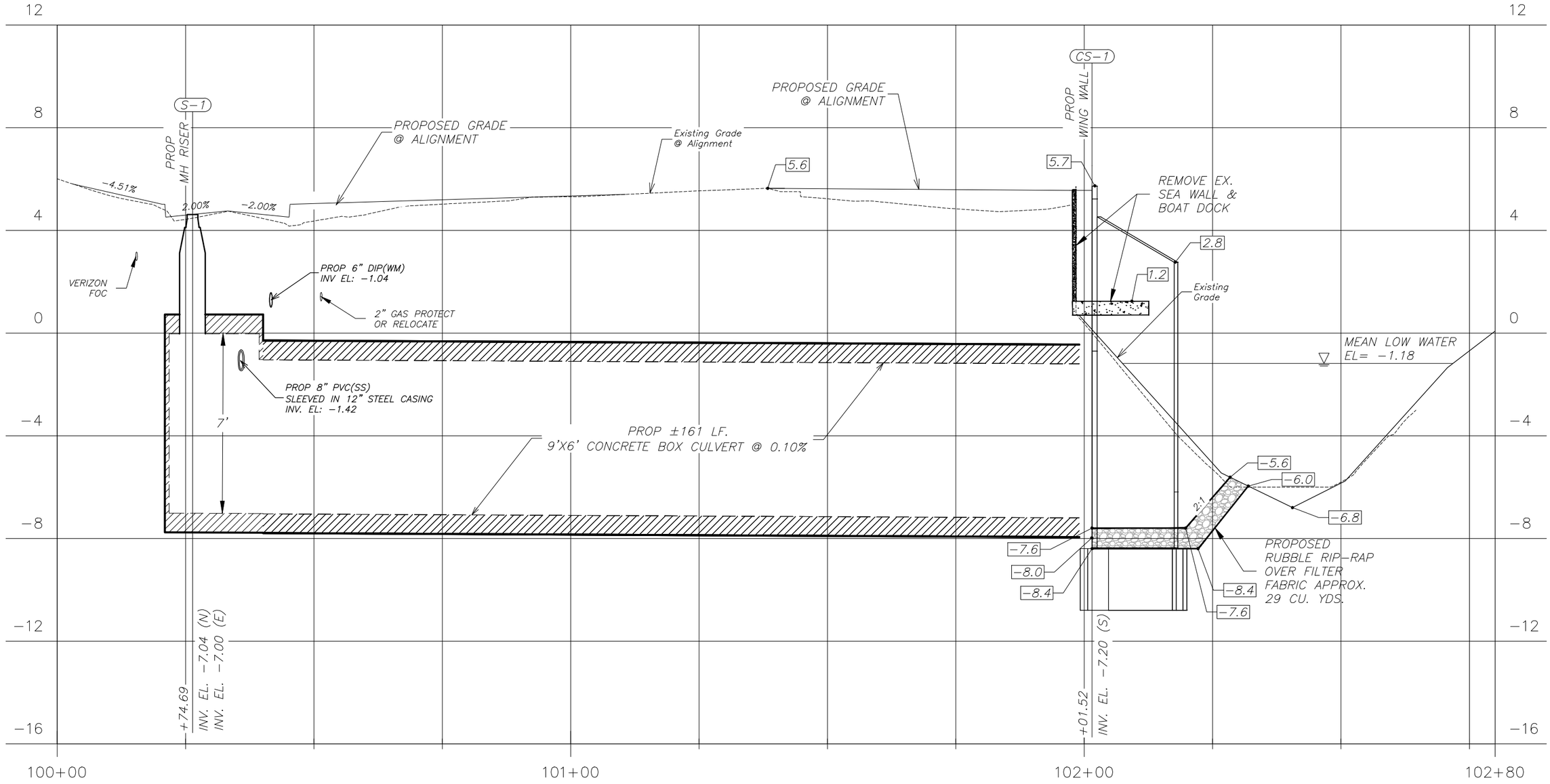
SW



OUTFALL PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

OUTFALL - STORMWATER - PROFILE

SHEET 12 of 105

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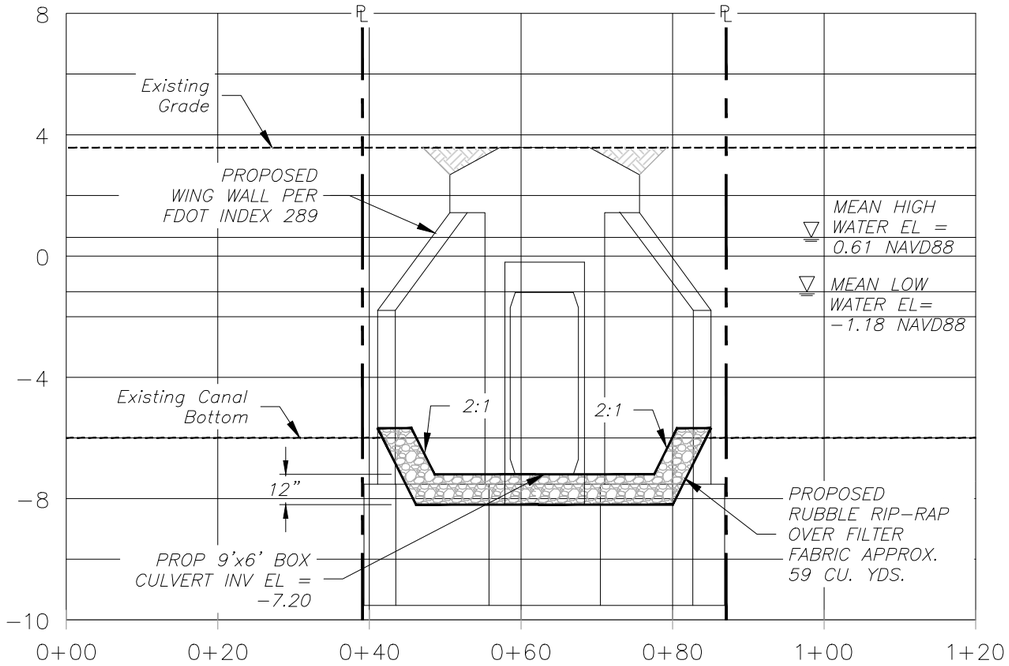
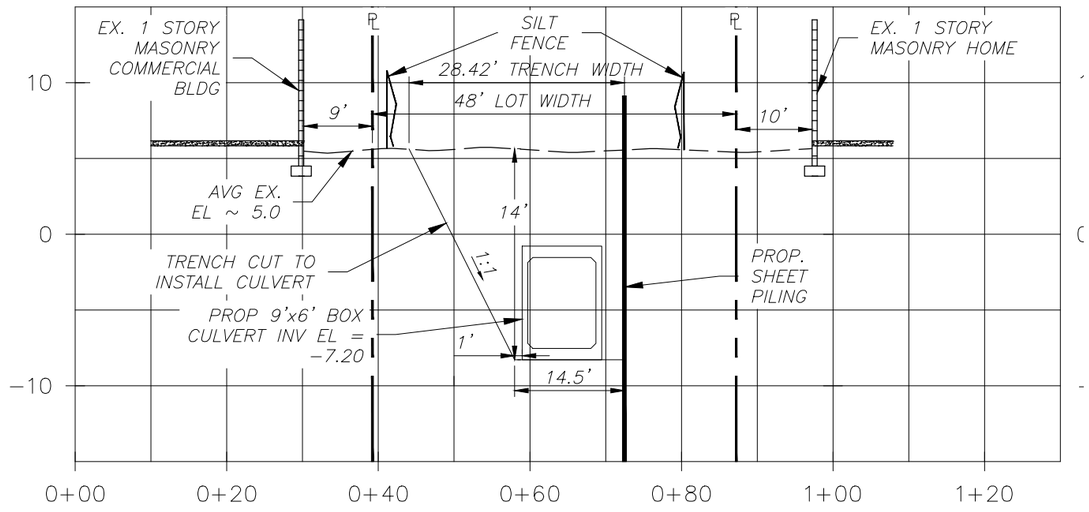
SW



OUTFALL CROSS SECTION
SCALE: HORZ. 1"=20'; VERT. 1"=5'



OUTFALL CROSS SECTION
SCALE: HORZ. 1"=20'; VERT. 1"=10'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

OUTFALL - STORMWATER - CROSS SECTIONS

SHEET 12A of 105

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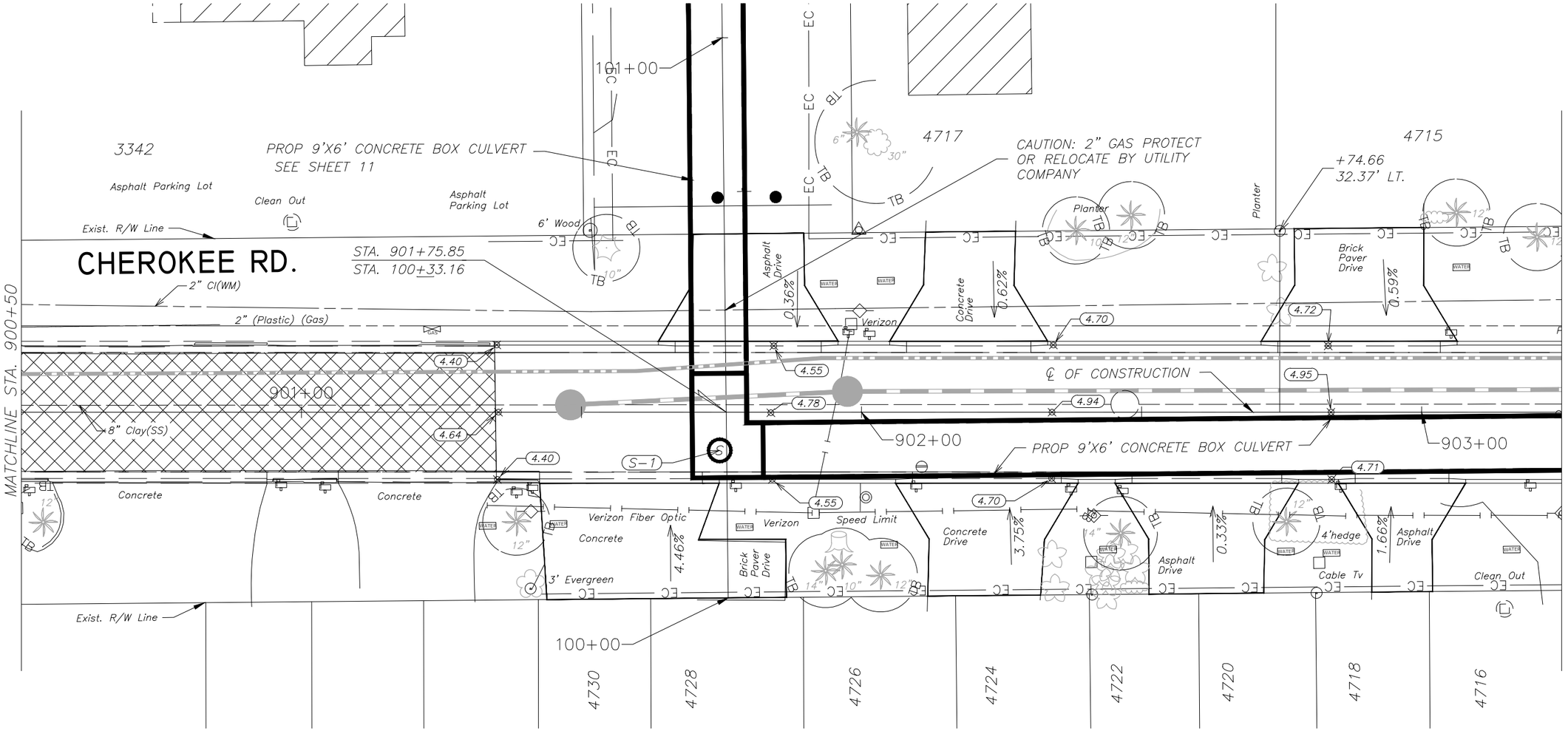
SW



S-1
STA. 901+74.69, 6.81' RT.
PROP CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (E) = -7.00
INV EL: 9'X6' CONCRETE BOX CULVERT (N) = -7.04
INV EL: 8" PVC SANITARY CROSSING (E) = -1.38
INV EL: 8" PVC SANITARY CROSSING (W) = -1.42
TOP SLAB EL: -0.291
MH RISER RIM: 4.62
SEE STRUCTURE DETAILS SHEET
FOR SIZING AND MORE INFORMATION

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PLAN

SHEET 13 OF 105

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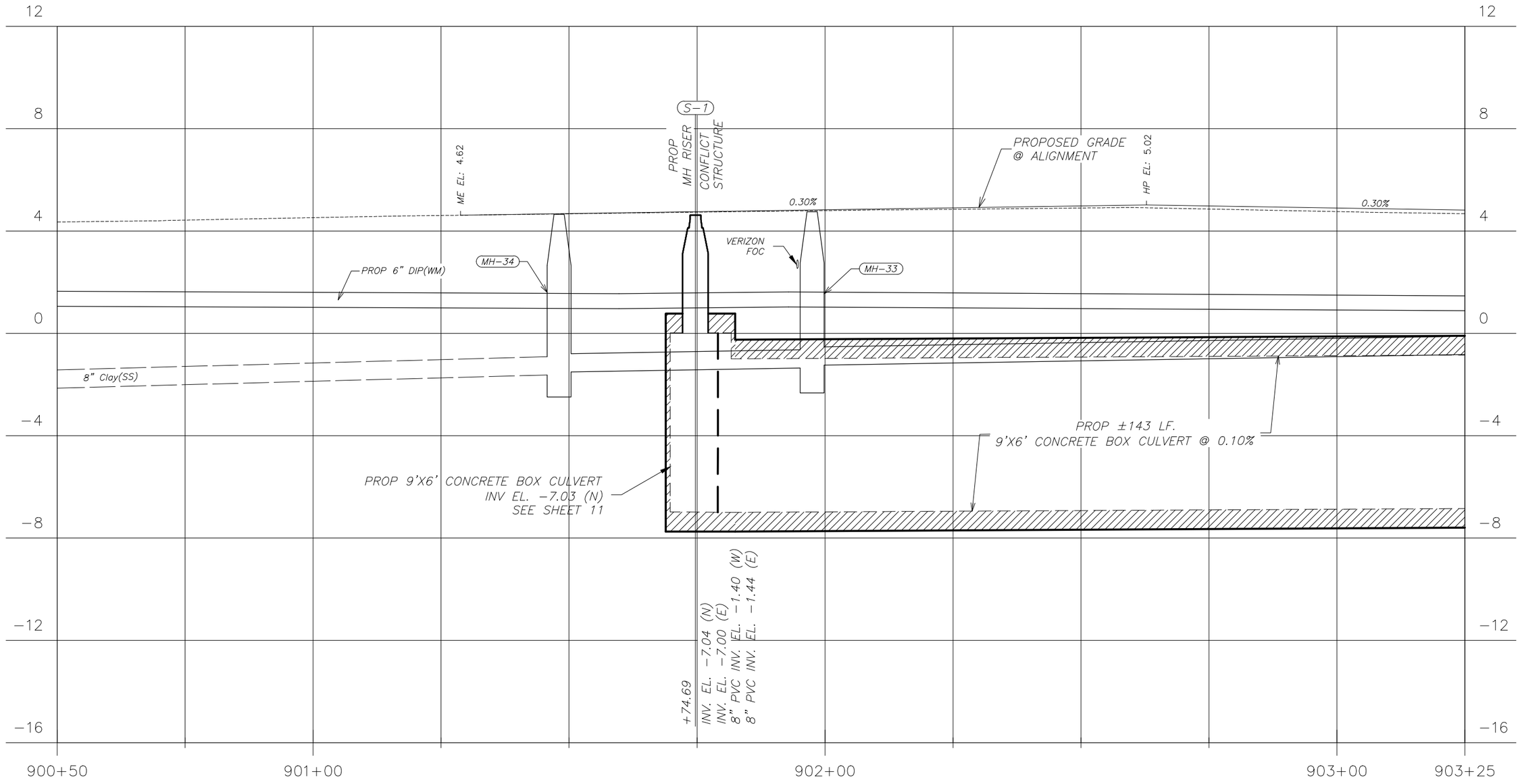
SW



CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PROFILE

SHEET 14 OF 105

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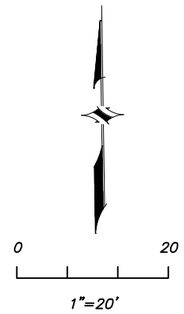

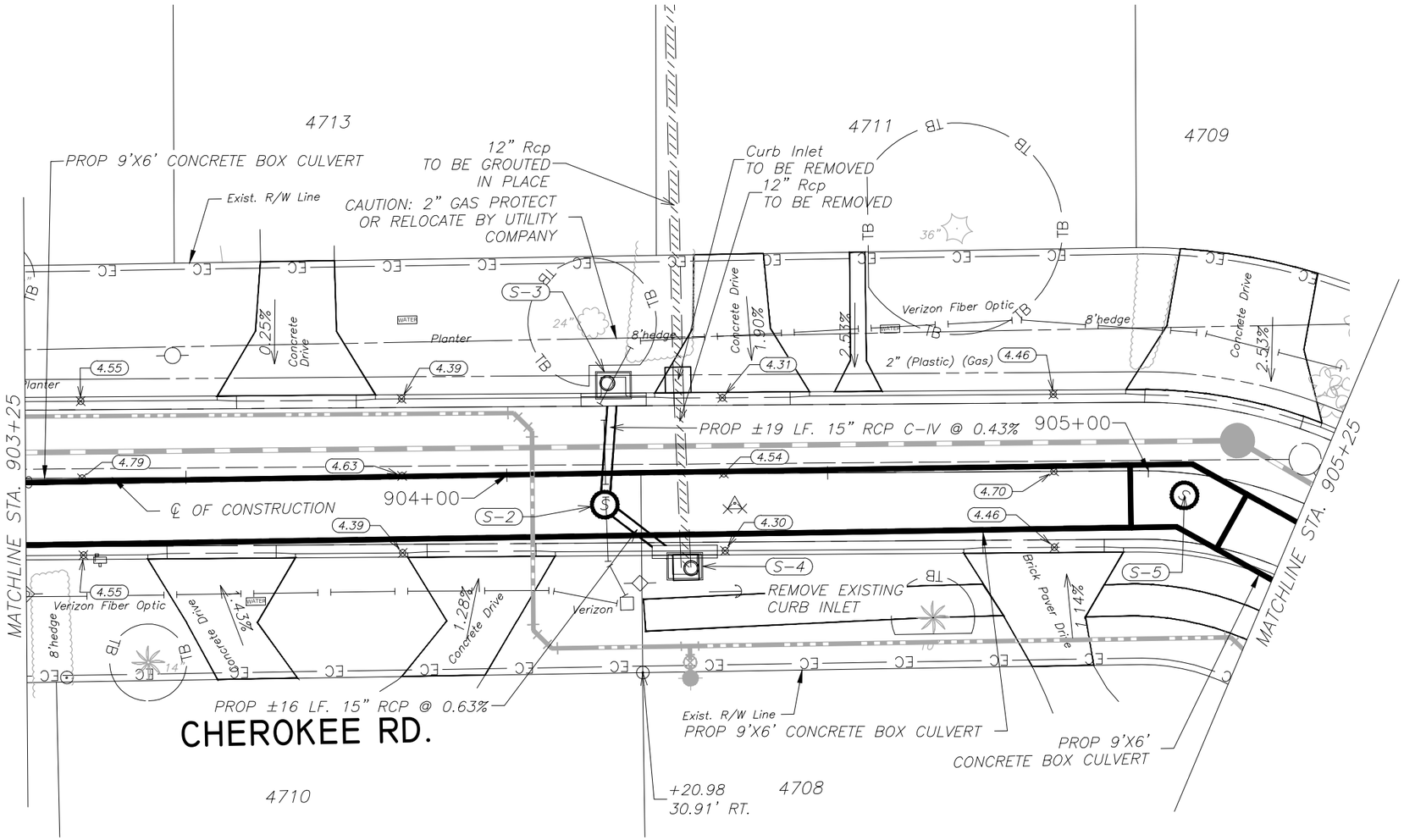

S-2
STA. 904+15.23, 4.69' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.43
INV EL: 15" RCP (SE) = 0.90
INV EL: 15" RCP C-IV (N) = 1.35

S-3
STA. 904+16.72, 13.91' LT.
PROP COT TYPE 1 CURB INLET
RIM: 4.81
INV EL: 15" RCP C-IV (S) = 1.43
FLOWLINE EL: 4.31

S-4
STA. 904+27.65, 14.39' RT.
PROP COT TYPE 1 CURB INLET
RIM: 4.77
INV EL: 15" RCP (NW) = 1.00
FLOWLINE EL: 4.27

S-5
STA. 905+06.00, 3.49' RT.
PROP CUSTOM J-BOX W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (SE) = -6.65
INV EL: 9'X6' CONCRETE BOX CULVERT (W) = -6.67
TOP SLAB EL: 0.08
MH RISER RIM: 4.69
SEE STRUCTURAL DETAIL SHEETS
FOR SIZING AND MORE INFORMATION

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation
and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PLAN

SHEET
15
OF
105

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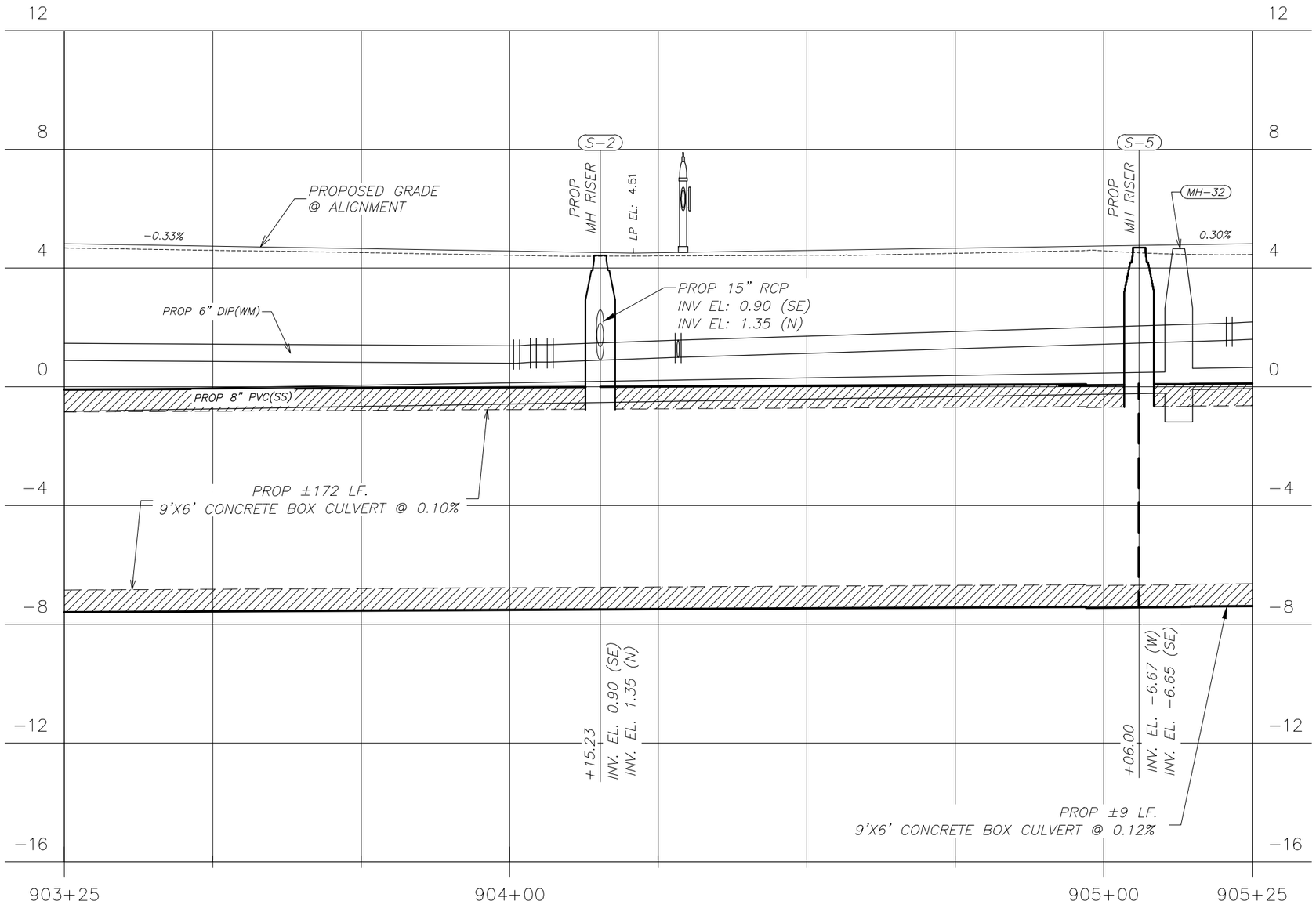
SW



CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PROFILE

SHEET 16 OF 105

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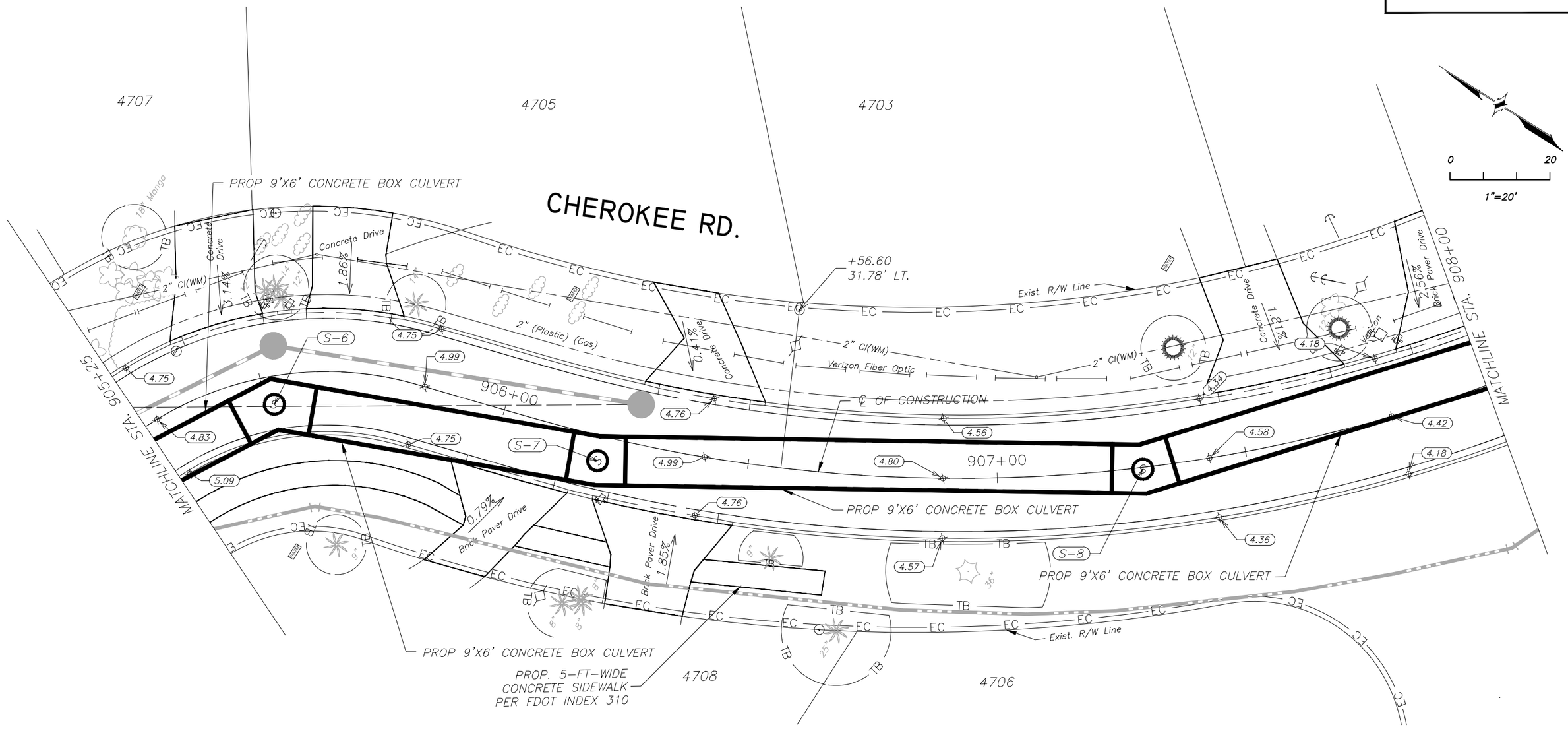
SW



S-6
STA. 905+51.92, 5.62' RT.
PROP CUSTOM J-BOX W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (S) = -6.60
INV EL: 9'X6' CONCRETE BOX CULVERT (NW) = -6.62
TOP SLAB EL: 0.13
MH RISER RIM: 4.79
SEE STRUCTURE DETAILS SHEET
FOR SIZING AND MORE INFORMATION

S-7
STA. 906+20.47, 4.96' RT.
PROP CUSTOM J-BOX W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (SE) = -6.53
INV EL: 9'X6' CONCRETE BOX CULVERT (N) = -6.54
TOP SLAB EL: 0.21
MH RISER RIM: 4.98
SEE STRUCTURE DETAILS SHEET
FOR SIZING AND MORE INFORMATION

S-8
STA. 907+29.17, 0.33' RT.
PROP CUSTOM J-BOX W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (SE) = -6.41
INV EL: 9'X6' CONCRETE BOX CULVERT (NW) = -6.42
TOP SLAB EL: 0.33
MH RISER RIM: 4.63
SEE STRUCTURE DETAILS SHEET
FOR SIZING AND MORE INFORMATION

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PLAN

SHEET 17 of 105

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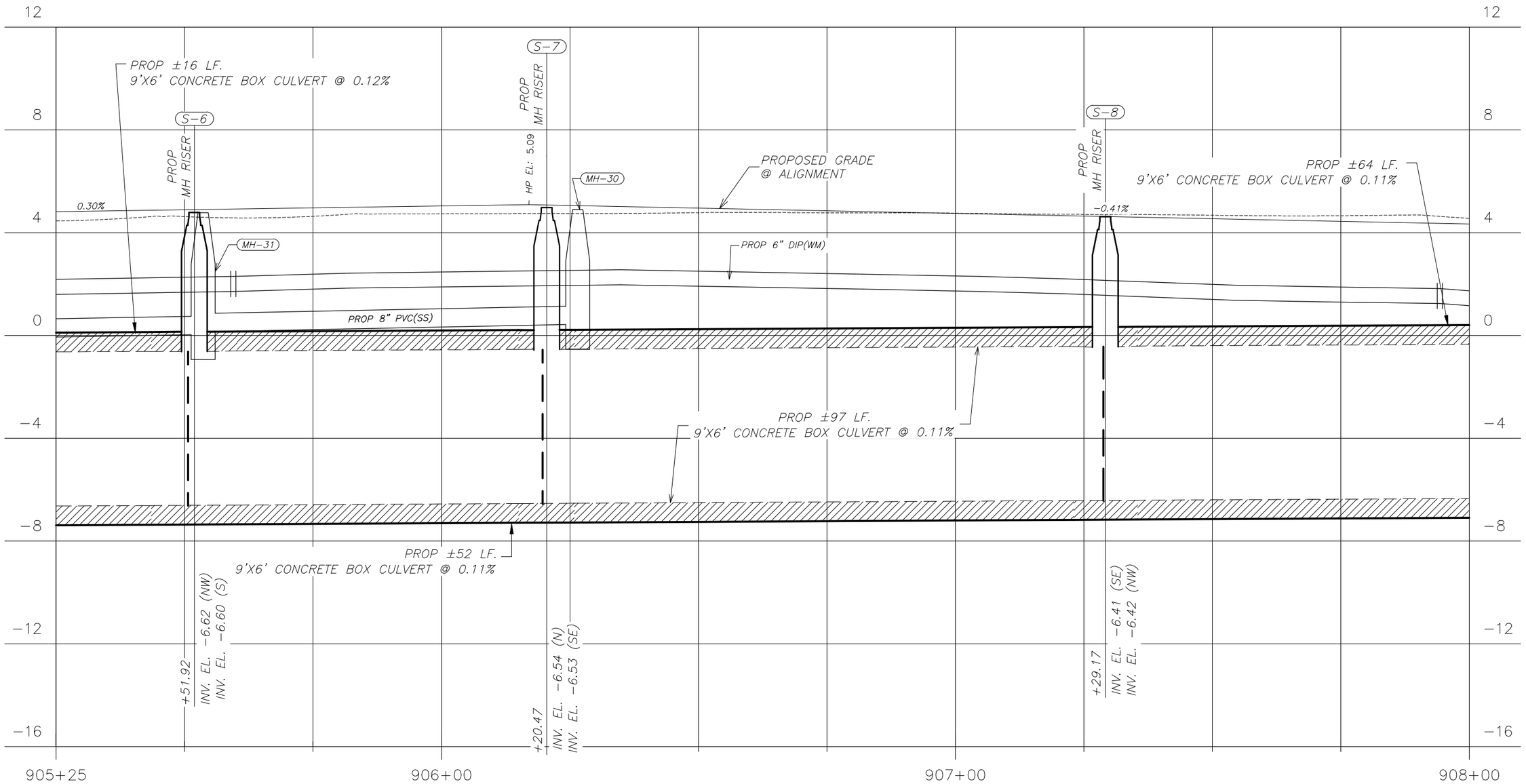
SW



CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PROFILE

SHEET 18 OF 105

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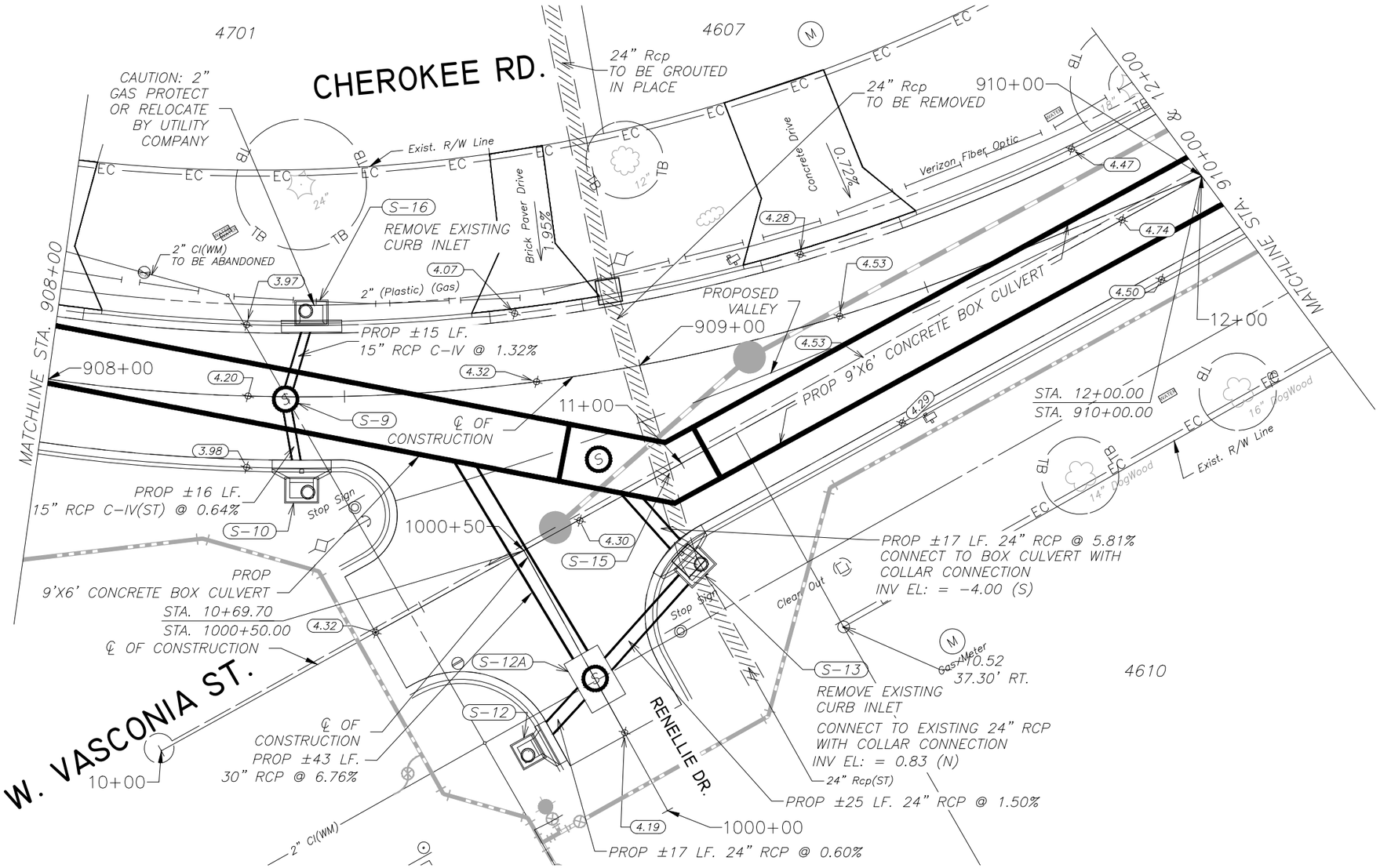

SW

0 20

1"=20'

S-9
STA. 908+40.07, 0.40' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.17
INV EL: 15" RCP C-IV (NE) = 1.30
INV EL: 15" RCP C-IV (S) = 1.30

S-10
STA. 908+42.77, 15.70' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 4.45
INV EL: 15" RCP C-IV (N) = 1.40
FLOWLINE EL: 3.95

S-12A
STA. 1000+25.30, 0.02' LT.
PROP 8'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24" RCP (E) = -1.10
INV EL: 24" RCP (W) = -1.10
INV EL: 42" HOLE W/BULKHEAD FOR FUTURE CONNECTION (S) = -1.85
INV EL: 30" RCP (N) = -1.25
MH RISER RIM: 4.11

S-12
STA. 1000+20.03, 15.71' LT.
PROP COT TYPE BS-1 CURB INLET
RIM: 4.39
INV EL: 24" RCP (E) = -1.00
FLOWLINE EL: 3.89

S-13
STA. 10+93.57, 16.34' RT.
PROP COT TYPE BR-1 CURB INLET
RIM: 4.21
INV EL: 24" RCP (N) = -3.00
INV EL: 24" RCP (W) = -0.72
INV EL: 24" RCP (S) = 0.83
FLOWLINE EL: 3.71

S-16
STA. 908+44.50, 14.14' RT.
PROP COT TYPE 1 CURB INLET
RIM: 4.38
INV EL: 15" RCP C-IV (SW) = 1.50
FLOWLINE EL: 3.88

S-15
STA. 10+97.49, 0.45' RT.
PROP CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (E) = -6.22
INV EL: 9'X6' CONCRETE BOX CULVERT (NW) = -6.25
INV EL: 8" PVC SANITARY CROSSING (E) = -4.60
INV EL: 8" PVC SANITARY CROSSING (W) = -4.64
TOP SLAB EL: 0.500
MH RISER RIM: 4.23
SEE STRUCTURE DETAILS SHEET FOR SIZING AND MORE INFORMATION

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER PLAN

SHEET 19 of 105

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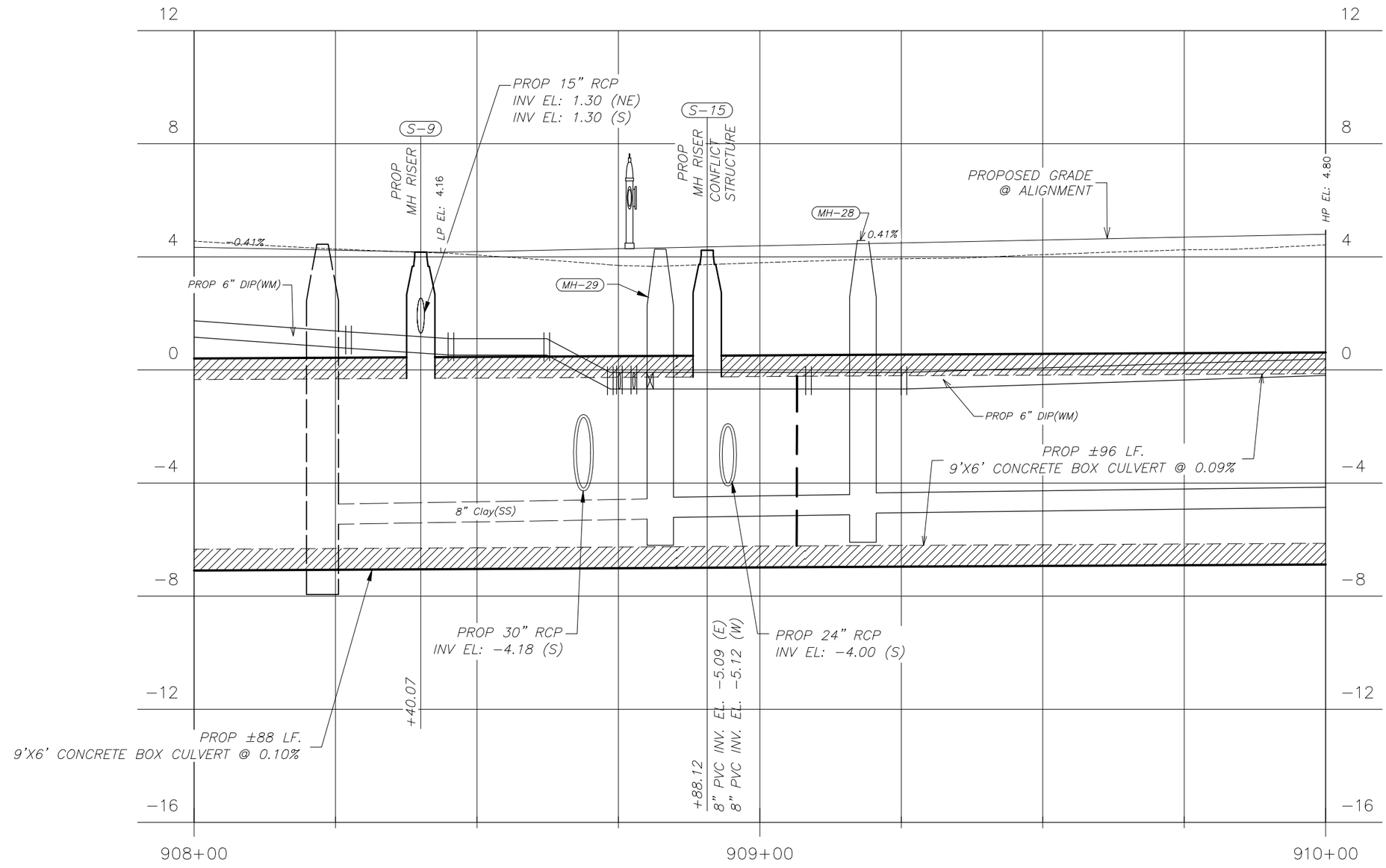
SW



CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - STORMWATER
PROFILE

SHEET 20 OF 105

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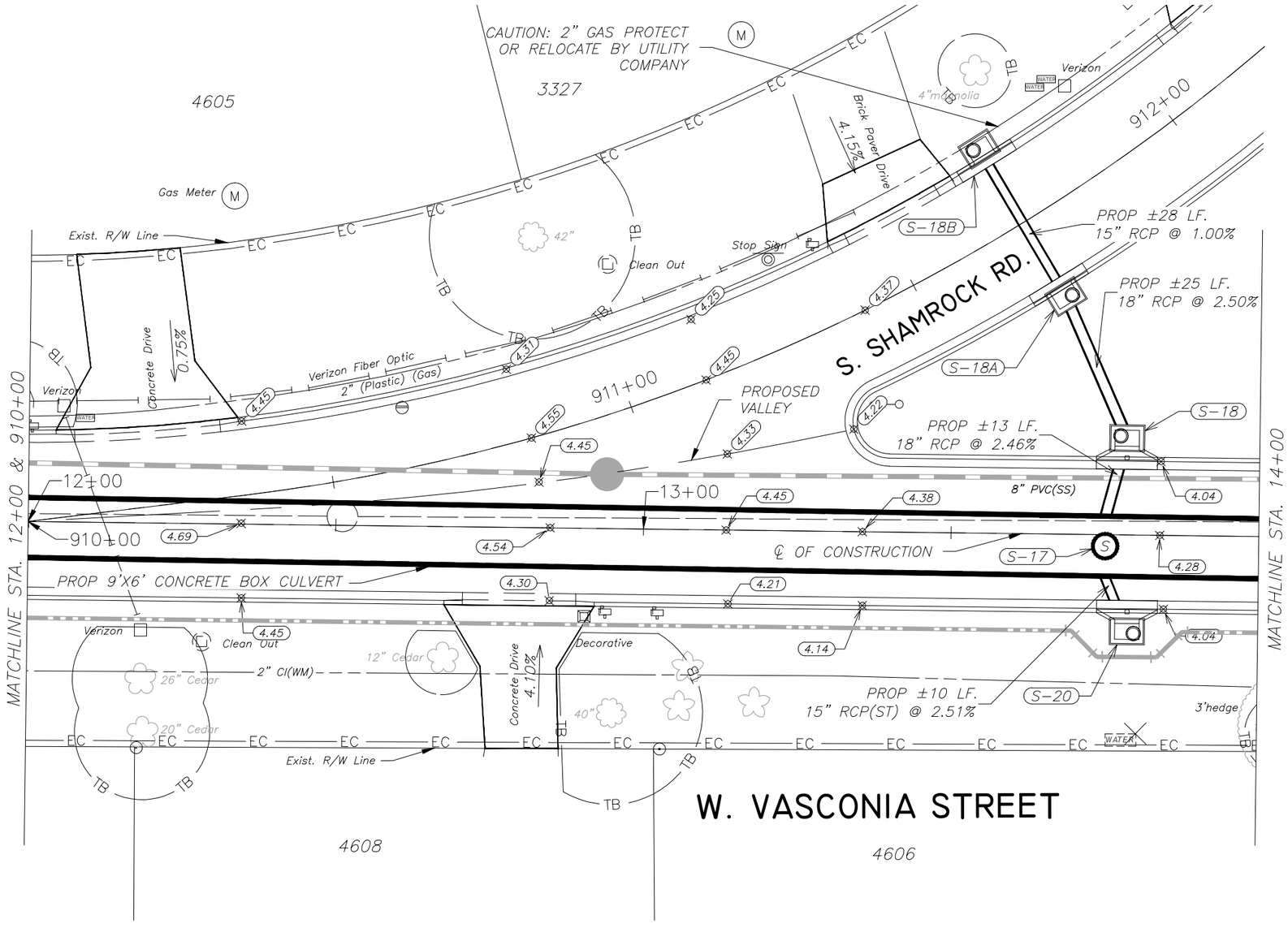

S-17
STA. 13+75.05, 1.86' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.22

S-18
STA. 13+78.44, 15.73' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 4.51
INV EL: 18" RCP (NW) = -1.74
INV EL: 18" RCP (S) = -1.85
FLOWLINE EL: 4.01

S-20
STA. 13+78.74, 15.68' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 4.51
INV EL: 15" RCP (N) = -1.68
FLOWLINE EL: 4.01

S-18A
STA. 911+70.17, 13.87' RT.
PROP COT TYPE 1 CURB INLET
RIM: 4.52
INV EL: 15" RCP (NW) = -1.00
INV EL: 18" RCP (SE) = -1.12
FLOWLINE EL: 4.05

S-18B
STA. 911+70.75, 13.94' LT.
PROP COT TYPE 1 CURB INLET
RIM: 4.52
INV EL: 15" RCP (SE) = -0.72
FLOWLINE EL: 4.05

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

0 20
1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST. - STORMWATER
PLAN

SHEET 21 of 105

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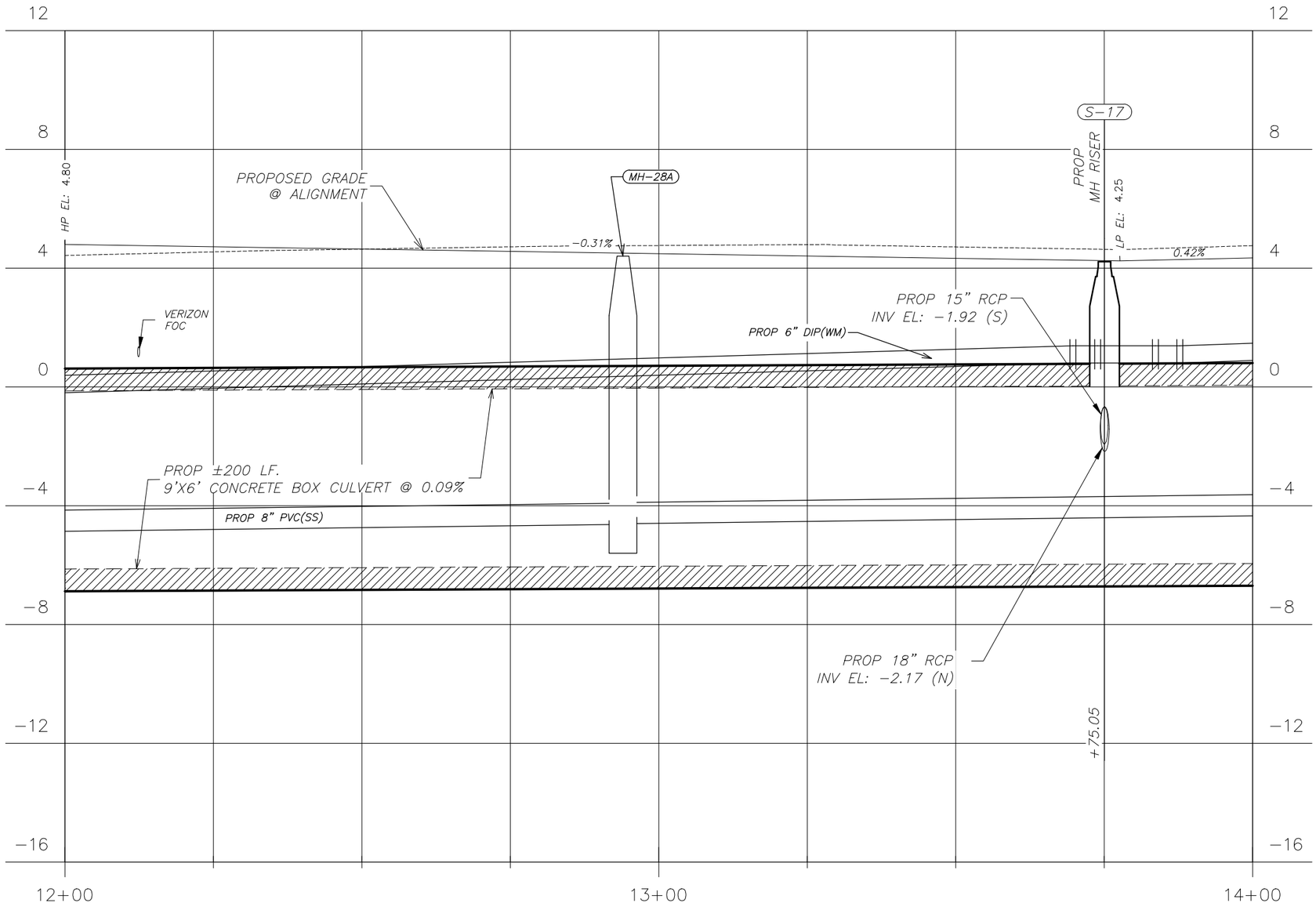
SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST. - STORMWATER
PROFILE

SHEET 22 OF 105

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SW

0 20

1"=20'

SHAMROCK RD.
SEE SHEET 41

Exist. R/W Line

PROP DOUBLE 5'X3' CONCRETE BOX CULVERT

LIGHT POLE HOLD OR RELOCATE (PRIOR TO CONSTRUCTION)

PROP ±13 LF. 15" RCP(ST) @ 1.03% CONNECT TO BOX CULVERT WITH COLLAR CONNECTION INV EL: 15" RCP = -2.26

STA. 15+08.37
STA. 200+00.00

Stop Sign

Waste

S-92A

S-93

S-93A

S-19

S-92

S-21

PROP ±14 LF. 15" RCP @ 3.54% CONNECT TO BOX CULVERT WITH COLLAR CONNECTION INV EL: 15" RCP = 0.00

3328

8" Rcp TO BE REMOVED

Curb Inlet TO BE REMOVED

6" Rcp TO BE REMOVED

Double 5'x4' Concrete Box Culvert TO BE GROUTED IN PLACE

BRICK & MORTAR INSIDE EX BOX CULVERT

CUT AND REMOVE SECTION OF EXISTING BOX CULVERT. GROUT EXISTING SYSTEM TO THE NORTH.

4519

12" Rcp TO BE REMOVED

Exist. R/W Line

6'Wood Fence

W. VASCONIA ST.

Concrete Drive 4.14%

42"

Small Sink H

MATCHLINE STA. 14+00

MATCHLINE STA. 17+00

℄ OF CONSTRUCTION

15+00

200+00

16+00

8" Clay(SS)

Concrete Drive 5.60 5.70 6.40 M.E.G.

Concrete Drive 5.40 5.50 6.62 M.E.G.

Concrete Drive 5.59 6.69 6.27 M.E.G.

Concrete Drive 4.36%

Planter

Concrete Drive 4.10%

4'hedge

Concrete Drive 3.87%

Cluster Crape Myrtle

2'hedge

Concrete Walk

Cluster Crape Myrtle

6'hedge

Brick Paver Drive 3.88%

14"

2"

14"

12"

48" Camphor

2" CI(WM) TO BE ABANDONED

4604PROP. 5-FT-WIDE CONCRETE SIDEWALK PER FDOT INDEX 310

+03.35
33.39' RT.

℄ OF CONSTRUCTION

199+70

Exist. R/W Line

PROP 10'X5' CONCRETE BOX CULVERT

4526

4522

Storm MH
RIM: 5.99

PROP 9'X5' CONCRETE BOX CULVERT

Double 5'x4' Concrete Box Culvert(ST)

4520

S-19

STA. 15+05.05, 2.52' RT.
PROP 13'X14' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 10'X5' CONCRETE BOX CULVERT (E) = -5.79
INV EL: 9'X6' CONCRETE BOX CULVERT (W) = -5.84
INV EL: 5'X3' CONCRETE BOX CULVERT (N) = -0.60
INV EL: 5'X3' CONCRETE BOX CULVERT (N) = -0.60
MH RISER RIM: 4.74

S-93

STA. 14+74.11, 15.70' LT.
PROP COT TYPE BS-1 CURB INLET
RIM: 4.91
INV EL: 15" RCP (S) = -2.12
FLOWLINE EL: 4.41

S-93A

STA. 14+71.46, 2.35' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.60

S-21

STA. 16+62.29, 4.38' RT.
PROP 13'X14' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 5'X4' CONCRETE BOX CULVERT (S) = -0.41
INV EL: 5'X4' CONCRETE BOX CULVERT (S) = -0.41
INV EL: 9'X5' CONCRETE BOX CULVERT (E) = -5.65
INV EL: 10'X5' CONCRETE BOX CULVERT (W) = -5.65
MH RISER RIM: 5.19

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PLAN

SHEET 23 of 105

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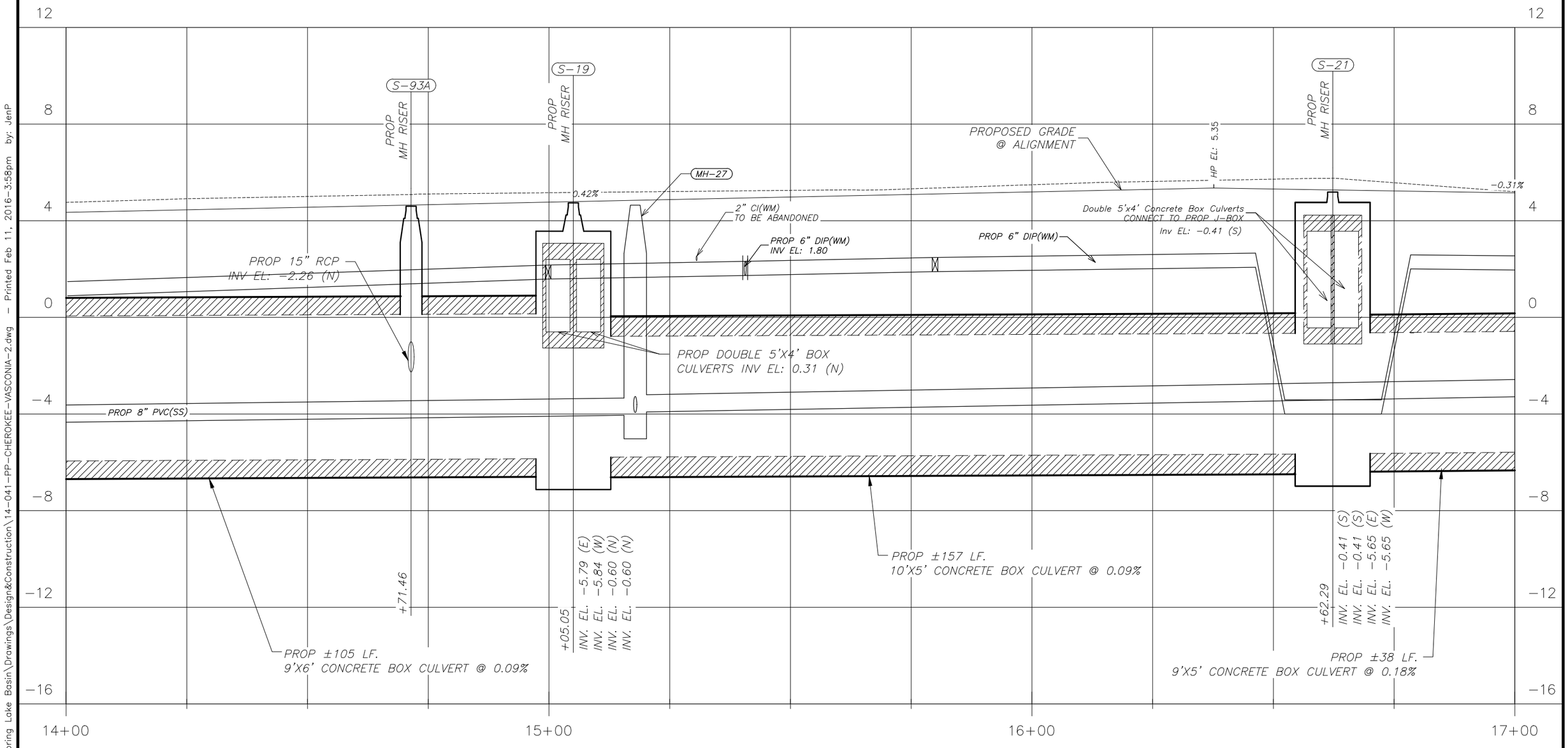
SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 24 OF 105

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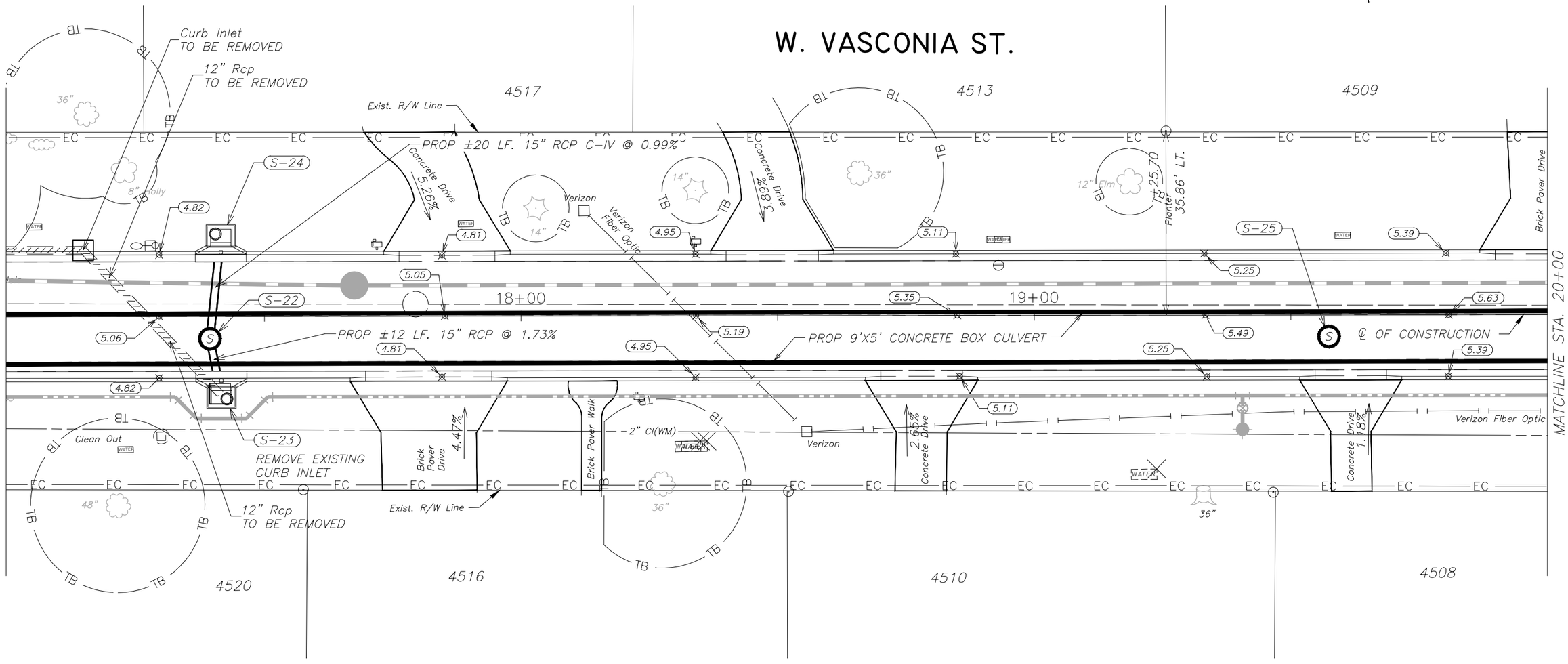
SW

0 20

1"=20'

W. VASCONIA ST.



S-22
STA. 17+39.37, 4.33' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.95
INV EL: 15" RCP (S) = 1.70
INV EL: 15" RCP C-IV (N) = 1.70

S-23
STA. 17+41.59, 15.70' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.23
INV EL: 15" RCP (N) = 1.90
FLOWLINE EL: 4.73

S-24
STA. 17+41.50, 15.69' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.23
INV EL: 15" RCP C-IV (S) = 1.90
FLOWLINE EL: 4.73

S-25
STA. 19+57.42, 4.19' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 5.48

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

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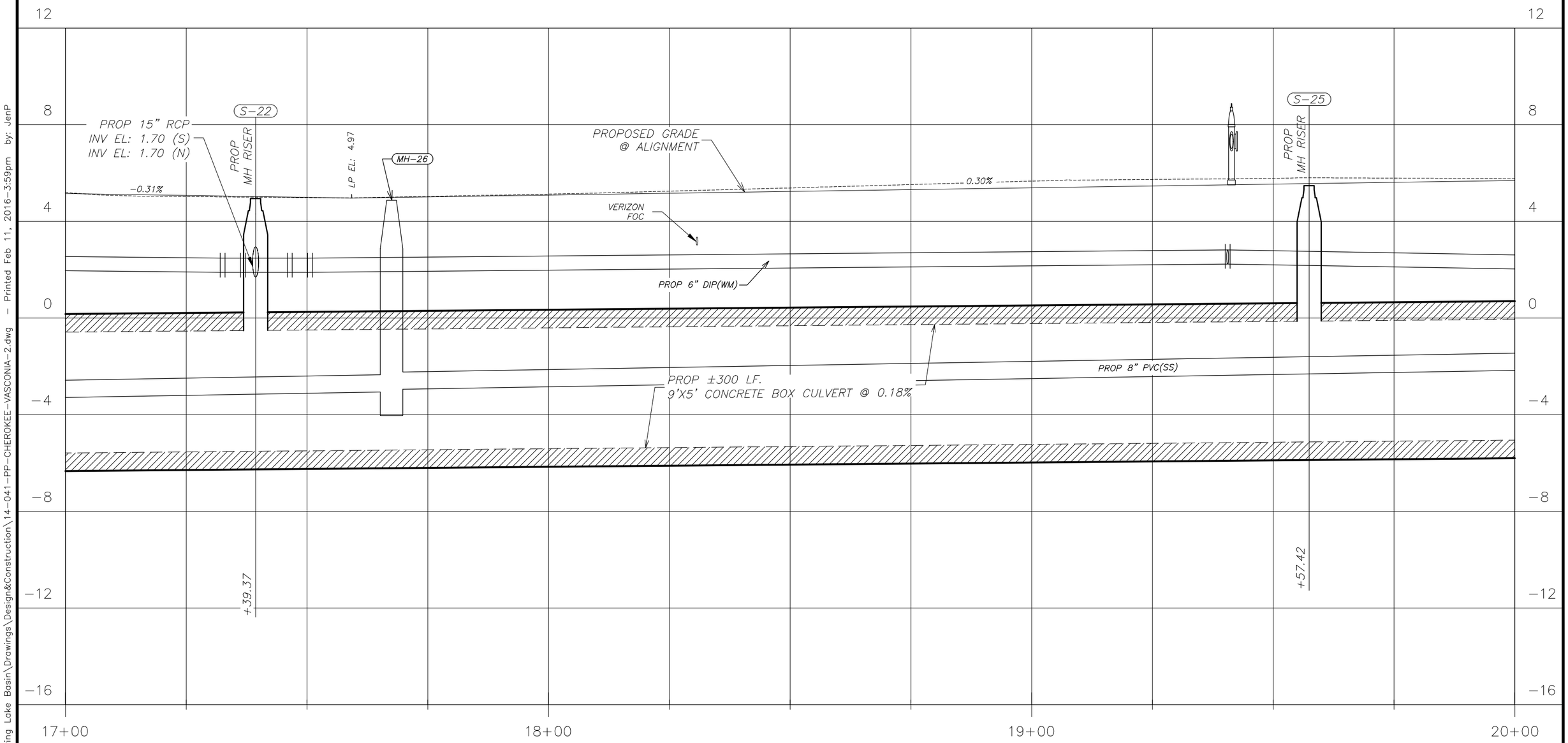
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PLAN

SHEET 25
105

SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PROFILE

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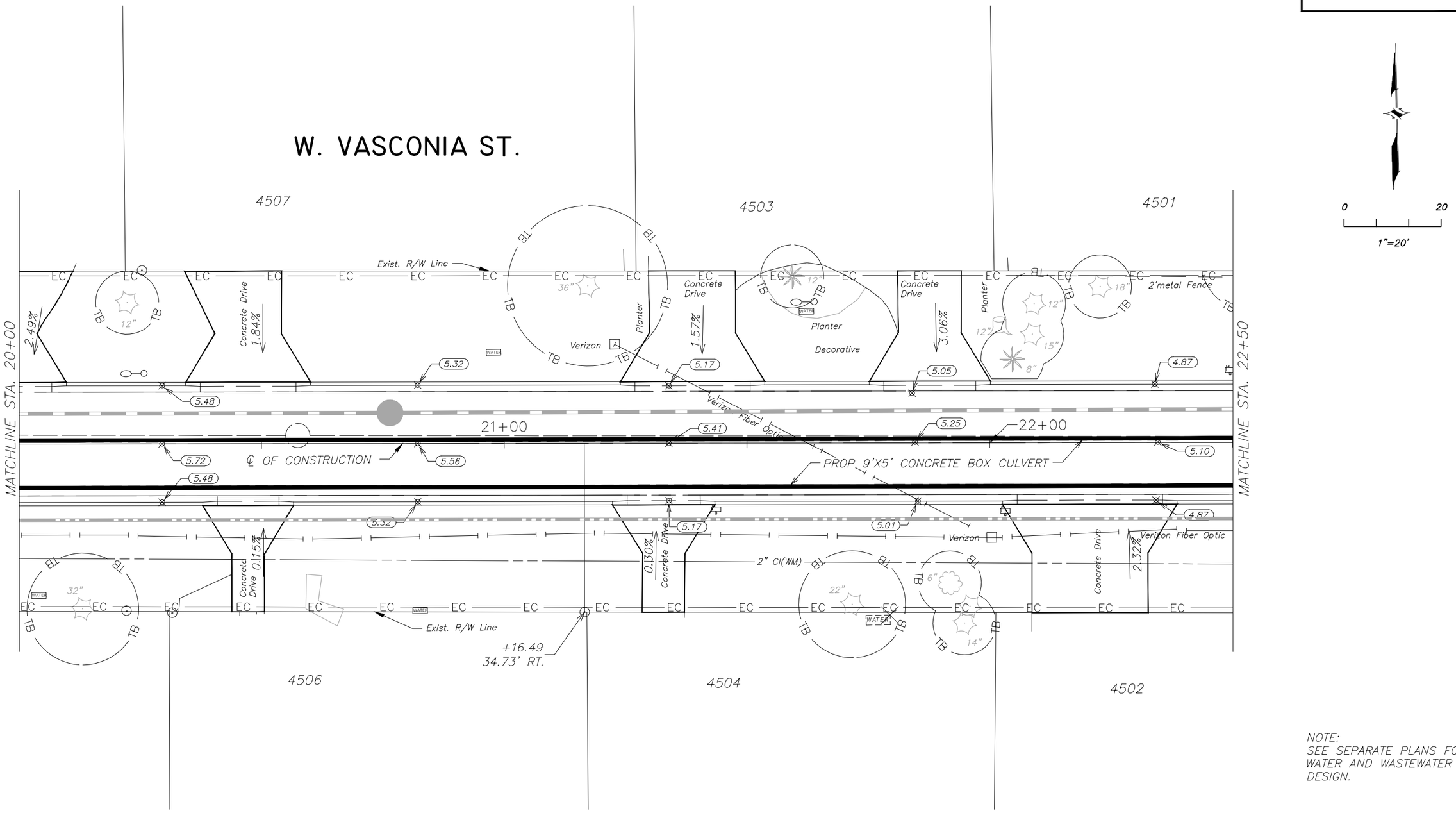
SW

W. VASCONIA ST.



0 20

1"=20'

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PLAN

SHEET 27 of 105

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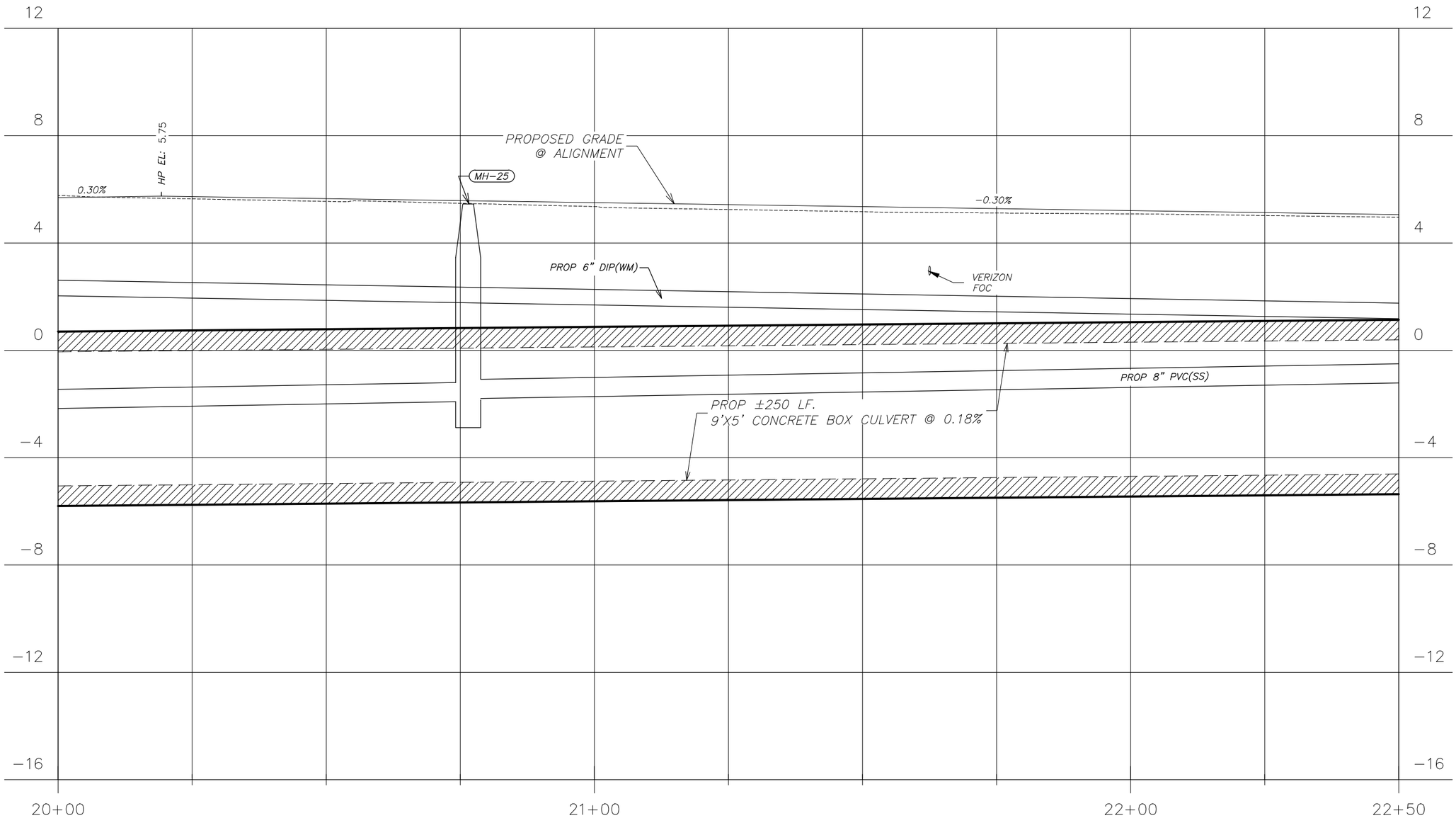
SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 28 OF 105

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SW

0 20
1"=20'

S-30
REMOVE EXISTING CURB INLET

PROP ±32 LF.
18" RCP(ST) @ 0.44%
CONNECT TO BOX CULVERT WITH COLLAR CONNECTION
INV EL: = -3.50 (N)

404+25
404+00
403+00
23+00
24+00
25+00
22+50
MATCHLINE STA. 22+50
MATCHLINE STA. 25+50

2-4" Verizon
1-4" Verizon Duct
Verizon Buried

PROP ±28 LF. 15" RCP @ 0.90%

CAUTION: VERIZON
PROTECT OR RELOCATE BY
UTILITY COMPANY

4" Metal(ST)
12" Palm

S-29
REMOVE EXISTING CURB INLET

STA. 23+29.69
STA. 403+54.81

12" Rcp
TO BE REMOVED

℄ OF CONSTRUCTION

S-26

℄ OF CONSTRUCTION

12" Rcp
TO BE REMOVED

PROP 9'X5' CONCRETE BOX CULVERT

Verizon

Stop Sign

HESPERIDES AVE.
SEE SHEET 88

18" Rcp(ST)
18" Rcp(ST)

PROP ±24 LF.
18" RCP(ST) @ 1.26%
CONNECT TO BOX CULVERT WITH COLLAR CONNECTION
INV EL: = -1.80 (S)

S-27
REMOVE EXISTING CURB INLET
CONNECT TO EXISTING 18" RCP
INV EL: = 1.69 (N)

CAUTION: VERIZON
PROTECT OR RELOCATE BY
UTILITY COMPANY

S-32
REMOVE EXISTING CURB INLET
CONNECT TO EXISTING 18" RCP
INV EL: = 1.82 (N)

PROP ±28 LF.
15" RCP(ST) @ 1.44%

4423
4419
4424
4422

Exist. R/W Line
Brick Walk
Gutter
Concrete Walk
18x18 Brick
Concrete Drive
1.30%
Verizon Fiber Optic
2" CI(WM)
Brick Drive
2.91%
Crape Myrtle Cluster
Clean Out
3.61%
+68.57
16.40' LT.
5.24%
1.28%

W. VASCONIA ST.

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

S-26
STA. 23+09.31, 3.96' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.80

S-27
STA. 23+15.88, 31.94' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.03
INV EL: 15" RCP (E) = -1.40
INV EL: 18" RCP (N) = -1.50
INV EL: 18" RCP (S) = 1.69
FLOWLINE EL: 4.53

S-29
STA. 23+43.54, 31.78' LT.
PROP COT TYPE 1 CURB INLET
RIM: 4.81
INV EL: 15" RCP (W) = 0.80
INV EL: 4" Metal (N) = 1.83
FLOWLINE EL: 4.31

S-30
STA. 23+15.60, 32.21' LT.
PROP COT TYPE 1 CURB INLET
RIM: 4.81
INV EL: 15" RCP (E) = 0.55
INV EL: 18" RCP (S) = -3.36
FLOWLINE EL: 4.31

S-32
STA. 23+43.61, 32.01' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.03
INV EL: 15" RCP (W) = -1.00
INV EL: 18" RCP (S) = 1.82
FLOWLINE EL: 4.53

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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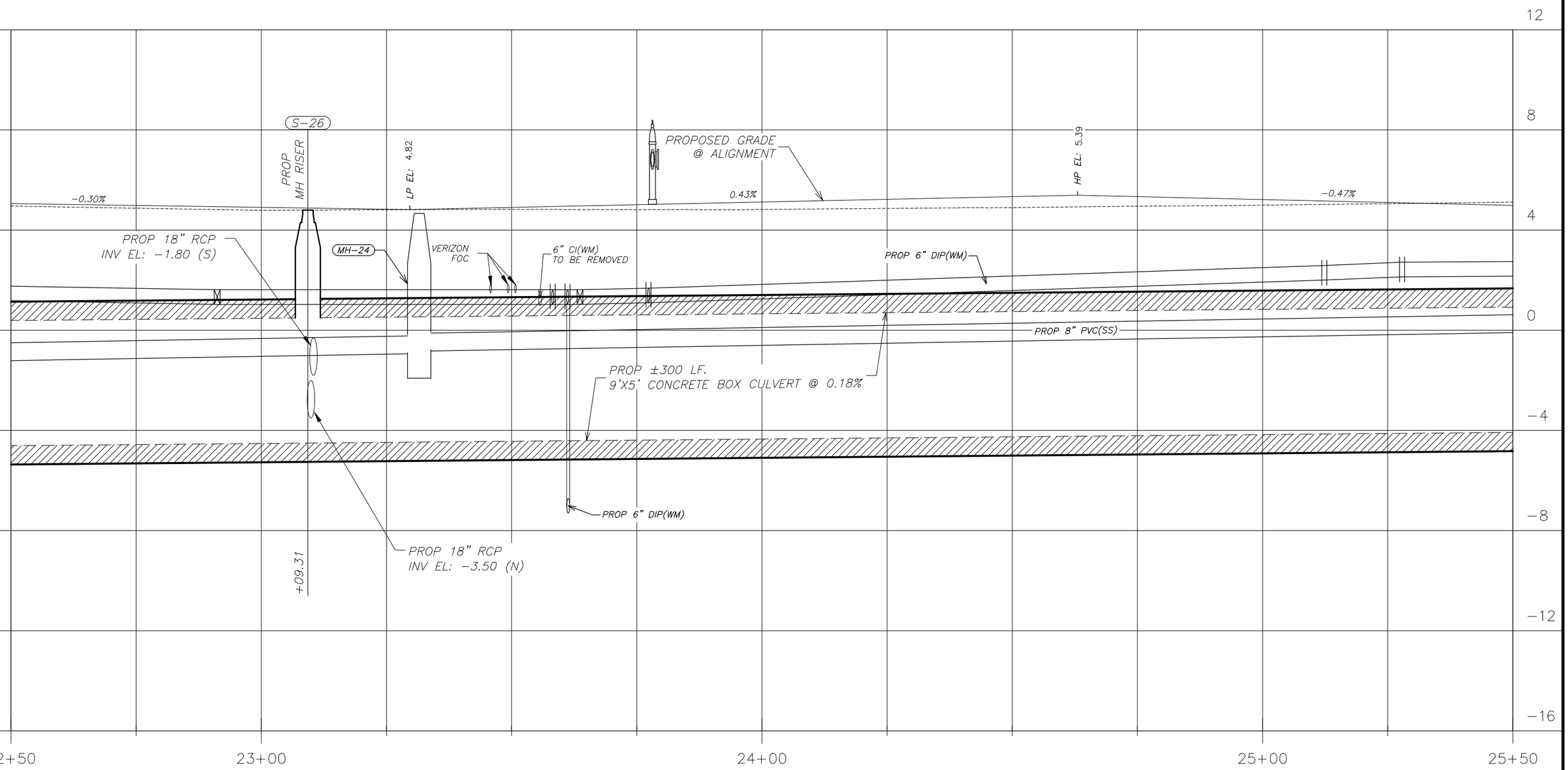
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PLAN

SHEET 29 OF 105

SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 30 OF 105

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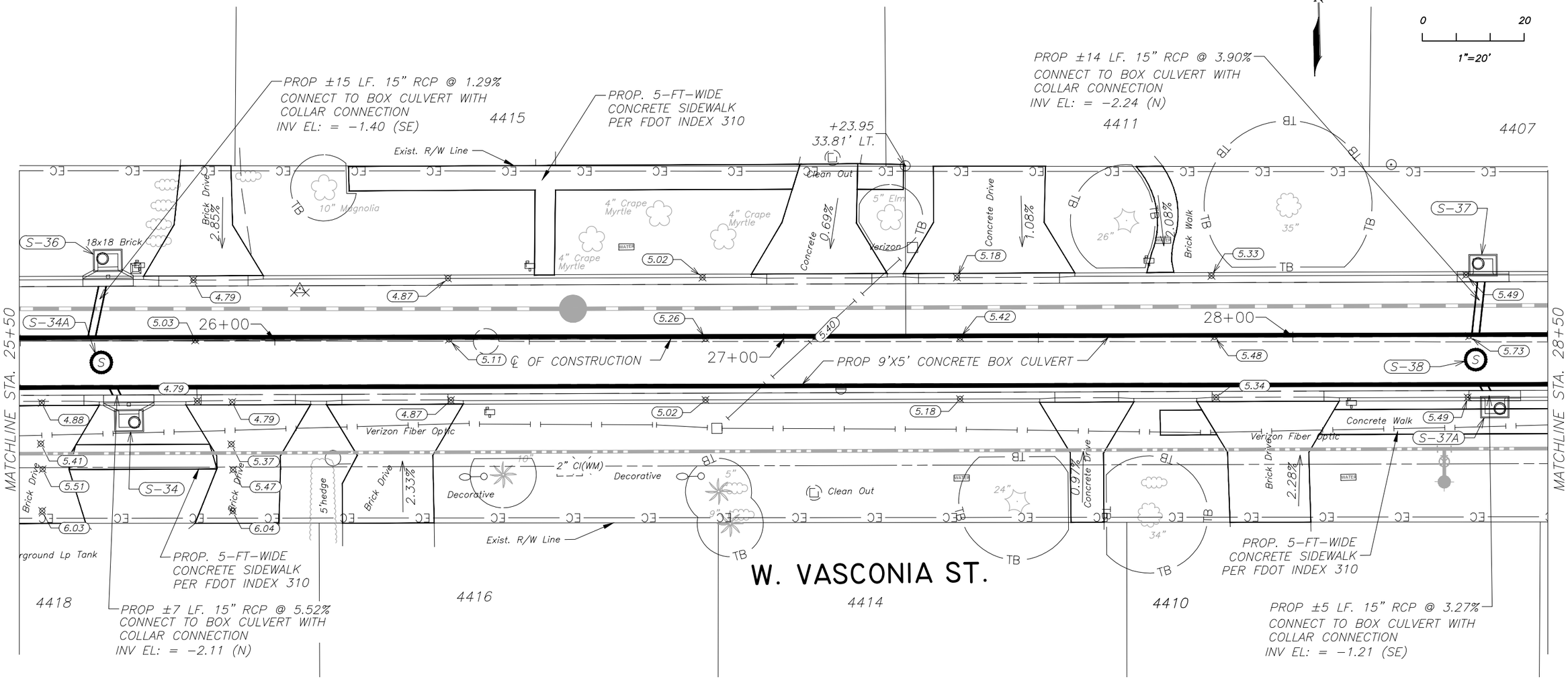
SW

0 20

1"=20'



S-34
STA. 25+71.30, 15.70' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.17
INV EL: 15" RCP (NW) = −1.00
FLOWLINE EL: 4.67

S-34A
STA. 25+65.90, 4.25' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.82

S-36
STA. 25+67.25, 15.76' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.18
INV EL: 15" RCP (S) = −1.91
FLOWLINE EL: 4.67

S-37
STA. 28+37.40, 13.92' LT.
PROP COT TYPE 1 CURB INLET
RIM: 5.58
INV EL: 15" RCP (S) = −1.70
FLOWLINE EL: 5.08

S-38
STA. 28+35.89, 4.60' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 5.23

S-37A
STA. 28+39.62, 13.93' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.61
INV EL: 15" RCP (NW) = −1.05
FLOWLINE EL: 5.08

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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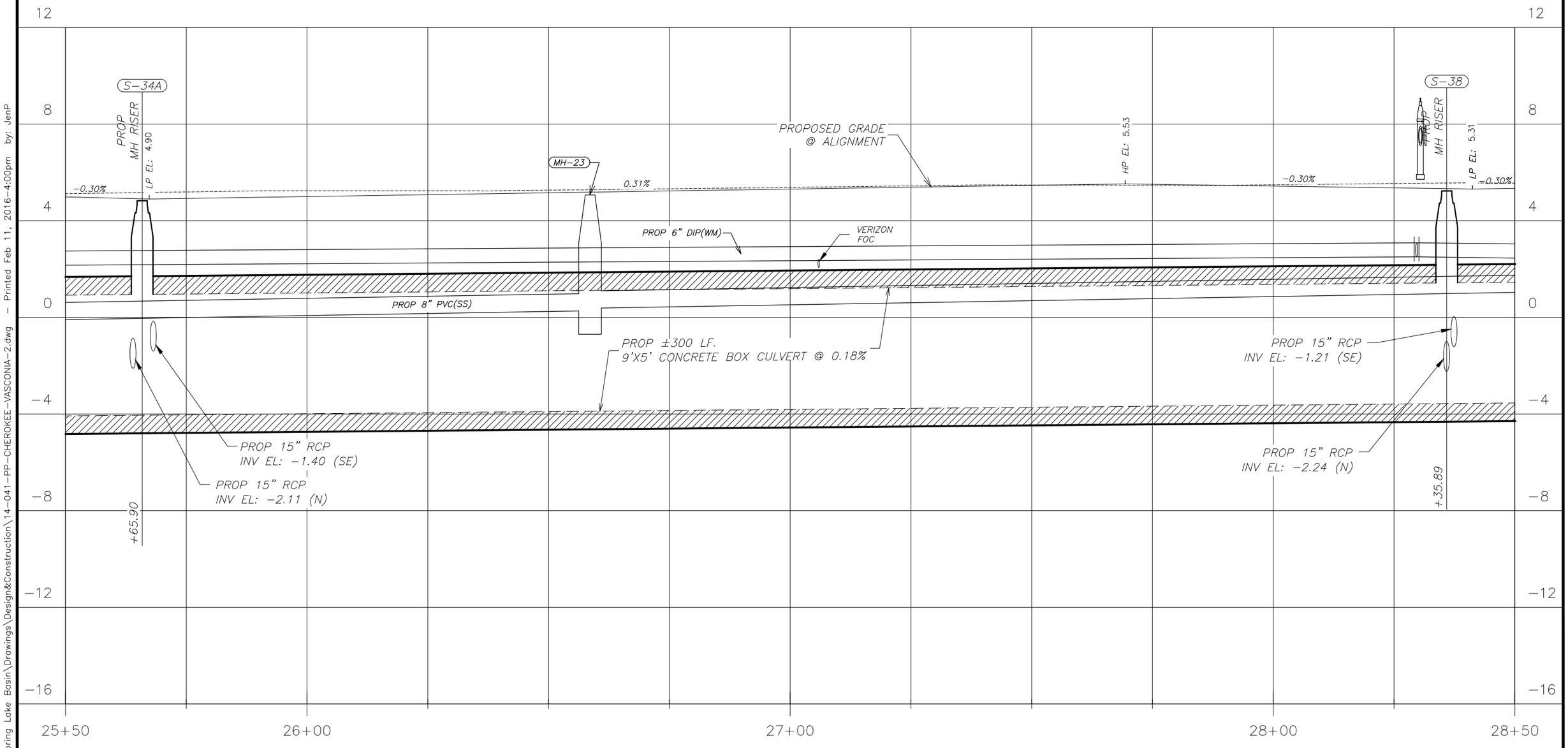
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PLAN

SHEET 31 of 105

SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 32 OF 105

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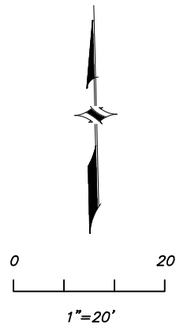

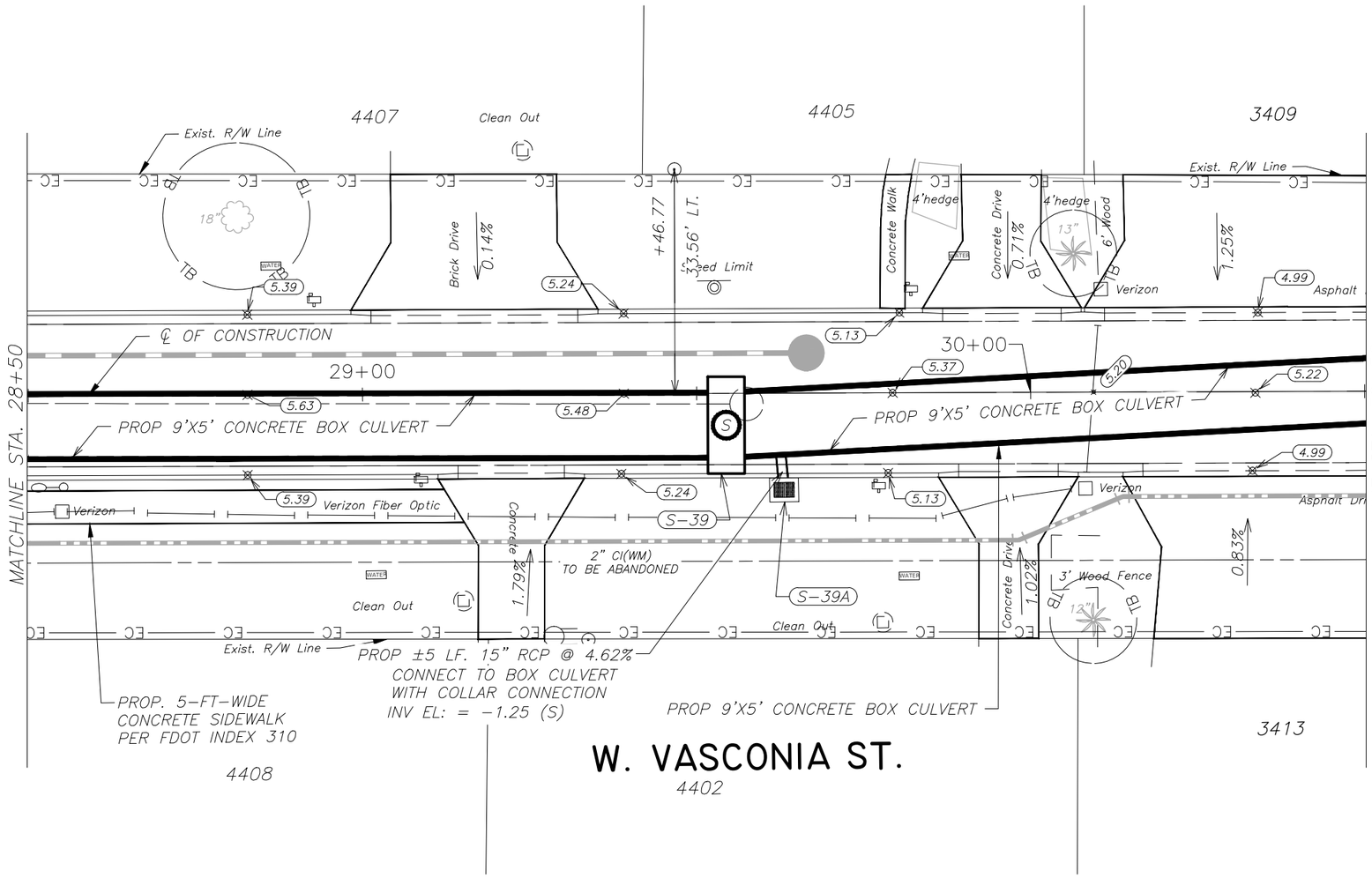

(S-39)
STA. 29+54.43, 4.76' RT.
PROP 13'X4' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 9'X5' CONCRETE BOX CULVERT (W) = -3.36
INV EL: 9'X5' CONCRETE BOX CULVERT (E) = -3.36
MH RISER RIM: 5.35

(S-39A)
STA. 29+63.06, 14.48' RT.
PROP 2'X4' COT TYPE "T" GRATE INLET
INV EL: 15" RCP (N) = -1.00
GRATE EL = 5.40

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PLAN

SHEET 33 OF 105

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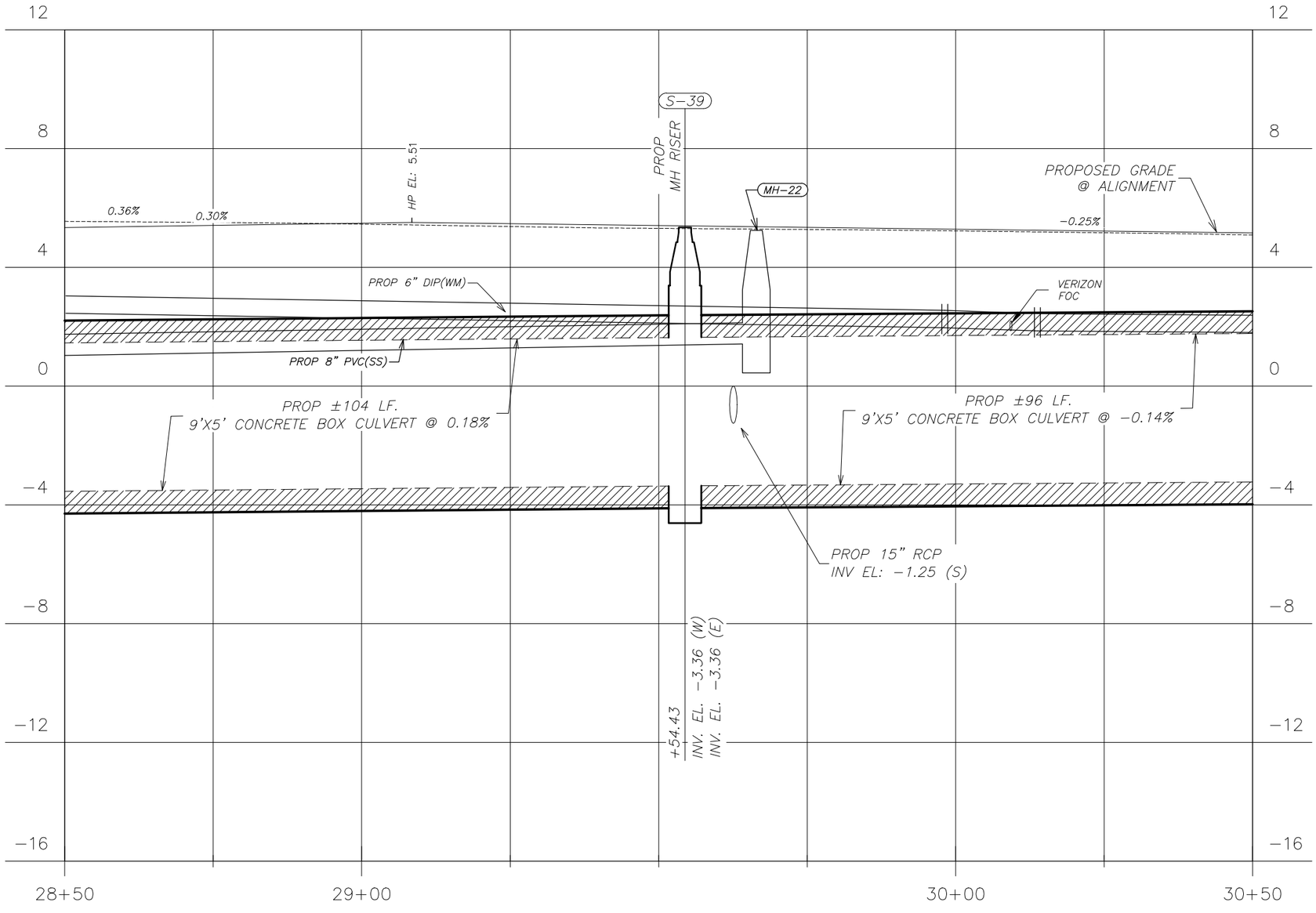
SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 34 OF 105

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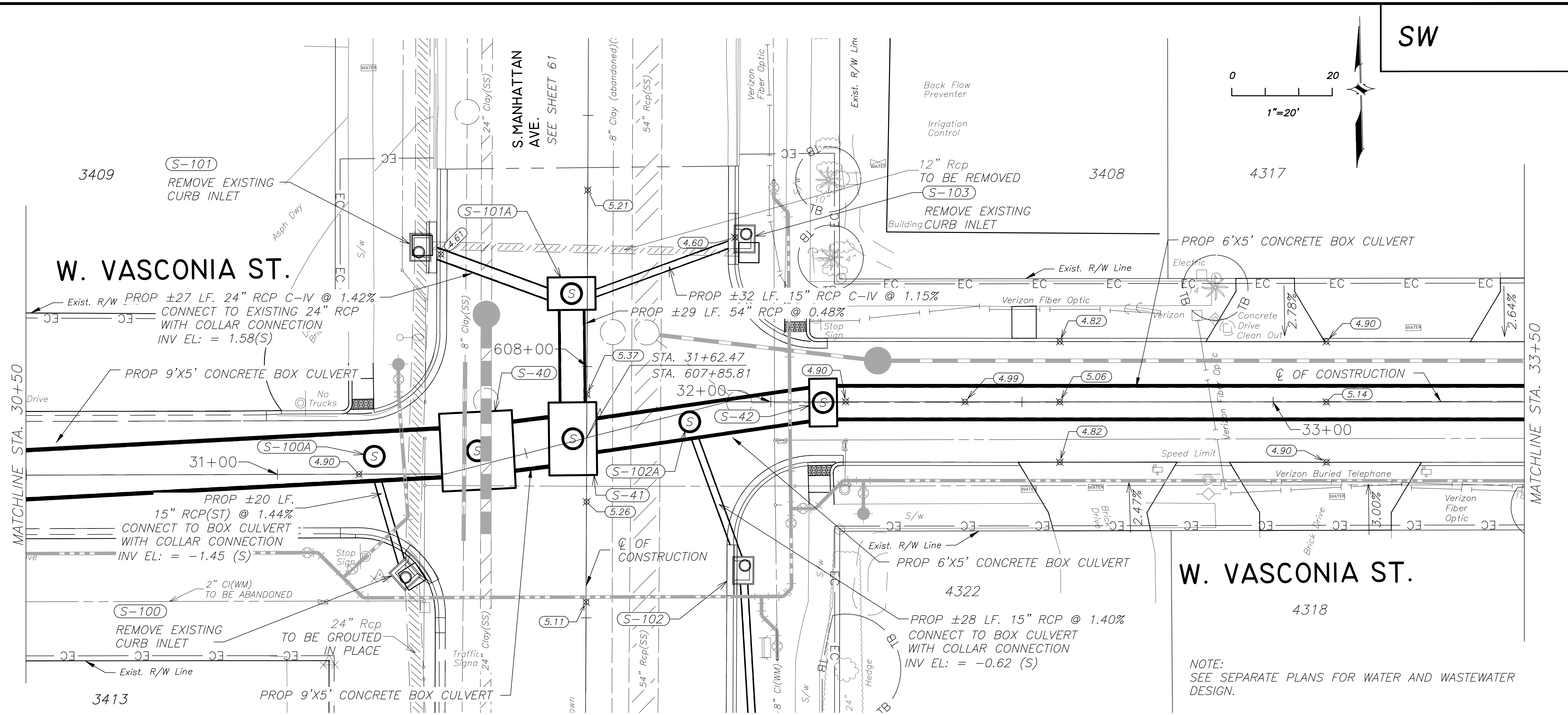

SW
0 20
1"=20'
S.MANHATTAN AVE.
SEE SHEET 61
3409
3408
4317
3413
4322
4318
W. VASCONIA ST.
W. VASCONIA ST.
MATCHLINE STA. 30+50
MATCHLINE STA. 33+50
S-101
REMOVE EXISTING CURB INLET
S-101A
S-103
REMOVE EXISTING CURB INLET
12" Rcp TO BE REMOVED
PROP 6'X5' CONCRETE BOX CULVERT
PROP ±27 LF. 24" RCP C-IV @ 1.42%
CONNECT TO EXISTING 24" RCP
WITH COLLAR CONNECTION
INV EL: = 1.58(S)
PROP ±32 LF. 15" RCP C-IV @ 1.15%
PROP ±29 LF. 54" RCP @ 0.48%
608+00
STA. 31+62.47
STA. 607+85.81
32+00
PROP 9'X5' CONCRETE BOX CULVERT
S-40
S-42
S-100A
31+00
℄ OF CONSTRUCTION
33+00
PROP 20 LF.
15" RCP(ST) @ 1.44%
CONNECT TO BOX CULVERT
WITH COLLAR CONNECTION
INV EL: = -1.45 (S)
S-102A
S-41
S-102
2" CI(WM) TO BE ABANDONED
S-100
REMOVE EXISTING CURB INLET
24" Rcp TO BE GROUTED IN PLACE
PROP 9'X5' CONCRETE BOX CULVERT
PROP 6'X5' CONCRETE BOX CULVERT
PROP ±28 LF. 15" RCP @ 1.40%
CONNECT TO BOX CULVERT
WITH COLLAR CONNECTION
INV EL: = -0.62 (S)
Exist. R/W Line
Verizon Fiber Optic
Verizon Buried Telephone
Speed Limit
Back Flow Preventer
Irrigation Control
Concrete Drive Clean Out
NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

S-42
STA. 32+10.42, 0.14' RT.
PROP 4'X8' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 6'X5' CONCRETE BOX CULVERT (E) = -2.46
INV EL: 6'X5' CONCRETE BOX CULVERT (W) = -2.48
MH RISER RIM: 4.88

S-41
STA. 31+59.75, 0.51' LT.
PROP 13'X8' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (N) = -3.07
INV EL: 6'X5' CONCRETE BOX CULVERT (E) = -2.60
INV EL: 9'X5' CONCRETE BOX CULVERT (W) = -3.07
MH RISER RIM: 5.41

S-40
STA. 31+40.72, 2.90' LT.
PROP 13'X14' FDOT J-BOX/CONFLICT STRUCTURE W/MH RISER PER INDEX 292
INV EL: 9'X5' CONCRETE BOX CULVERT (E) = -3.10
INV EL: 9'X5' CONCRETE BOX CULVERT (W) = -3.10
MH RISER RIM: 4.95

S-100
STA. 31+25.34, 19.95' RT.
PROP COT TYPE BR-1 CURB INLET
RIM: 4.97
INV EL: 15" RCP (N) = -1.17
INV EL: 24" RCP (S) = 1.45
FLOWLINE EL: 4.51

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PLAN

SHEET 35
CF 105

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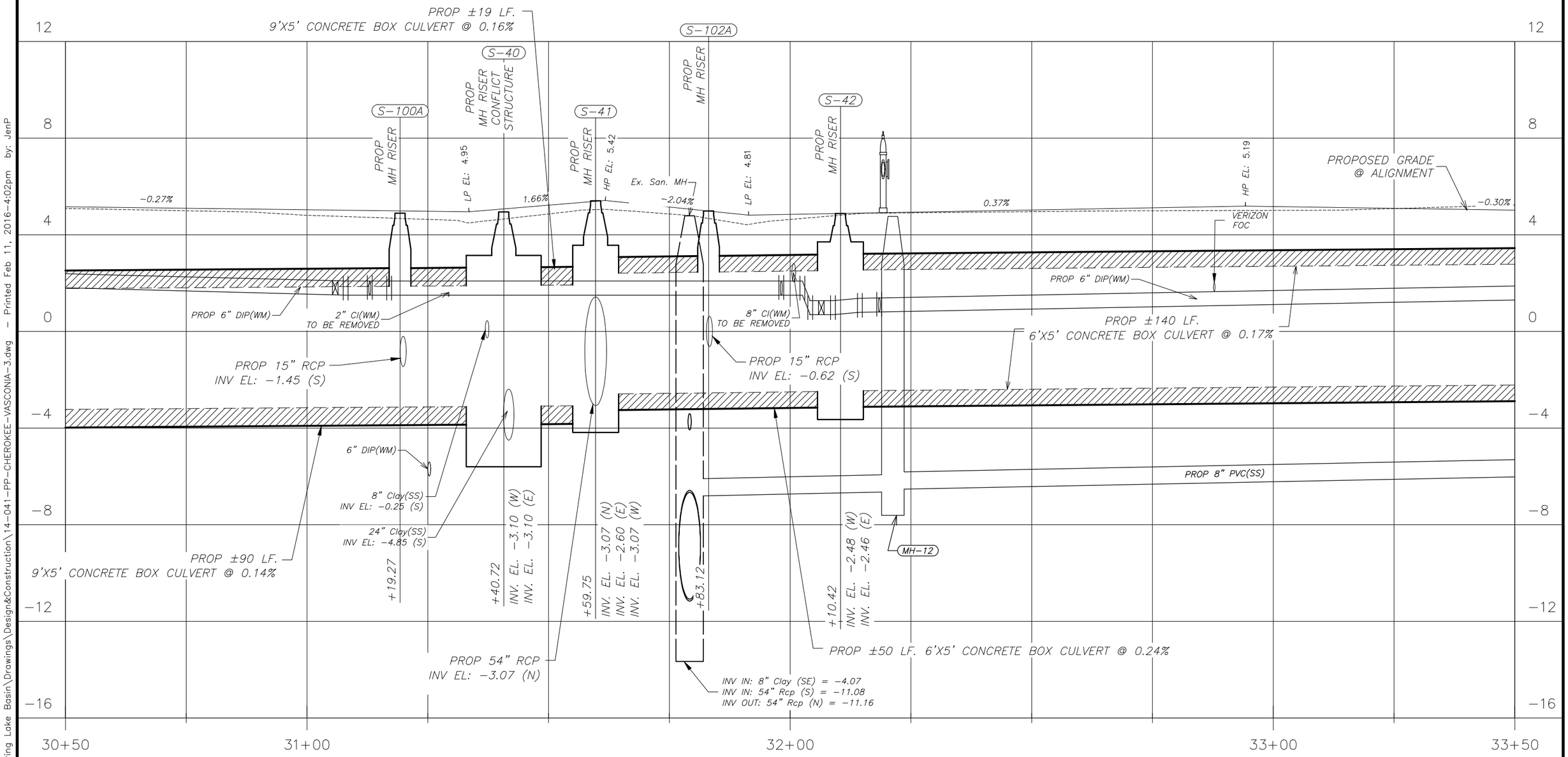
SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PROFILE

SHEET 36
of 105

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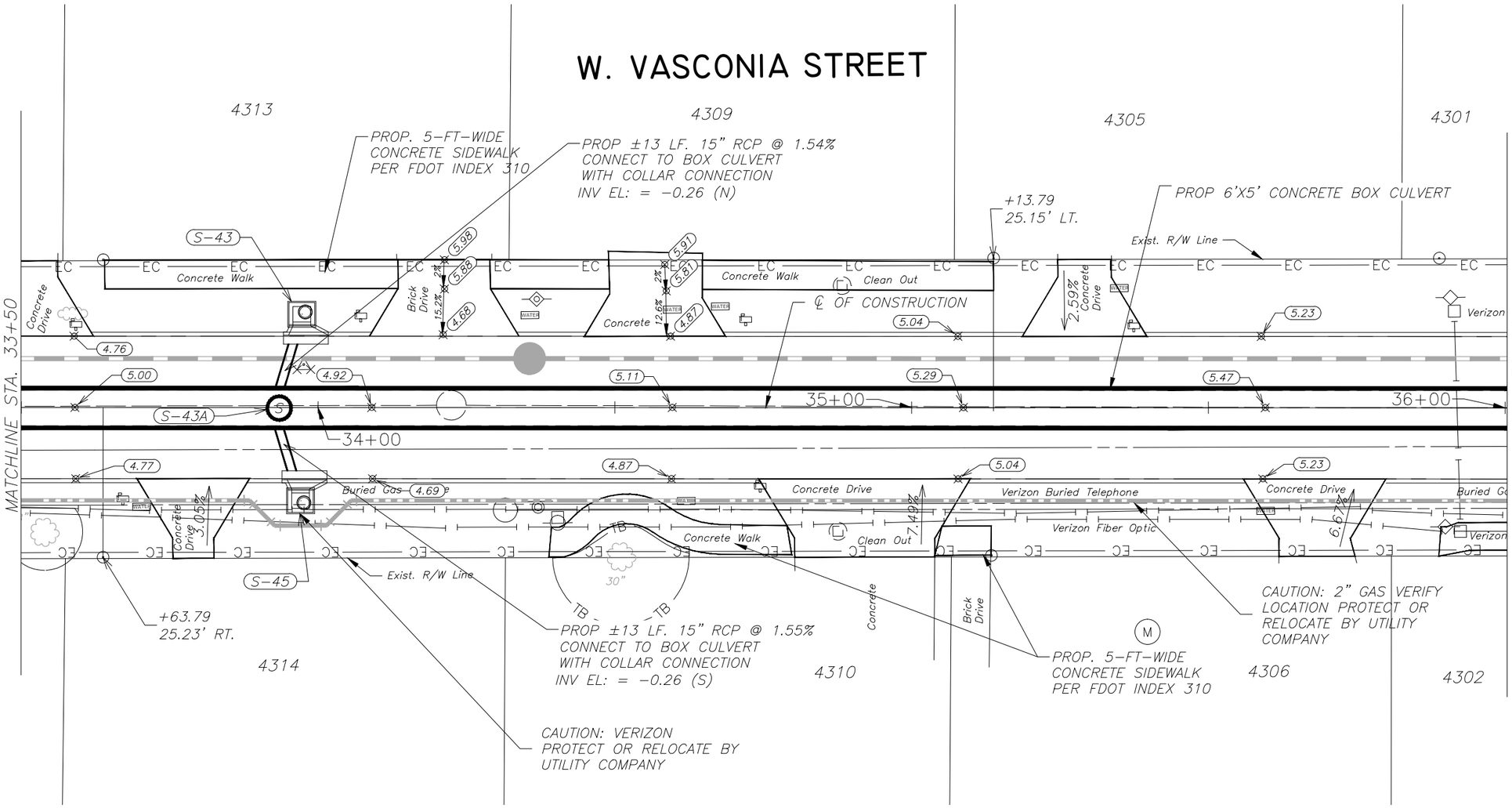
SW

W. VASCONIA STREET



0 20

1"=20'

S-43A
STA. 33+93.46, 0.11' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.89

S-43
STA. 33+97.26, 15.69' LT.
PROP COT TYPE BS-1 CURB INLET
RIM: 5.15
INV EL: 15" RCP (S) = -0.06
FLOWLINE EL: 4.65

S-45
STA. 33+97.06, 15.70' RT.
PROP COT TYPE BS-1 CURB INLET
RIM: 5.15
INV EL: 15" RCP (N) = -0.06
FLOWLINE EL: 4.64

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER
PLAN

SHEET 37 OF 105

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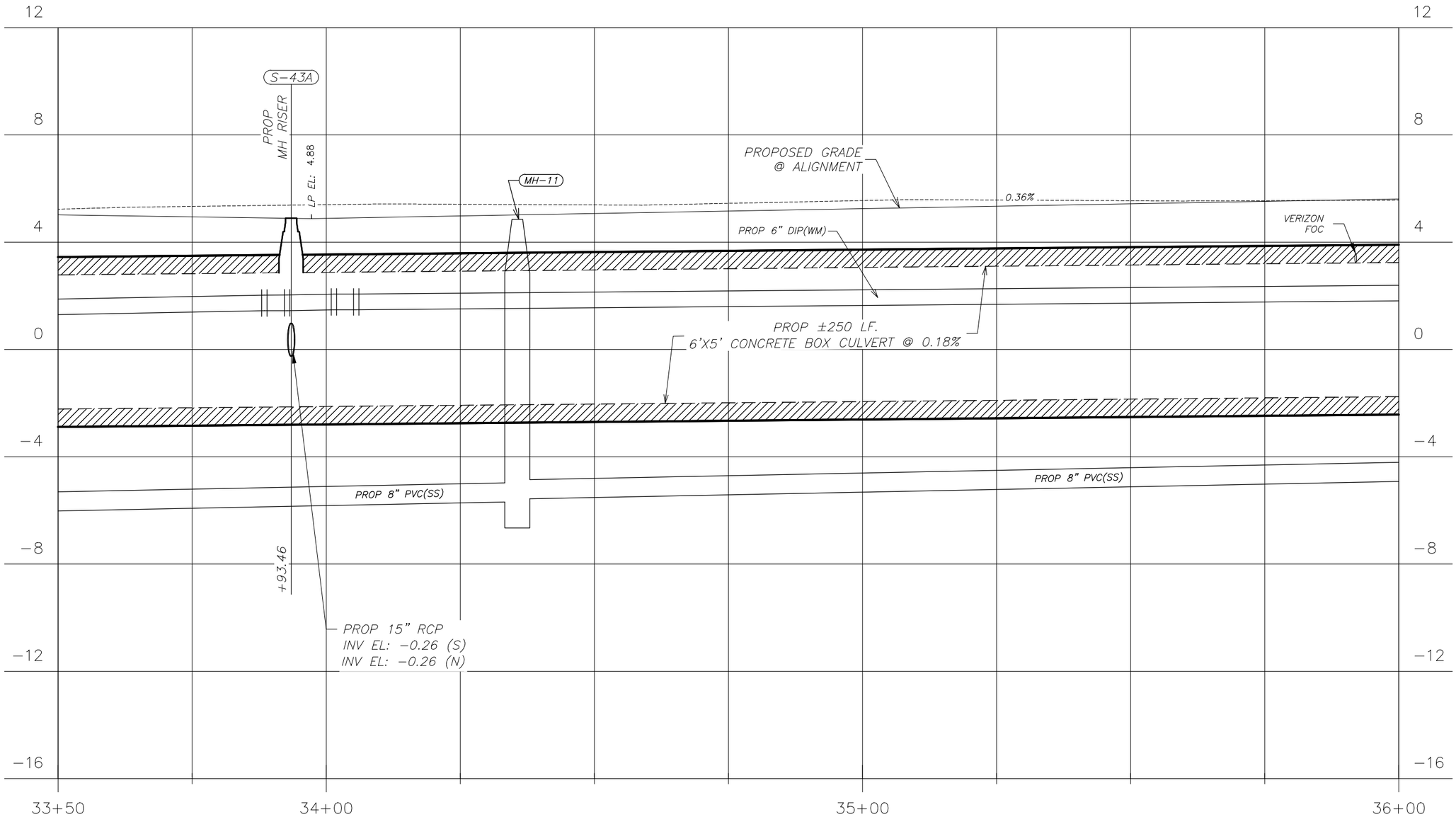
SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 38 OF 105

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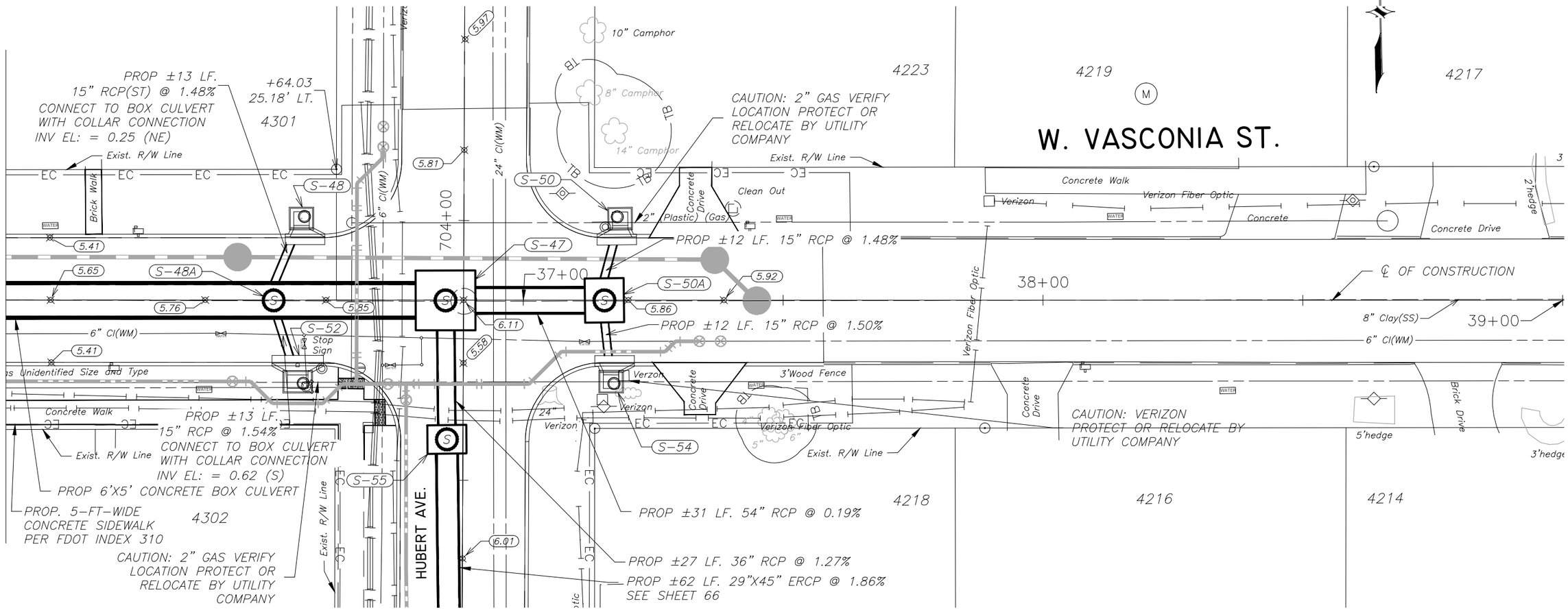
SW

0 20

1"=20'



S-47
STA. 36+85.03, 0.05' RT.
PROP 10'X10' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (E) = -1.60
INV EL: 48"X76" HOLE W/BULKHEAD FOR FUTURE CONNECTION (N) = -0.50
INV EL: 36" RCP (S) = -0.50
INV EL: 6'X5' CONCRETE BOX CULVERT (W) = -1.60
MH RISER RIM: 6.10

S-50A
STA. 37+15.60, 0.05' RT.
PROP 7'X6' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" HOLE W/BULKHEAD FOR FUTURE CONNECTION (E) = -1.53
INV EL: 15" RCP (S) = -0.06
INV EL: 15" RCP (N) = -0.15
INV EL: 54" RCP (W) = -1.54
MH RISER RIM: 5.86

S-48
STA. 36+57.30, 15.69' LT.
PROP COT TYPE BS-1 CURB INLET
RIM: 6.09
INV EL: 15" RCP (SW) = 0.45
FLOWLINE EL: 5.59

S-50
STA. 37+18.62, 15.66' LT.
PROP COT TYPE BS-1 CURB INLET
RIM: 6.11
INV EL: 15" RCP (S) = 0.03
FLOWLINE EL: 5.61

S-54
STA. 37+16.89, 15.70' RT.
PROP COT TYPE BS-1 CURB INLET
RIM: 6.11
INV EL: 15" RCP (N) = 0.11
FLOWLINE EL: 5.61

S-48A
STA. 36+51.95, 0.06' RT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 5.80

S-52
STA. 36+56.57, 15.71' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 6.08
INV EL: 15" RCP (N) = 0.82
FLOWLINE EL: 5.58

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

DES: ALC
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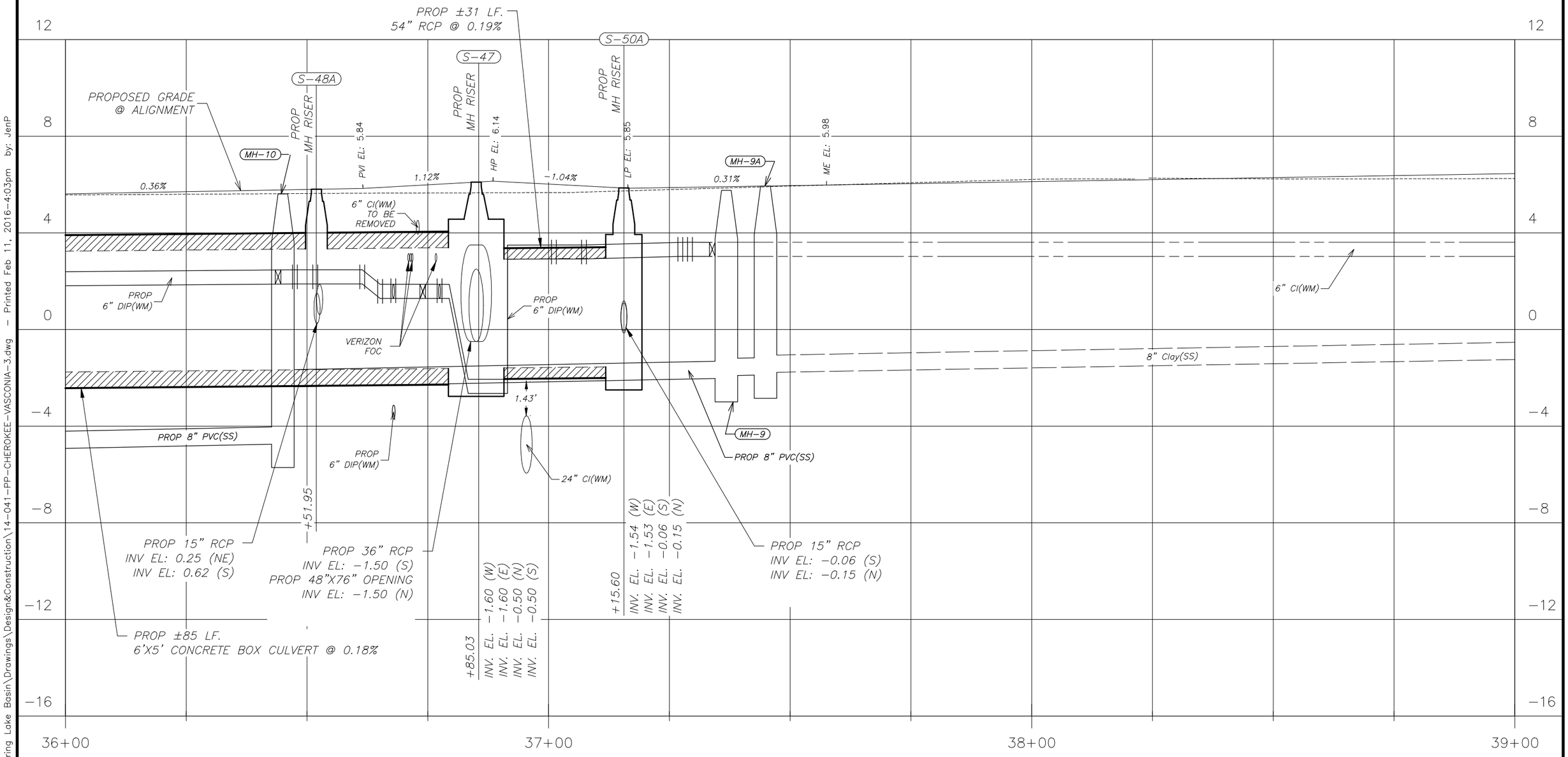
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PLAN

SHEET 39
105

SW



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - STORMWATER PROFILE

SHEET 40 OF 105

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SW

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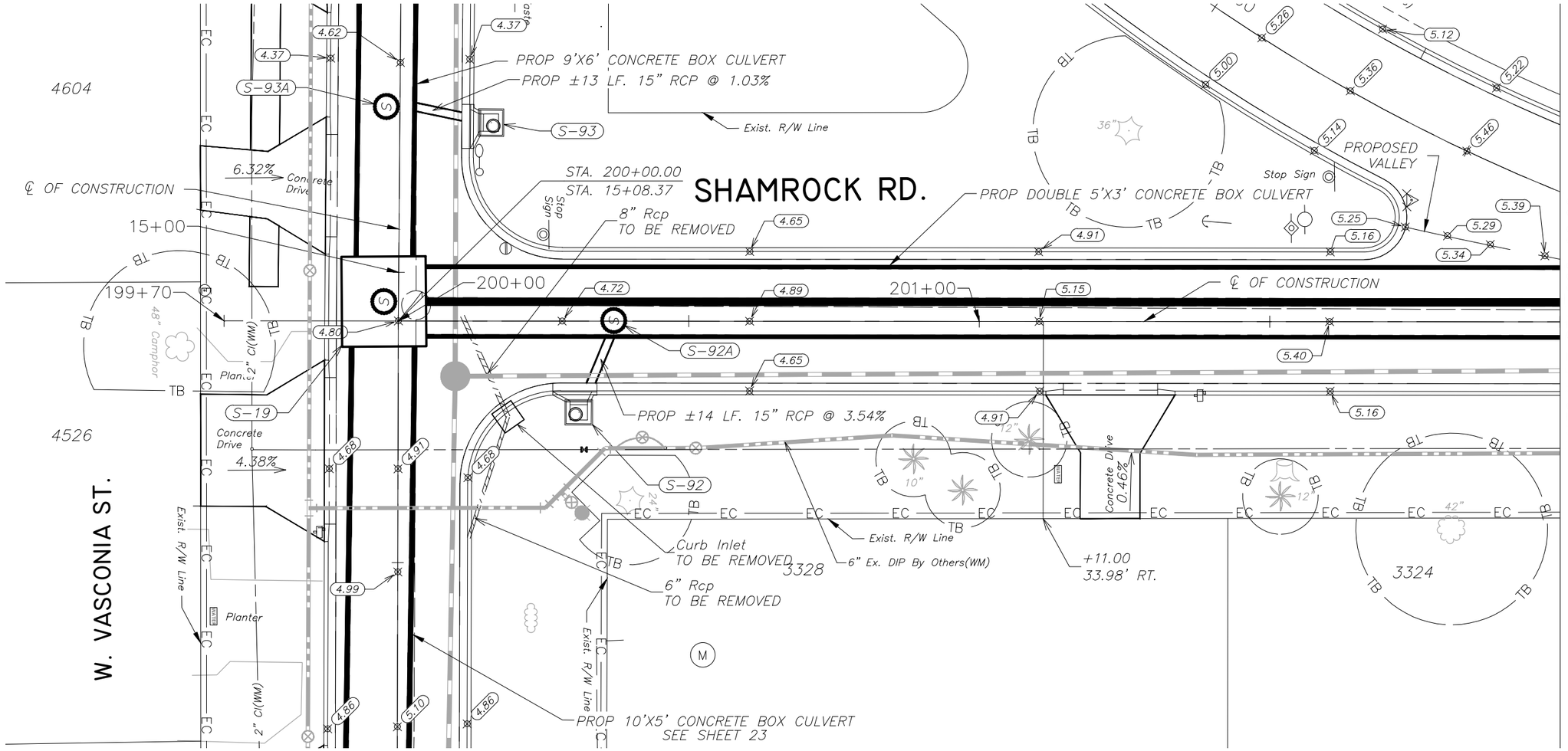
1"=20'



S-19
STA. 15+05.05, 2.52' RT.
PROP 13'X14' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 10'X5' CONCRETE BOX CULVERT (E) = -5.79
INV EL: 9'X6' CONCRETE BOX CULVERT (W) = -5.84
INV EL: 5'X3' CONCRETE BOX CULVERT (N) = -0.60
INV EL: 5'X3' CONCRETE BOX CULVERT (N) = -0.60
MH RISER RIM: 4.74

S-92
STA. 200+31.06, 15.71' RT.
PROP COT TYPE BS-1 CURB INLET
RIM: 5.01
INV EL: 15" RCP (NW) = 0.50
FLOWLINE EL: 4.50

S-92A
STA. 200+37.08, 0.10' LT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 4.77

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - STORMWATER
PLAN

SHEET 41 of 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK.dwg - Printed Feb 11, 2016-3:53pm by: JenP

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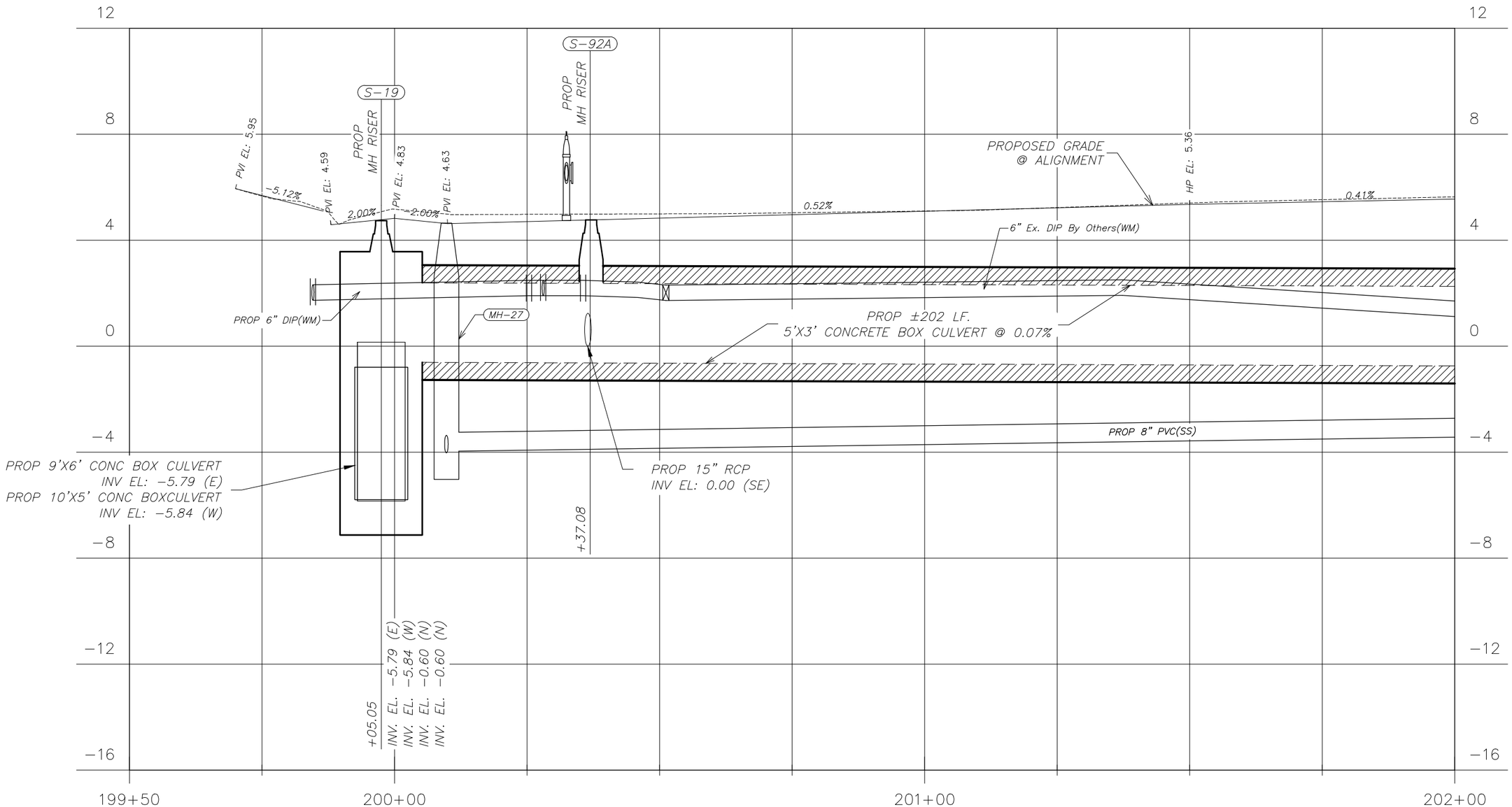

SHAMROCK RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - STORMWATER
PROFILE

SHEET 42 OF 105

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SW

0 20

1"=20'

MATCHLINE STA: 202+00.00

MATCHLINE STA: 204+50.00

Exist. R/W Line

CAUTION: 2" GAS PROTECT OR RELOCATE BY UTILITY COMPANY

PROPOSED VALLEY

18' Elm

299+75

3'hedge

2'hedge

0.03% Concrete Drive

0.64% Concrete Drive

1.45% Concrete Drive

Clean Out

PROP DOUBLE 5'X4' CONCRETE BOX CULVERT

2" (Plastic) (Gas)

914+00

914+54

STA. 202+83.81

STA. 300+00.00

202+00

300+00

203+00

204+00

PROP ±18 LF. 15" RCP @ 1.00%

PROP ±6 LF. 15" RCP @ 1.00%

48" RCP(ST)

Street Sign

2" CI (Abandoned)(WM)

SUPPORT POWER POLE

Brick Paver Drive

Magnolia

Shared Pole

RELOCATE AND RESET POWER POLE

+10.17
33.38' RT.

SEVILLA ST.

SEE SHEET 47

SHAMROCK RD.

3323 3321 3315 3324 3322 3318

S-96

STA. 202+91.02, 3.34' LT.
PROP 13'X14' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 5'X3' CONCRETE BOX CULVERT (S) = -0.80
INV EL: 48" RCP (E) = -0.75
INV EL: 5'X3' CONCRETE BOX CULVERT (S) = -0.80
INV EL: 5'X4' CONCRETE BOX CULVERT (N) = -0.80
INV EL: 5'X4' CONCRETE BOX CULVERT (N) = -0.80
MH RISER RIM: 5.81

S-96A

STA. 300+32.39, 13.89' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.77
INV EL: 15" RCP (N) = 2.02
FLOWLINE EL: 5.27

S-96B

STA. 300+33.61, 13.73' LT.
PROP COT TYPE 1 CURB INLET
RIM: 5.77
INV EL: 15" RCP (SW) = 2.24
FLOWLINE EL: 5.26

S-96C

STA. 300+27.45, 7.36' LT.
PROP FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 48" RCP (E) = -0.73
INV EL: 15" RCP (NE) = 2.17
INV EL: 15" RCP (S) = 1.83
INV EL: 48" RCP (W) = -0.73
TOP SLAB EL: 3.685
MH RISER RIM: 5.35

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

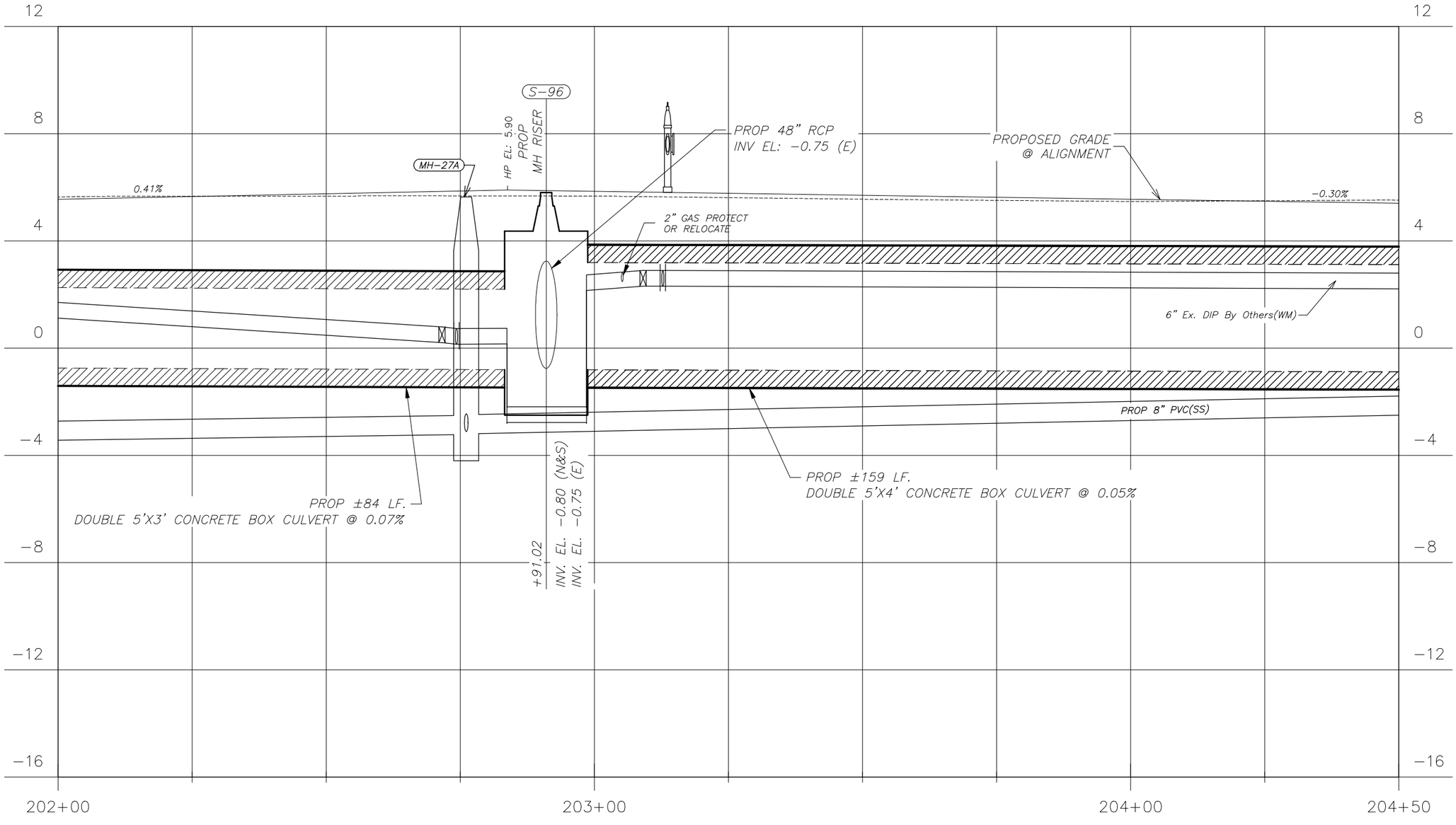
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - STORMWATER
PLAN

SHEET 43 of 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK.dwg - Printed Feb 11, 2016-3:53pm by: JenP

SW



SHAMROCK RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - STORMWATER
PROFILE

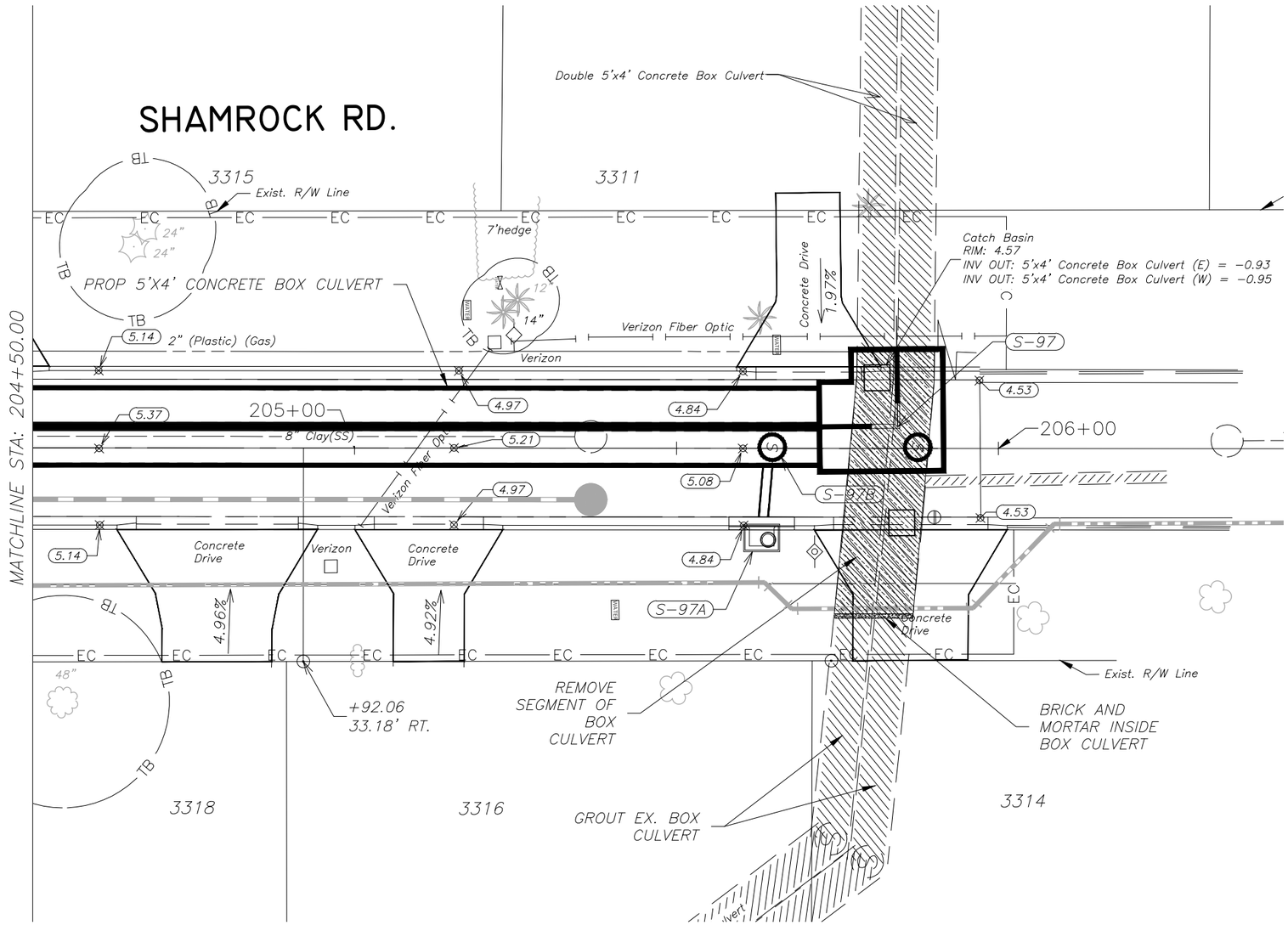
SHEET 44 OF 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK.dwg - Printed Feb 11, 2016-3:53pm by: JenP

SW

0 20

1"=20'



(S-97A)
STA. 205+63.24, 13.92' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.39
INV EL: 15" RCP (W) = 0.23
THROAT EL: 4.77

(S-97)
STA. 205+84.33, 3.34' LT.
PROP CUSTOM J-BOX W/MH RISER
INV. EL. -0.95 (W)
INV. EL. -0.94 (S)
MH RISER RIM: 5.00
SEE STRUCTURE DETAILS SHEET FOR SIZING AND MORE INFORMATION

(S-97B)
STA. 205+64.87, 0.18' LT.
PROP MANHOLE RISER ON BOX CULVERT
RIM: 5.06

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - STORMWATER
PLAN

SHEET 45 of 105

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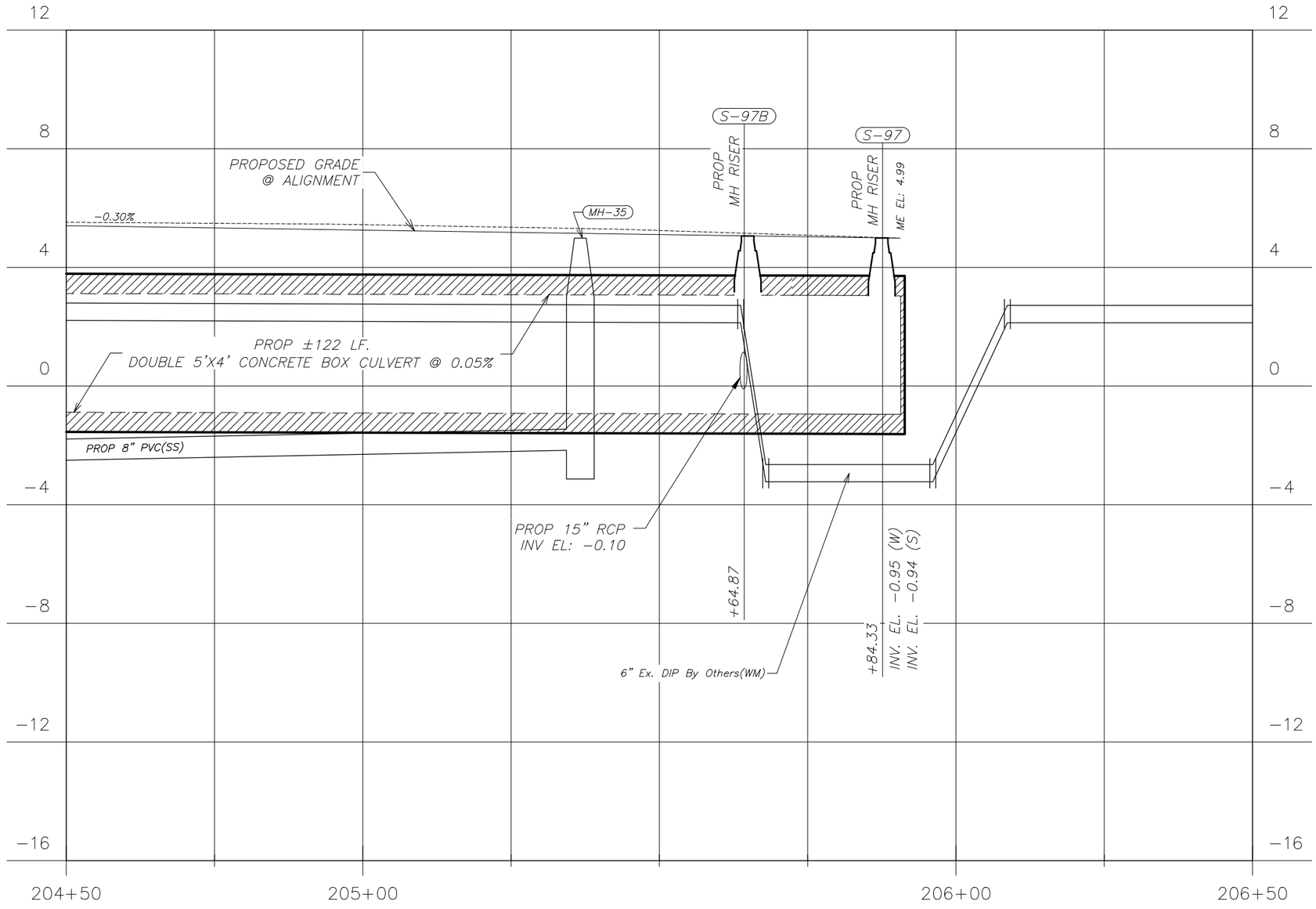
SW



SHAMROCK RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - STORMWATER
PROFILE

SHEET 46 OF 105

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SW

0 20

1"=20'

3322

4517

PROP 5'X4' CONCRETE BOX CULVERT
SEE SHEET 43

2" CI (Abandoned)(WM)

STA. 300+00.00
STA. 202+83.81

48" RCP(ST)

15" RCP(ST)

PROP. 5-FT-WIDE
CONCRETE SIDEWALK
PER FDOT INDEX 310

5'x4' Concrete Box Culvert
TO BE GROUTED
IN PLACE

5'x4' Concrete Box Culvert
TO BE GROUTED
IN PLACE

BRICK & MORTAR INSIDE EX. BOX CULVERT

Storm MH
TO BE REMOVED

Catch Basin
TO BE REMOVED

6' PVC Fence

Exist. R/W Line

Crape Myrtle

Morning Buried Utility

42" Rcp(ST)
CONNECT TO PROPOSED
FDOT TYPE 9 CURB INLET
INV. EL: =>-0.60 (E)

CO
7.99

D/W

Brick D/W

Street Sign

2" (Plastic) (Gas)

2" CI(WM)

Shared Pole

S/W

203+00

S-96

S-96B

S-98

5.58
5.82
5.52
5.40
5.46
5.25

6"

Power Pole
(No Power)

42" Rcp(ST)

℄ OF CONSTRUCTION

301+00

302+00

5.76
5.70
5.49
5.64
5.52
5.28
5.40
5.46

PROP ±22 LF. 15" RCP @ 3.38%

Verizon Fiber Optic

300+00

914+54
299+75

SHAMROCK RD.

SEVILLA ST.

0.90%

S-96A

S-99

Service
Cabinet

REMOVE EXISTING
CATCH BASIN

Stump

Verizon Fiber Optic

Stump

Hedge

5.55
5.80
5.68

+33.69
27.78' RT.

Storm MH
TO BE REMOVED

REMOVE ±45 LF. OF
DOUBLE 5'x4' Concrete Box Culverts(ST)
PLUG BOTH ENDS OF CUT PIPE
WITH BRICK AND MORTAR.

Exist. R/W Line

℄ OF CONSTRUCTION

3324

BRICK & MORTAR INSIDE EX. BOX CULVERT

4514

914+00

5.63

PROP DOUBLE 5'X3' CONCRETE BOX CULVERT
SEE SHEET 43

5'x4' Concrete Box Culvert
TO BE GROUTED
IN PLACE

5'x4' Concrete Box Culvert
TO BE GROUTED
IN PLACE

S-96
STA. 202+91.02, 3.34' LT.
PROP 13'X14' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 5'X3' CONCRETE BOX CULVERT (S) = -0.80
INV EL: 48" RCP (E) = -0.75
INV EL: 5'X3' CONCRETE BOX CULVERT (S) = -0.80
INV EL: 5'X4' CONCRETE BOX CULVERT (N) = -0.80
INV EL: 5'X4' CONCRETE BOX CULVERT (N) = -0.80
TOP SLAB EL: 4.37
MH RISER RIM: 5.81

S-96A
STA. 300+32.39, 13.89' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.70
INV EL: 15" RCP (N) = 2.02
THROAT EL: 5.24

S-96B
STA. 300+33.61, 13.73' LT.
PROP COT TYPE 1 CURB INLET
RIM: 5.77
INV EL: 15" RCP (SW) = 2.24
THROAT EL: 5.24

S-96C
STA. 300+27.45, 7.36' LT.
PROP 6'X4' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 48" RCP (E) = -0.73
INV EL: 15" RCP (NE) = 2.17
INV EL: 15" RCP (S) = 1.83
INV EL: 48" RCP (W) = -0.73
TOP SLAB EL: 4.19
MH RISER RIM: 5.35

S-98
STA. 301+59.90, 8.00' LT.
PROP TYPE "T" RISER ON TOP OF FDOT
RIM: 5.82
INV EL: 15" RCP (S) = 0.74
INV EL: 48" RCP (W) = -0.64
INV EL: 42" RCP (E) = -0.60
GRATE EL: 5.32

S-99
STA. 301+56.40, 13.92' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.82
INV EL: 15" RCP (N) = 1.48
THROAT EL: 5.32

NOTE:
SEE SEPARATE PLANS FOR WATER AND SEWER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SEVILLA ST. - STORMWATER
PLAN

SHEET 47 of 105

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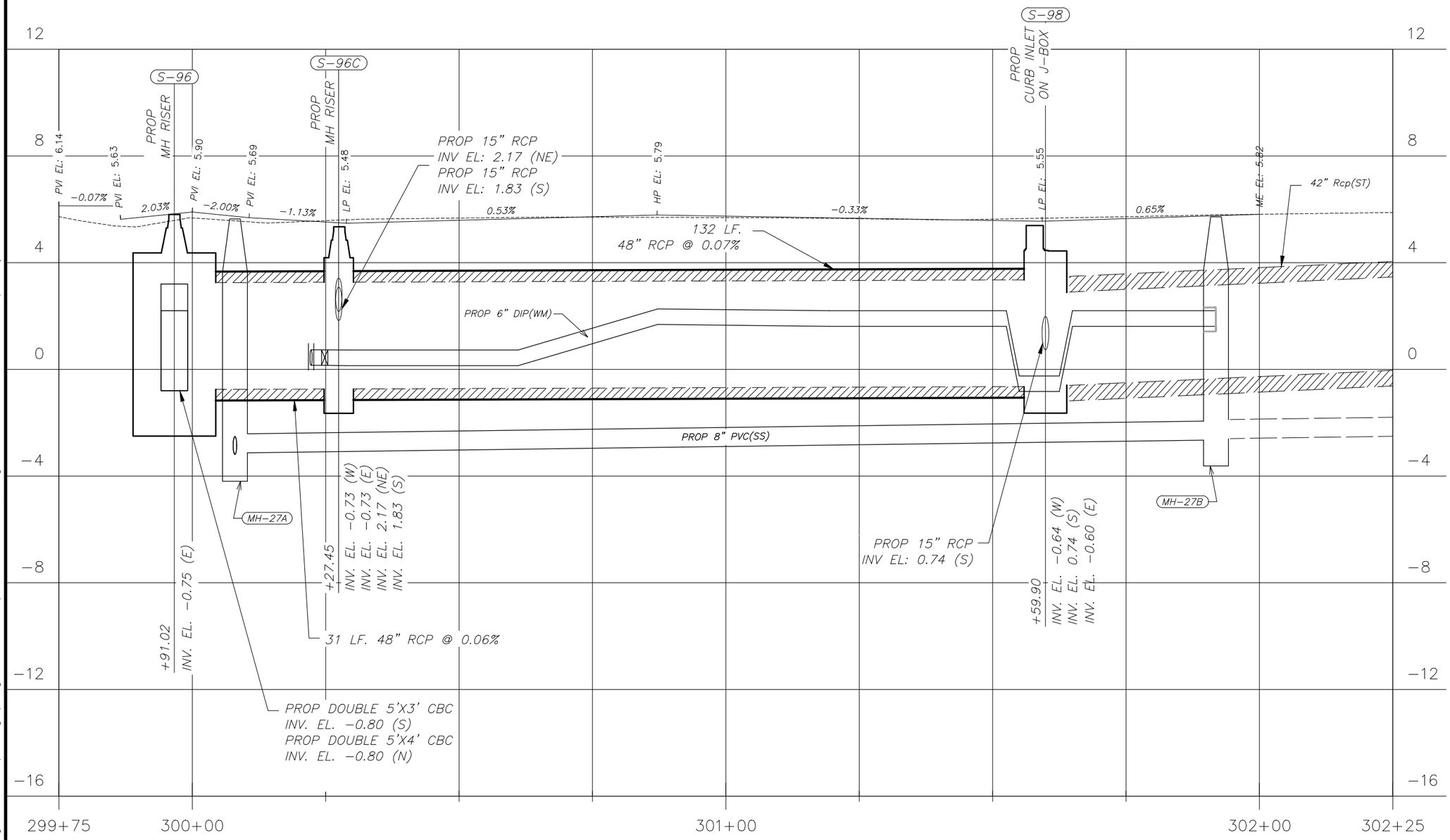
SW



SEVILLA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

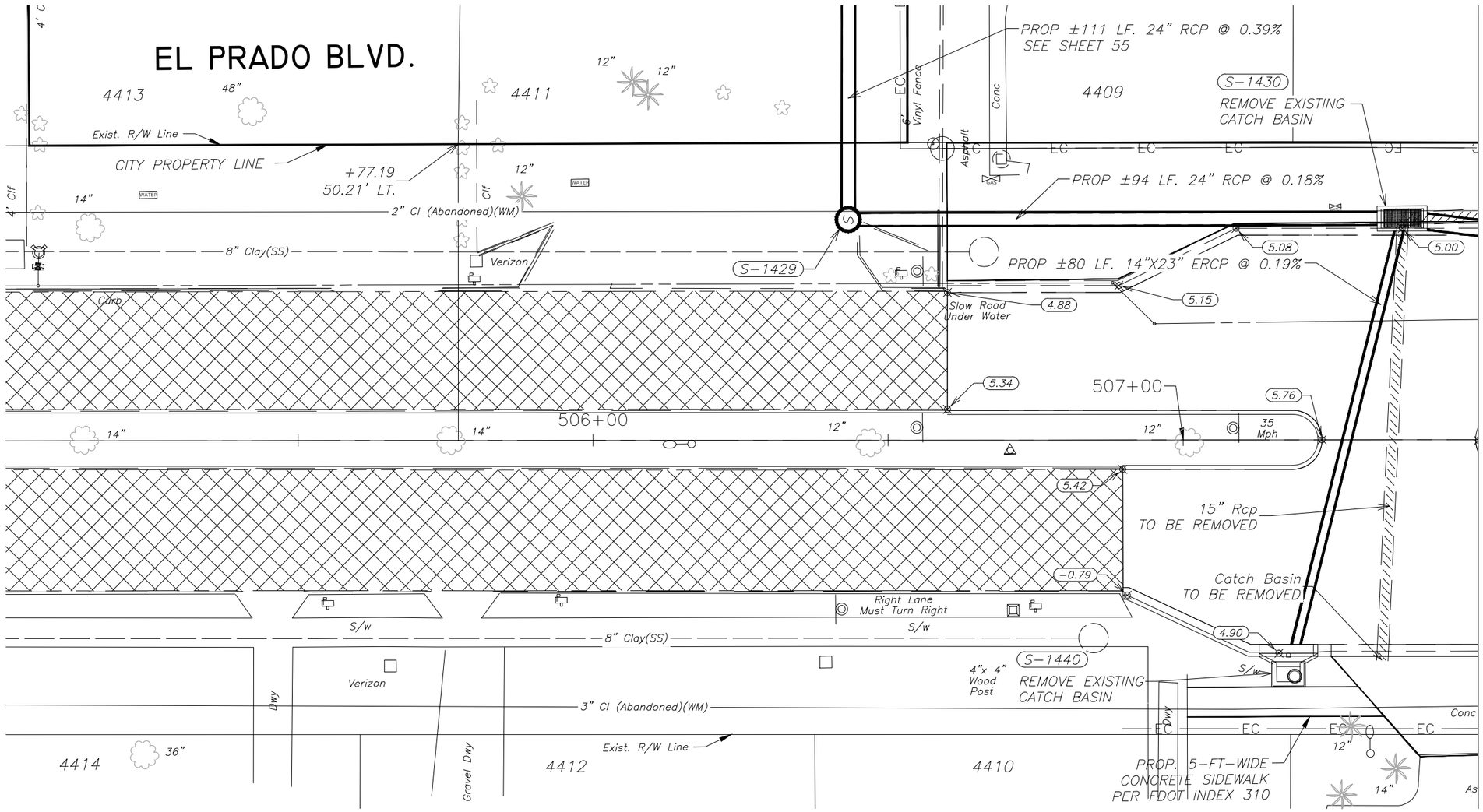
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SEVILLA ST. - STORMWATER
PROFILE

SHEET 48 OF 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SEVILLA.dwg - Printed Feb 11, 2016-3:56pm by: JenP

SW



S-1429
STA. 506+43.25, 37.39' LT.
PROP FDOT TYPE 'J' STORM MANHOLE
RIM: 6.04
INV EL: 24" RCP (E) = 1.58
INV EL: 24" RCP (N) = 1.58

S-1430
STA. 507+37.13, 37.51' LT.
PROP COT TYPE "H" GRATE INLET
GRATE: 5.00
INV EL: 14"X23" ERCP (S) = 2.00
INV EL: 24" RCP (W) = 1.75
INV EL: 19"X30" ERCP (E) = 2.00

S-1440
STA. 507+17.80, 39.72' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.40
INV EL: 14"X23" ERCP (N) = 2.15
FLOWLINE EL: 4.90

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PLAN

SHEET 49 OF 105

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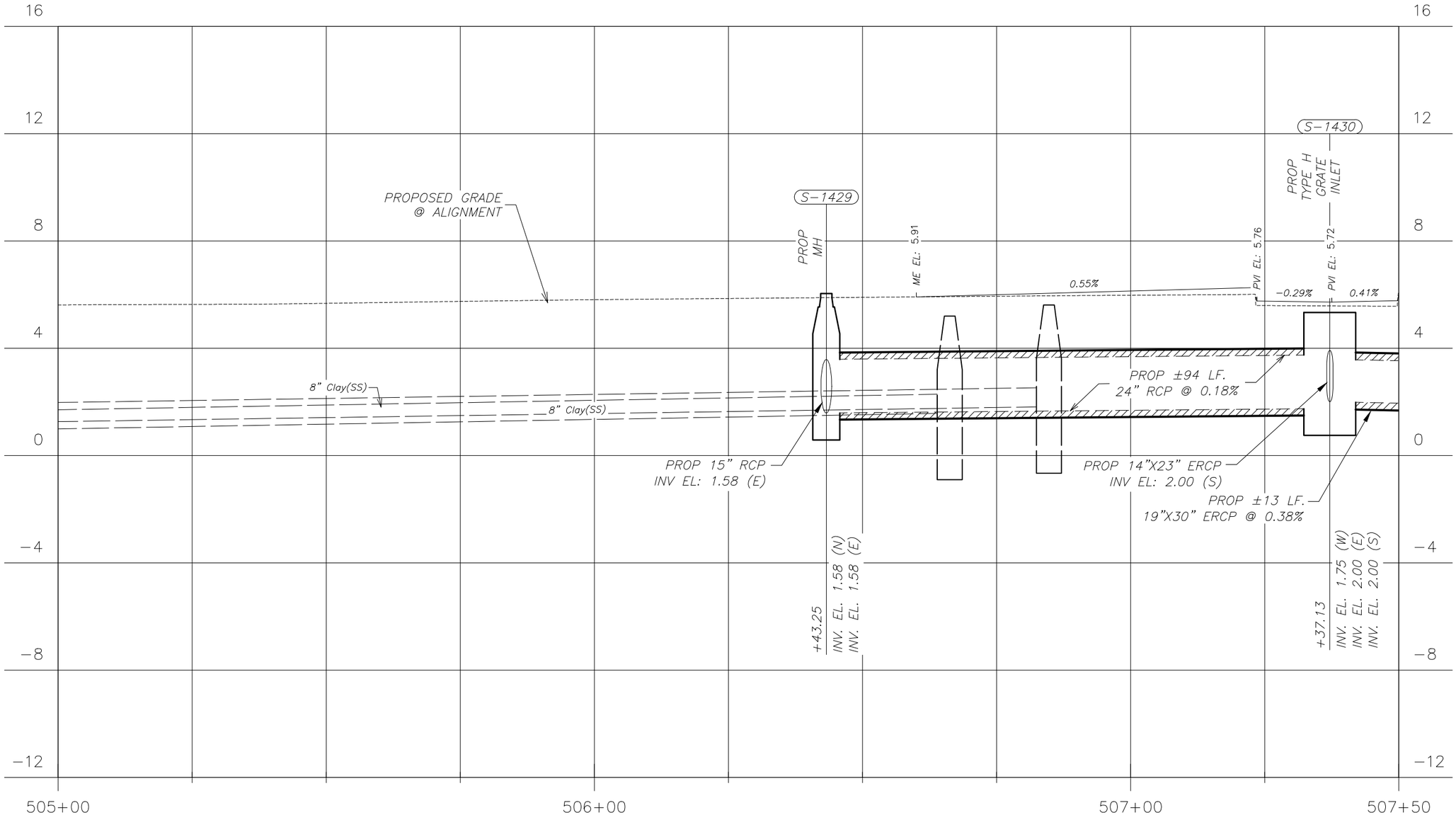
SW



EL PRADO PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PROFILE

SHEET
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of
105

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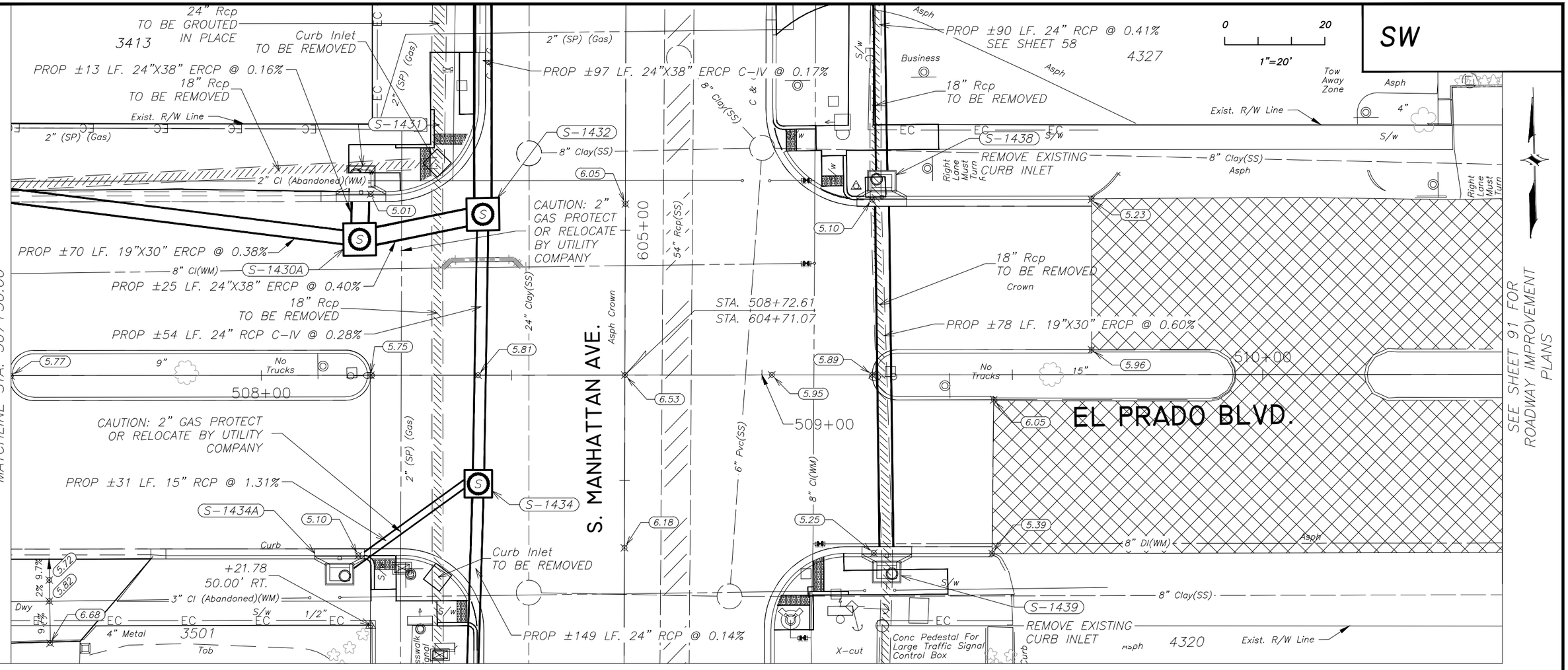

S-1430A
STA. 508+19.67, 27.15' LT.
PROP 5'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 19"X30" ERCP (W) = 1.68
INV EL: 24"X38" ERCP (N) = 1.68
INV EL: 24"X38" ERCP (E) = 1.68
MH RISER RIM: 5.34

S-1432
STA. 605+03.10, 28.45' LT.
PROP 5'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24"X38" ERCP (W) = 1.58
INV EL: 24" RCP C-IV (S) = 1.34
INV EL: 24"X38" ERCP C-IV (N) = 1.34
MH RISER RIM: 5.29

S-1434A
STA. 508+15.61, 39.73' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.60
INV EL: 15" RCP (NE) = 1.90
FLOWLINE EL: 5.10

S-1438
STA. 509+23.95, 38.71' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.60
INV EL: 19"X30" ERCP (S) = 1.85
INV EL: 24" RCP (N) = 1.85
FLOWLINE EL: 5.10

S-1439
STA. 509+24.89, 39.37' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.75
INV EL: 18" RCP (S) = 2.60
INV EL: 19"X30" ERCP (N) = 2.32
FLOWLINE EL: 5.25

S-1431
STA. 508+19.95, 39.71' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.51
INV EL: 24"X38" ERCP (S) = 1.70
FLOWLINE EL: 5.01

S-1434
STA. 604+49.26, 29.21' LT.
PROP 4'X4' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24" RCP (S) = 1.49
INV EL: 15" RCP (SW) = 1.49
INV EL: 24" RCP C-IV (N) = 1.49
MH RISER RIM: 5.74

NOTE:
SEE SEPARATE PLANS FOR
WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER PLAN

SHEET 51 OF 105

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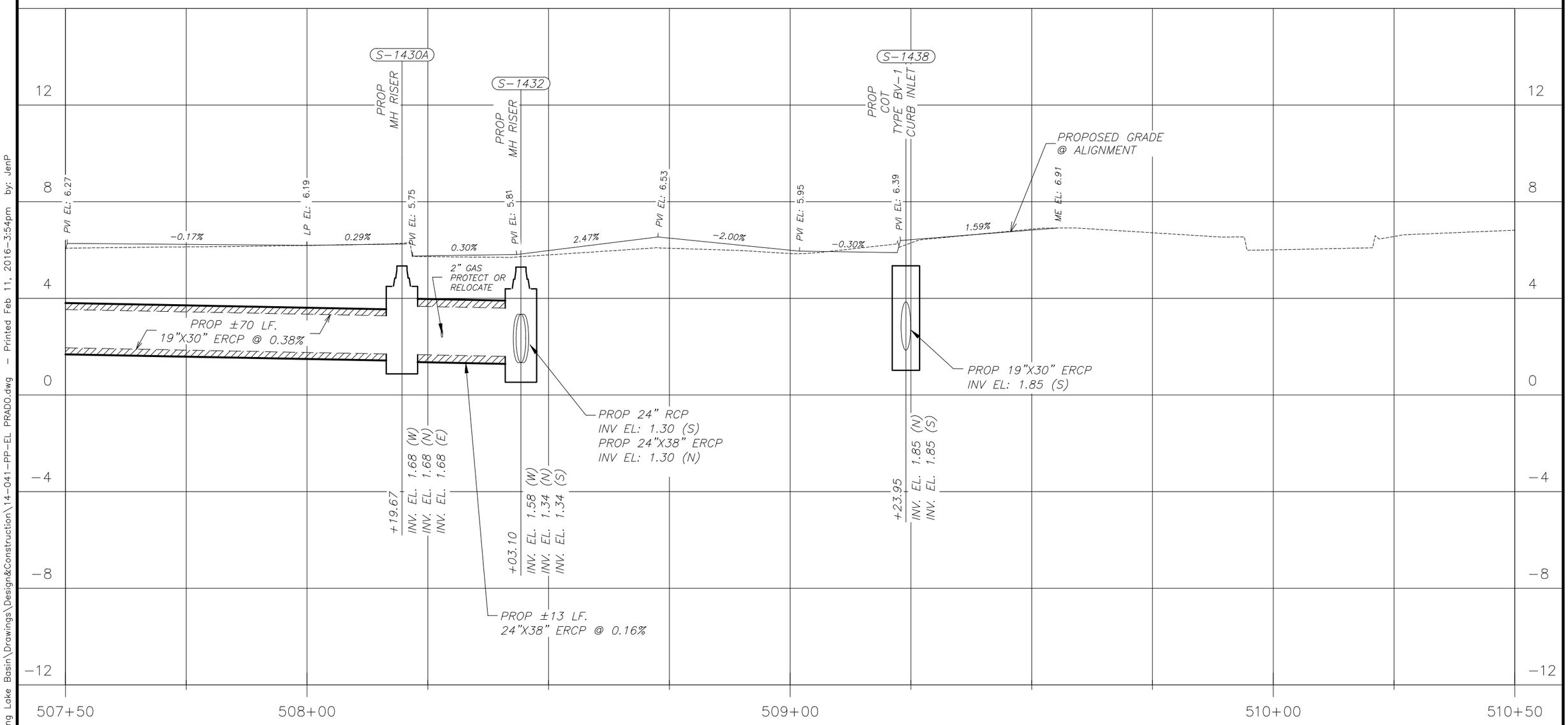
SW



EL PRADO PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PROFILE

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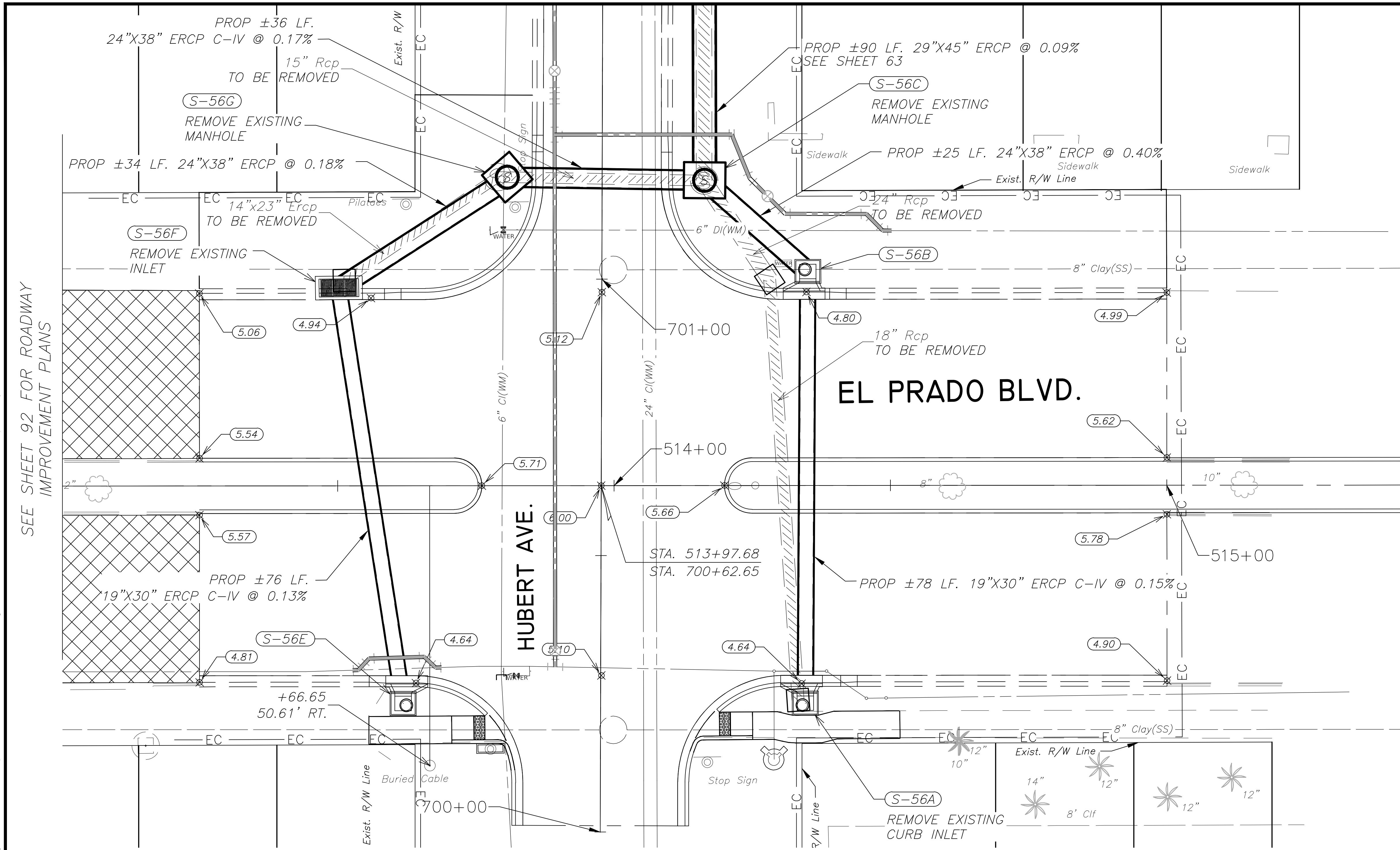
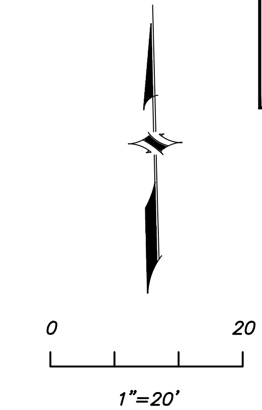
SW





S-56E
STA. 700+23.15, 35.72' LT.
PROP COT TYPE BS-1 CURB INLET
RIM: 5.14
INV EL: 19"X30" ERCP C-IV (N) = 2.00
FLOWLINE EL: 4.64

S-56A
STA. 700+23.43, 37.04' RT.
PROP COT TYPE BS-1 CURB INLET
RIM: 5.14
INV EL: 19"X30" ERCP C-IV (N) = 2.00
FLOWLINE EL: 4.64

S-56F
STA. 700+98.27, 47.57' LT.
PROP COT TYPE "H" GRATE INLET
GRATE EL: 4.94
INV EL: 19"X30" ERCP C-IV (S) = 1.90
INV EL: 24"X38" ERCP (NE) = 1.90

S-56B
STA. 701+01.49, 37.25' RT.
PROP COT TYPE BS-1 CURB INLET
RIM: 5.30
INV EL: 19"X30" ERCP C-IV (S) = 1.88
INV EL: 24"X38" ERCP (NW) = 1.88
FLOWLINE EL: 4.80

S-56G
STA. 701+18.39, 17.18' LT.
PROP 5'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24"X38" ERCP (SW) = 1.84
INV EL: 24"X38" ERCP C-IV (E) = 1.84
MH RISER RIM: 5.39

S-56C
STA. 701+17.94, 18.52' RT.
PROP 5'X6' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24"X38" ERCP (SE) = 1.78
INV EL: 24"X38" ERCP C-IV (W) = 1.78
INV EL: 29"X45" ERCP (N) = 1.78
MH RISER RIM: 5.46

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PLAN

SHEET 53
OF 105

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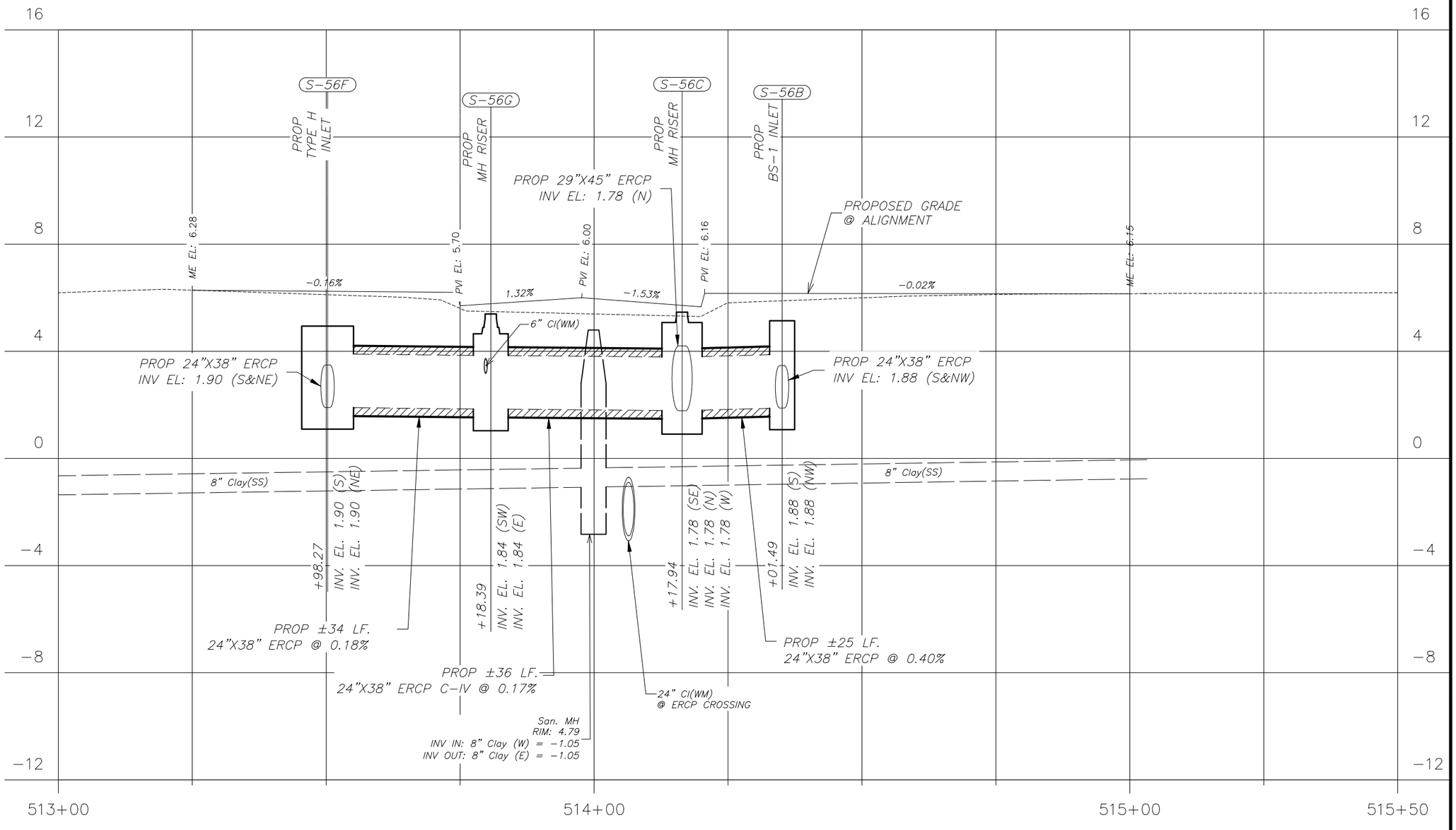
SW



EL PRADO PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PROFILE

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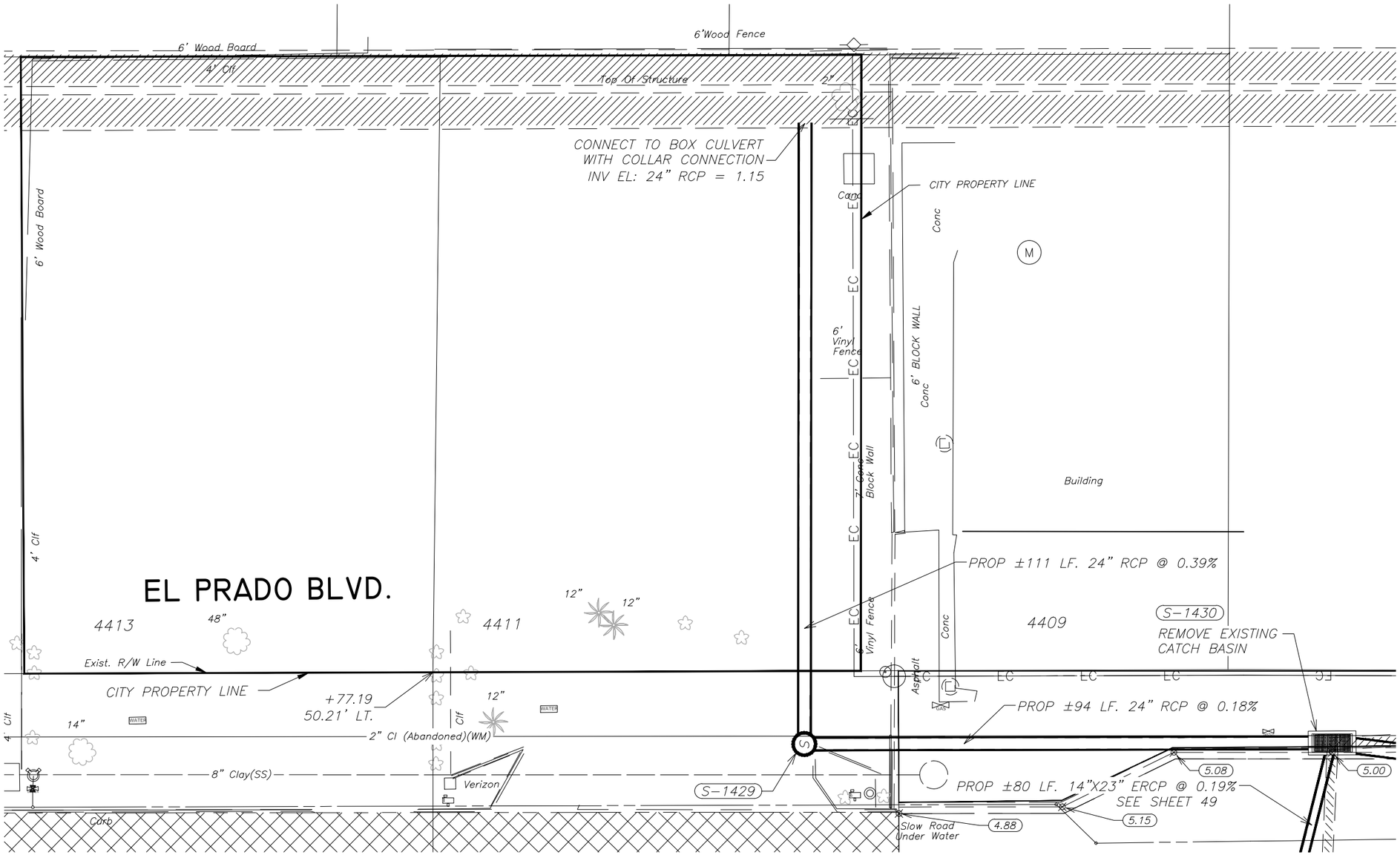
SW



S-1429
STA. 506+43.25, 37.39' LT.
PROP FDOT TYPE 'J' STORM MANHOLE
RIM: 6.04
INV EL: 24" RCP (E) = 1.58
INV EL: 24" RCP (N) = 1.58

S-1430
STA. 507+37.13, 37.51' LT.
PROP COT TYPE "H" GRATE INLET
GRATE: 5.00
INV EL: 14"X23" ERCP (S) = 2.00
INV EL: 24" RCP (W) = 1.75
INV EL: 19"X30" ERCP (E) = 2.00

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. - STORMWATER
PLAN

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SW

0 20

1"=20'

Hedge
Tos
Tob
Eop
Exist. R/W Line
S/w
Driveway
18" Rcp(ST)
C & G
Eop
Tob
Tos
S/w
Eop
Eop
Relic
Home-garden
Asph
Exist. R/W Line
S/w
S-1444
C & G
18" Rcp
TO BE REMOVED
PROP ±114 LF. 24" RCP @ 0.18%
24" Clay(SS)
18" Rcp(ST)
C & G
Eop
18" Rcp
TO BE REMOVED
PROP ±156 LF. 18" RCP @ 0.20%
CONNECT TO EXISTING CATCH BASIN
INV EL: 18" RCP = 2.21

S. MANHATTAN AVE.

600+00
601+00
Asph Crown
602+00
54" Rcp(SS)

Catch Basin
RIM: 5.08
INV IN: 18" Rcp (S) = 2.21
INV IN: 18" Rcp (E) = 2.32
INV OUT: 18" Rcp (N) = 2.09

Eop
C & G
Eop
C & G
24"
Curb
Curb
Curb
Asph
Conc
S/w
Over Head
48"
Exist. R/W Line
+33.27
51.01' RT.
C & G
Conc
Chiropra
Entrar

W. KENSINGTON AVE.

C & G
C & G
Sod
Curb Inlet
RIM: 6.35
Planter
Conc
16"
16"
16"
18" Rcp(ST)
Gravel
Gravel

MATCHLINE STA: 603+00.00

S-1444
STA. 601+86.27, 36.44' LT.
PROP COT TYPE BR-2 CURB INLET
RIM: 6.00
INV EL: 18" RCP (S) = 1.90
INV EL: 24" RCP (N) = 1.90
THROAT EL: 5.50

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER
PLAN

SHEET 56 OF 105

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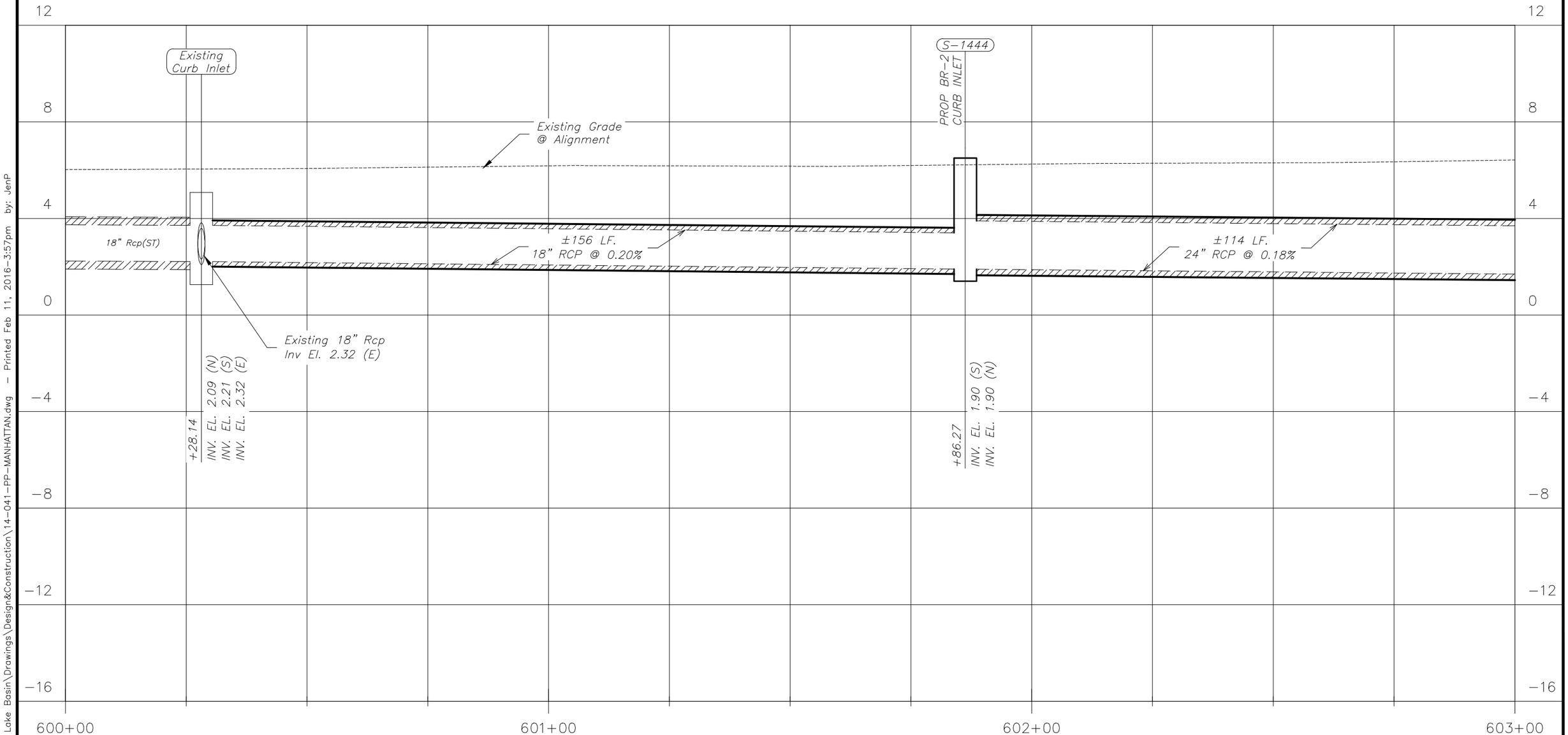
SW



S. MANHATTAN AVE. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER PROFILE

SHEET 57 of 105

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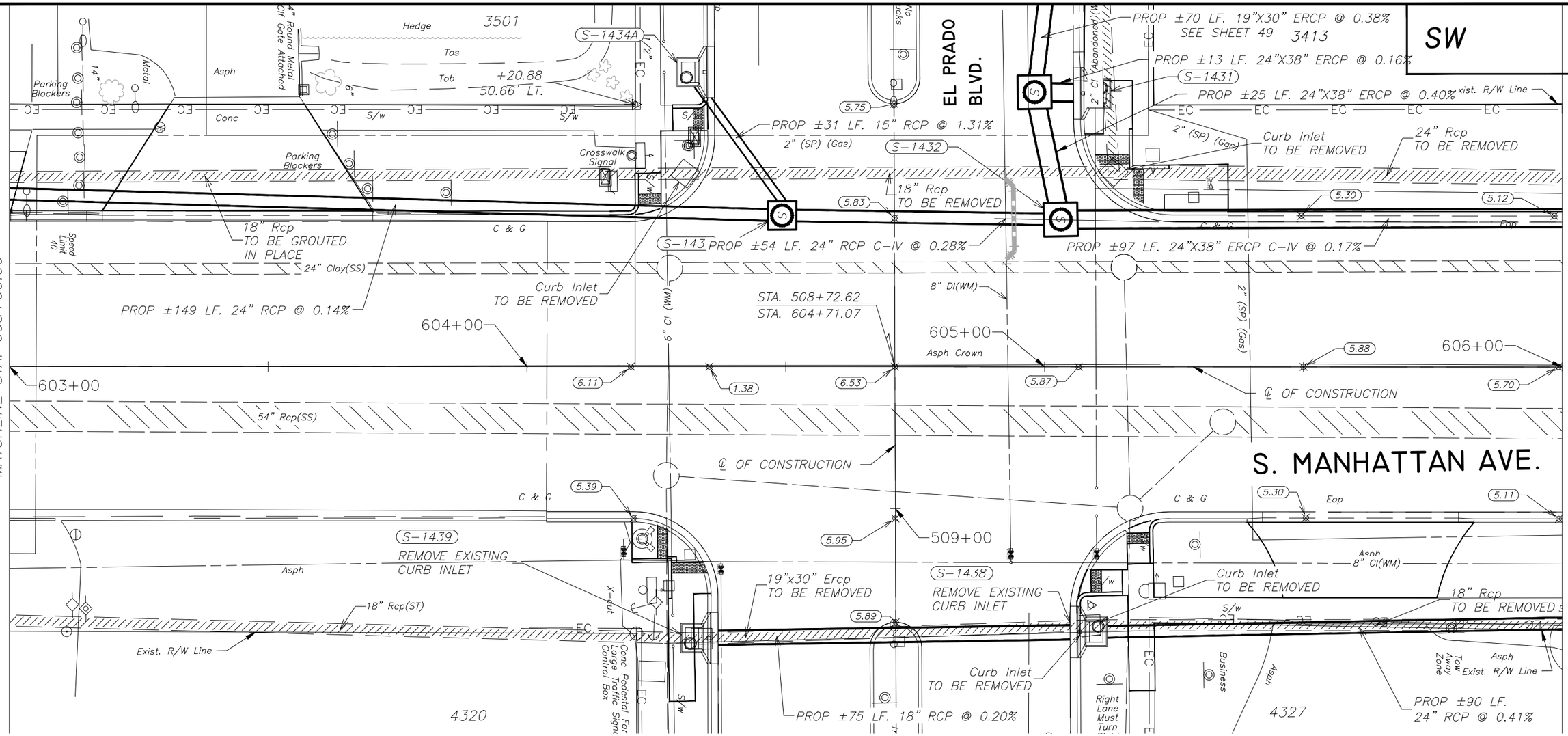

S-1431
STA. 508+19.95, 39.71' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.51
INV EL: 24"X38" ERCP (S) = 1.70
THROAT EL: 5.01

S-1434
STA. 604+49.26, 29.21' LT.
PROP 4'X4' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24" RCP (S) = 1.49
INV EL: 15" RCP (SW) = 1.49
INV EL: 24" RCP C-IV (N) = 1.49
MH RISER RIM: 5.56

S-1434A
STA. 508+15.61, 39.73' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.60
INV EL: 15" RCP (NE) = 1.90
THROAT EL: 5.10

S-1438
STA. 509+23.95, 38.71' LT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.60
INV EL: 19"X30" ERCP (S) = 1.85
INV EL: 24" RCP (N) = 1.85
THROAT EL: 5.10

S-1439
STA. 509+24.89, 39.37' RT.
PROP COT TYPE BV-1 CURB INLET
RIM: 5.75
INV EL: 18" RCP (S) = 2.60
INV EL: 19"X30" ERCP (N) = 2.32
THROAT EL: 5.25

S-1432
STA. 605+03.10, 28.45' LT.
PROP 5'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24"X38" ERCP (W) = 1.58
INV EL: 24" RCP C-IV (S) = 1.34
INV EL: 24"X38" ERCP C-IV (N) = 1.34
MH RISER RIM: 5.29

0 20
1"=20'

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER
PLAN

SHEET 58 OF 105

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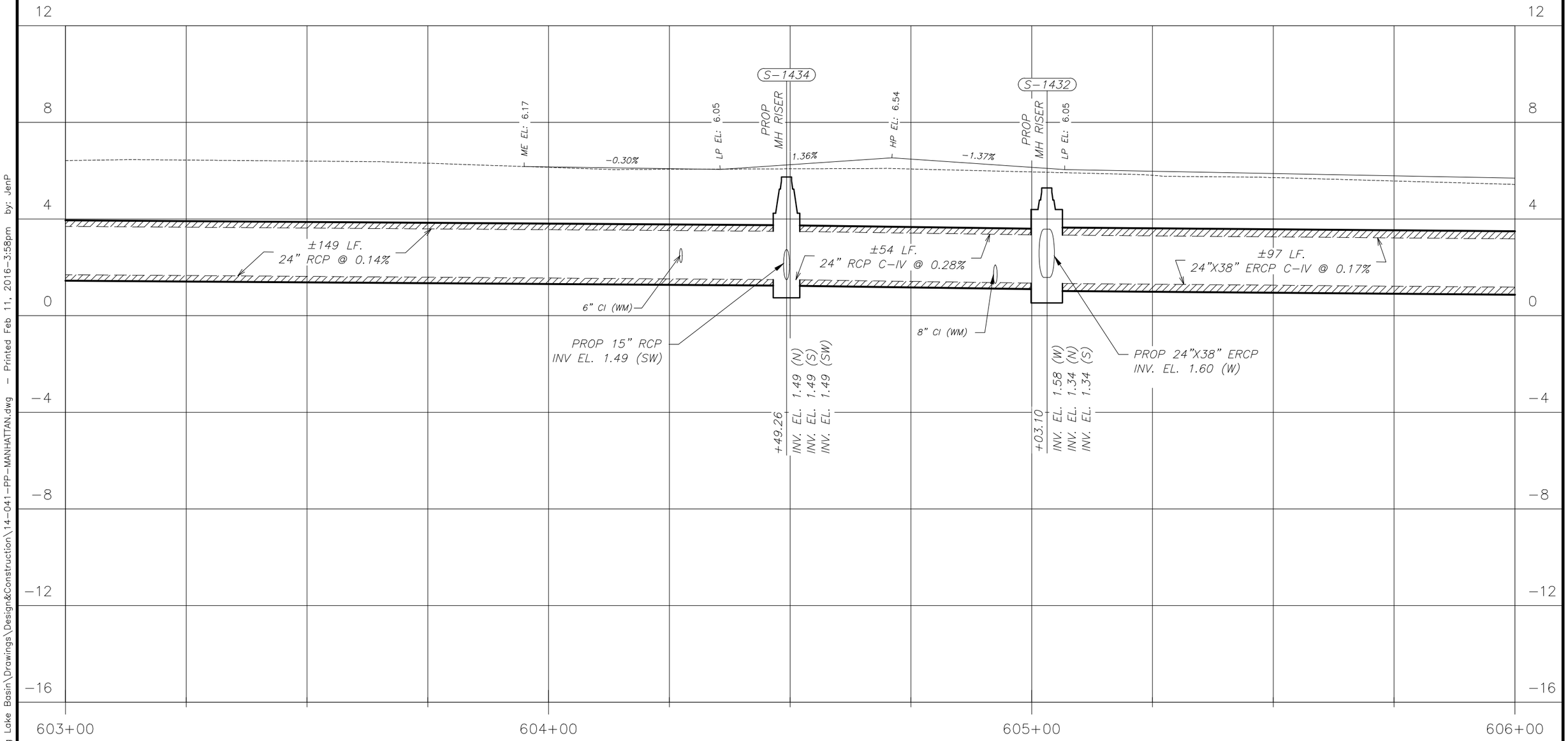
SW



S. MANHATTAN AVE. PROFILE WEST SIDE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER PROFILE

SHEET 59 OF 105

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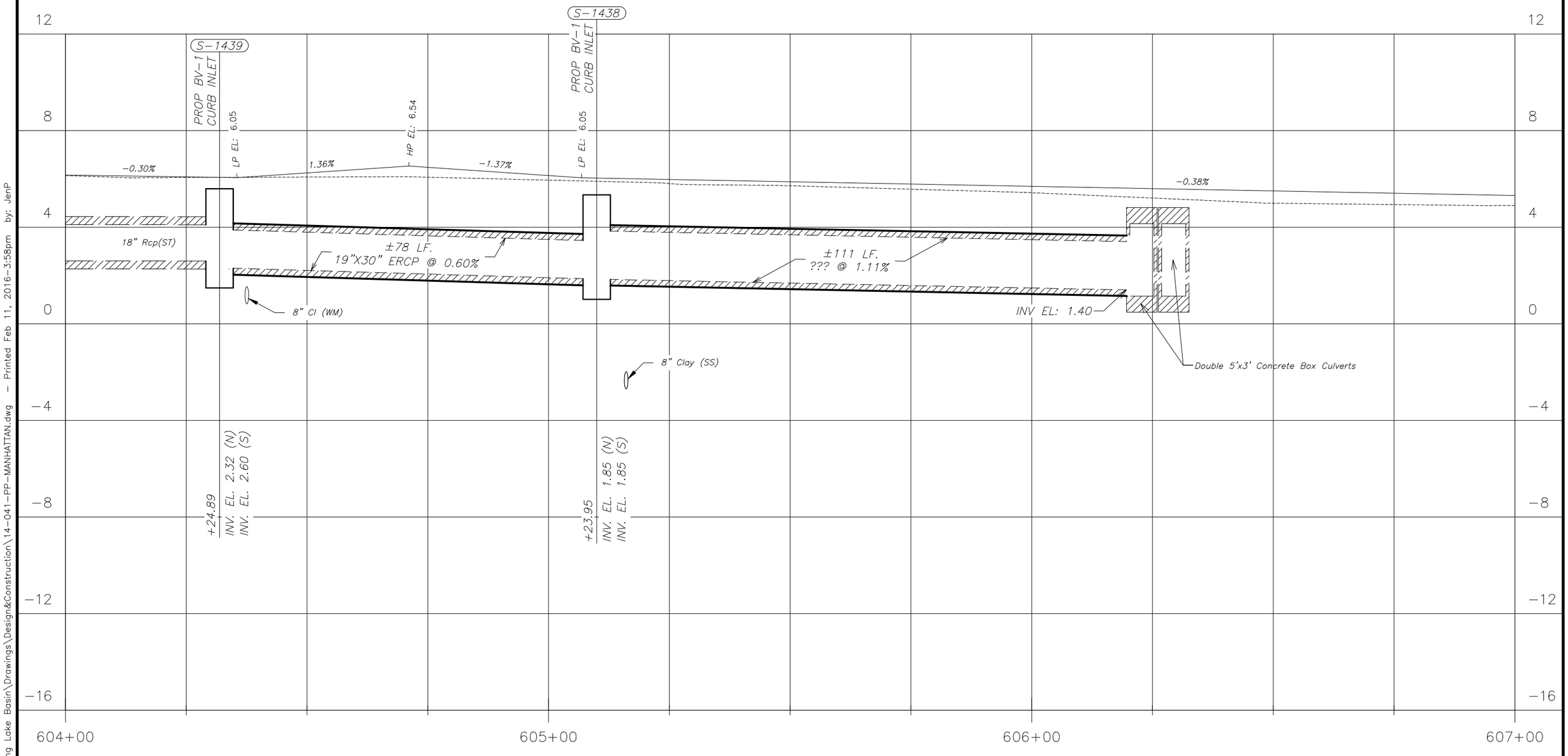

S. MANHATTAN AVE. PROFILE EAST SIDE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER PROFILE

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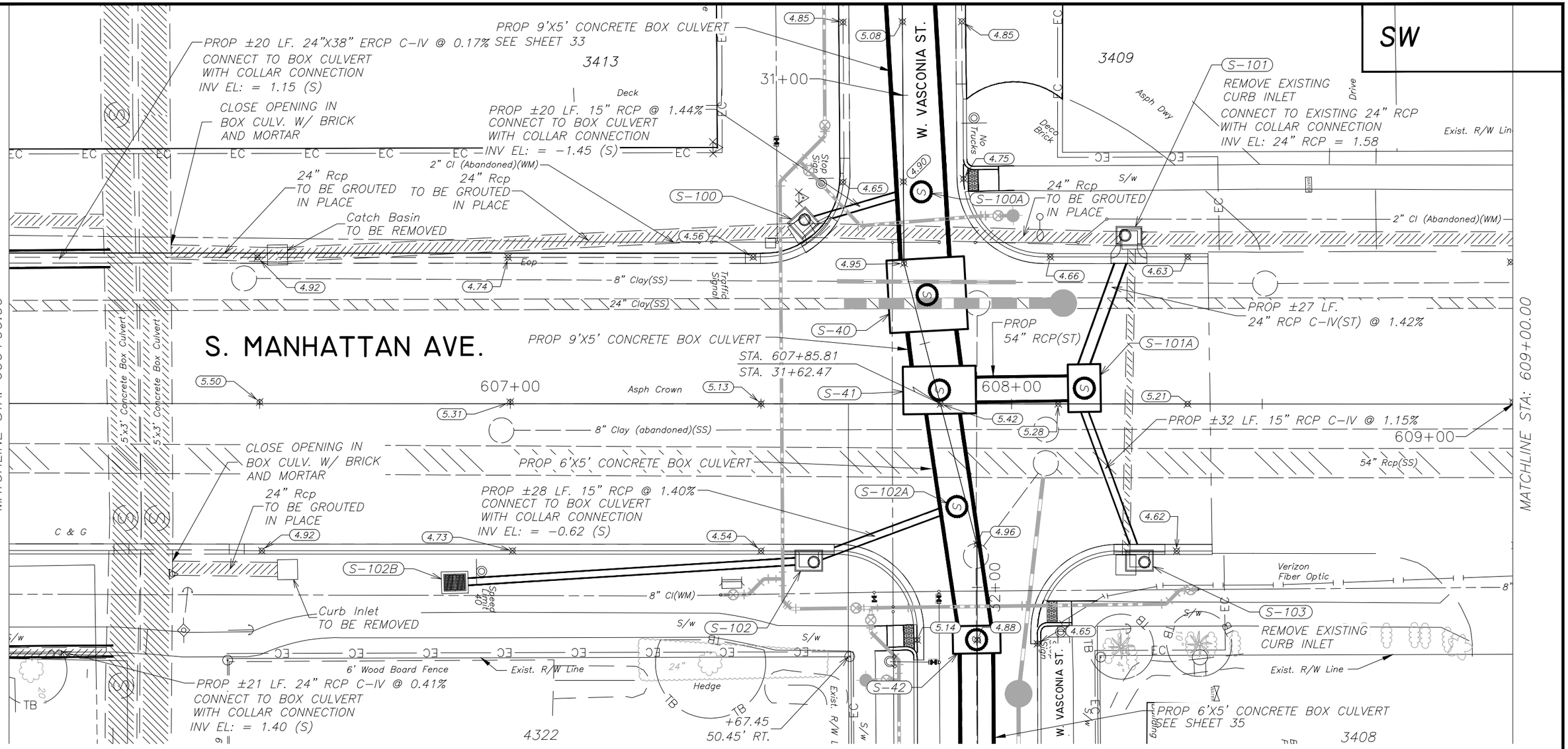


S-41
STA. 31+59.75, 0.51' LT.
PROP 13'X8' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (N) = -3.07
INV EL: 6'X5' CONCRETE BOX CULVERT (E) = -2.60
INV EL: 9'X5' CONCRETE BOX CULVERT (W) = -3.07
MH RISER RIM: 5.41

S-101A
STA. 608+14.51, 3.15' LT.
PROP 8'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" HOLE W/BULKHEAD FOR FUTURE CONNECTION (N) = -2.93
INV EL: 24" RCP C-IV (W) = 0.99
INV EL: 15" RCP C-IV (E) = 1.36
INV EL: 54" RCP (S) = -2.93
MH RISER RIM: 5.18

S-102
STA. 607+59.55, 31.27' RT.
PROP COT TYPE 1 CURB INLET
RIM: 5.02
INV EL: 15" RCP (S) = 1.55
INV EL: 15" RCP (N) = -0.23
THROAT EL: 4.51

S-103
STA. 31+94.79, 32.41' LT.
PROP COT TYPE 1 CURB INLET
RIM: 5.11
INV EL: 15" RCP C-IV (W) = 1.73
THROAT EL: 4.60

S-101
STA. 608+23.59, 33.29' LT.
PROP COT TYPE 1 CURB INLET MODIFIED
RIM: 5.10
INV EL: 24" RCP (N) = 1.58
INV EL: 24" RCP C-IV (E) = 1.38
THROAT EL: 4.60

S-102B
STA. 606+88.94, 35.67' RT.
PROP COT TYPE "T" GRATE INLET
INV EL: 15" RCP (N) = 2.25
GRATE EL: 4.73

0 20
1"=20'

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

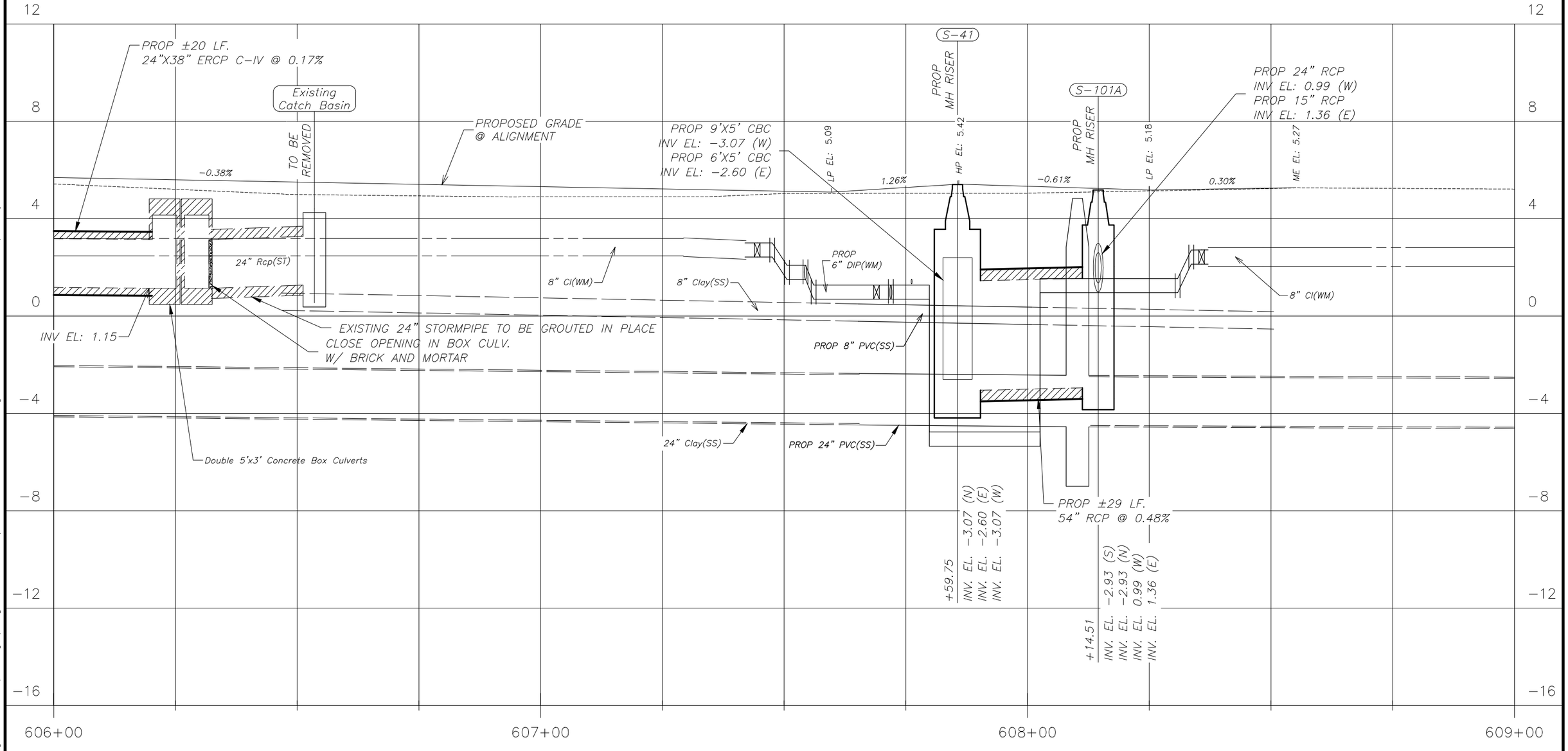
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER PLAN

SHEET 61 OF 105

SW



S. MANHATTAN AVE. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - STORMWATER
PROFILE

SHEET 62 of 105

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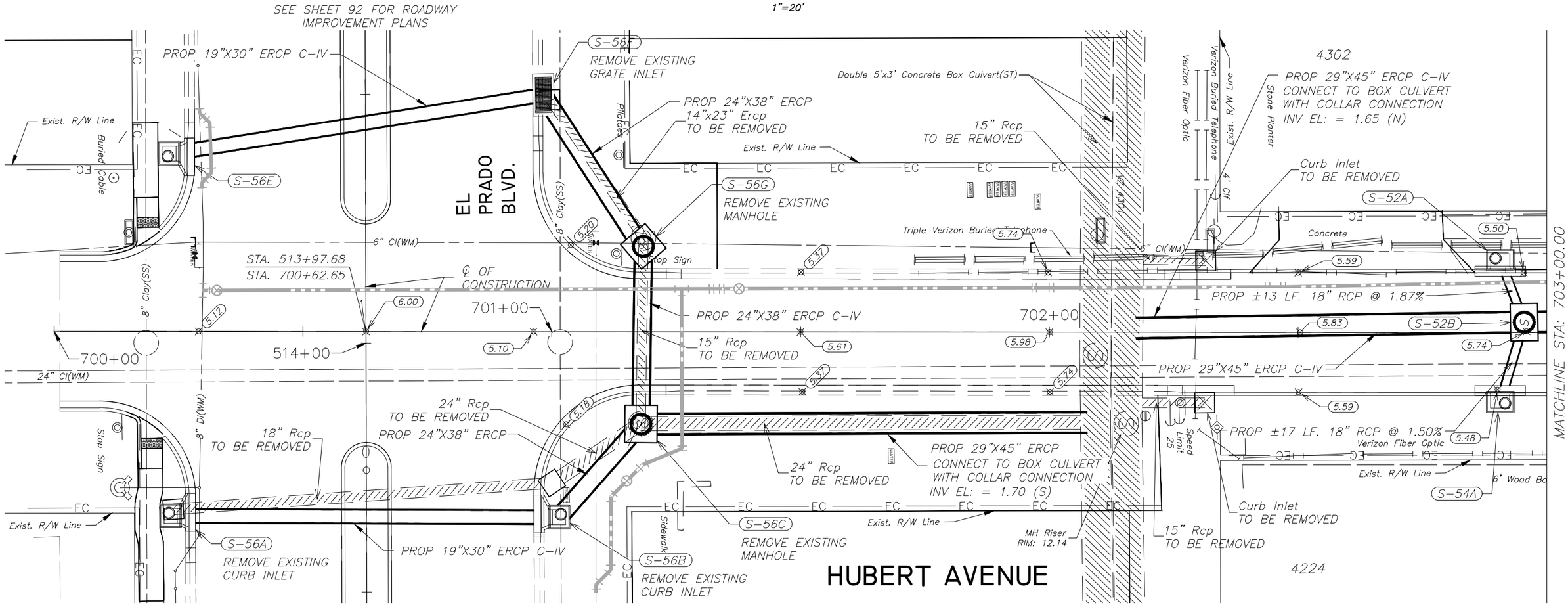
SW

0 20

1"=20'



S-56E
STA. 700+23.15, 35.72' L
PROP COT TYPE BS-1 CURB INLET
RIM: 5.14
INV EL: 19"X30" ERCP C-IV (N) = 2.00
FLOWLINE EL: 4.80

S-56F
STA. 700+98.27, 47.57' L
PROP COT TYPE "H" GRATE INLET
GRATE EL: 4.64
INV EL: 19"X30" ERCP C-IV (S) = 1.90
INV EL: 24"X38" ERCP (NE) = 1.90

S-56G
STA. 701+18.39, 17.18' L
PROP 5'X5' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24"X38" ERCP (SW) = 1.84
INV EL: 24"X38" ERCP C-IV (E) = 1.84
MH RISER RIM: 5.39

S-56C
STA. 701+17.94, 18.52' R
PROP 5'X6' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 24"X38" ERCP (SE) = 1.78
INV EL: 24"X38" ERCP C-IV (W) = 1.78
INV EL: 29"X45" ERCP (N) = 1.78
MH RISER RIM: 5.46

S-56B
STA. 701+01.49, 37.25' R
PROP COT TYPE BS-1 CURB INLET
RIM: 5.30
INV EL: 19"X30" ERCP C-IV (S) = 1.88
INV EL: 24"X38" ERCP (NW) = 1.88
FLOWLINE EL: 4.80

S-56A
STA. 700+23.43, 37.04' R
PROP COT TYPE BS-1 CURB INLET
RIM: 5.14
INV EL: 19"X30" ERCP C-IV (N) = 2.00
FLOWLINE EL: 4.64

S-52A
STA. 702+90.65, 14.58' L
PROP COT TYPE 1 CURB INLET
RIM: 6.12
INV EL: 18" RCP (E) = 1.75
FLOWLINE EL: 5.48

S-54A
STA. 702+90.65, 13.92' R
PROP COT TYPE 1 CURB INLET
RIM: 6.03
INV EL: 18" RCP (W) = 1.75
FLOWLINE EL: 5.48

S-52B
STA. 702+95.46, 2.09' L
PROP 6'X4' FDOT J-BOX W/MH RISER PER
INV EL: 18" RCP (E) = 1.50
INV EL: 18" RCP (W) = 1.50
INV EL: 29"X45" ERCP C-IV (S) = 1.00
INV EL: 29"X45" ERCP (N) = 1.00
MH RISER RIM: 5.70

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - STORMWATER
PLAN

SHEET 63 of 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-HUBERT.dwg - Printed Feb 11, 2016-4:00pm by: JenP

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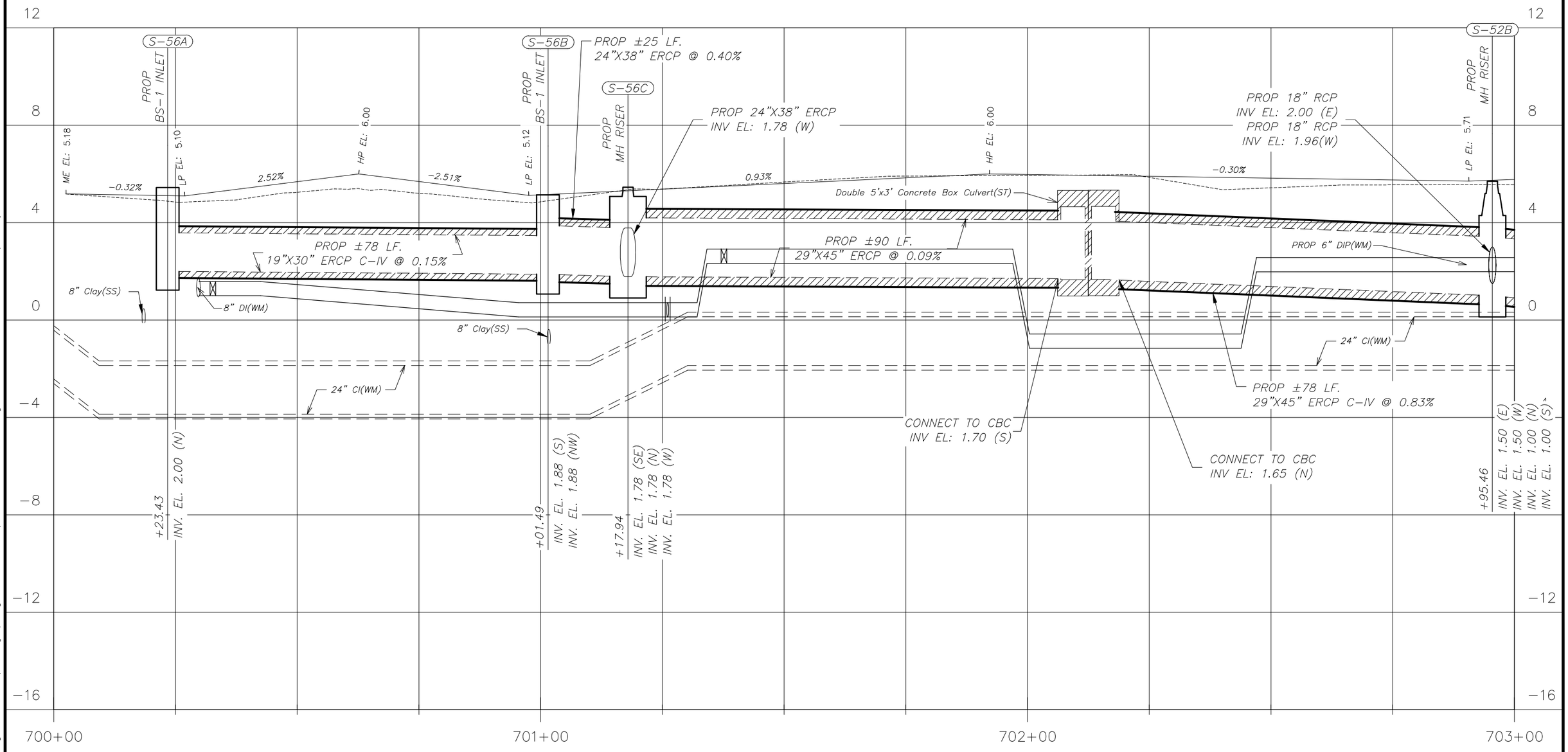

HUBERT AVE. PROFILE EAST SIDE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - STORMWATER
PROFILE

SHEET 64 of 105

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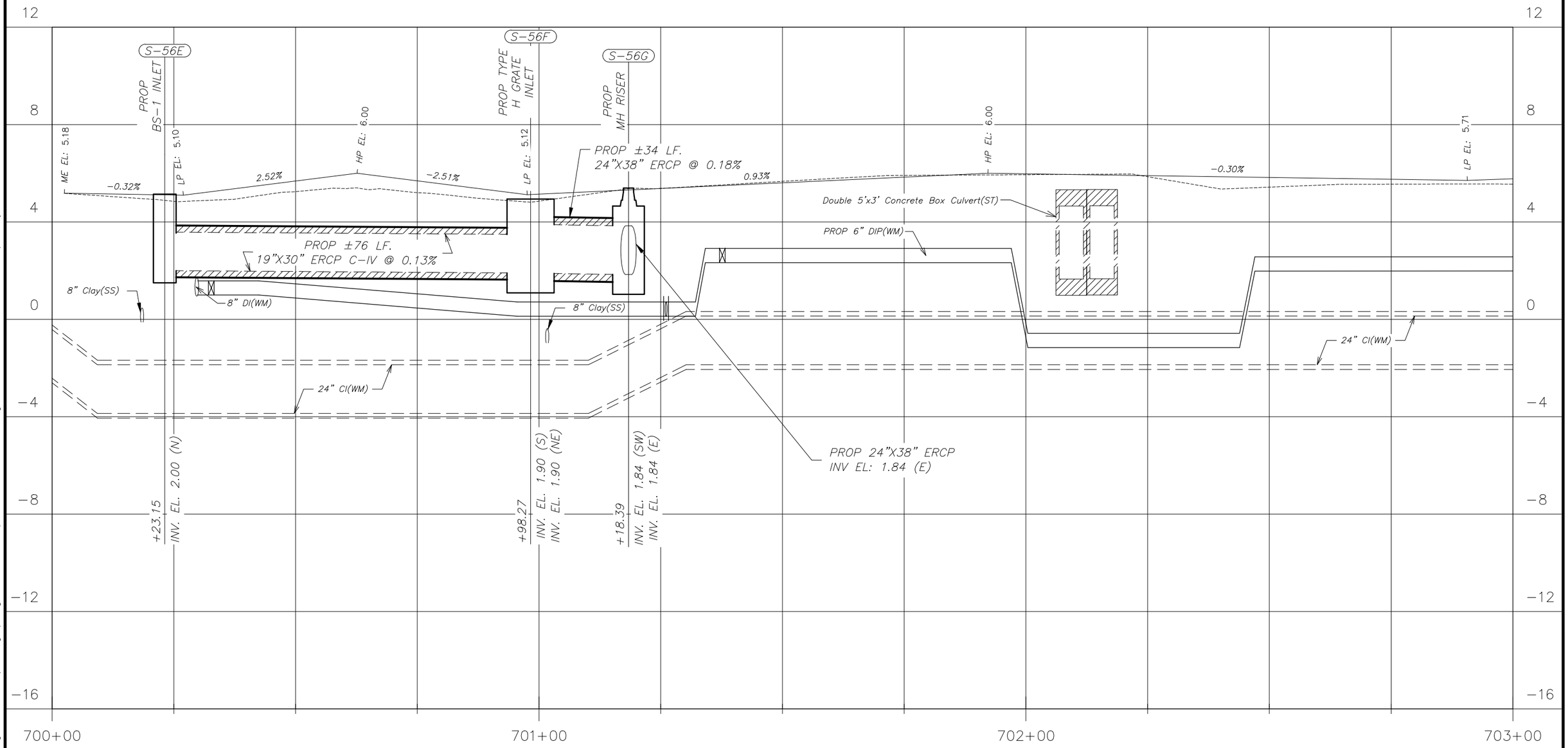

HUBERT AVE. PROFILE WEST SIDE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - STORMWATER
PROFILE

SHEET 65 OF 105

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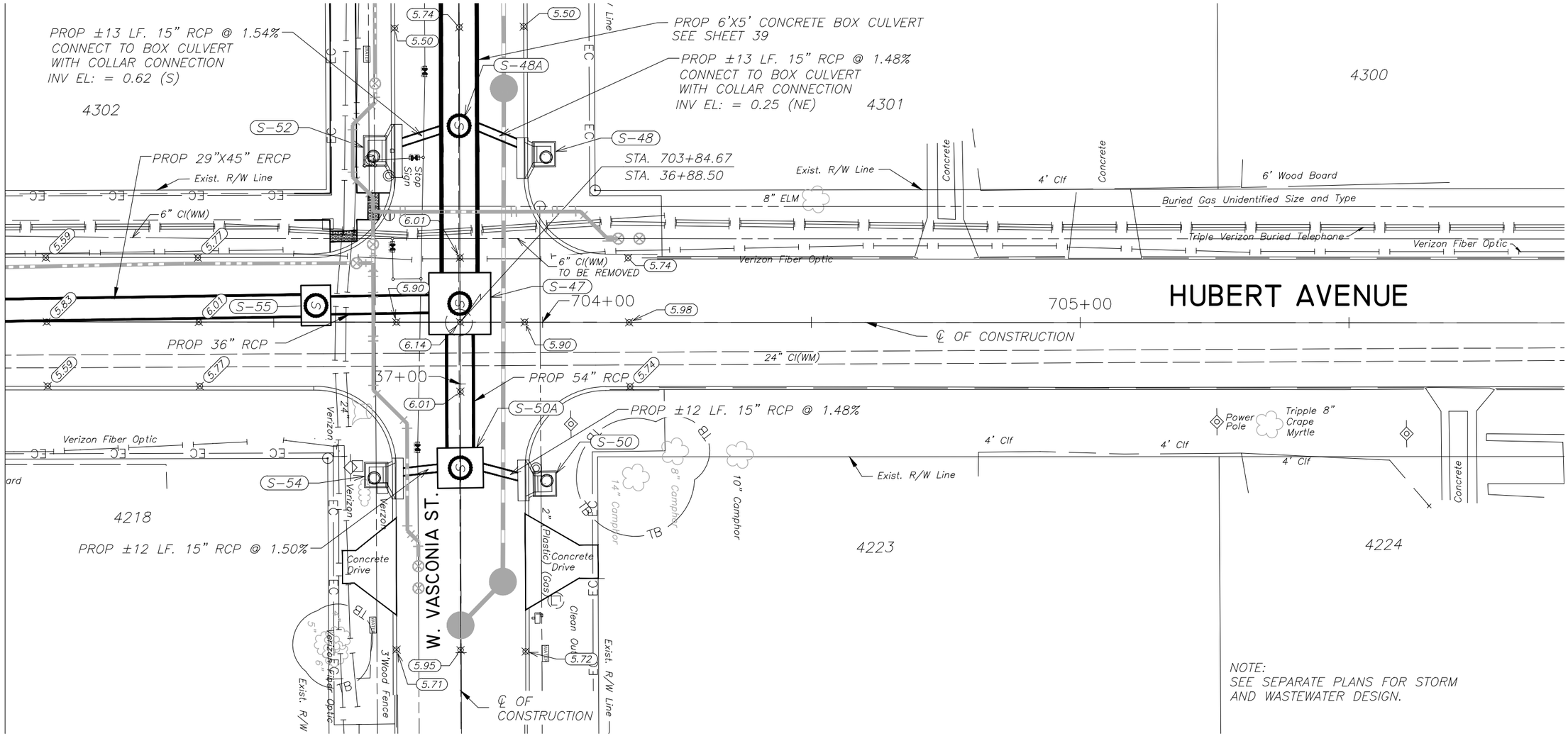
SW

0 20

1"=20'



NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

S-47
STA. 36+85.03, 0.05' R
PROP 10'X10' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (E) = -1.60
INV EL: 48"X76" HOLE W/BULKHEAD FOR FUTURE CONNECTION (N) = -0.50
INV EL: 36" RCP (S) = -0.50
INV EL: 6'X5' CONCRETE BOX CULVERT (W) = -1.60
MH RISER RIM: 6.10

S-55
STA. 703+57.85, 3.09' L
PROP 6'X4' FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 29"X45" ERCP (S) = -0.16
INV EL: 36" RCP (N) = -0.16
MH RISER RIM: 5.88

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - STORMWATER
PLAN

SHEET 66 OF 105

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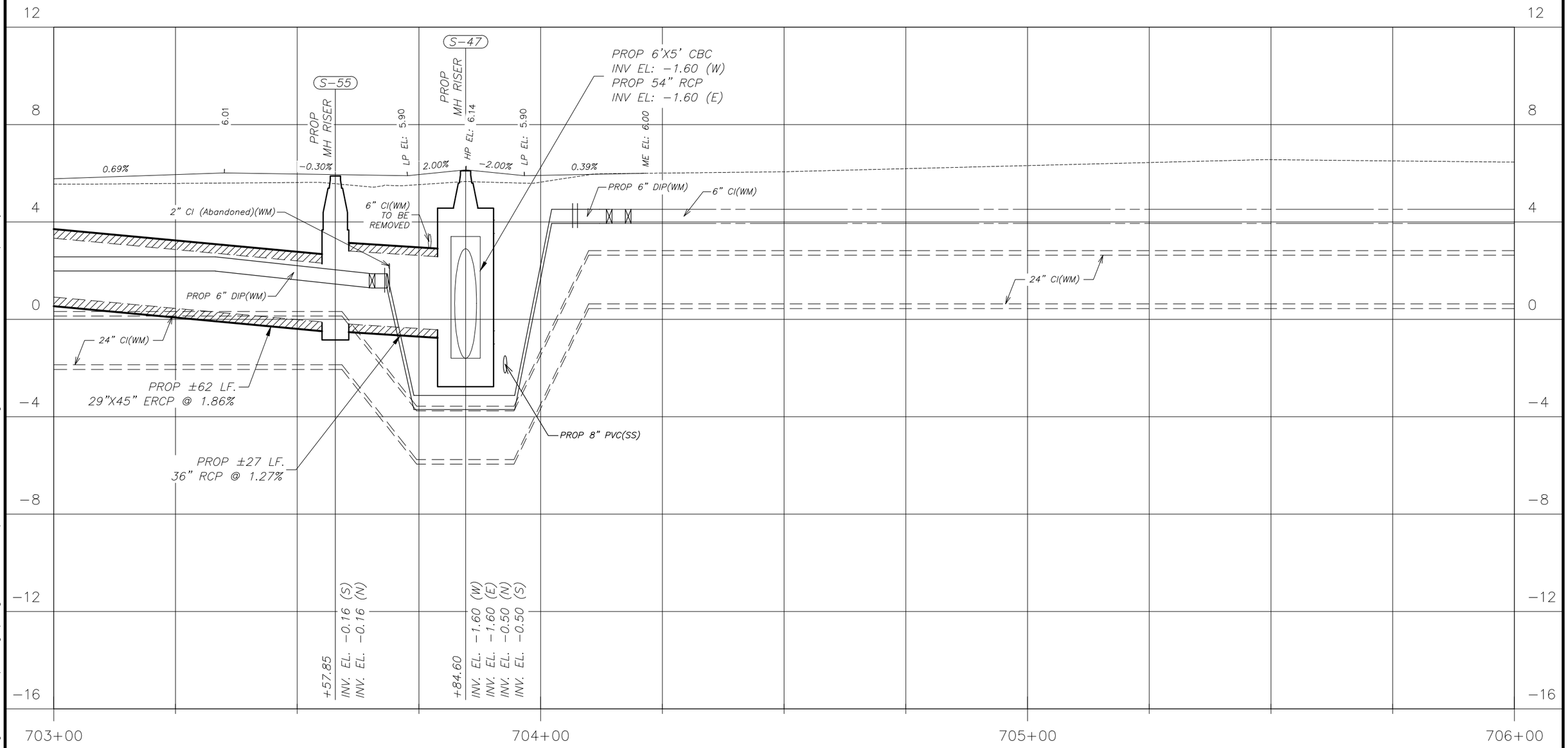

HUBERT AVE. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - STORMWATER
PROFILE

SHEET 67 of 105

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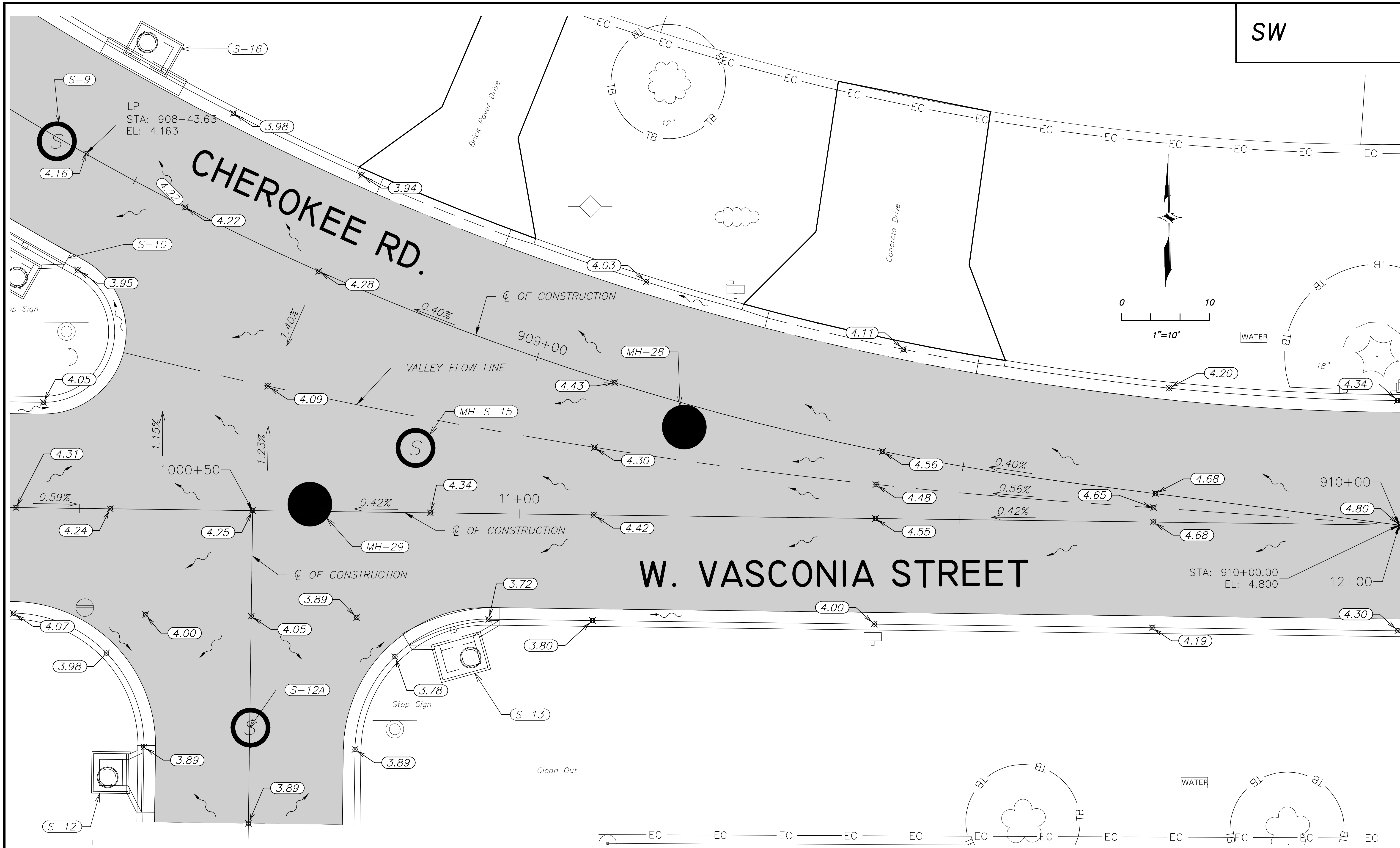

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. & W VASCONIA ST. VALLEY
DETAILED GRADING PLAN

SHEET 68
105

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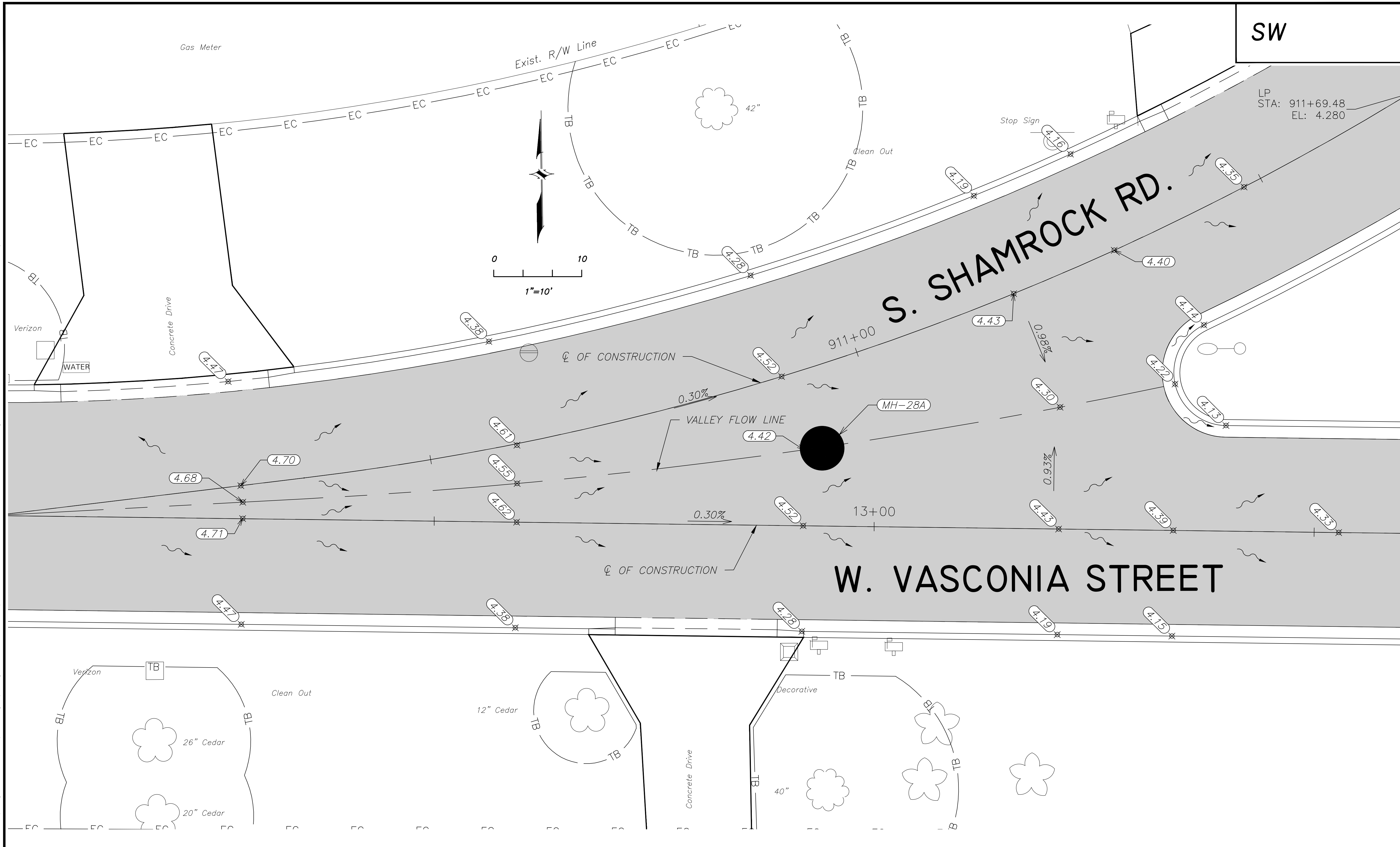

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. & W VASCONIA ST. VALLEY
DETAILED GRADING PLAN

SHEET 68A
CF 105

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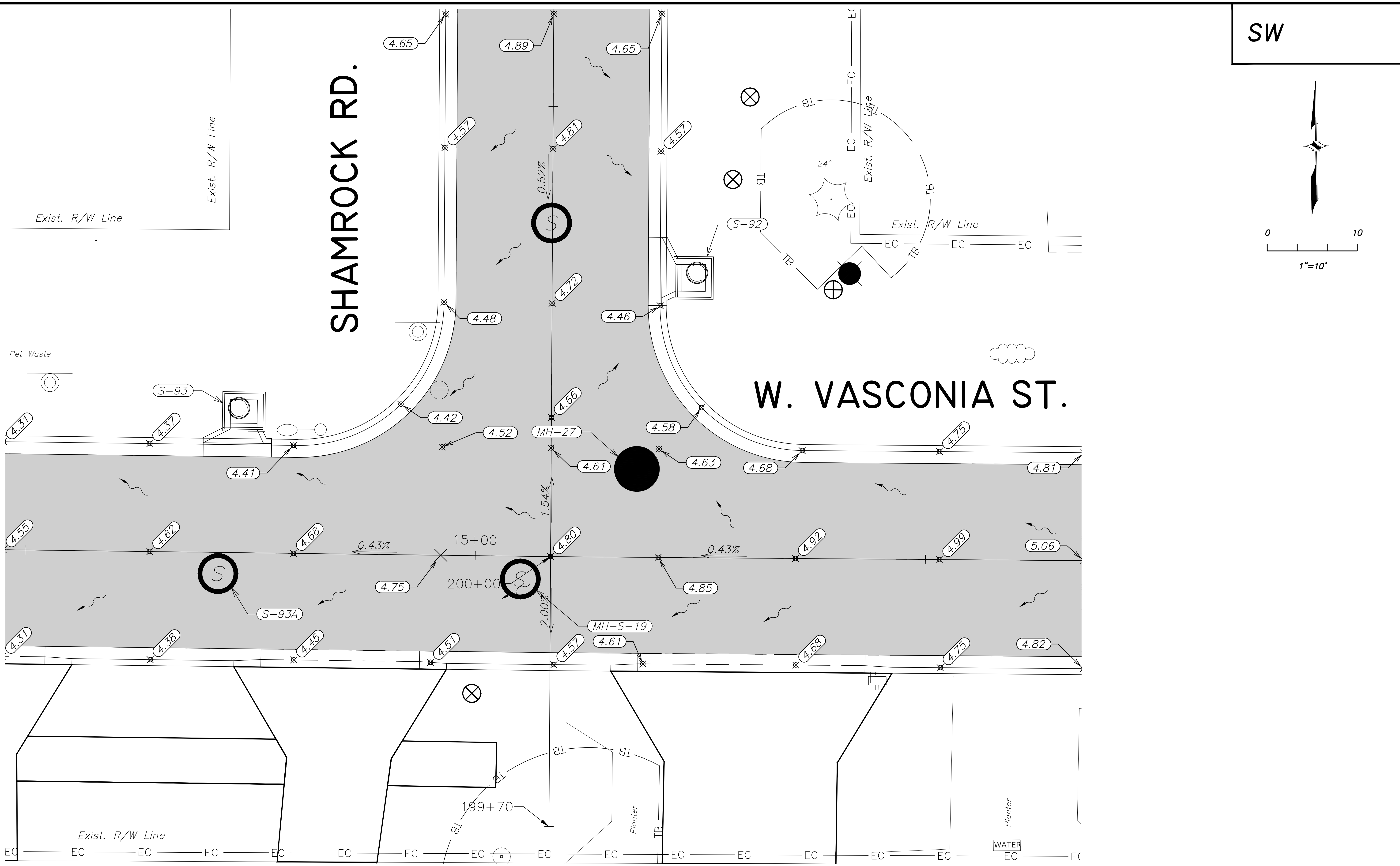

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST. & SHAMROCK RD.
DETAILED GRADING PLAN

SHEET 68B
OF 105

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SW

SHAMROCK RD.

Exist. R/W Line

0 10

1"=10'

GB
STA: 913+20.85
EL: 5.336

5.24 0.70% 5.20 5.44 0.42% 5.31 5.43 5.55 5.55 5.63 5.60

Stop Sign

5.17 1.96% 5.22 5.11 5.18

VALLEY FLOWLINE

℄ OF CONSTRUCTION

1.35% 5.41 0.58% 5.57 5.67 914+00 5.78

HP
STA: 202+83.81
EL: 5.900

914+54

1.59% 1.43%

GB
STA: 201+50.00
EL: 5.355

0.50% 5.45 0.40% 5.56 202+00 5.67 5.73 0.41% 5.79 5.90 MH-S-96 203+00

℄ OF CONSTRUCTION

MH-27A

300+00

5.08 5.12 5.17 5.23 5.28 5.50 5.67 5.62 5.24 5.60 5.42

SHAMROCK RD.

LP
STA: 300+28.89
EL: 5.480

SEVILLA ST.

1.13% 5.50 5.19 5.26

S-96A MH-S-96C S-96B

18' Elm

3'hedge

299+75

Concrete Drive

WATER

10" 12" 14" 12" 14" 18" 12" 42"

TB EC

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK VALLEY
DETAILED GRADING PLAN

SHEET 68C of 105

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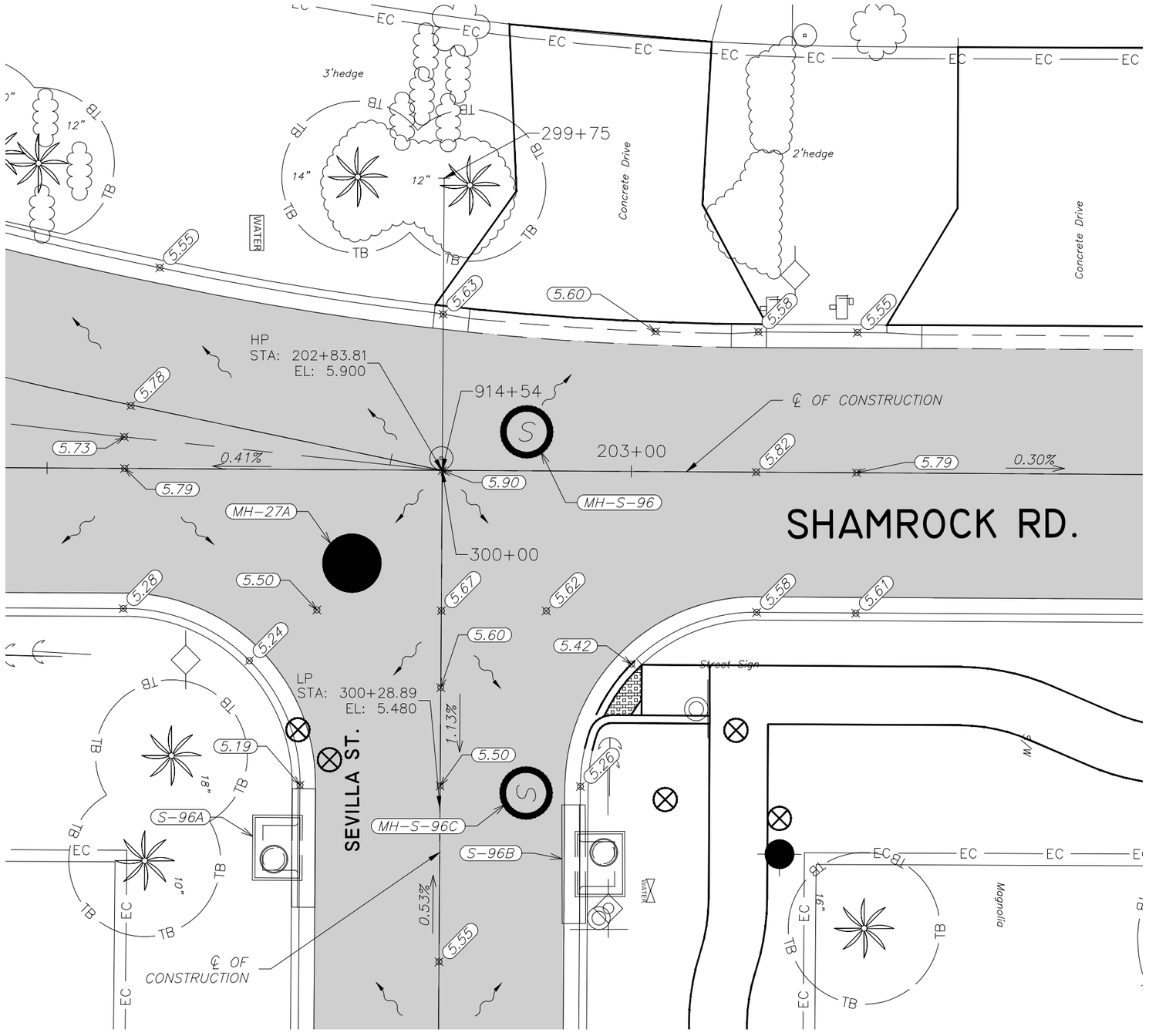
SW



0 10

1"=10'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. & SEVILLA ST.
DETAILED GRADING PLAN

SHEET 68D OF 105

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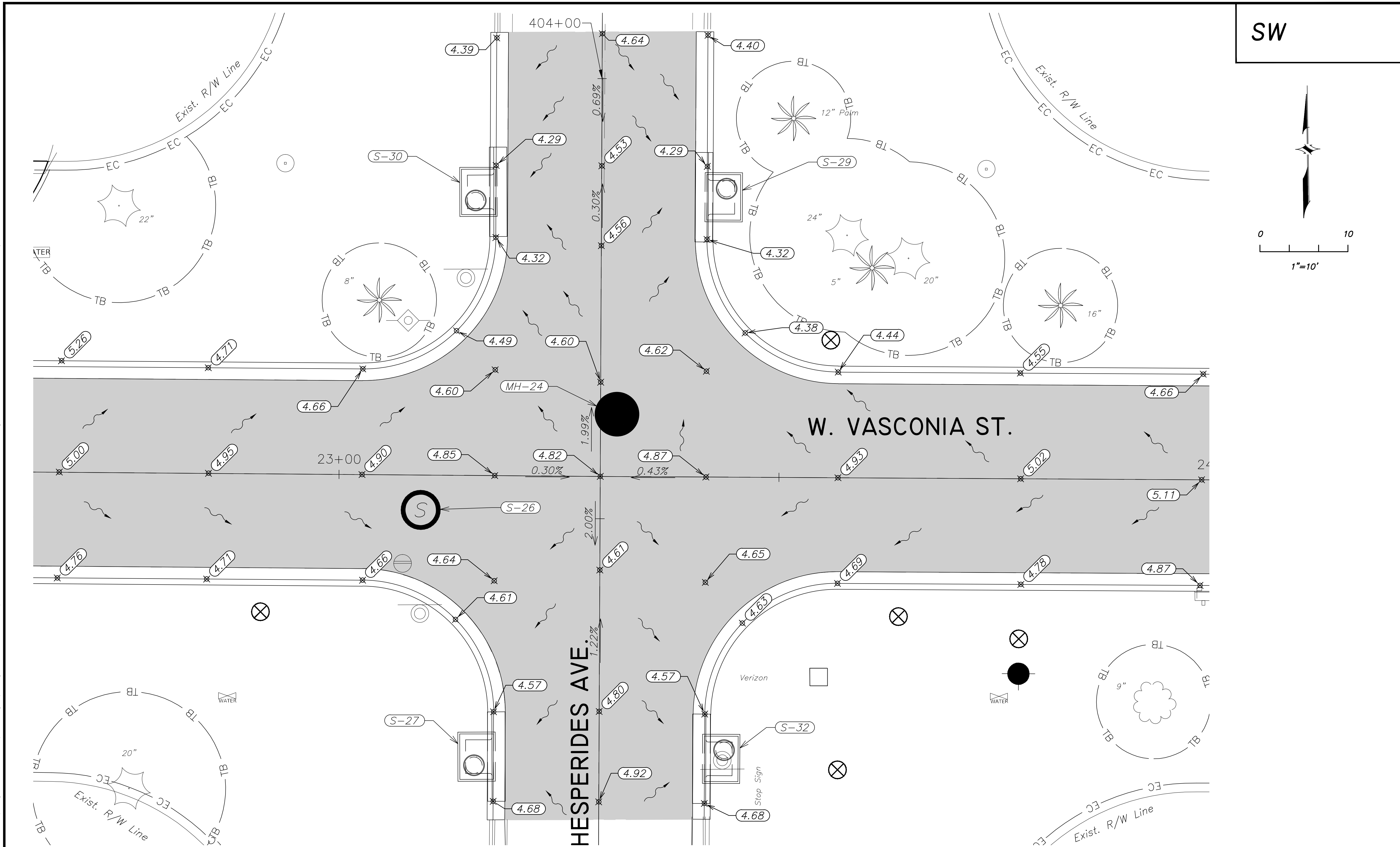

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST. & HESPERIDES AVE.
DETAILED GRADING PLAN

SHEET
68E
of 105

SW

S. MANHATTAN AVE.

W. VASCONIA STREET

W. VASCONIA STREET

Asph Dwy

Exist. R/W Line

EC

S/w

S-101

S-100

S-100A

S-102

S-102A

S-103

MH-S-40

MH-S-41

MH-S-101A

MH-12

MH-S-42

608+00

31+00

32+00

0.30%

0.61%

2.04%

1.61%

0.25%

1.26%

0.38%

0.37%

4.63 4.61 4.66 4.69 4.82 4.85 4.80 4.76 4.95 4.90 4.67 4.85 4.80 4.76 4.50 4.56 4.57 5.08 5.04 5.21 5.18 5.26 5.35 5.42 5.28 5.09 5.15 4.62 4.62 4.52 4.77 4.64 4.68 4.69 4.75 4.90 4.88 4.93 4.99 4.78 4.61 4.65 4.70 5.15 4.76 4.57 4.53 4.57

WATER

TB

4"

10"

Building Line

R/W Line

0 10

1"=10'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST. & MANHATTAN AVE.
DETAILED GRADING PLAN

SHEET 68F of 105

SW

0 10

1"=10'

HUBERT AVE.

W. VASCONIA ST.

Exist. R/W Line

EC

TB

8" Camphor

14" Camphor

S-48

S-48A

S-50

S-52

S-54

MH-10

MH-9

MH-S-47

MH-S-50A

MH-S-55

704+00

37+00

1.12%

1.04%

2.00%

0.30%

5.52 5.56 5.60 5.66 5.72 5.75 5.99 5.96 5.90 5.61 5.65 5.68 5.76 5.84 5.80 5.96 6.14 5.97 5.85 5.88 5.92 5.62 5.64 5.66 5.71 5.95 6.21 5.74 5.98 5.77 6.01

WATER

Verzon

24"

Clea

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST. & HUBERT AVE.
DETAILED GRADING PLAN

SHEET 68G of 105

SW

0 20

1"=20'

Exist. R/W Line

S. MANHATTAN AVE.

S-1430 S-1431 S-1438 S-1440 S-1434A S-1439

MH-S-1430A MH-S-1432 MH-S-1434

507+00 508+00 509+00 605+00 604+00

EL PRADO BLVD.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. & MANHATTAN AVE.
DETAILED GRADING PLAN

SHEET 68H of 105

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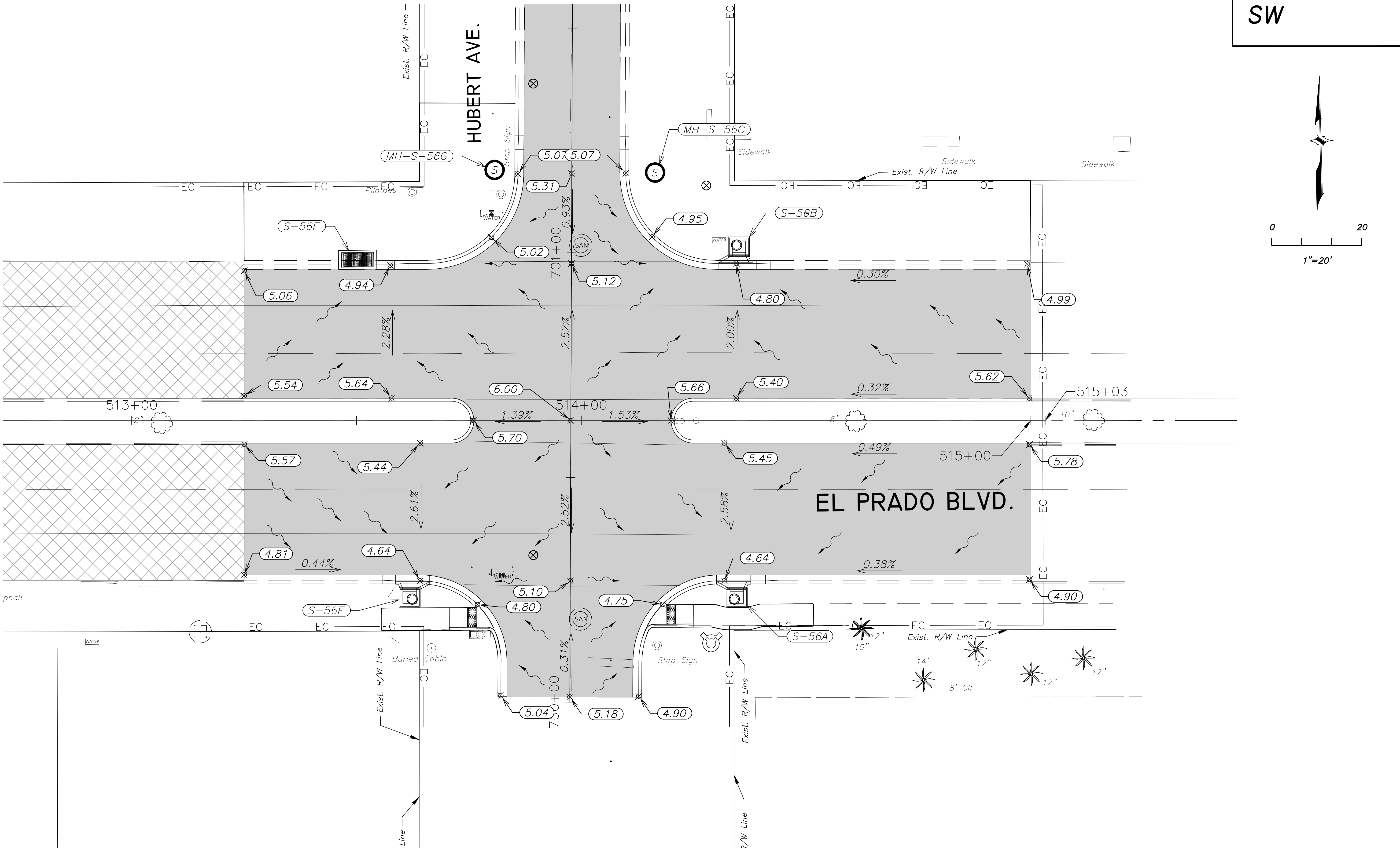

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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1			4		

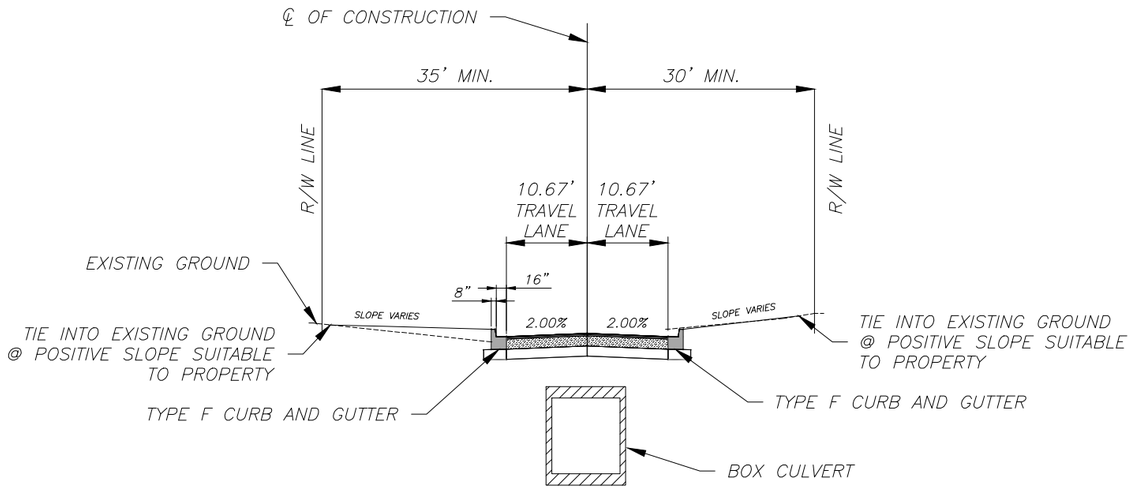
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD. & HUBERT AVE.
DETAILED GRADING PLAN

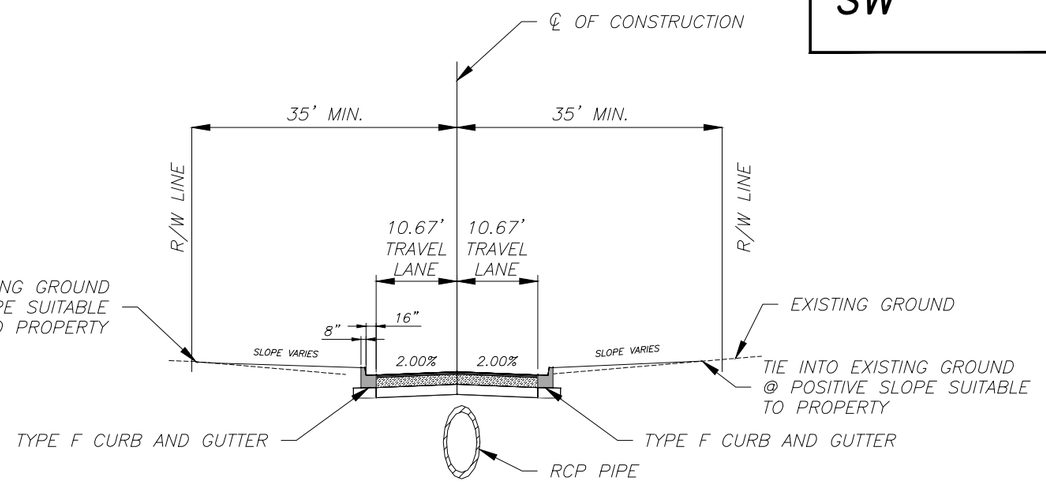
SHEET 681 of 105

SW



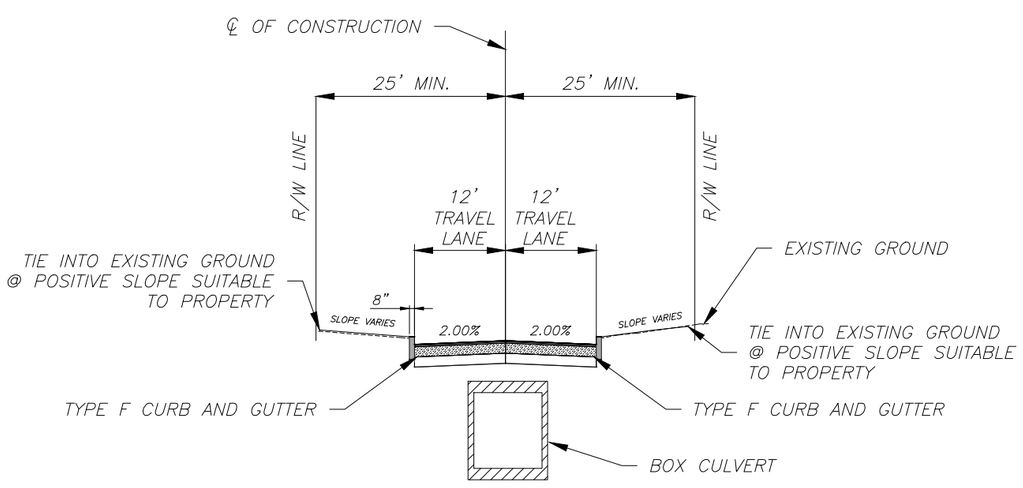
TYPICAL SECTION
CHEROKEE ROAD

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")



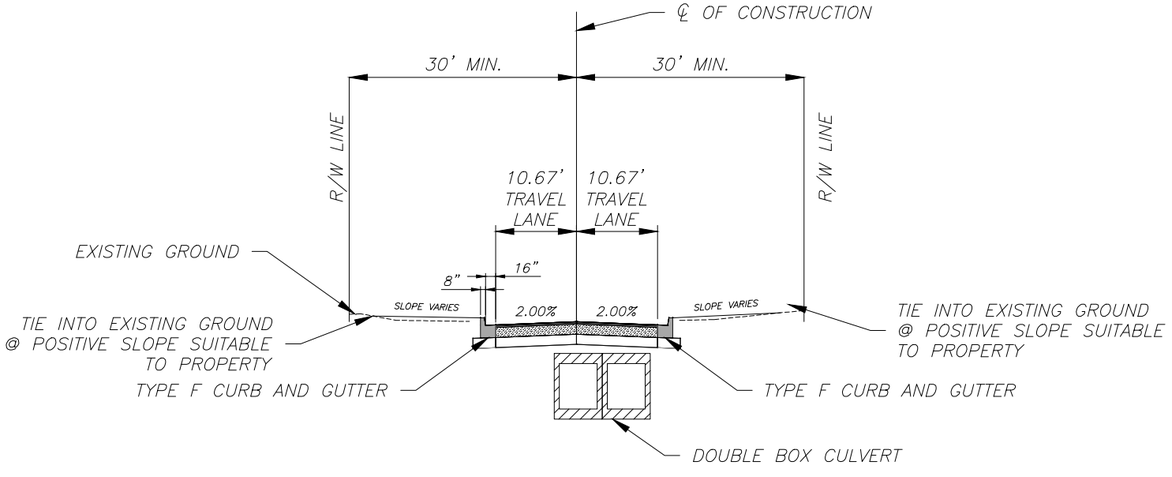
TYPICAL SECTION
W VASCONIA STREET
STA 10+40.54 - STA 31+33.53

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")



TYPICAL SECTION
W VASCONIA STREET
STA 31+91.40 - STA 37+57.54

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")



TYPICAL SECTION
SHAMROCK ROAD

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

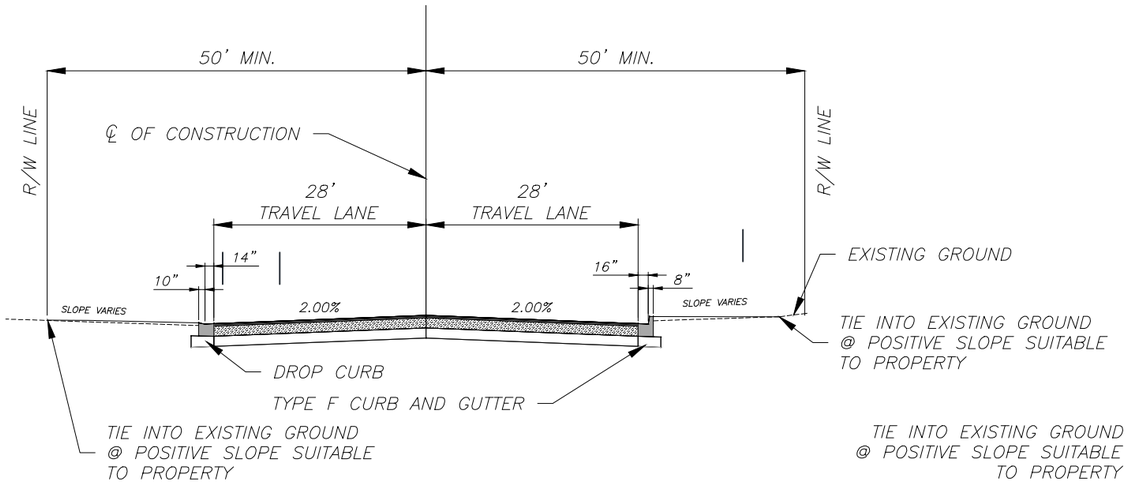
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

TYPICAL SECTIONS

SHEET 69 OF 105

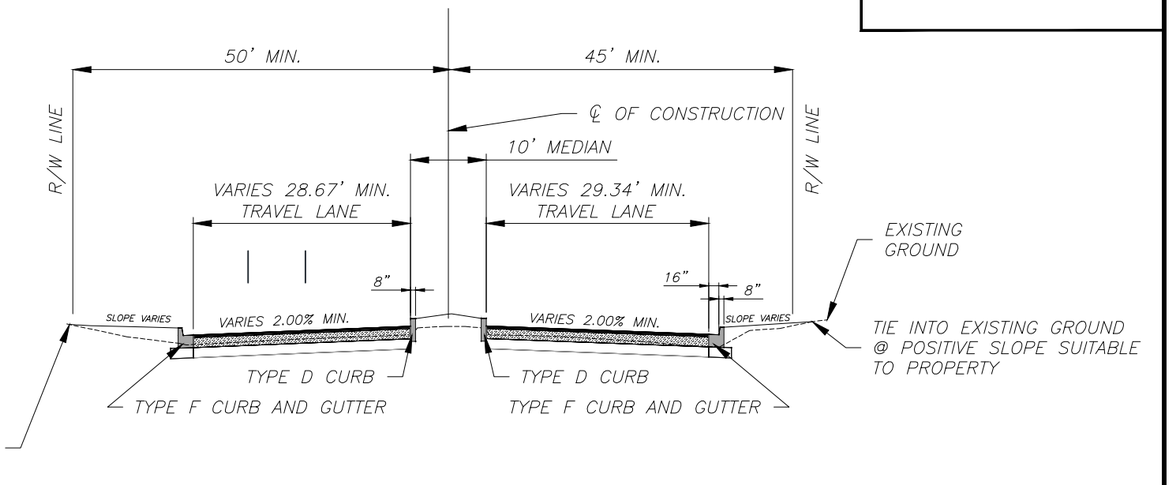
G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-Typical Sections.dwg - Printed Feb 11, 2016-10:50am by: JenP

SW



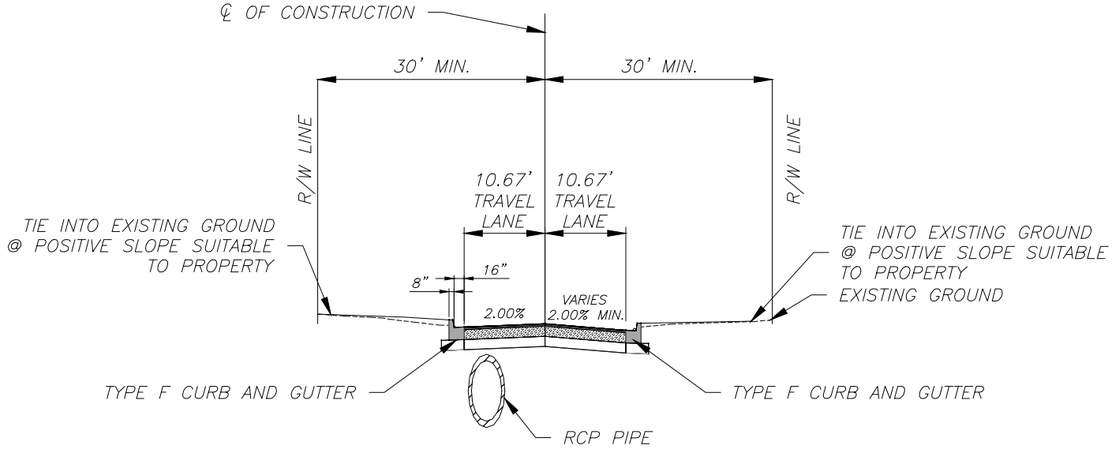
TYPICAL SECTION
MANHATTAN AVENUE

FRICTION COURSE FC-9.5 (TRAFFIC B) (1")
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")



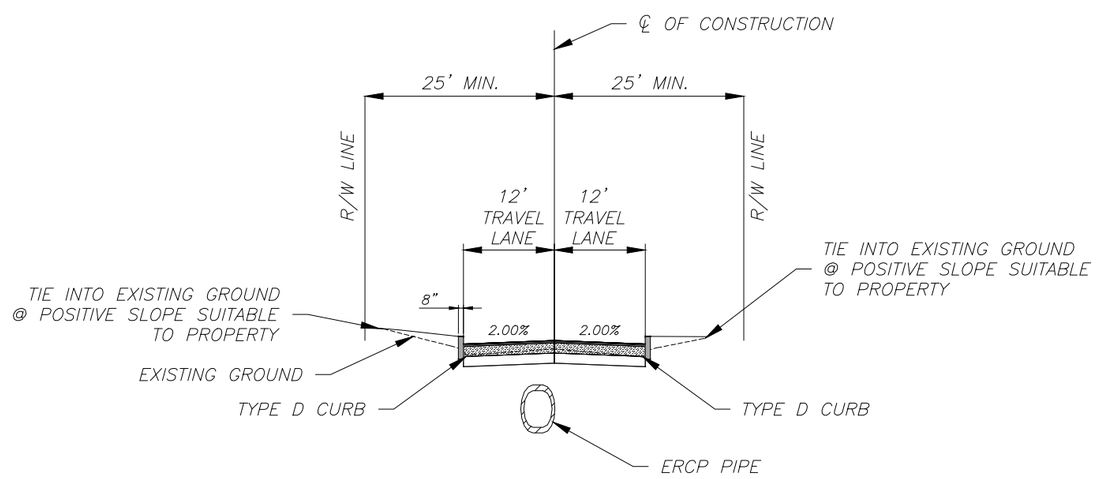
TYPICAL SECTION
EL PRADO BOULEVARD

FRICTION COURSE FC-9.5 (TRAFFIC B) (1")
TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")



TYPICAL SECTION
SEVILLA STREET

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")



TYPICAL SECTION
HUBERT AVENUE

TYPE SP STRUCTURAL COURSE (TRAFFIC B) (2")
OPTIONAL BASE GROUP GROUP 06 (CRUSHED CONCRETE LBR-100) (8")
TYPE B STABILIZATION (LBR-40) (6")

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

TYPICAL SECTIONS

SHEET
69A
105

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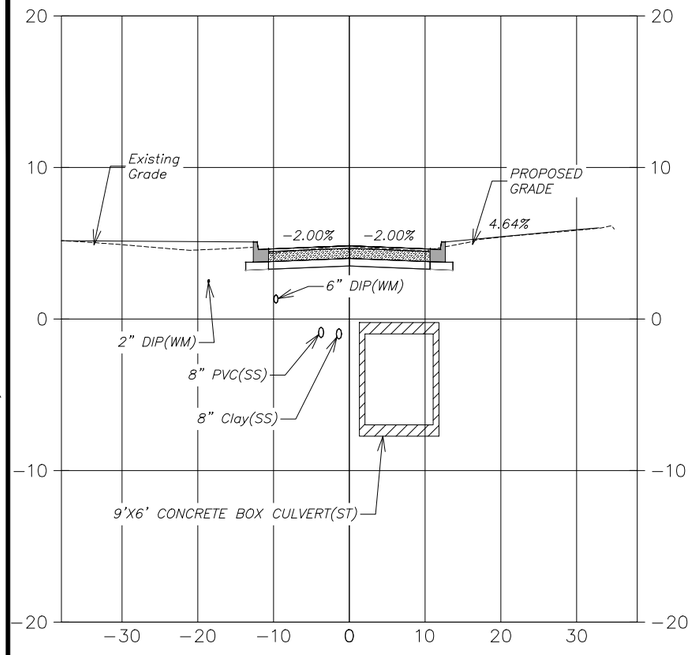

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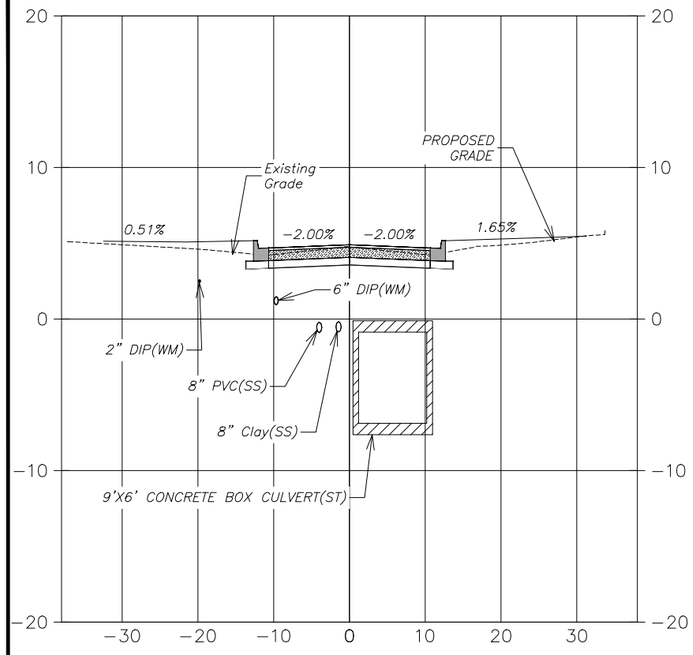

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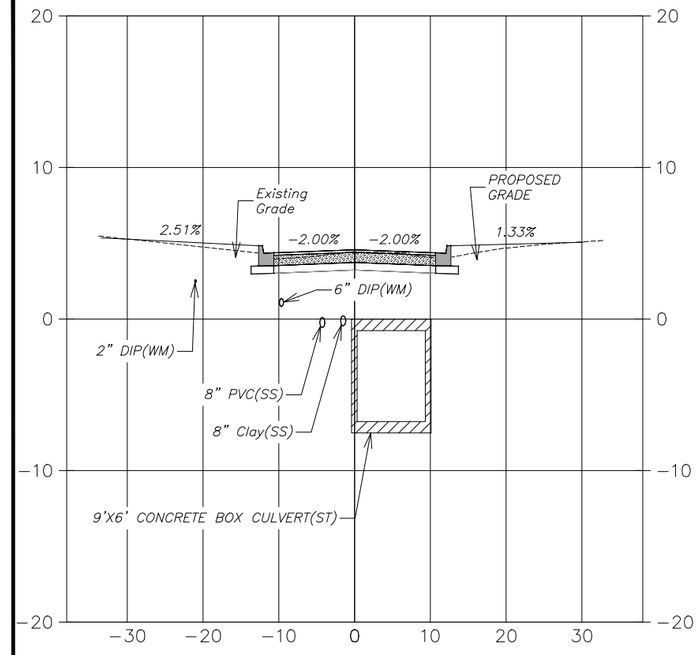

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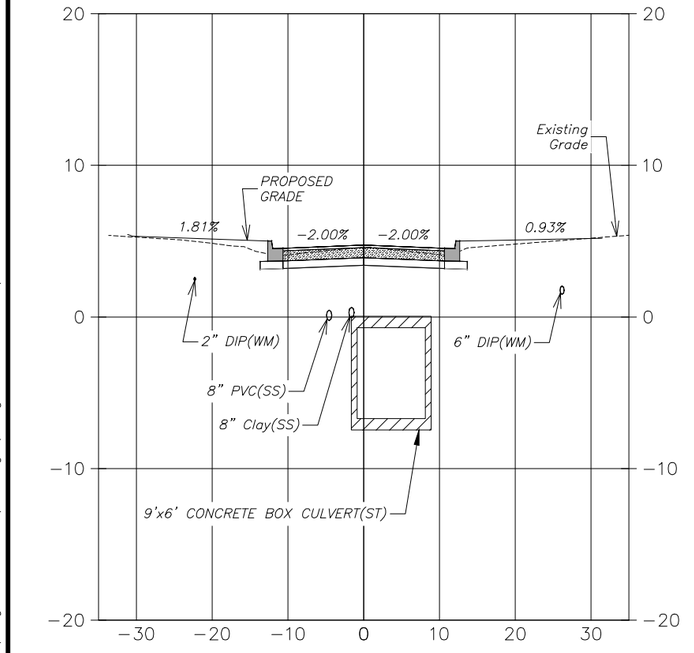

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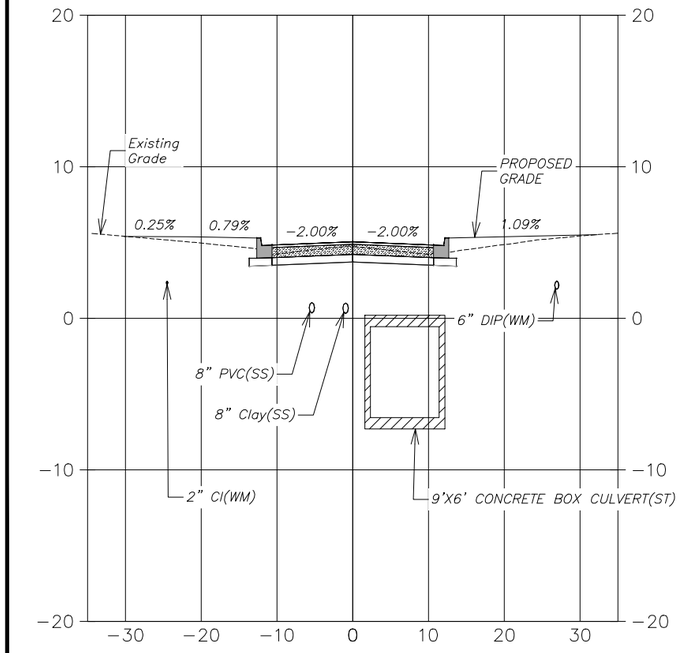

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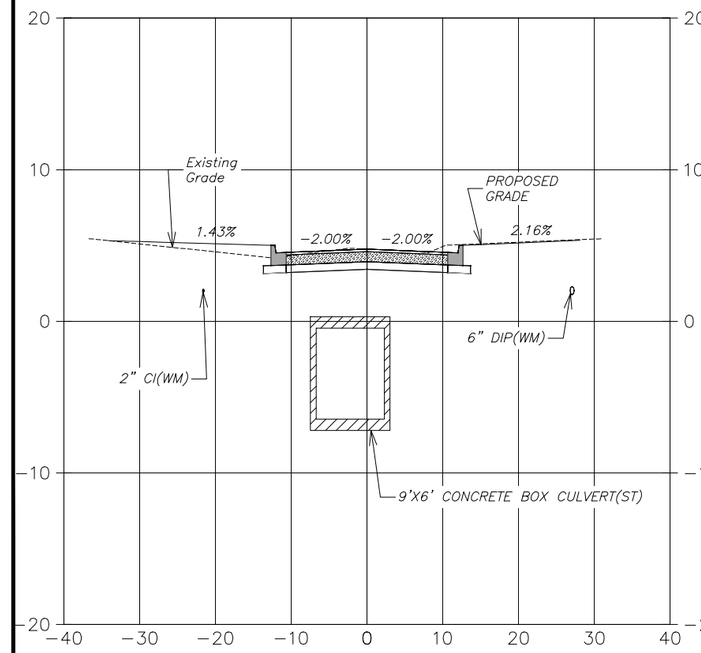

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SW

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
CROSS SECTIONS

SHEET 69B of 105

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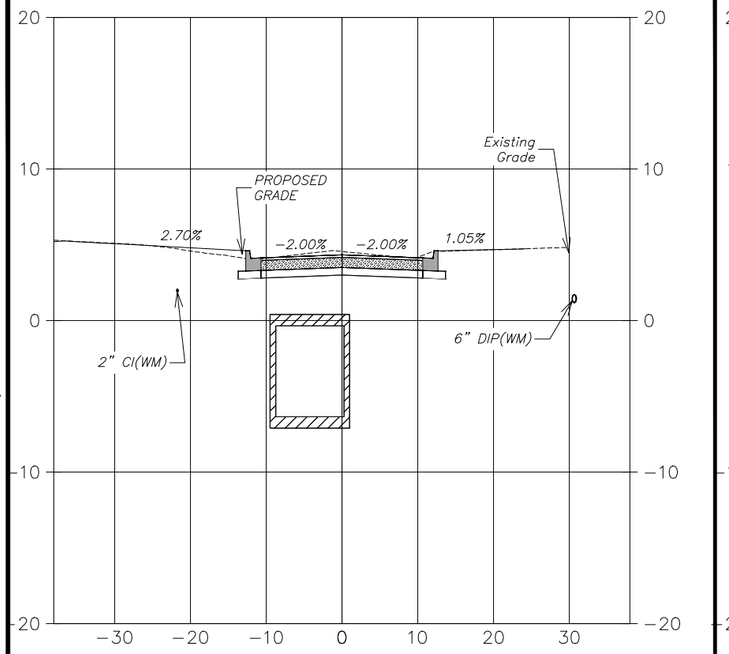

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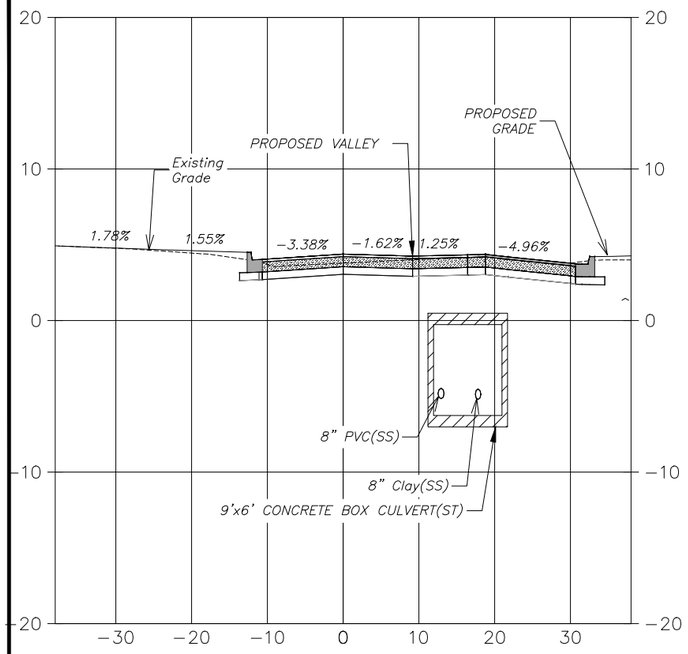

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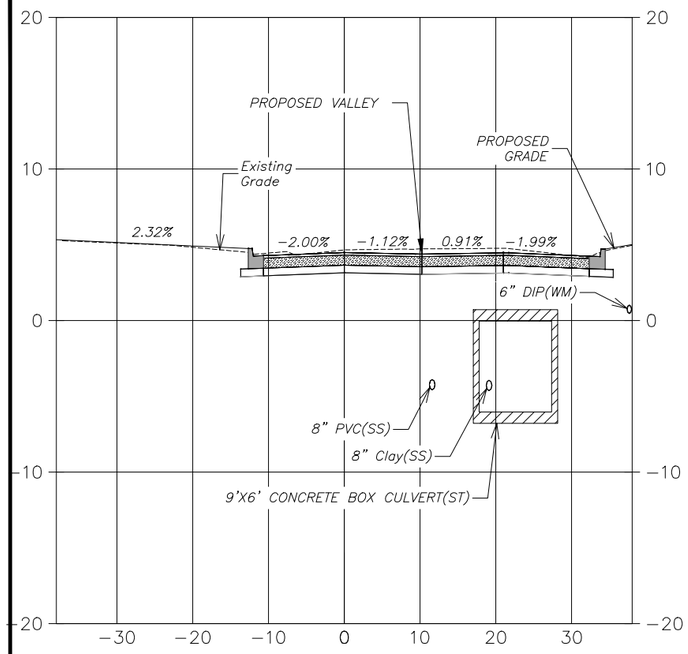

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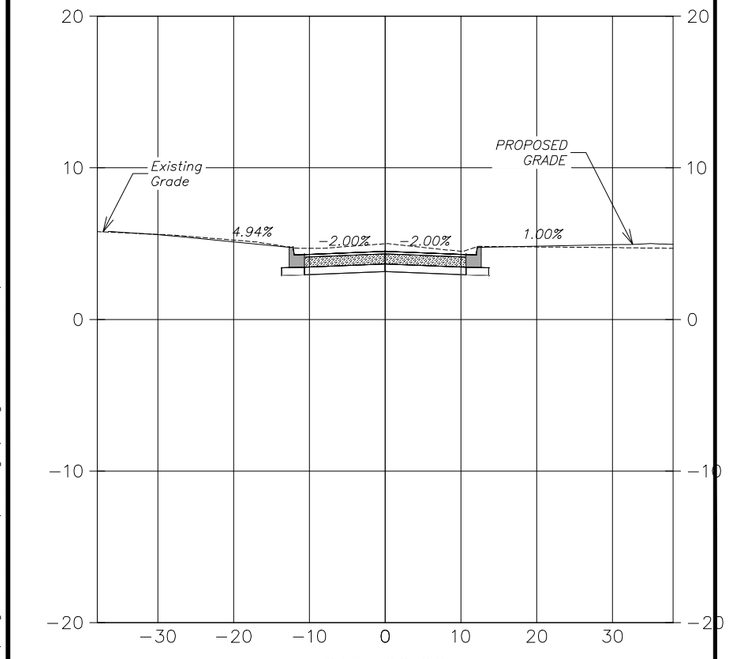
SW



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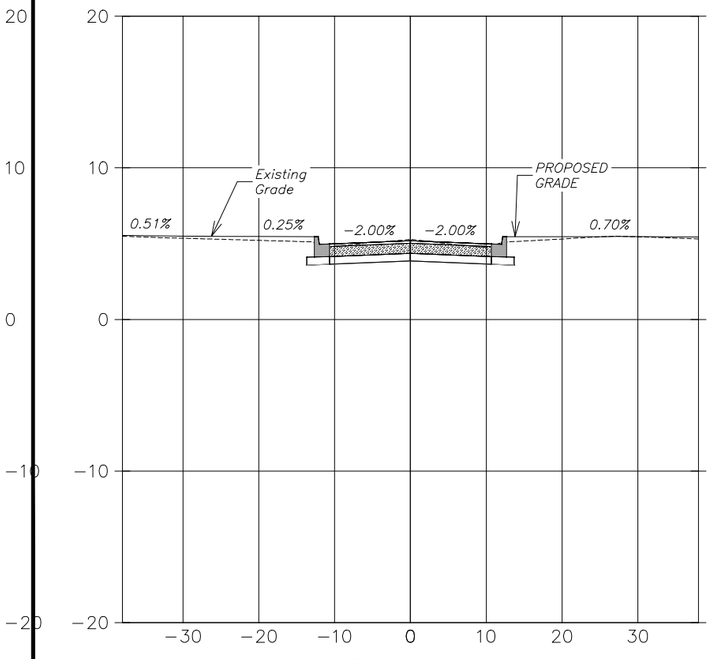

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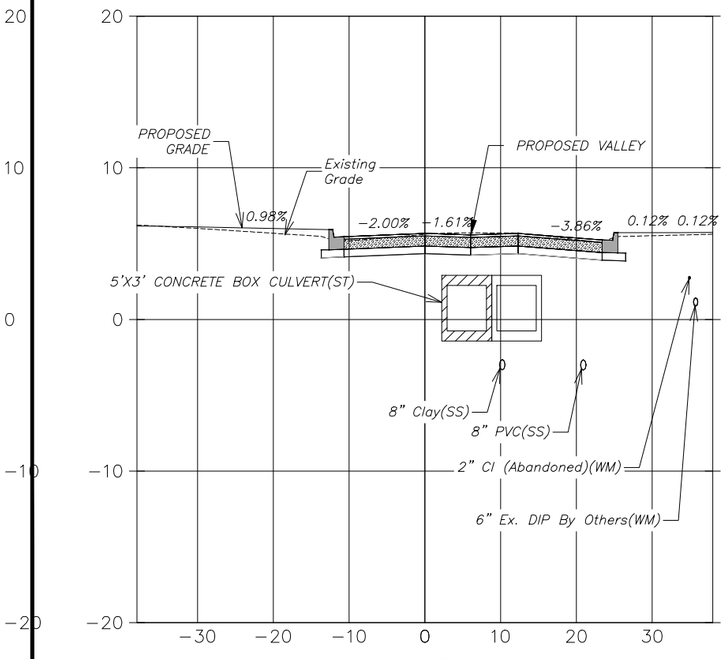

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. & SHAMROCK RD.
CROSS SECTIONS

SHEET 70 OF 105

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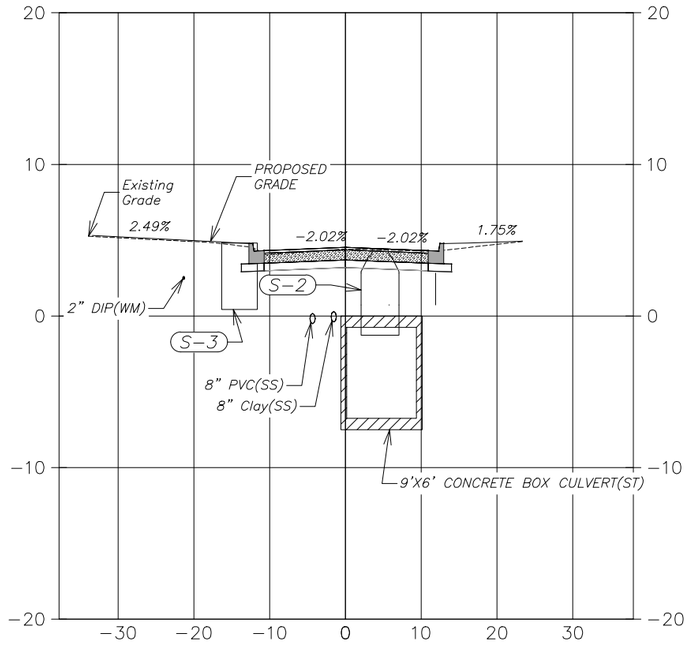

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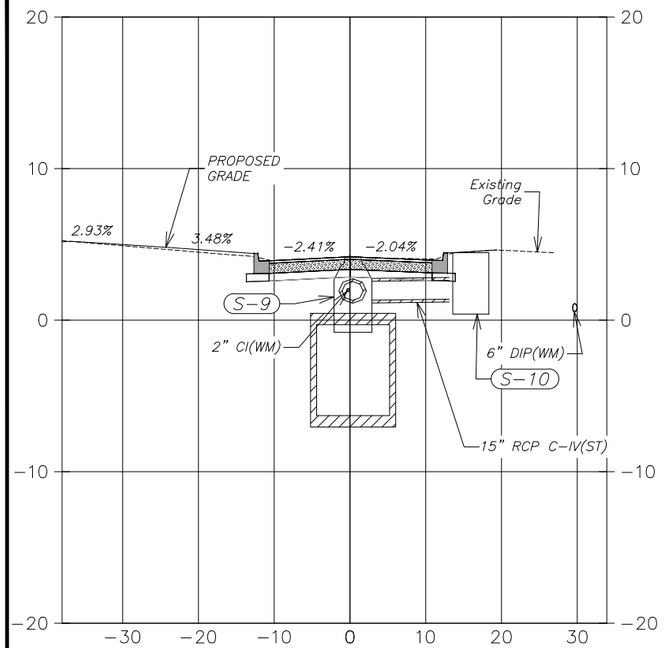

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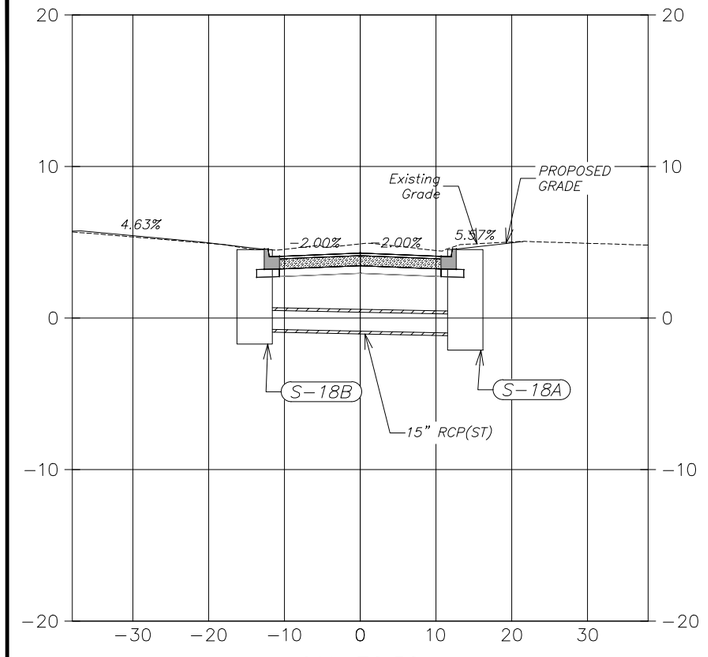

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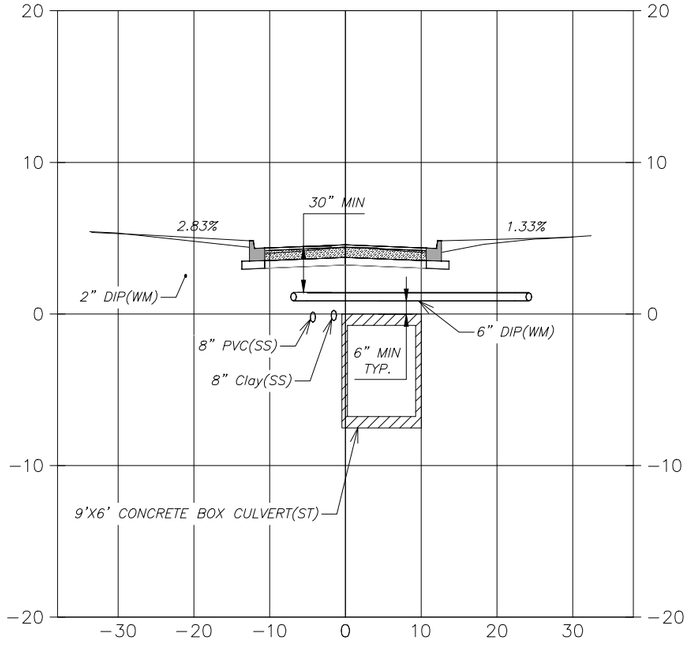

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SW

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-CHEROKEE-VASCONIA-Sections.dwg - Printed Feb 11, 2016-10:56am by: JenP

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
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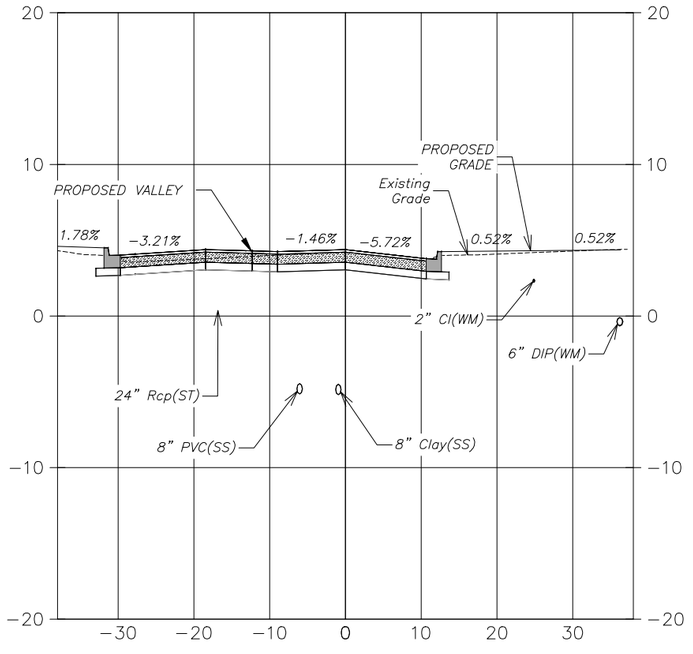
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
INLET CROSS SECTIONS

SHEET 71 OF 105



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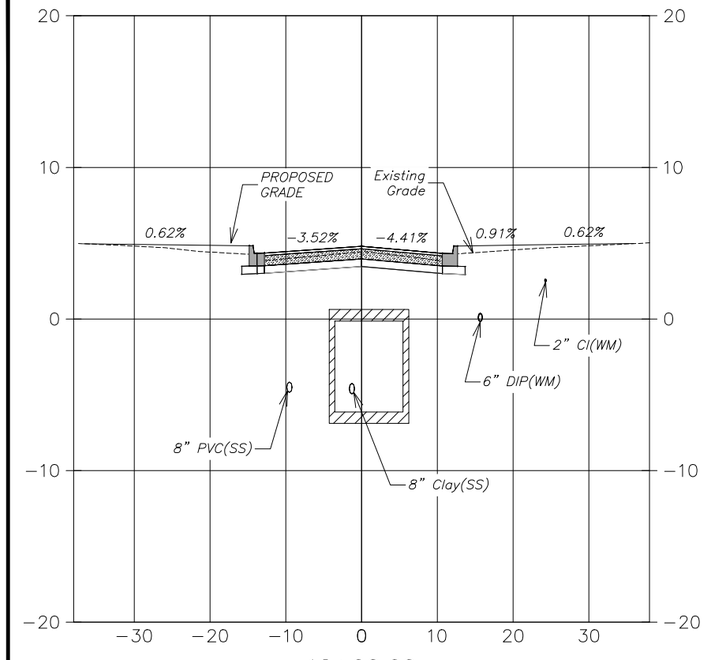

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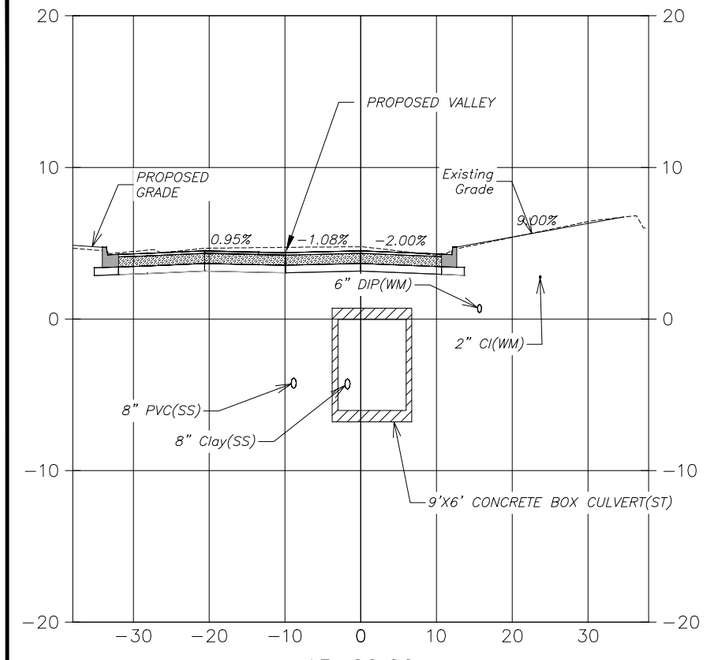

13+00.00
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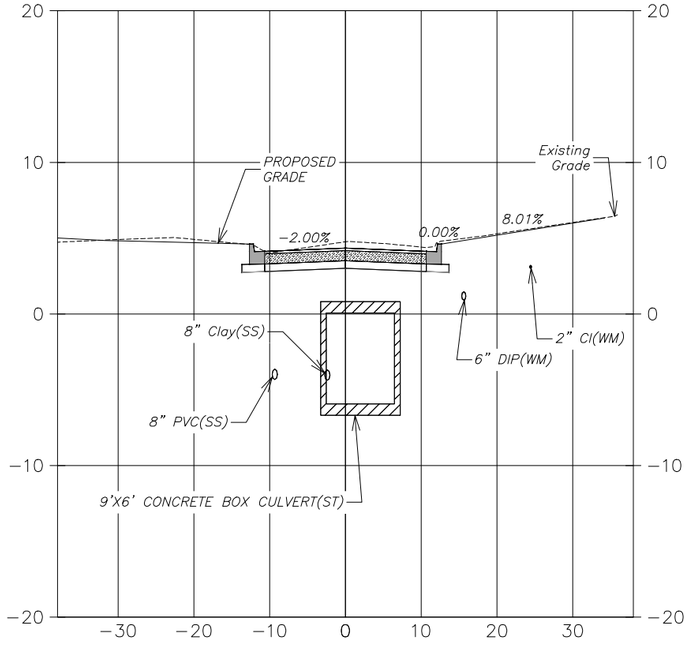
SW



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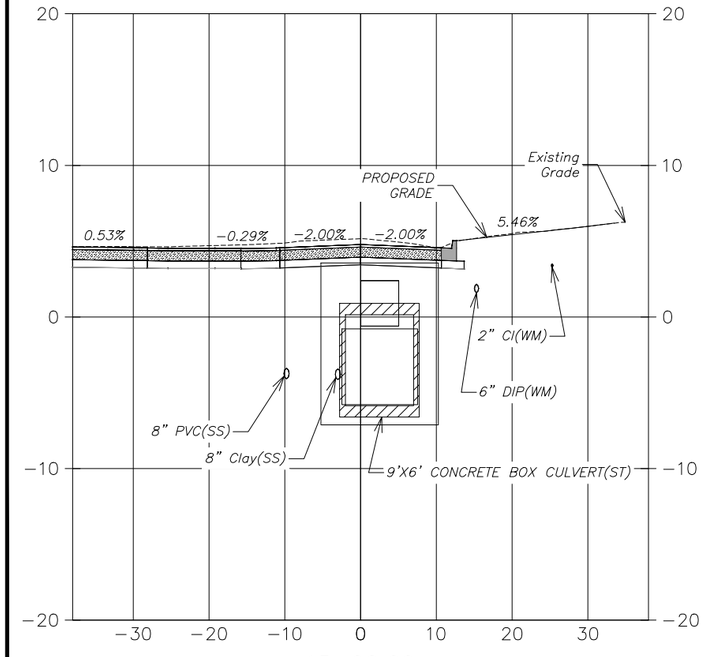

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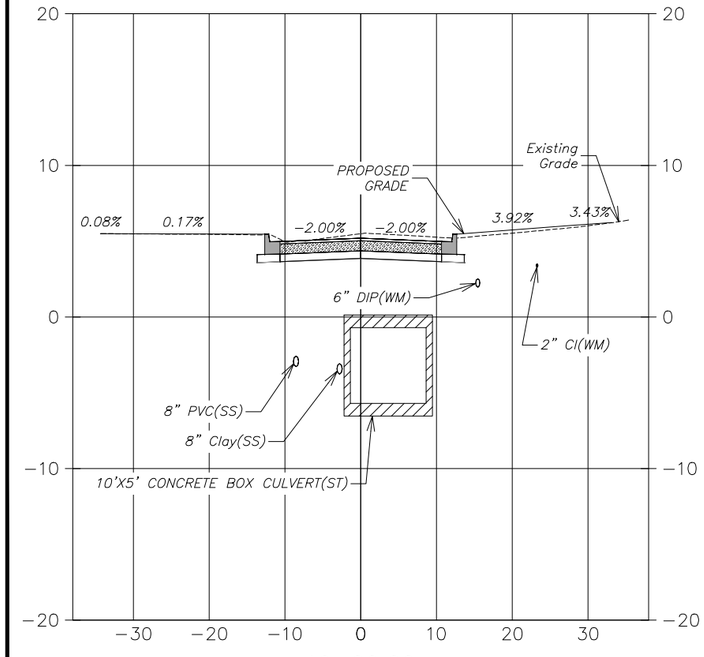

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
CROSS SECTIONS

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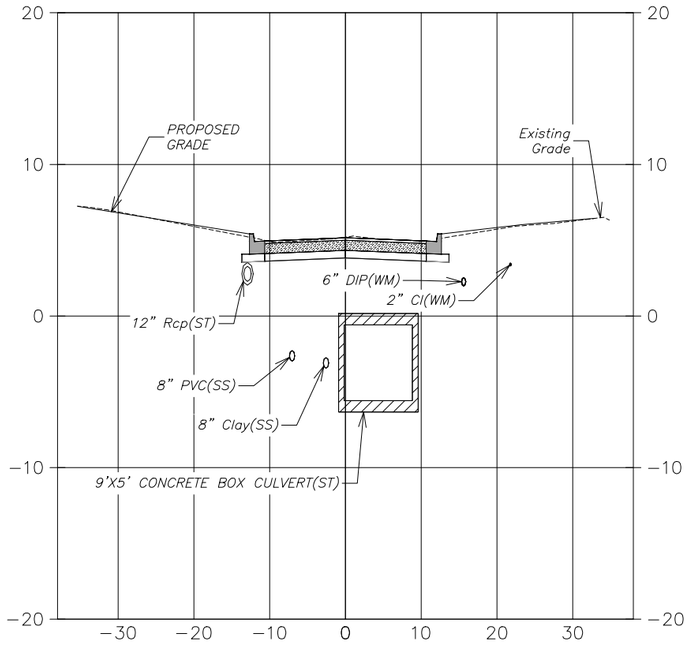

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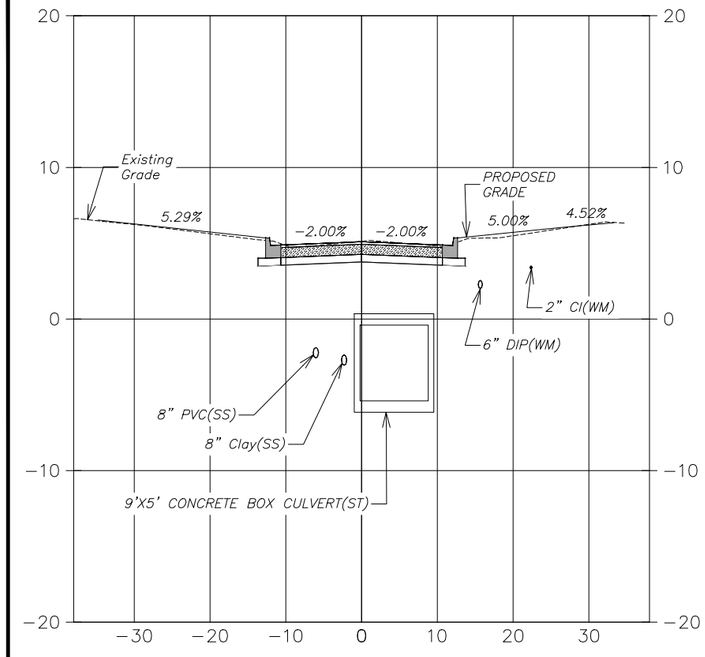

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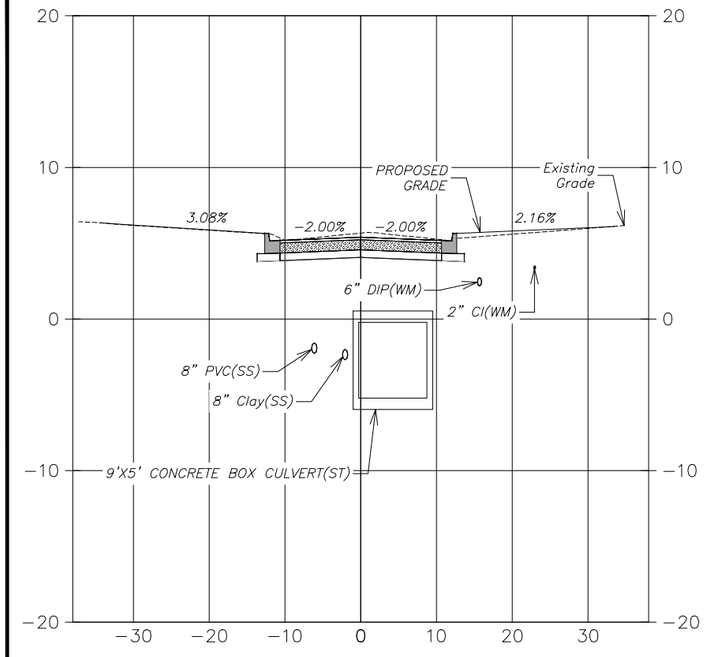

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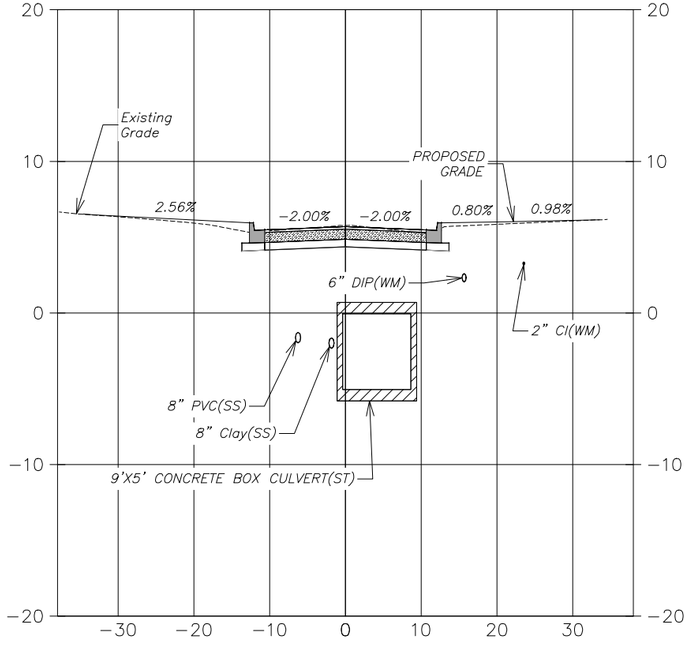
SW



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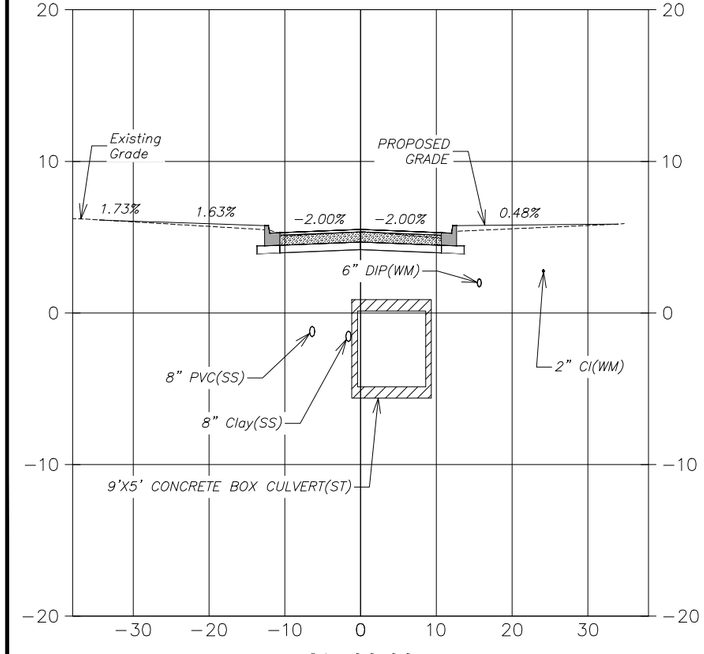

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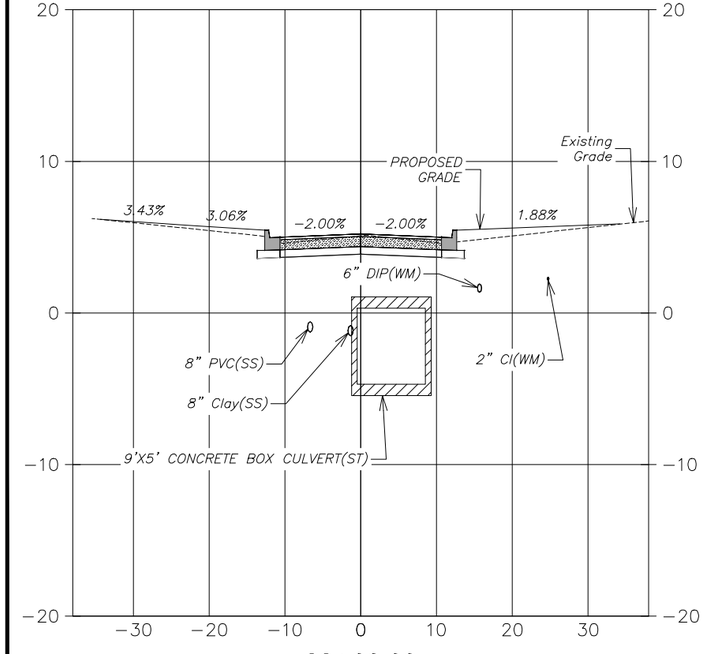

22+00.00
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
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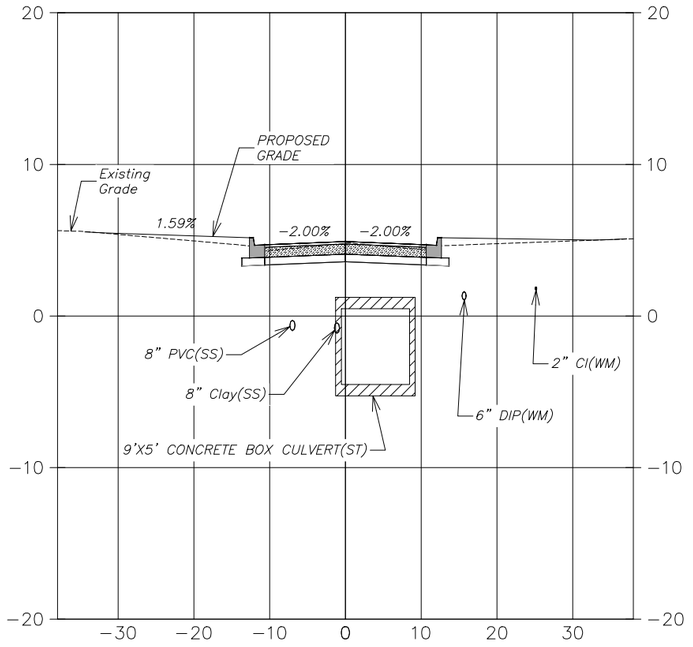

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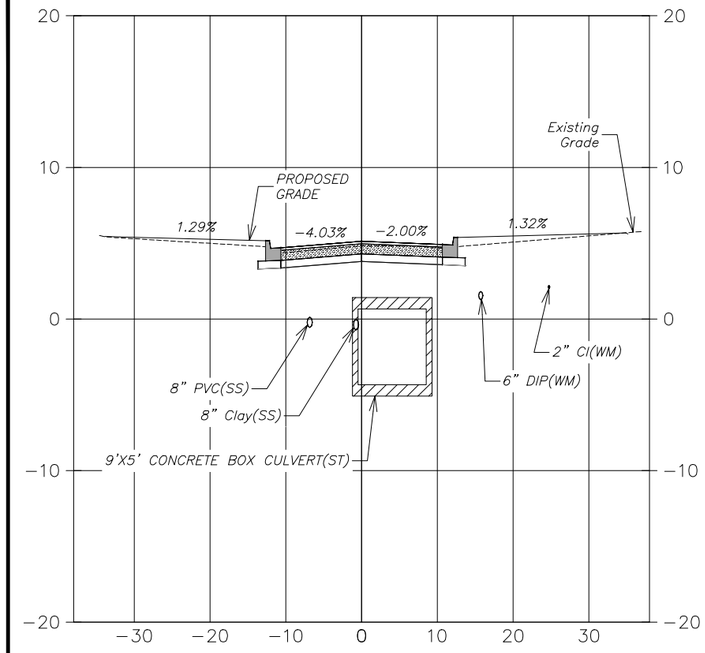

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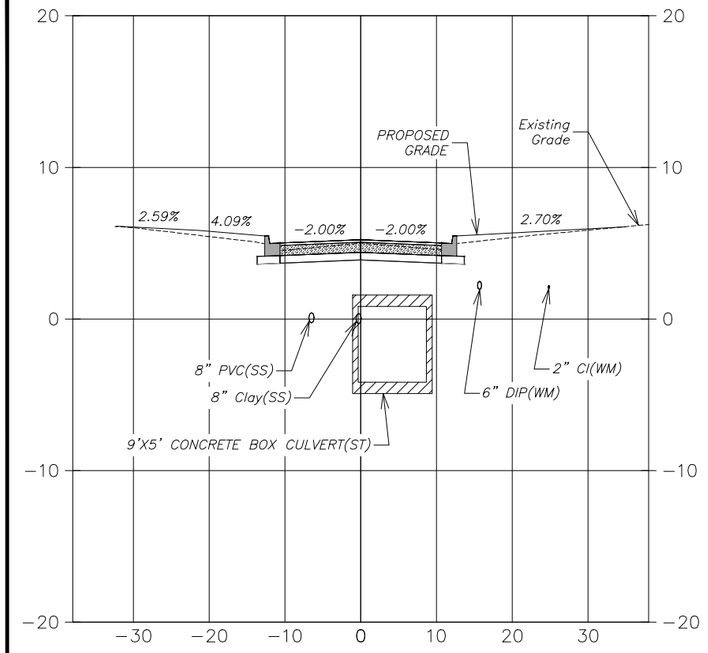

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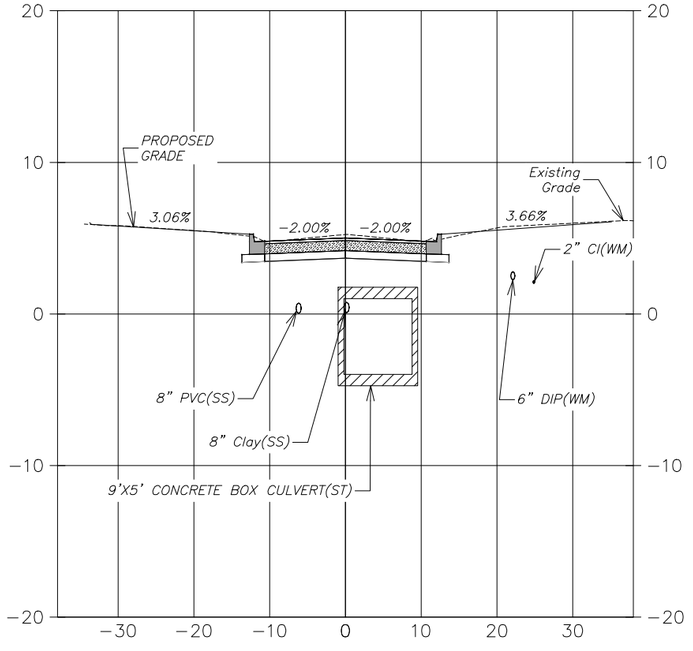

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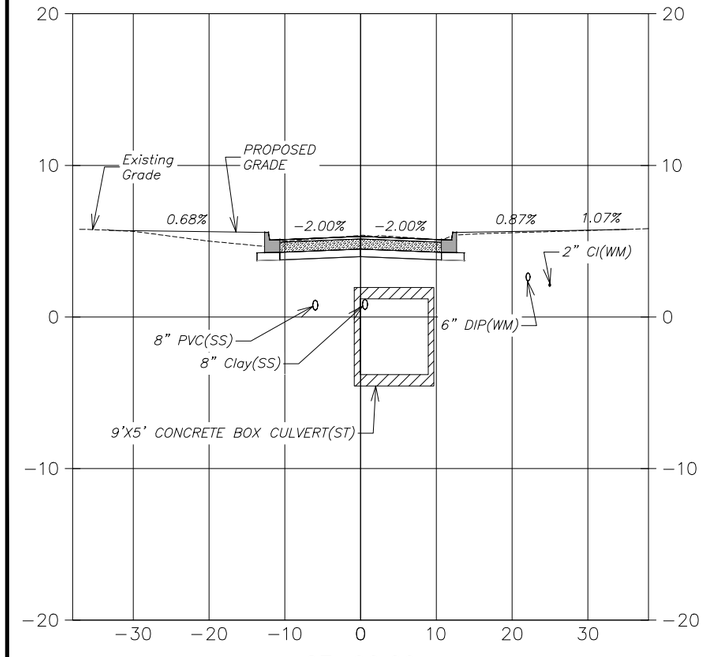

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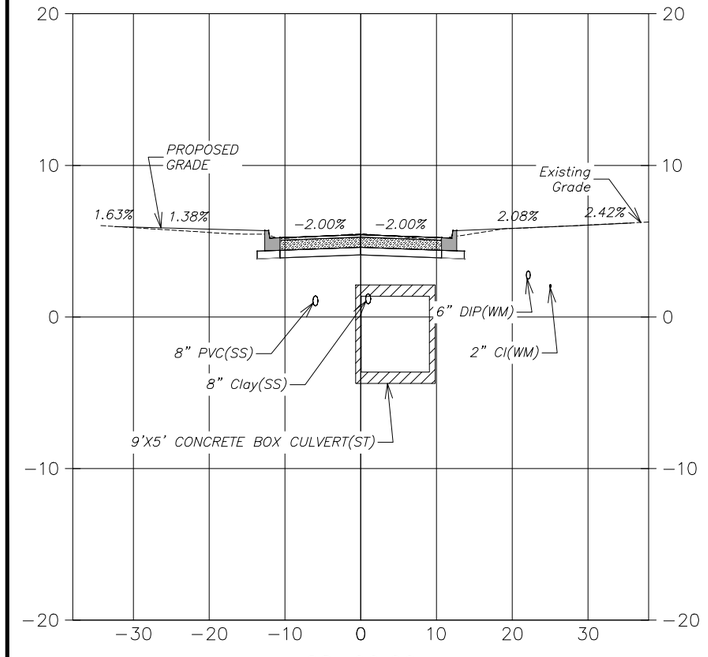

28+00.00
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
CROSS SECTIONS

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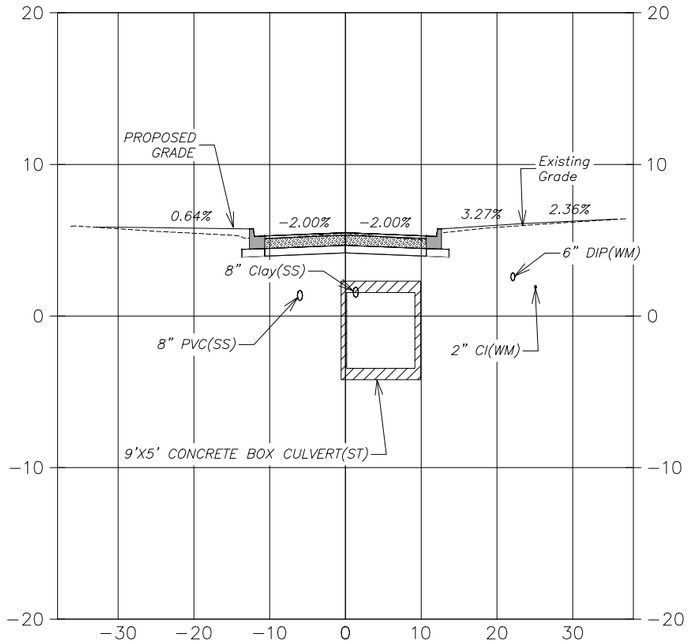

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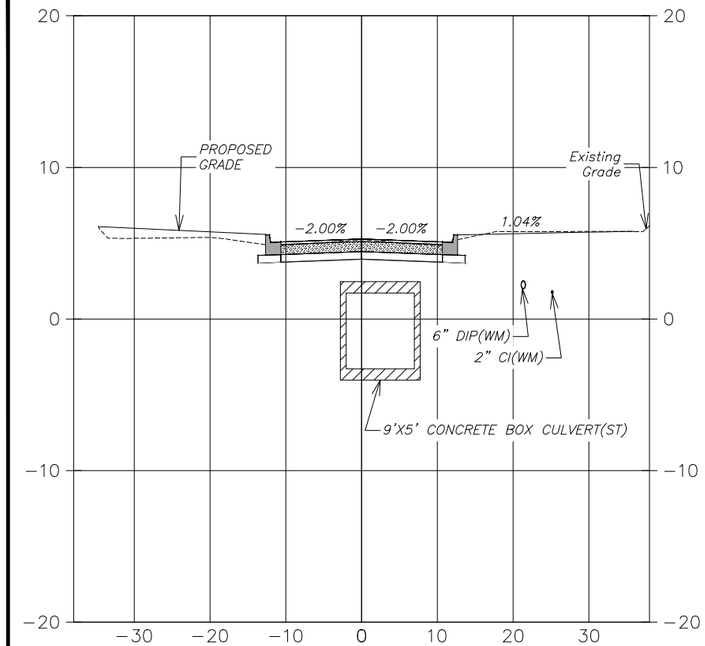

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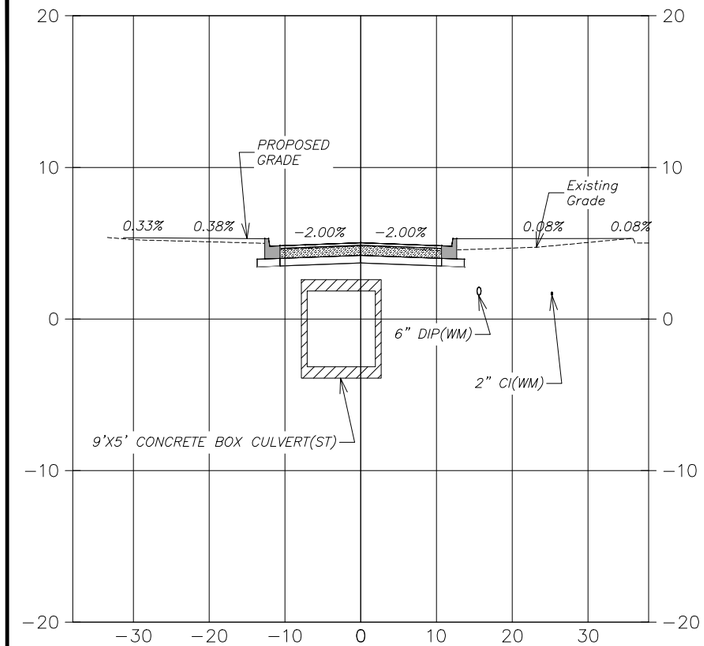

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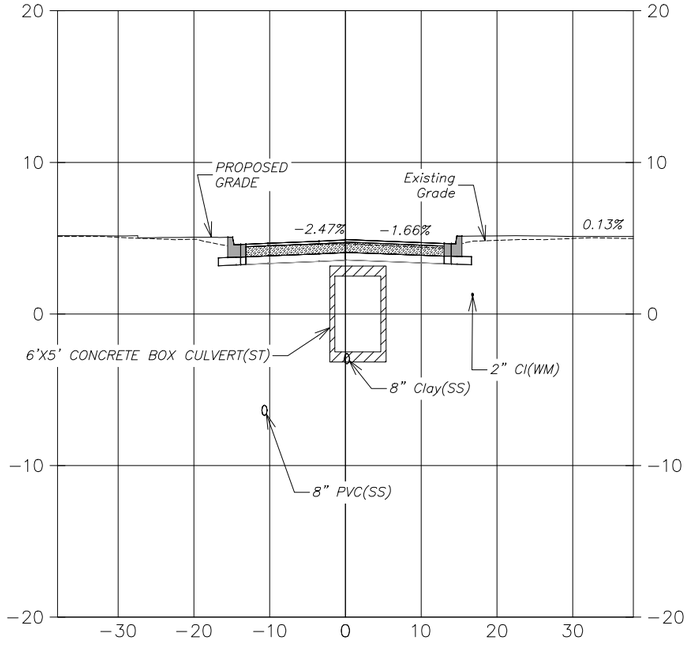

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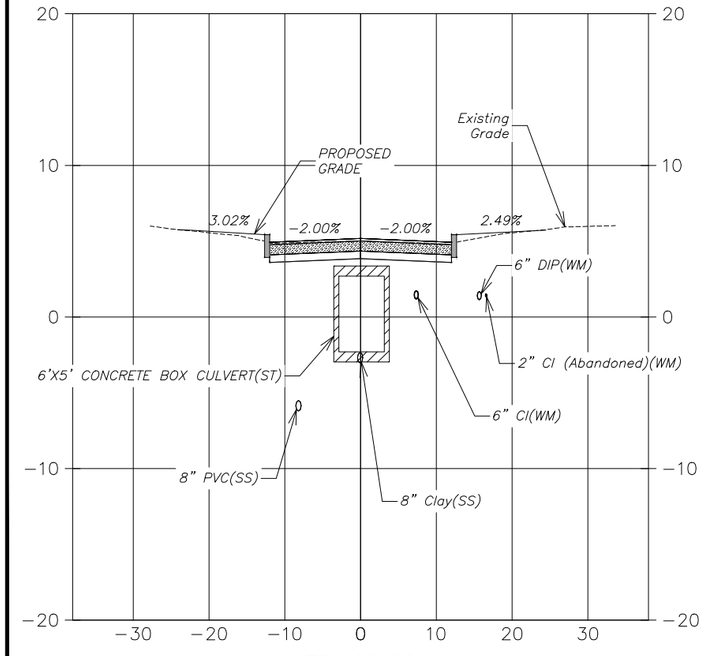

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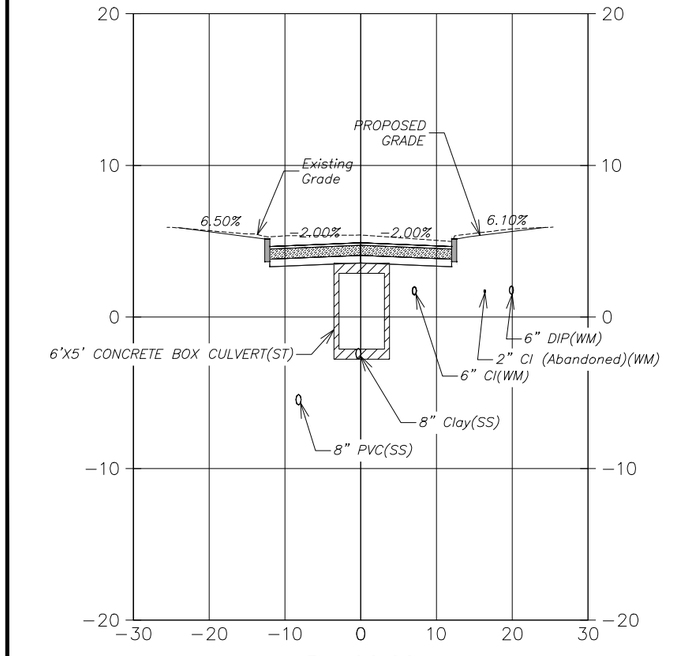

34+00.00
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SW

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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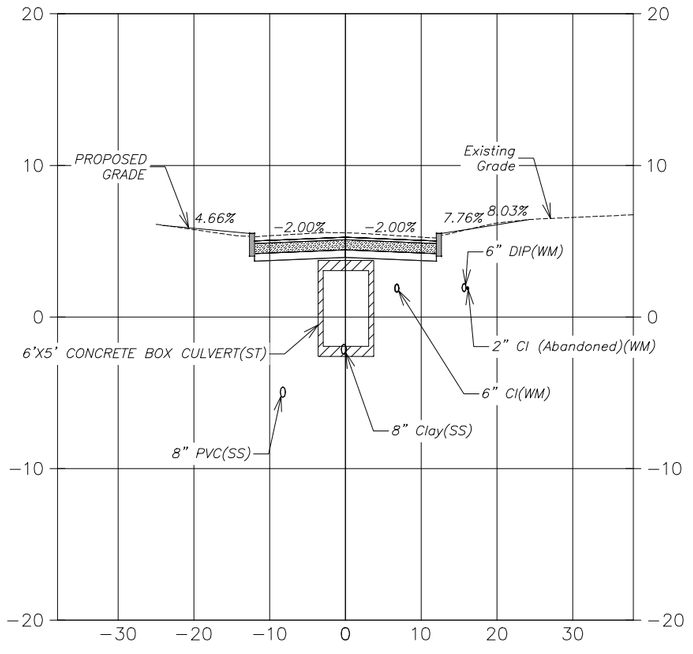
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
CROSS SECTIONS

SHEET 75 OF 105



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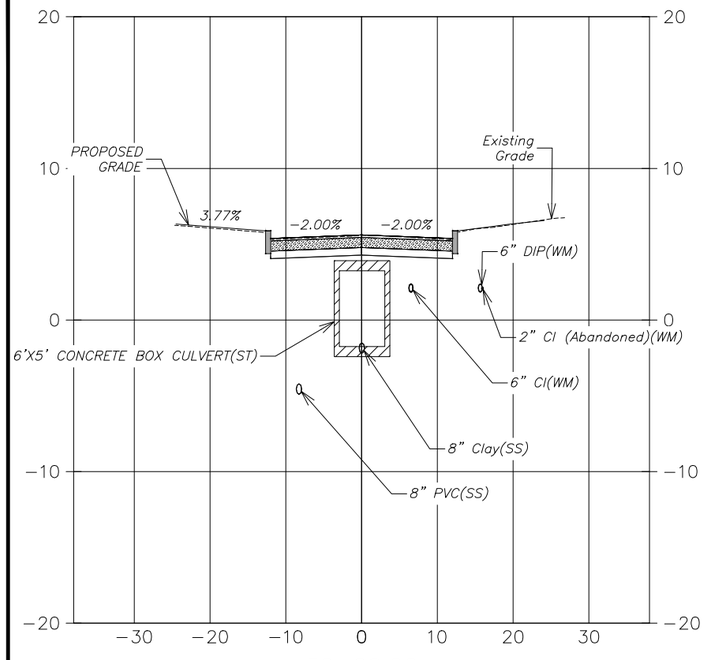

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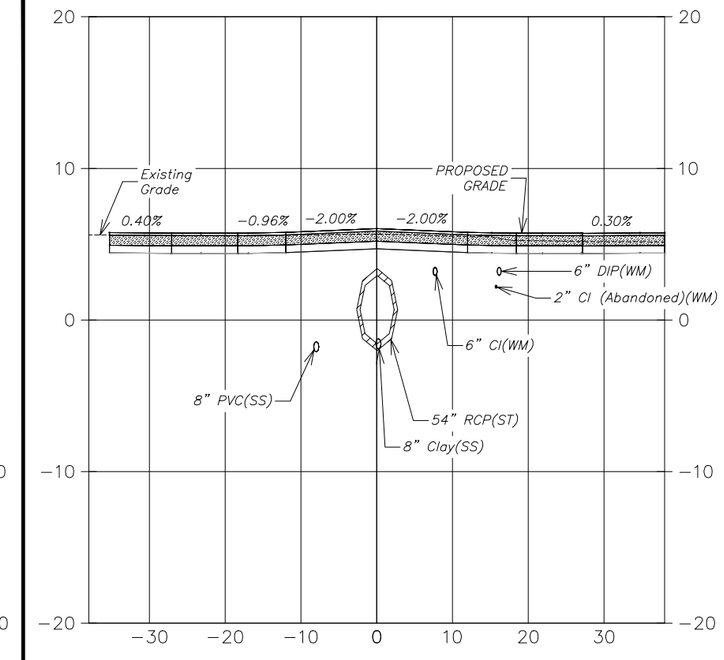

37+00.00

SCALE: HORZ. 1"=20'; VERT. 1"=10'

SW

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
CROSS SECTIONS

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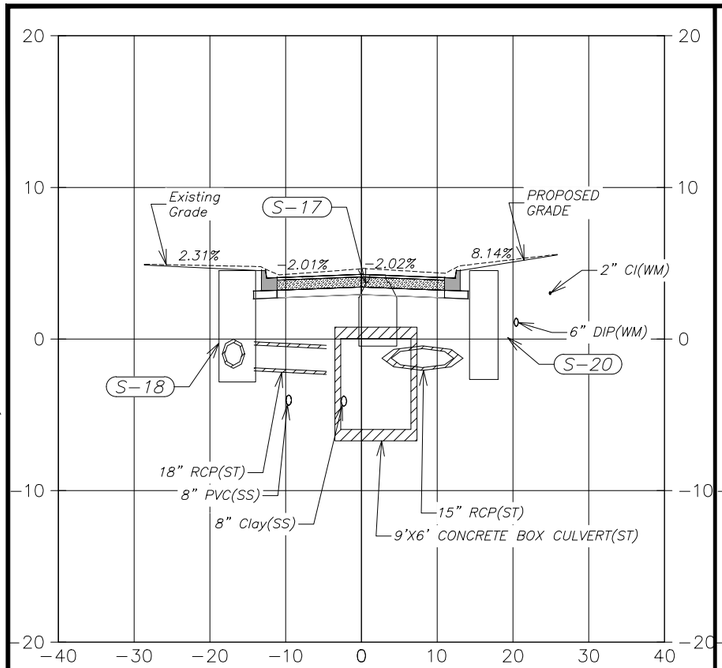

13+73.53

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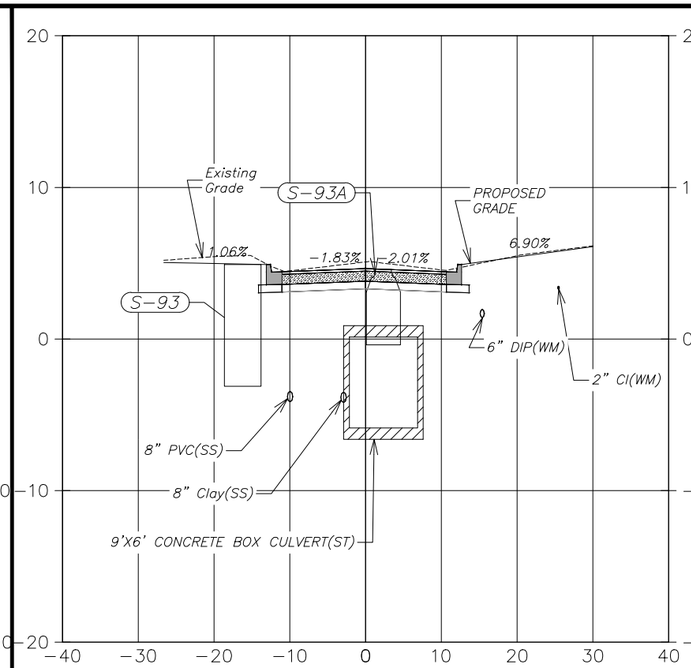

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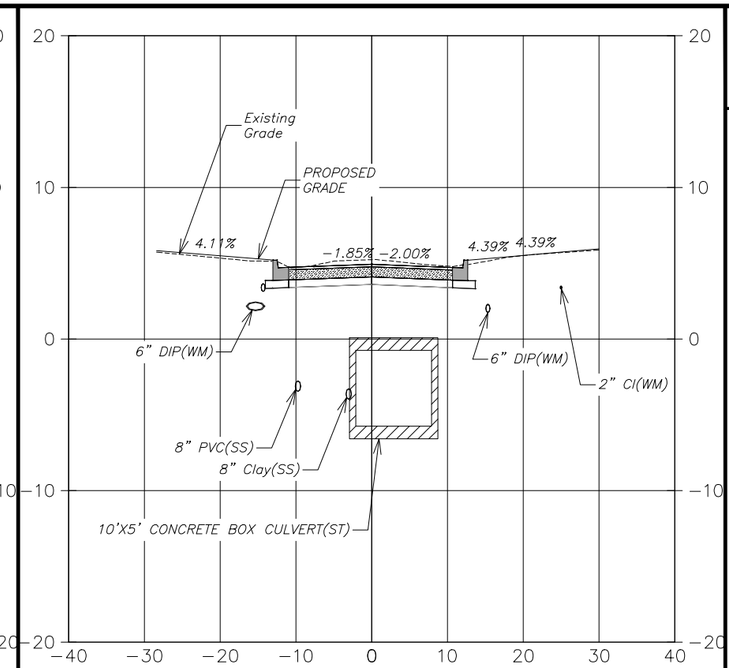

15+36.95

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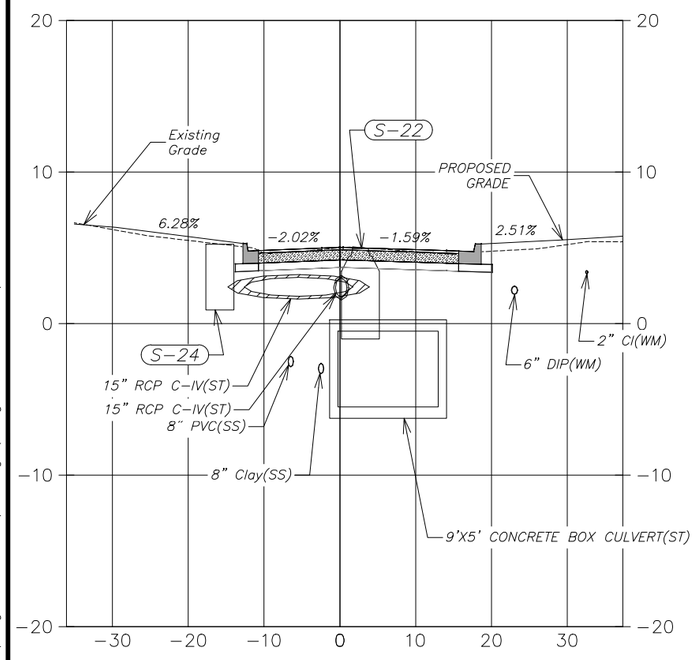
SW



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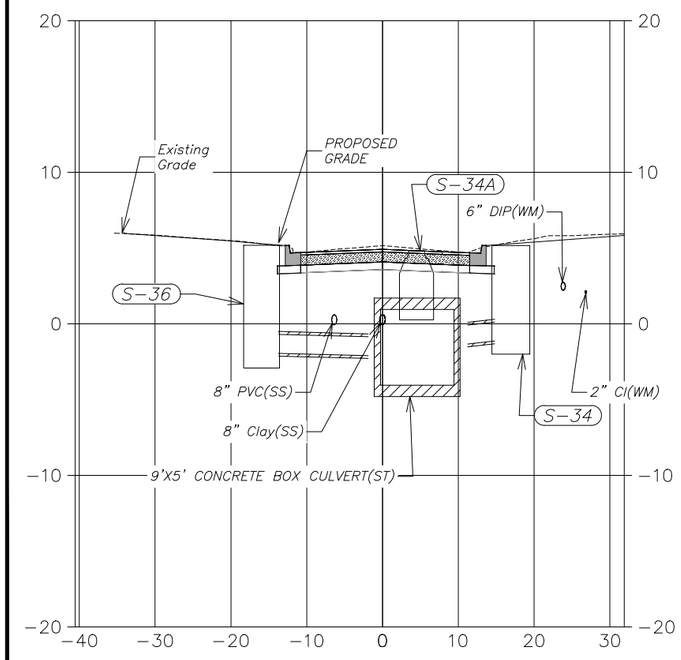

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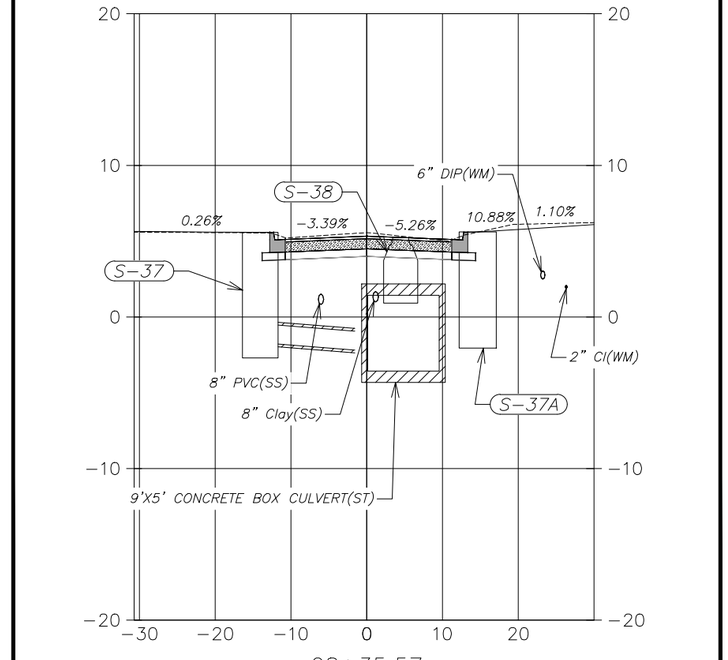

28+35.57

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
INLET CROSS SECTIONS

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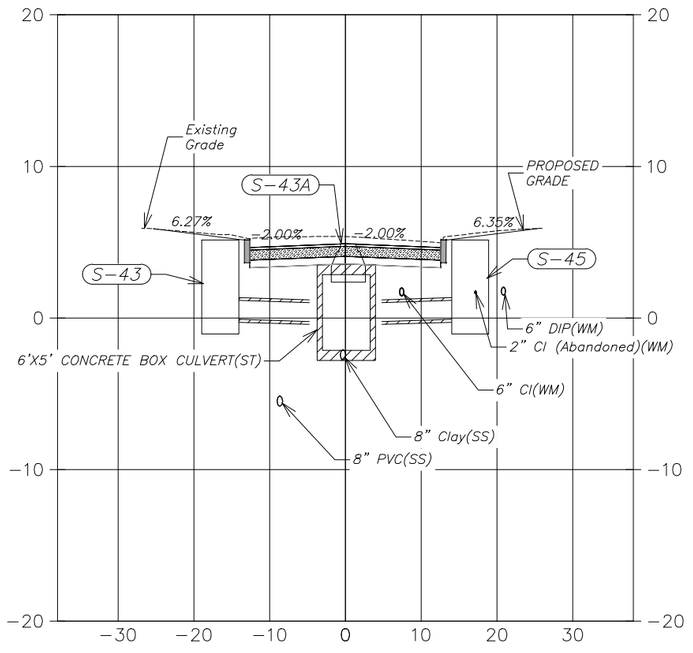

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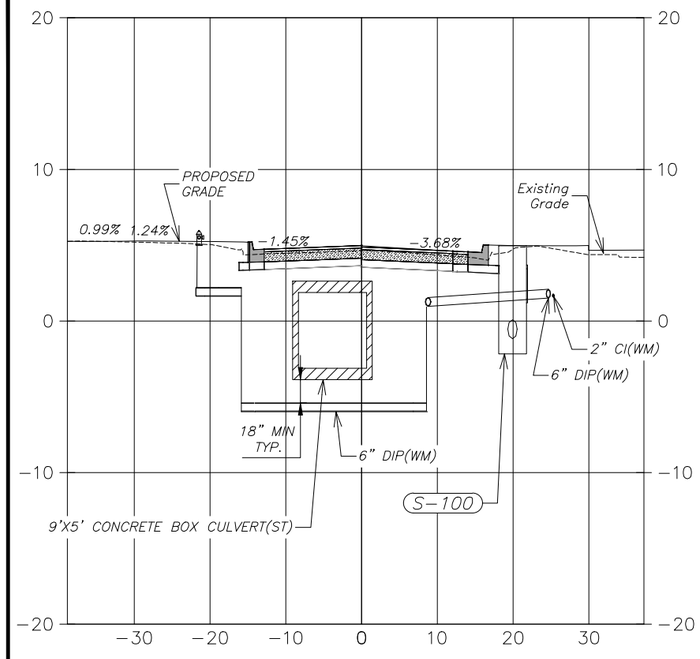

31+25.31

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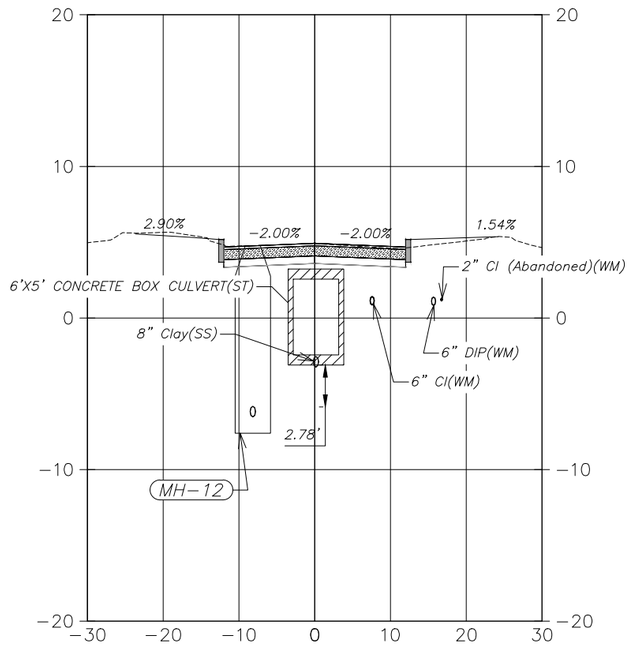

32+21.30

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SW

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W VASCONIA ST.
INLET CROSS SECTIONS

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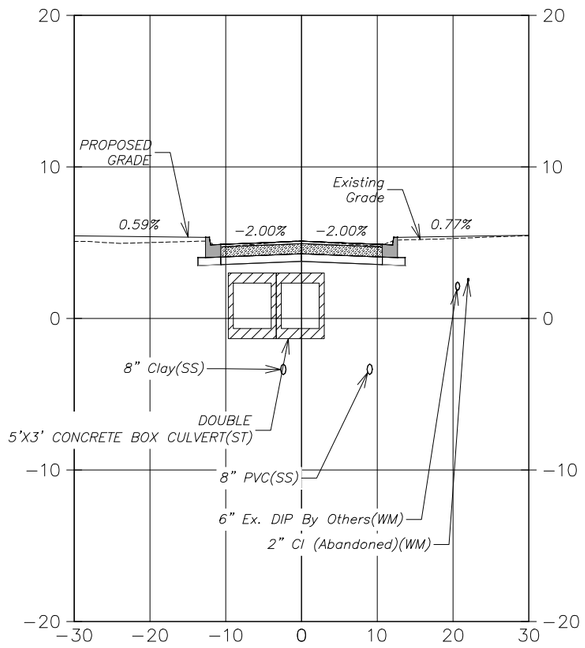
SW



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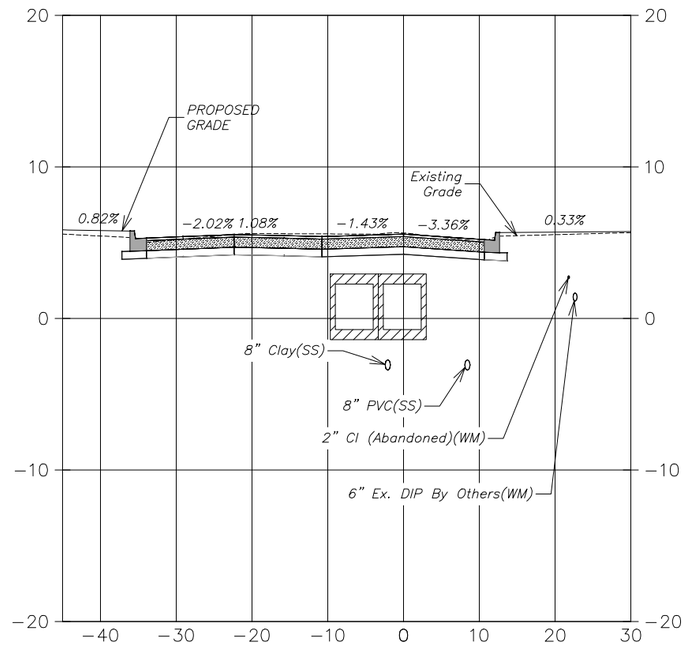

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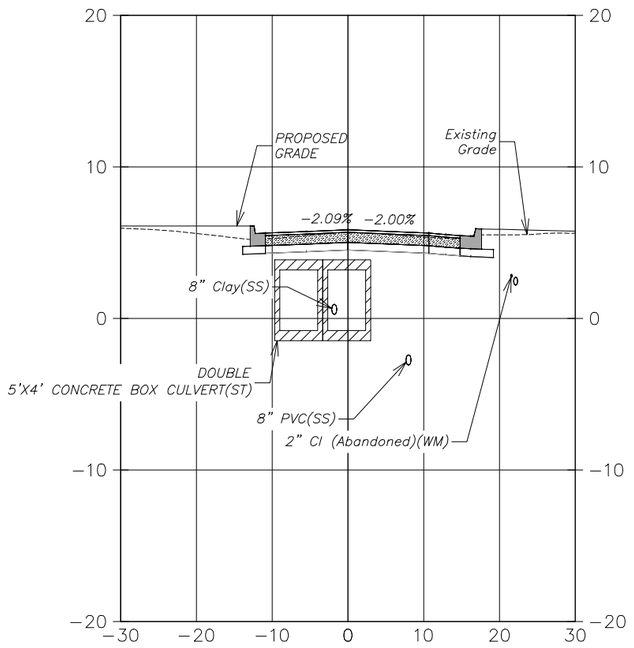

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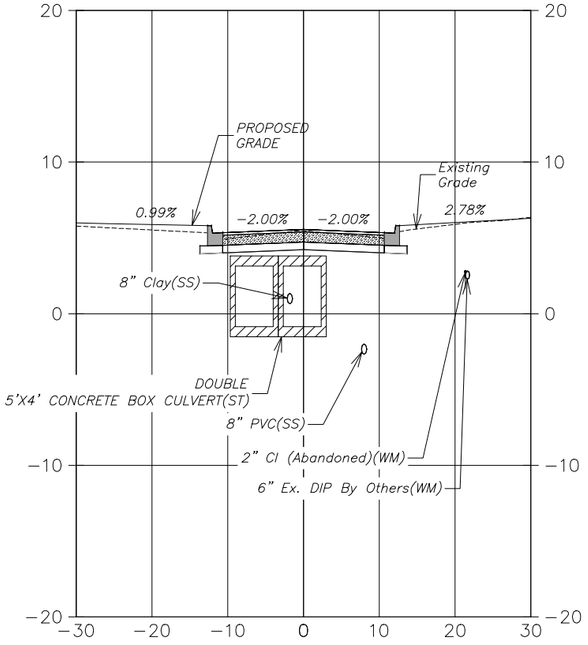

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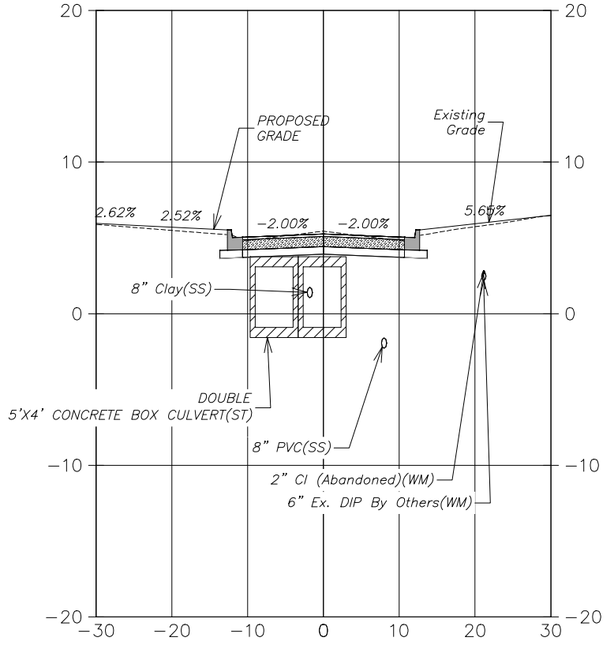

205+00.00
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CITY of TAMPA
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
CROSS SECTIONS

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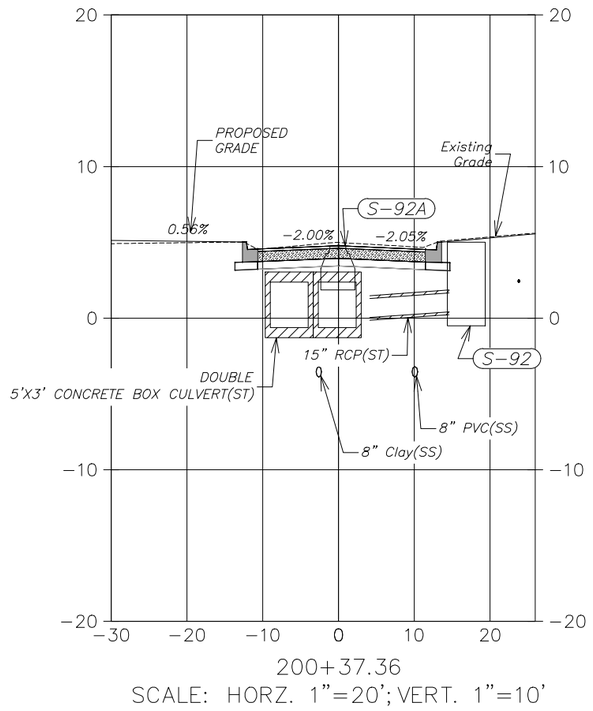

200+37.36

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SW

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
INLET CROSS SECTIONS

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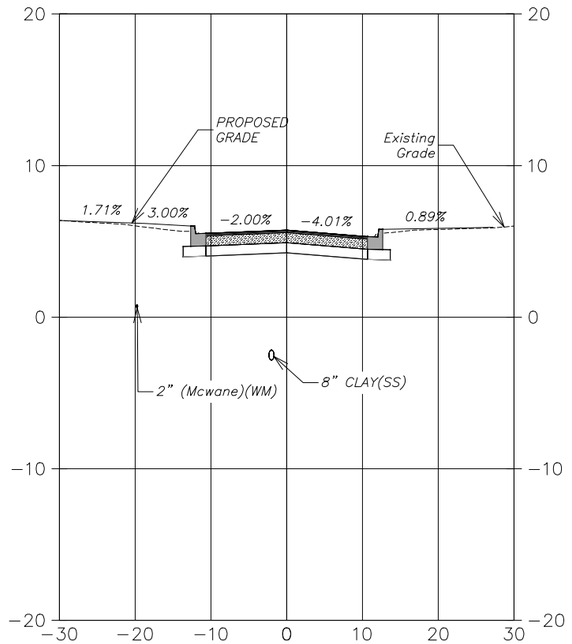

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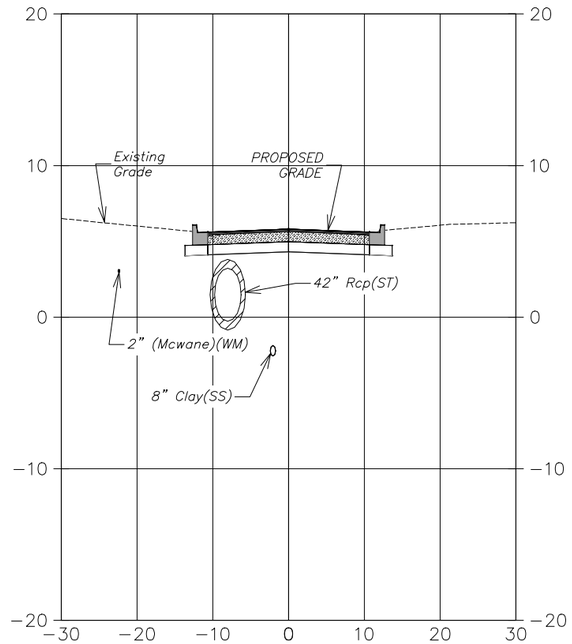

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SW

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SEVILLA ST.
CROSS SECTIONS

SHEET 79 OF 105

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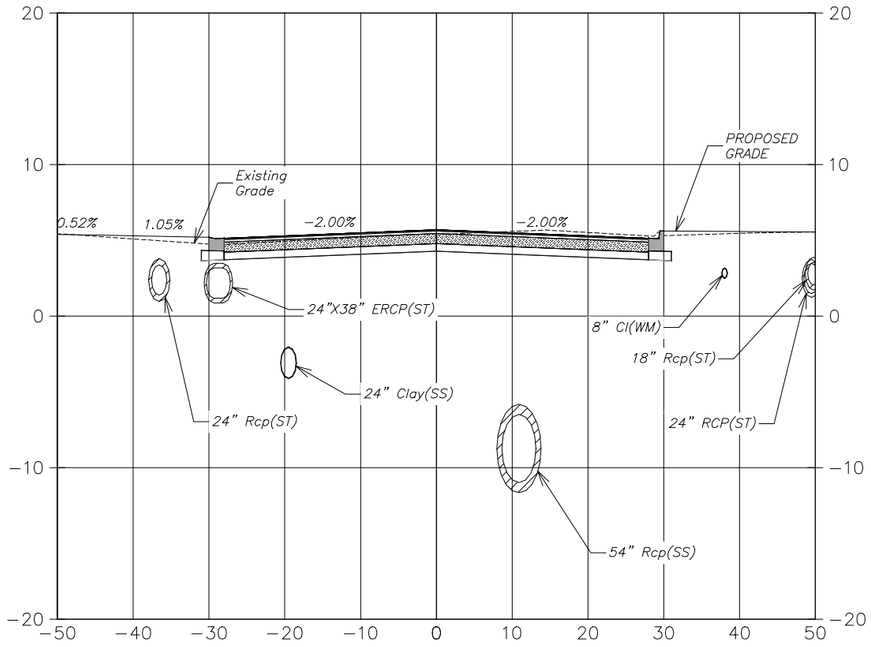

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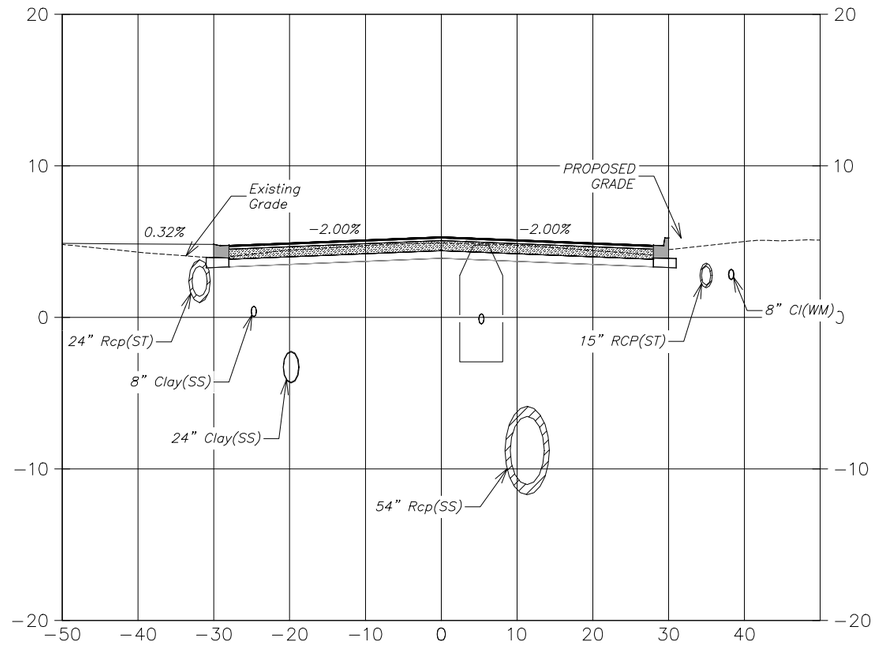

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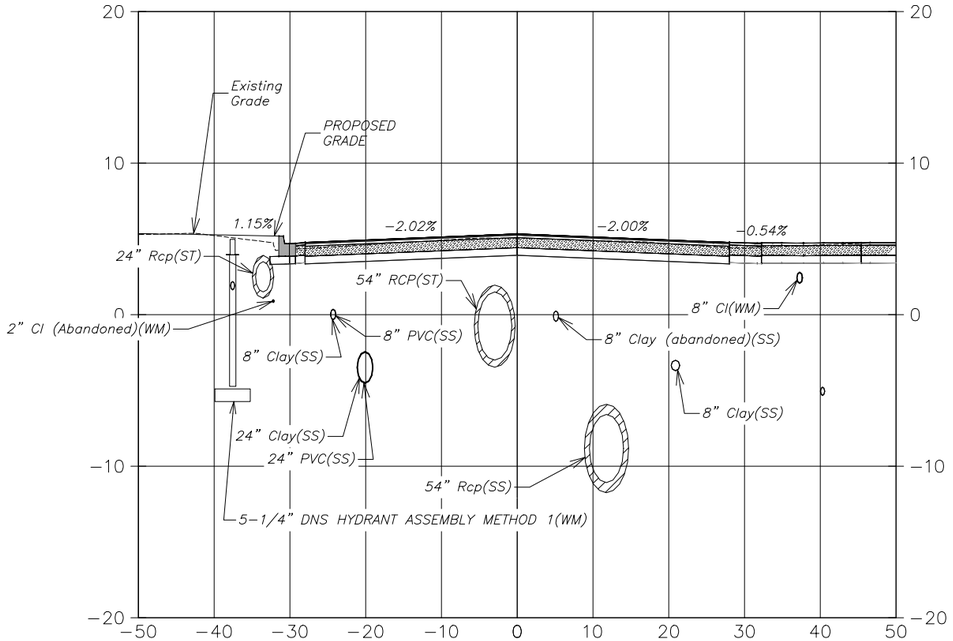

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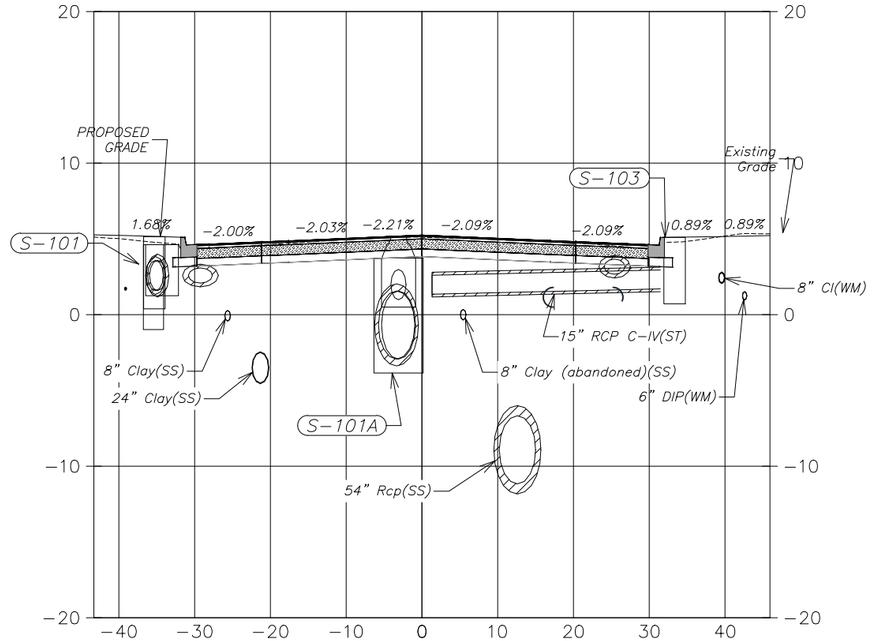

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE.
CROSS SECTIONS

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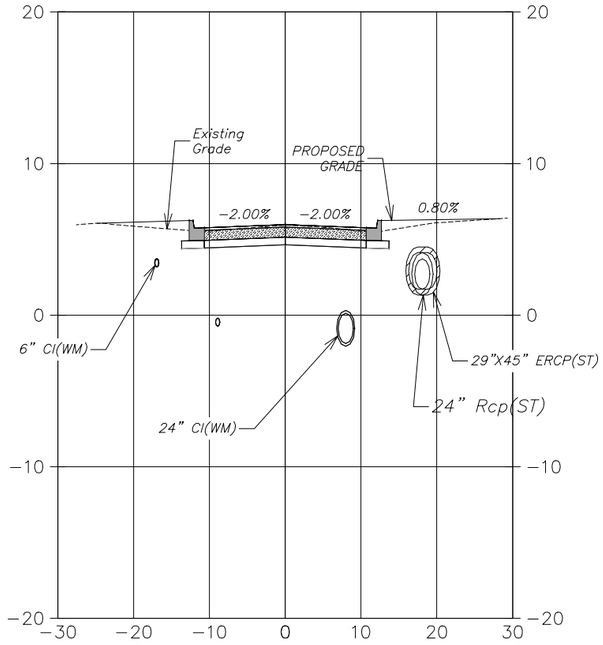

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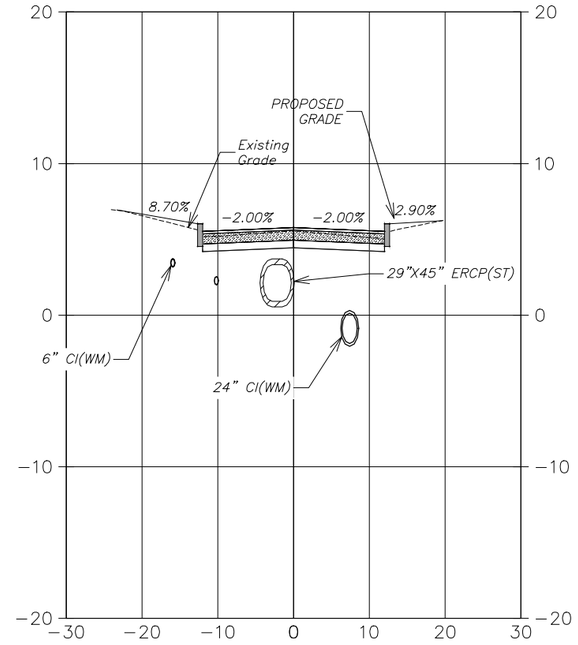

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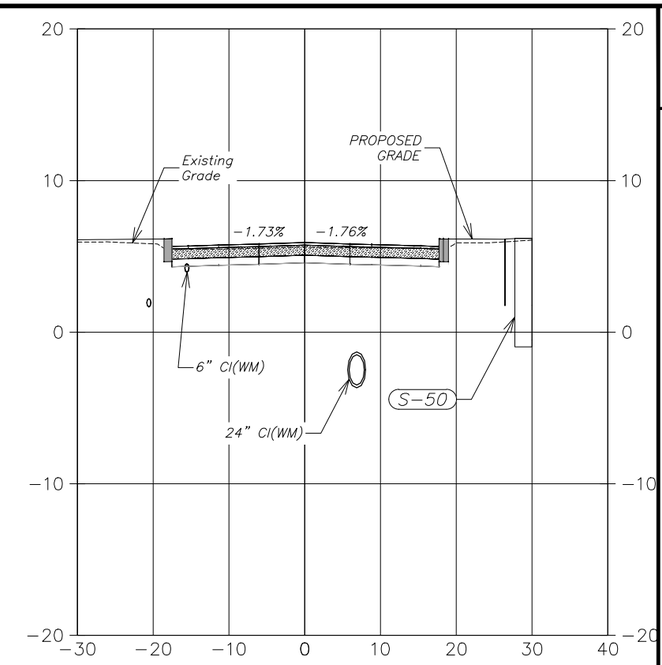

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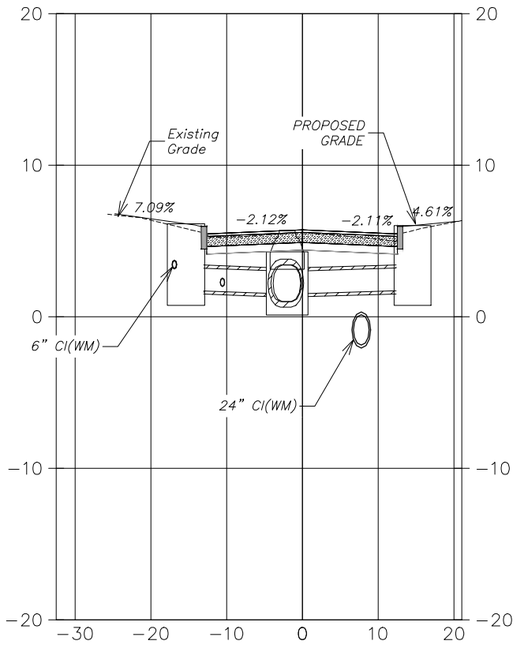

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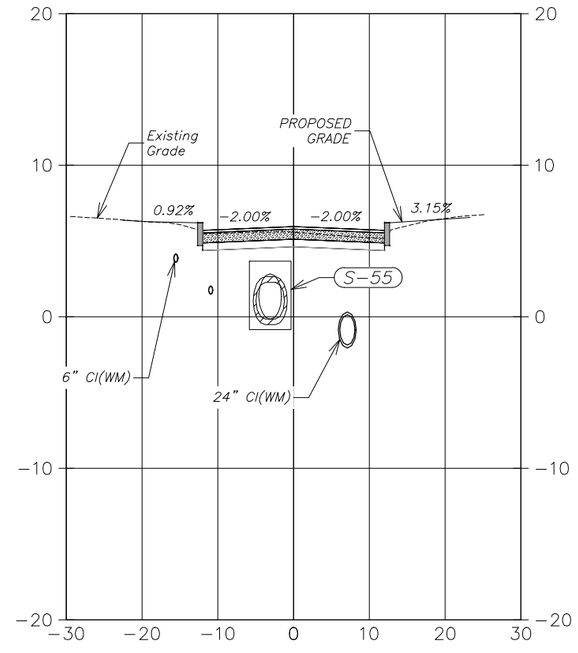

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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVE.
CROSS SECTIONS

SHEET 81 OF 105

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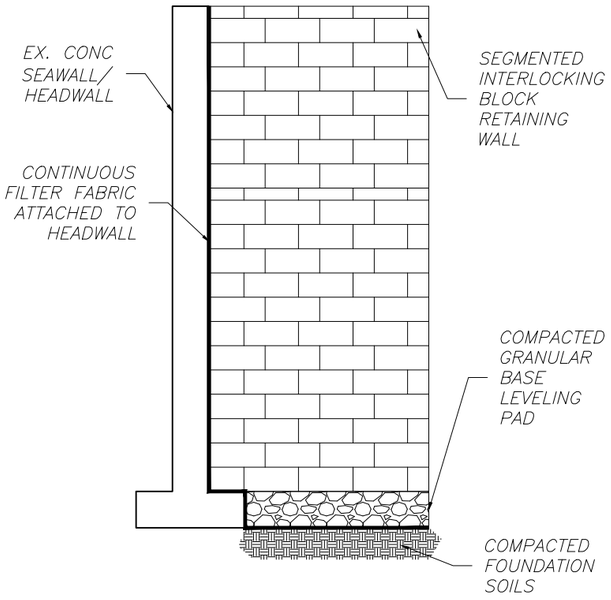
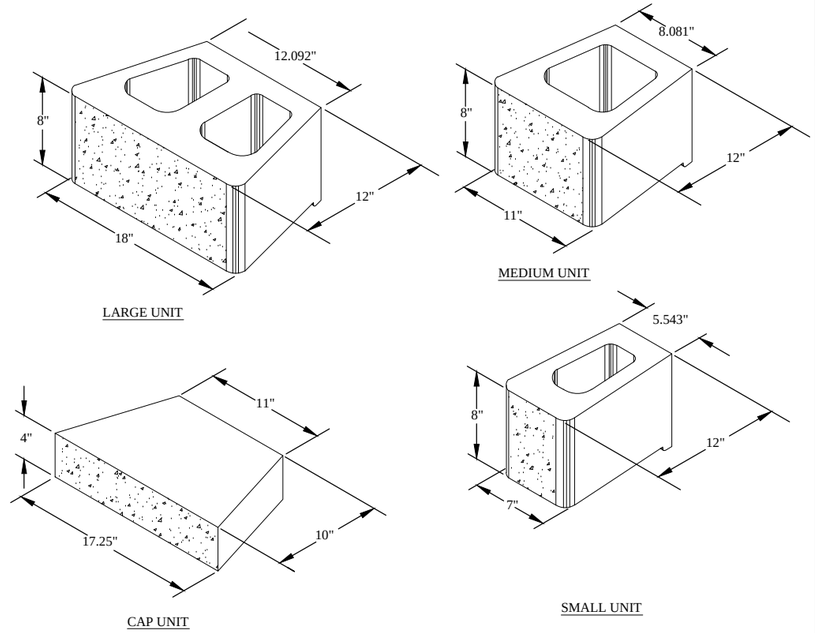
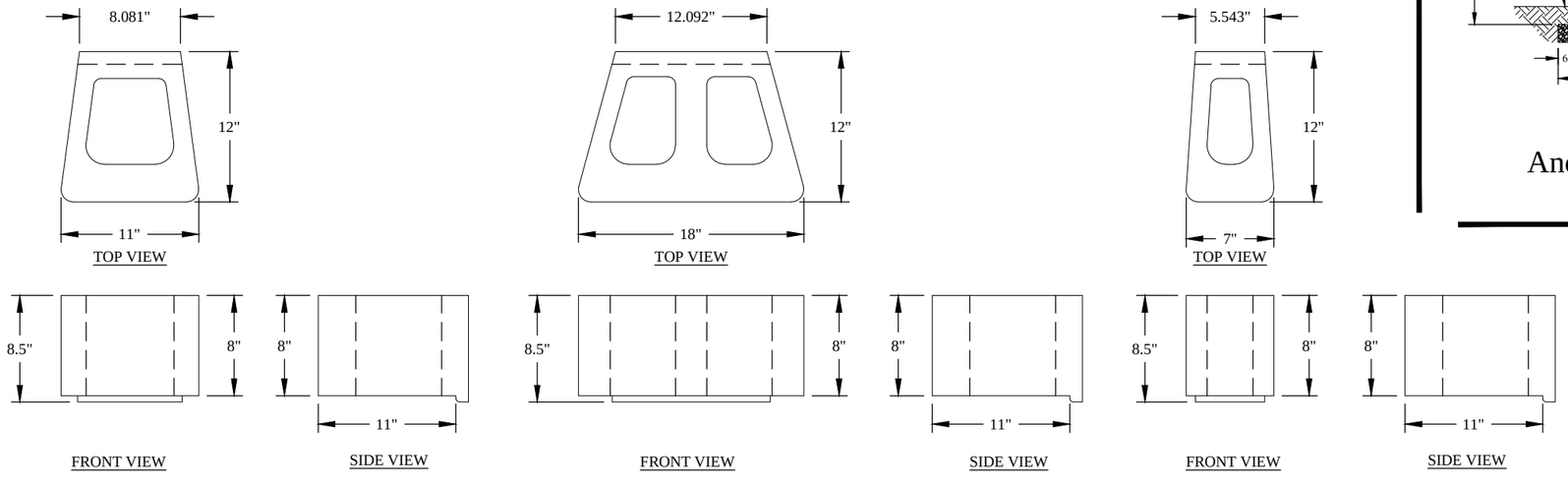


RETAINING WALL TIE IN TO EXIST. HEADWALL/SEAWALL DETAIL
(NTS)



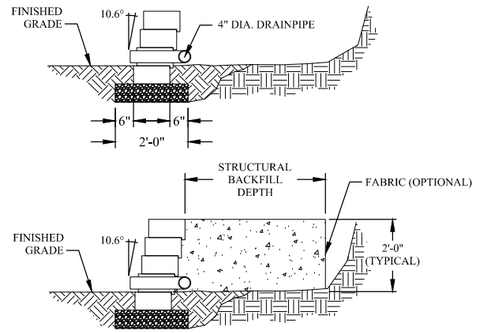
Anchor™ Diamond Pro Stone Cut™ Retaining Wall
ISOMETRIC BLOCK VIEWS

® and ™ ANCHOR WALL SYSTEMS, INC.

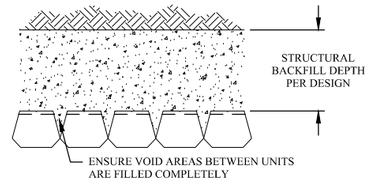


Anchor™ Diamond Pro Stone Cut™ Retaining Wall
INDIVIDUAL BLOCK VIEWS

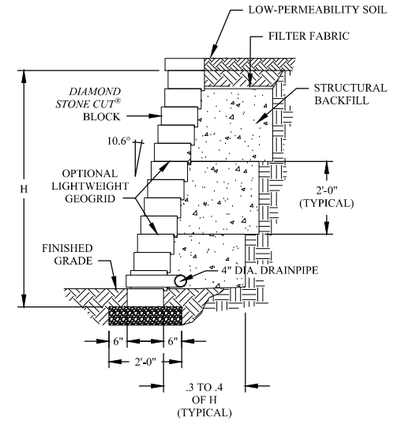
® and ™ ANCHOR WALL SYSTEMS, INC.



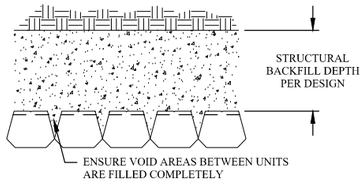
NOTES:
1. STRUCTURAL BACKFILL IS TO BE PLACED IN 8- TO 24-INCH (TYPICAL) LIFTS
2. STRUCTURAL BACKFILL MUST BE MANIPULATED INTO ALL VOIDS BETWEEN BLOCKS TO ENSURE ADEQUATE BOND BETWEEN BLOCK AND CONCRETE MASS.



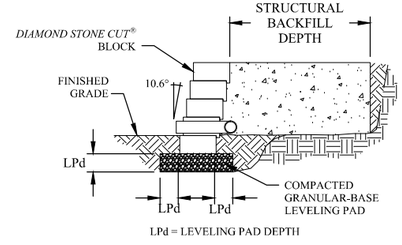
Anchor™ Diamond Stone Cut® Retaining Wall System
Differential Movement Section



NOTES:
1. STRUCTURAL BACKFILL IS TO BE PLACED IN 8- TO 24-INCH (TYPICAL) LIFTS
2. STRUCTURAL BACKFILL MUST BE MANIPULATED INTO ALL VOIDS BETWEEN BLOCKS TO ENSURE ADEQUATE BOND BETWEEN BLOCK AND CONCRETE MASS.
3. IF DIFFERENTIAL MOVEMENT BETWEEN THE STRUCTURAL BACKFILL AND THE WALL FACE UNIT IS A CONCERN, LAYERS OF LIGHTWEIGHT GEOGRID MAY BE INCORPORATED INTO THE SYSTEM. WHILE GENERALLY NOT NECESSARY, IF USED, THE GRID SHOULD BE PLACED FROM NEAR THE FRONT FACE OF THE WALL SYSTEM AND EXTEND INTO THE STRUCTURAL BACKFILL ABOUT 1 FOOT. THE GEOGRID CAN BE LAID DIRECTLY ON THE COLD JOINT SURFACE WITH FRESH STRUCTURAL BACKFILL PLACED DIRECTLY ON TOP.



Anchor™ Diamond Stone Cut® Retaining Wall System
Typical First-Pour Column Detail



WALL NOTES:
1. THE WALL SECTION DETAILS ARE TO SERVE AS THE GUIDELINES FOR THE DESIGN OF THE WALL AS PROVIDED BY THE MANUFACTURER. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS WITH CALCULATIONS SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF FLORIDA. THESE SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. CONCRETE RETAINING WALL DETAIL PROVIDED FOR BIDDING PURPOSES ONLY. CONTRACTOR TO PROVIDE STRUCTURAL DESIGN THAT INCORPORATES A GEOTECHNICAL STUDY SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.

Anchor™ Diamond Stone Cut® Retaining Wall System
1:1 Excavation Detail

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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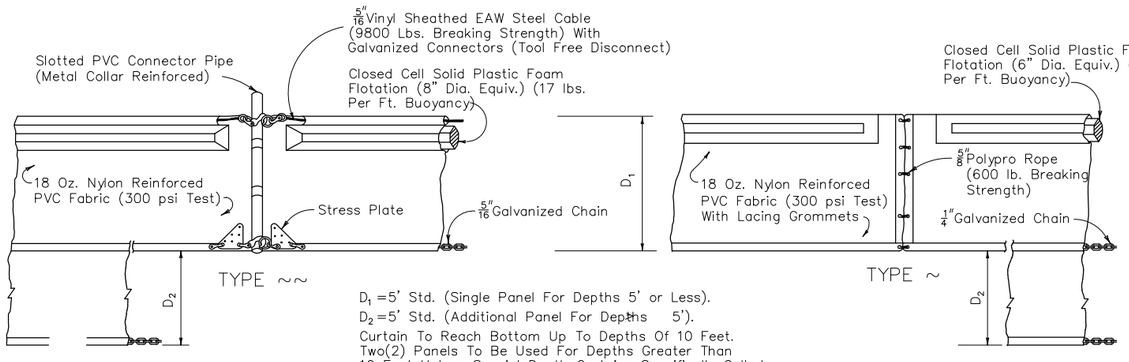
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

INTERLOCKING BLOCK WALL DETAILS

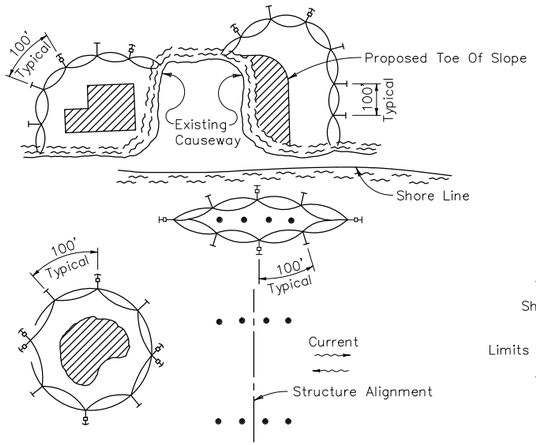
SHEET 81A OF 105



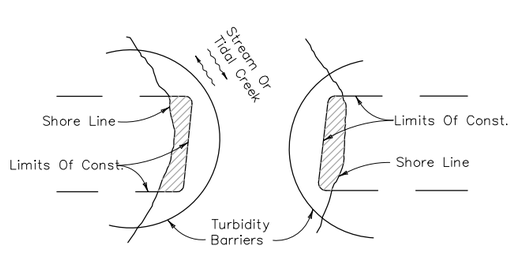
D_1 =5' Std. (Single Panel For Depths 5' or Less).
D_2 =5' Std. (Additional Panel For Depths > 5').
Curtain To Reach Bottom Up To Depths Of 10 Feet. Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: COMPONENTS OF TYPES ~ AND ~~ 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 ~ AND ~~ SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS



LEGEND
- Pile Locations
- Dredge Or Fill Area
- Mooring Buoy w/Anchor
- Anchor
- Barrier Movement Due To Current Action



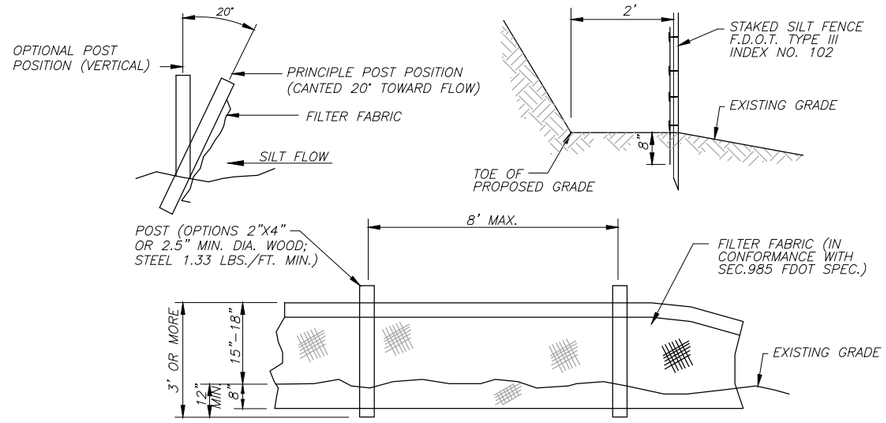
NOTES:
1. Turbidity barriers are to be used in all permanent bodies of water regardless of water depth.
2. Number and spacing of anchors dependent on current velocities.
3. Deployment of barrier around pile locations may vary to accommodate construction operations.
4. Navigation may require segmenting barrier during construction operations.
5. For additional information see Section 104 of the Standard Specifications.

Note:
Turbidity barriers for flowing streams and tidal creeks may be either floating, or staked types or any combinations of types that will suit site conditions and meet erosion control and water quality requirements. The barrier type(s) will be at the Contractors option unless otherwise specified in the plans, however payment will be under the pay item(s) established in the plans for Floating Turbidity Barrier and/or Staked Turbidity Barrier. Posts in staked turbidity barriers to be installed in vertical position unless otherwise directed by the Engineer.

TURBIDITY BARRIER APPLICATIONS

TURBIDITY BARRIERS
NOT TO SCALE

GENERAL NOTES
1. Floating and staked turbidity barriers are to be paid for under the contract lump sum price for Erosion Control and Tree Protection.



STAKED TURBIDITY BARRIER

NPDES/FDEP NOTICE OF INTENT AND REPORTING NOTES:

1. *CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROECTION. THE PLAN SHALL INCLUDE THE FOLLOWING:*
   - *A. NARRATIVE: A BRIEF DESCRIPTION OF THE OVERALL STRATEGY FOR EROSION AND SEDIMENT CONTROL.*
   - *B. MAP/SITE PLAN: SITE PLAN WHICH SHOWS THE EXISTING AND FINAL ELEVATION CONTOURS, CRITICAL AREAS WITHIN OR NEAR THE PROJECT AREA, EXISTING VEGETATION, LIMITS OF CLEARING AND GRADING, AND LOCATIONS AND NAMES OF EROSION AND SEDIMENT CONTROL MEASURES, WITH DIMENSIONS.*
   - *C. CONSTRUCTION DETAILS*
   - *D. CALCULATIONS: INCLUDE CALCULATIONS USED TO SIZE THE CONTROL MEASURES AND THE DESIGN ASSUMPTIONS FOR SEDIMENT BASINS AND TRAPS.*
2. *ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED BEFORE AND AFTER EACH RAIN EVENT OF 1/4 INCH OR MORE.*
3. *DISTURBED AREAS WHICH HAVE BEEN BROUGHT TO FINAL GRADE OR WHICH WILL REMAIN AT ROUGH GRADE FOR 14 DAYS OR MORE SHALL RECEIVE PERMANENT STABILIZATION IMMEDIATELY.*
4. *CONTRACTOR SHALL MAINTAIN ON-GOING INSPECTION REPORTS FOR EROSION & SEDIMENT CONTROL INSPECTIONS AND MAINTENANCE.*
5. *CONTRACTOR SHALL HAVE A CERTIFIED INSPECTOR ON STAFF AND BE RESPONSIBLE FOR ALL NPDES REPORTING.*
6. *ANY AREAS SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATIVE MATERIAL THAT WILL, WITHIN A REASONABLE TIME FRAME, DETER SOIL DISTURBANCE. SODDING, PLUGGING, SPRIGGING, OR SEEDING IS ACCEPTABLE FOR STABILIZATION; HOWEVER, SODDING MAY BE REQUIRED IN AREAS OF EROSION-PRONE SOILS OR WHERE SLOPES ARE GREATER THAN 5:1. VEGETATION OTHER THAN GRASS IS ACCEPTABLE UNLESS OTHERWISE SPECIFIED.*
7. *THE CONTRACTOR SHALL SUBMIT THE REQUIRED NPDES/FDEP NOTICE OF INTENT 30 DAYS PRIOR TO STARTING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL RAINFALL AND DISCHARGE LOGS DURING CONSTRUCTION. UPON COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION SHALL BE FILED WITH FDEP.*

EROSION/TURBIDITY CONTROL NOTES:

1. *THE INSTALLATION OF TEMPORARY EROSION CONTROL BARRIERS SHALL BE COORDINATED WITH THE CONSTRUCTION OF THE PERMANENT EROSION CONTROL FEATURES TO THE EXTENT NECESSARY TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL OF EROSION AND WATER POLLUTION THROUGHOUT THE LIFE OF THE CONSTRUCTION PHASE.*
2. *THE TYPE OF EROSION CONTROL BARRIERS USED SHALL BE GOVERNED BY THE NATURE OF THE CONSTRUCTION OPERATION AND SOIL TYPE THAT WILL BE EXPOSED. SILTY AND CLAYEY MATERIAL USUALLY REQUIRE SOLID SEDIMENT BARRIERS TO PREVENT TURBID WATER DISCHARGE, WHILE SANDY MATERIAL MAY NEED ONLY SILT SCREENS OR HAY BALES TO PREVENT EROSION. FLOATING TURBIDITY CURTAINS SHALL BE USED IN OPEN WATER SITUATIONS. DIVERSION DITCHES OR SWALES MAY BE REQUIRED TO PREVENT TURBID STORMWATER RUNOFF FROM BEING DISCHARGED TO WETLANDS OR OTHER WATER BODIES. IT MAY BE NECESSARY TO EMPLOY A COMBINATION OF BARRIERS, DITCHES AND OTHER EROSION/TURBIDITY CONTROL MEASURES IF CONDITIONS WARRANT.*
3. *CONSTRUCTION OPERATIONS IN OR ADJACENT TO WETLANDS SHALL BE RESTRICTED TO THOSE AREAS IDENTIFIED IN THE PLANS AND IN THE SPECIFICATIONS.*
4. *EXCAVATED MATERIAL SHALL NOT BE DEPOSITED IN THE WETLANDS OR IN A POSITION CLOSE ENOUGH THERETO TO BE WASHED AWAY BY HIGH WATER OR RUNOFF.*
5. *WHERE PUMPS ARE TO BE USED TO REMOVE TURBID WATERS FROM CONSTRUCTION AREAS, THE WATER SHALL BE TREATED PRIOR TO DISCHARGE TO THE WETLANDS. TREATMENT METHODS INCLUDE AND ARE NOT LIMITED TO, TURBID WATER BEING PUMPED INTO GRASSED SWALES OR APPROPRIATE VEGETATED AREAS, SEDIMENT BASINS, OR CONFINED BY AN APPROPRIATE ENCLOSURE SUCH AS TURBIDITY BARRIERS, AND KEPT CONFINED UNTIL ITS TURBIDITY LEVEL MEETS STATE WATER QUALITY STANDARDS.*
6. *THE CONTRACTOR SHALL SCHEDULE HIS OPERATIONS SUCH THAT THE AREA OF UNPROTECTED ERODIBLE EARTH EXPOSED AT ANY ONE TIME IS NOT LARGER THAN THE MINIMUM AREA NECESSARY FOR EFFICIENT CONSTRUCTION OPERATIONS, AND THE DURATION OF EXPOSED, UNCOMPLETED CONSTRUCTION TO THE ELEMENTS SHALL BE AS SHORT AS PRACTICABLE. CLEARING AND GRUBBING SHALL BE SO SCHEDULED AND 3PERFORMED THAT GRADING OPERATIONS CAN FOLLOW IMMEDIATELY THEREAFTER, AND GRADING OPERATIONS SHALL BE SCHEDULED AND PERFORMED THAT PERMANENT EROSION CONTROL FEATURES CAN FOLLOW IMMEDIATELY THEREAFTER IF CONDITIONS ON THE PROJECT PERMIT.*
7. *THE CONTRACTOR AND/OR OWNER'S REPRESENTATIVE SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.*
8. *SILT FENCE SHALL BE LOCATED AT THE PERIMETER OF CONSTRUCTION LIMITS, AS DEFINED BY FIELD CONDITIONS.*
9. *CONTRACTOR IS TO PROVIDE EROSION CONTROL AND SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY, STREETS, STORM SEWERS AND WATERWAYS. IN ADDITION, CONTRACTOR SHALL PLACE STRAW, MULCH OR OTHER SUITABLE MATERIAL ON GROUND IN AREAS WHERE CONSTRUCTION RELATED TRAFFIC IS TO ENTER AND EXIT SITE. IF, IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR BY VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES.*
10. *IF WIND EROSION BECOMES SIGNIFICANT DURING CONSTRUCTION, THE CONTRACTOR SHALL STABILIZE THE AFFECTED AREA USING SPRINKLING, IRRIGATION OR OTHER ACCEPTABLE METHODS.*

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

TURBIDITY BARRIER DETAILS

SHEET 8IB OF 105

SW

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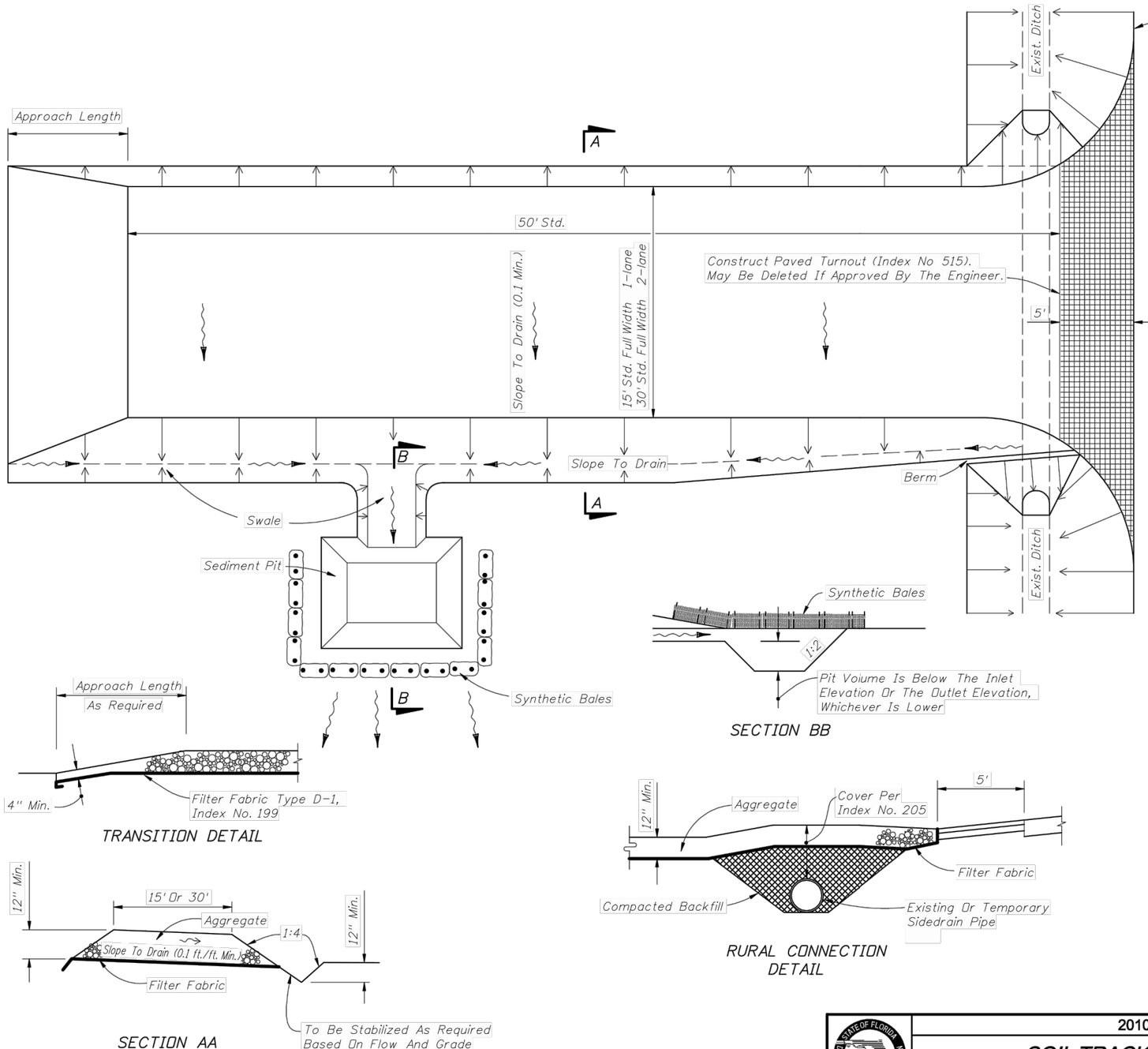
SW



GENERAL NOTES

1. A Soil Tracking Prevention Device (STPD) shall be constructed at locations designated by the engineer for points of egress from unstabilized areas of the project to public roads where off-site tracking of mud could occur. Traffic from unstabilized areas of the construction project shall be directed thru a STPD. Barriers, flagging, or other positive means shall be used as required to limit and direct vehicular egress across the STPD.

2. The Contractor may propose an alternative technique to minimize off-site tracking of sediment. The alternative must be reviewed and approved by the Engineer prior to its use.

3. All materials spilled, dropped, or tracked onto public roads (including the STPD aggregate and construction mud) shall be removed daily, or more frequently if so directed by the Engineer.

4. Aggregates shall be as described in Section 901 excluding 901-2.3. Aggregates shall be FDOT size #1. If this size is not available, the next available smaller size aggregate may be substituted with the approval of the Engineer. Sizes containing excessive small aggregate will track off the project and are unsuitable.

5. The sediment pit should provide a retention volume of 3600 cubic feet/acre of surface area draining to the pit.
   When the STPD is isolated from other drainage areas, the following pit volumes will satisfy this requirement:
   15' x 50'=100 ft.³ 30' x 50'=200 ft.³
   As an option to the sediment pit, the width of the swale bottom can be increased to obtain the volume. When the sediment pit or swale volume has been reduced to one half, it shall be cleaned. When a swale is used, synthetic bales or silt fence shall be placed along the entire length.

6. The swale ditch draining the STPD shall have a 0.02% minimum and a 1.0% maximum grade along the STPD and to the sediment pit.

7. Mitered end sections are not required when the sidedrain pipe satisfies the clear zone requirements.

8. The STPD shall be maintained in a condition that will allow it to perform its function. To prevent off-site tracking, the STPD shall be rinsed (daily when in use) to move accumulated mud downward thru the stone. Additional stabilization of the vehicular route leading to the STPD may be required to limit the mud tracked.

9. A STPD shall be paid for under the contract unit price for Soil Tracking Prevention Device, EA. The unit price shall constitute full compensation for construction, maintenance, replacement of materials, removal, and restoration of the area utilized for the STPD: including but not limited to excavation, grading, temporary pipe (including MES when required), filter fabric, aggregate, paved turnout (including asphalt and base construction), ditch stabilization, approach route stabilization, sediment removal and disposal, water, rinsing and cleaning of the STPD and cleaning of public roads, grassing and sod. Synthetic Bale or Bale Type Barrier shall be paid for under the contract unit price for Synthetic Bales, LF. Silt fence shall be paid for under the contract unit price for Staked Silt Fence, LF.

10. The nominal size of a standard STPD is 15' x 50' unless otherwise shown in the plans. If the volume of entering and existing vehicles warrant, a 30' width STPD may be used if approved by the Engineer. When a double width (30') STPD is used, the pay quantity shall be 2 for each location.

2010 FDOT Design Standards

SOIL TRACKING PREVENTION DEVICE TYPE A

Last Revision 07/01/07 | Sheet No. 1 of 1 | Index No. 106

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

SOIL TRACKING PREVENTION DEVICE DETAIL

SHEET 8IC OF 105

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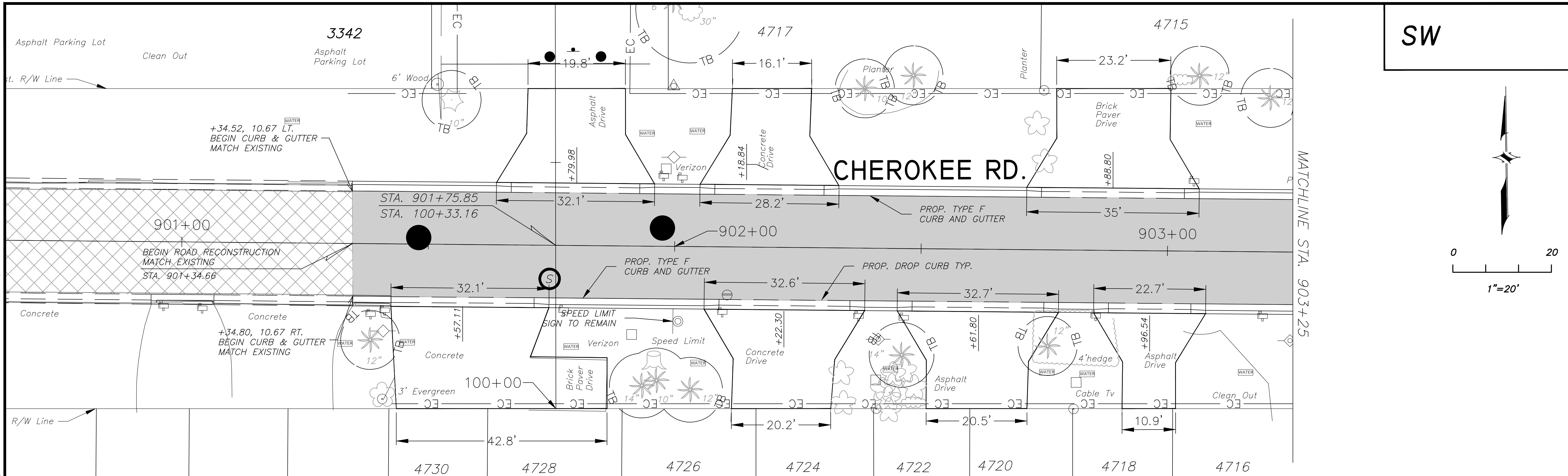
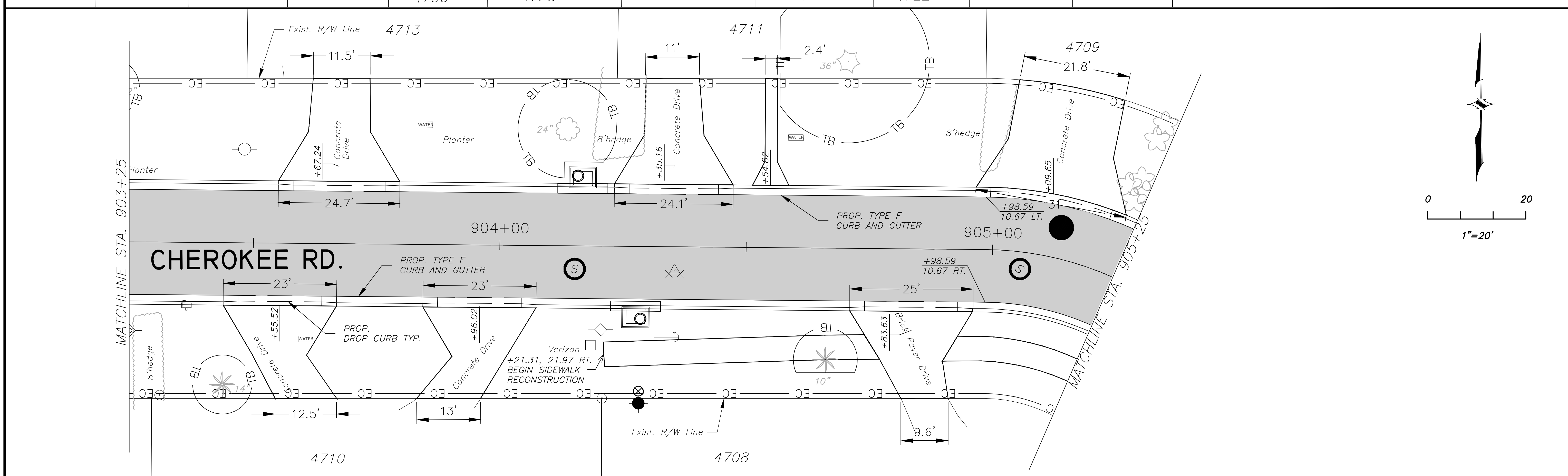
SW





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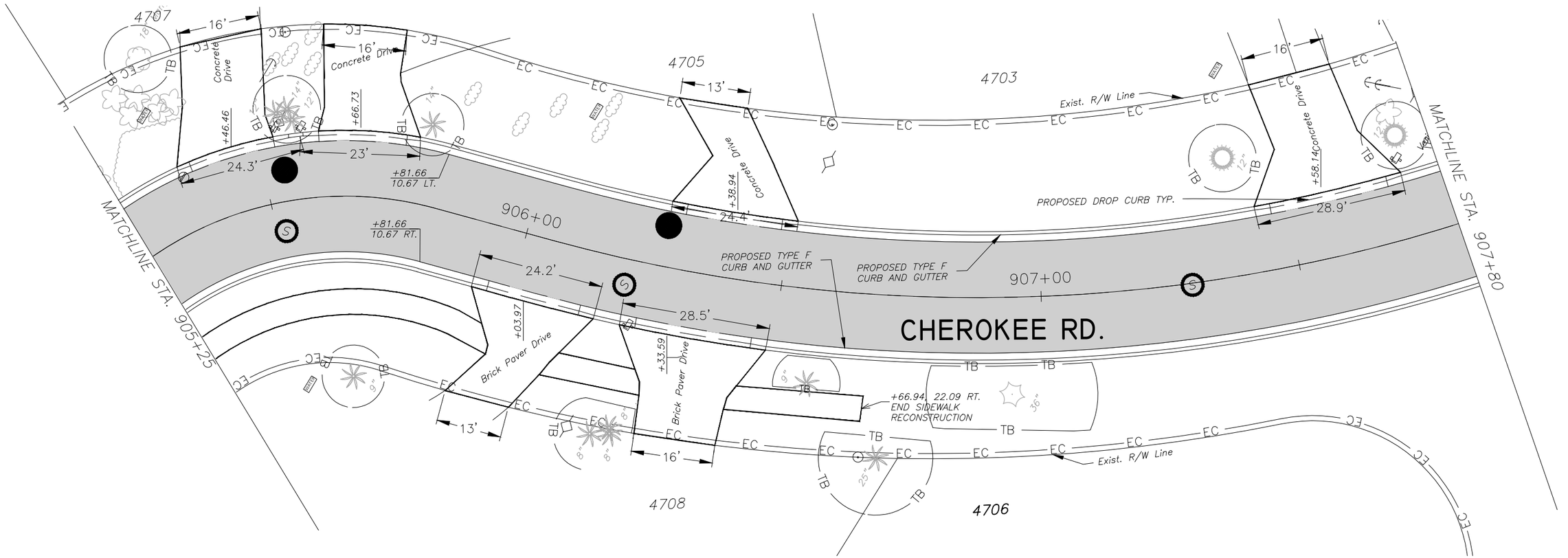
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 82A
OF 105

SW

0 20

1"=20'



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DATE: 10/13/15

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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 82B of 105

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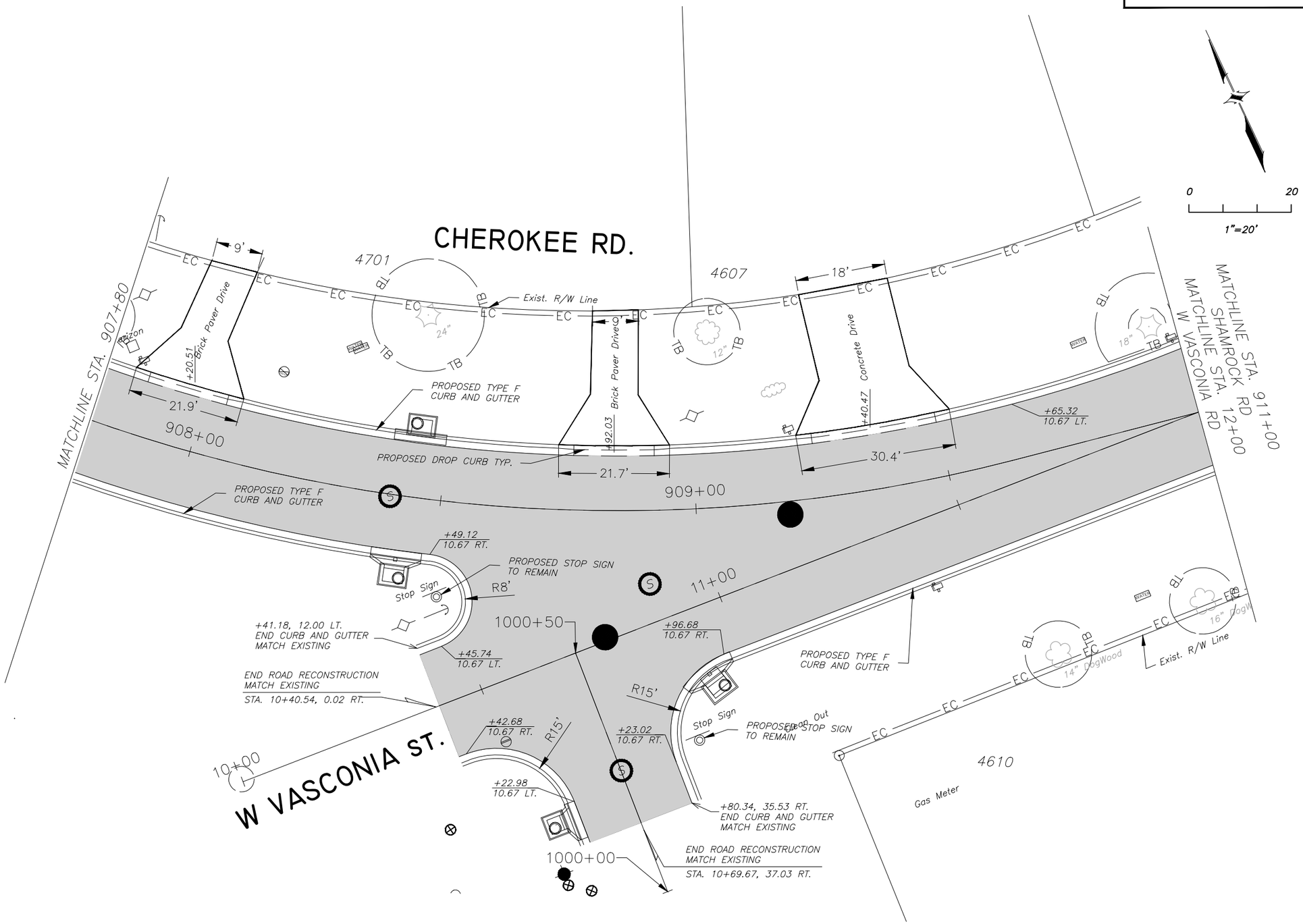

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DATE: 10/13/15

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. & W. VASCONIA STREET
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 82C of 105

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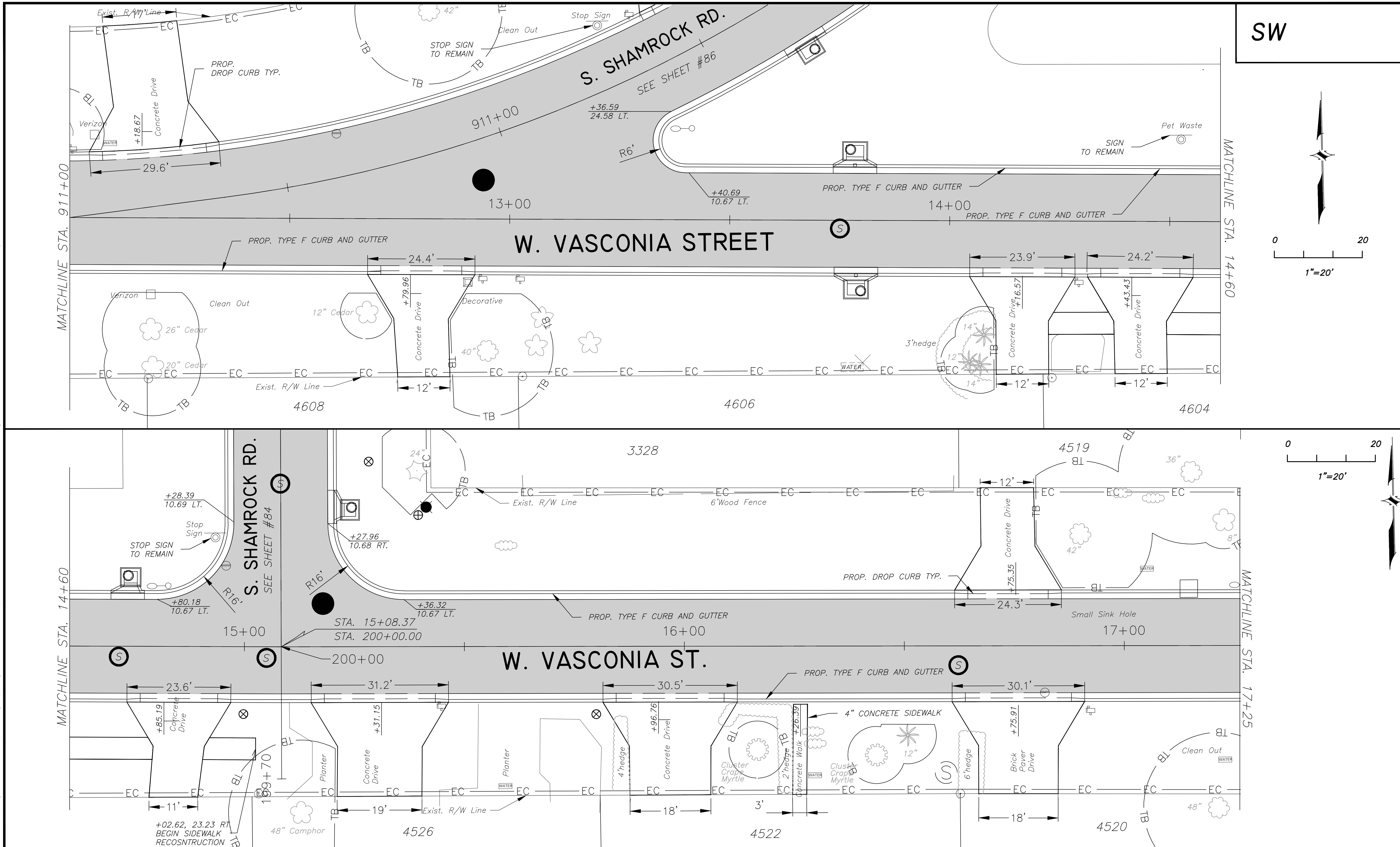

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DRN: ASA
CKD: MDC
DATE: 10/13/15

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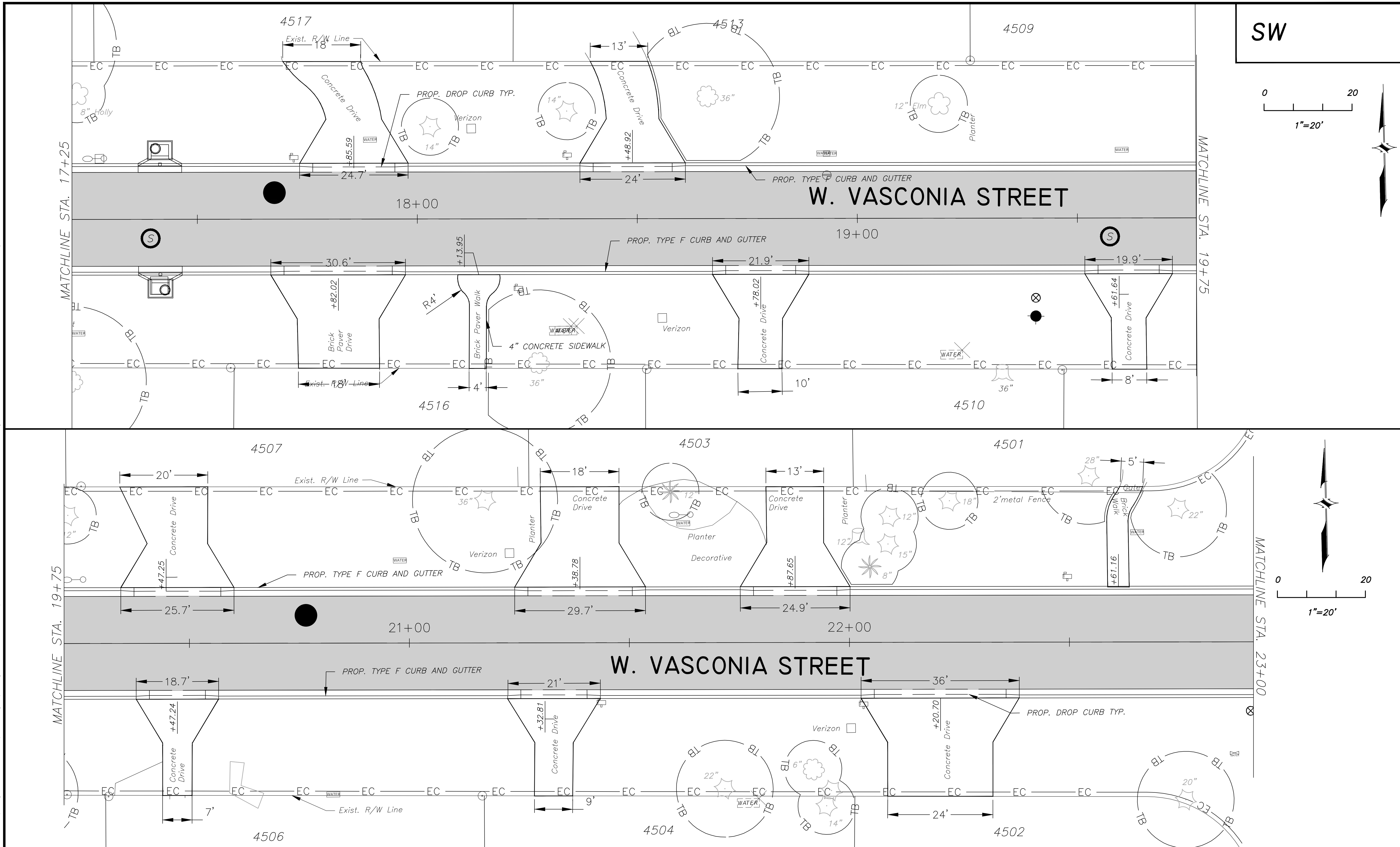
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 83A OF 105



No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 83B
105

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SW

0 20

1"=20'

W. VASCONIA STREET

MATCHLINE STA. 23+00

MATCHLINE STA. 25+30

MATCHLINE STA. 25+30

MATCHLINE STA. 28+50

HESPERIDES AVE.

404+00

24+00

25+00

26+00

27+00

28+00

4423

4419

4424

4422

4418

4415

4411

4416

4414

4410

12" Palm

END ROAD RECONSTRUCTION
MATCH EXISTING
STA. 23+29.46, 50.47 LT.

STOP SIGN TO REMAIN

STOP SIGN TO REMAIN

PROP. TYPE F CURB AND GUTTER

PROP. TYPE F CURB AND GUTTER

PROP. TYPE F CURB AND GUTTER

PROP. DROP CURB TYP.

PROP. DROP CURB TYP.

END ROAD RECONSTRUCTION
BEGIN MILLING AND RESURFACING
STA. 403+15.85

+73.89, 16.77 RT.
BEGIN SIDEWALK
RECONSTRUCTION

Brick Walk

Concrete Walk

Concrete Drive

Brick Drive

Brick Drive

Brick Drive

Brick Drive

Concrete Drive

Concrete Drive

Concrete

Concrete Walk

18x18 Brick

18x18 Brick

18x18 Brick

Crape Myrtle Cluster

Clean Out

Clean Out

Underground Lp Tank

Verizon

Verizon

Stop Sign

5'hedge

Decorative

Decorative

10" Magnolia

4" Crape Myrtle

4" Crape Myrtle

4" Crape Myrtle

5" Elm

Exist. R/W Line

Exist. R/W Line

Exist. R/W Line

Exist. R/W Line

+81.89
10.67 LT.

+81.79
10.67 RT.

+03.02
10.67 LT.

+02.77
10.67 RT.

+56.60
10.68 LT.

+56.71
10.67 RT.

+27.89
10.67 LT.

+27.79
10.67 RT.

+00.95

+19.14

+20.27

+12.69

+53.11

+85.98

+53.01

+06.97

+40.22

+74.00

+94.80

+23.59

+59.44

+95.11

R15'

R15'

R15'

R15'

6'

4'

4'

12'

22'

5'

10'

23.4'

26.7'

33.7'

24.5'

26.8'

18.5'

28'

16'

18'

18'

18'

16'

6'

16'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

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DRN: ASA
CKD: MDC
DATE: 10/13/15

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 83C of 105

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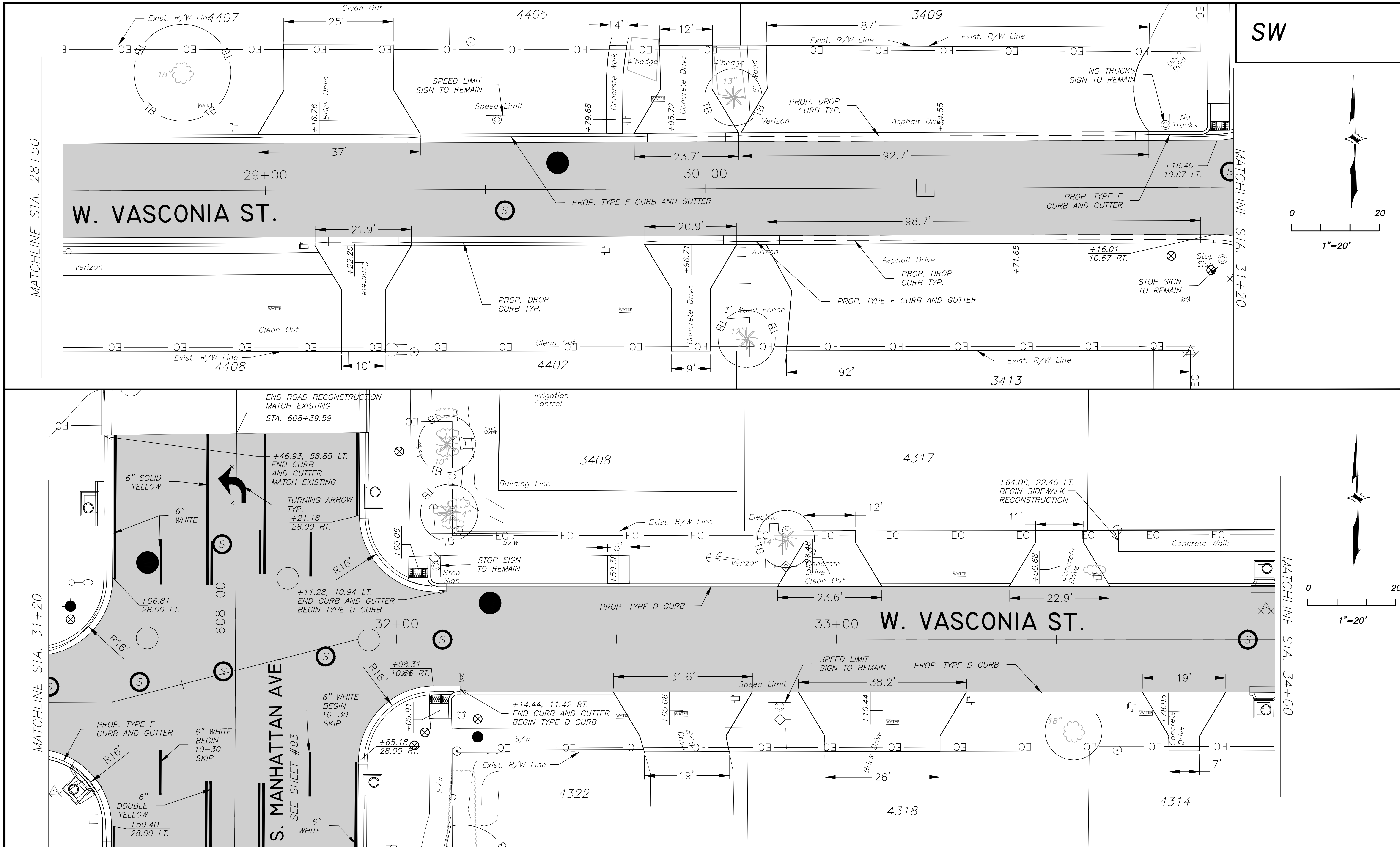

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
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DATE: 10/13/15

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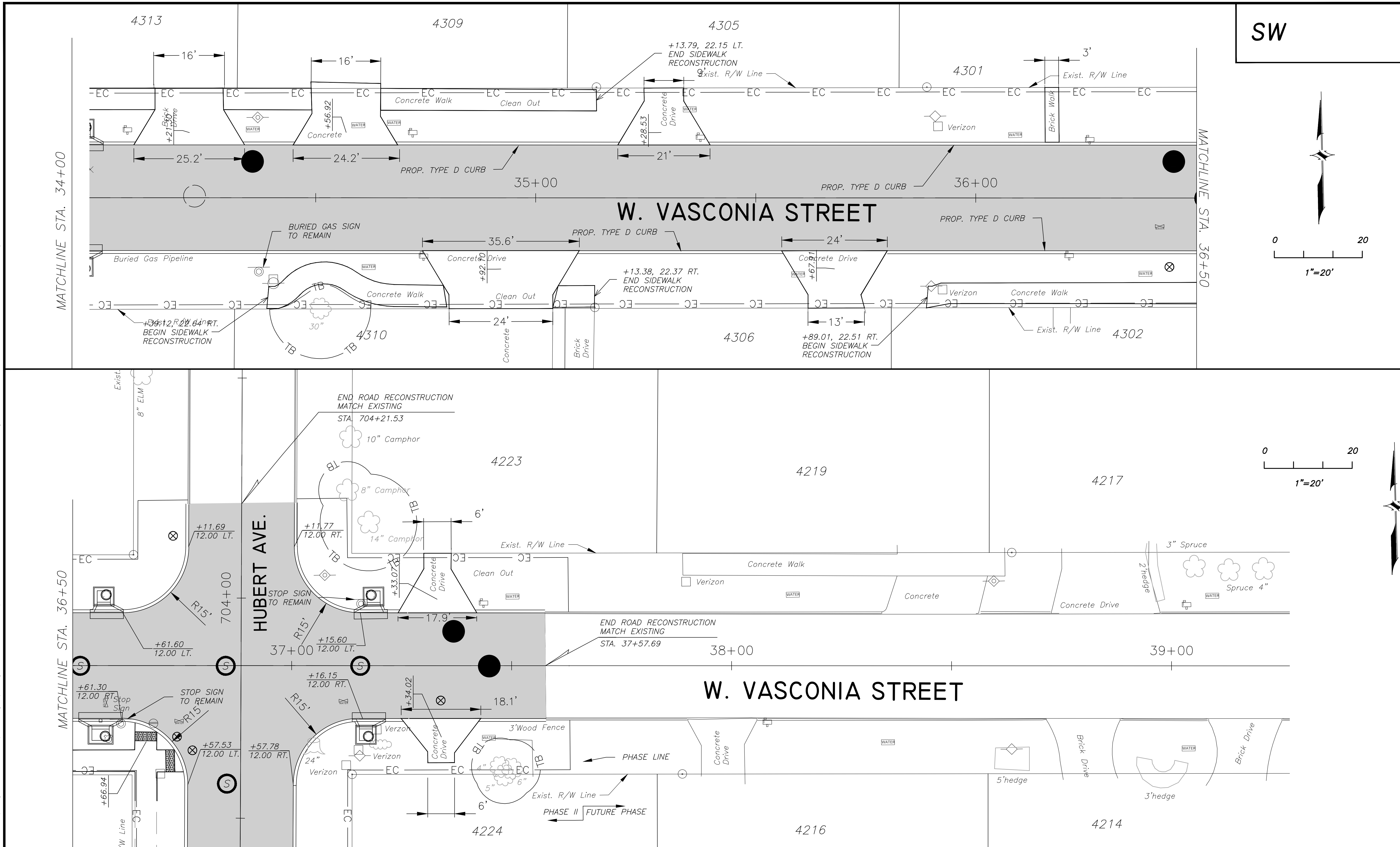
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 83D
OF 105



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DATE: 10/13/15

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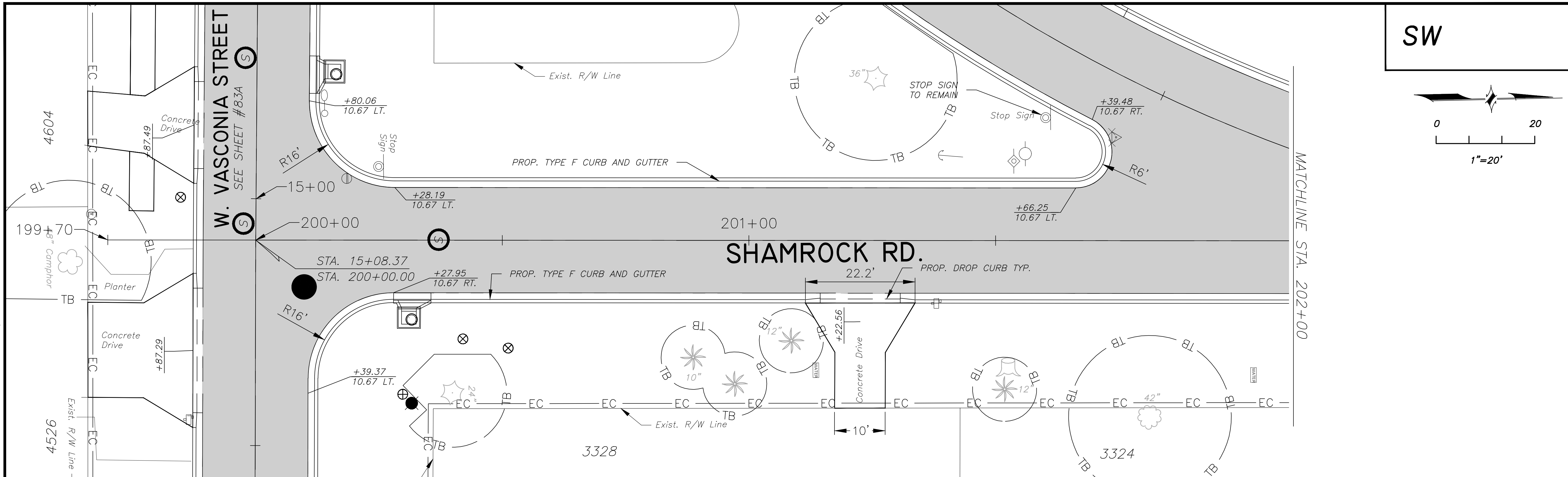
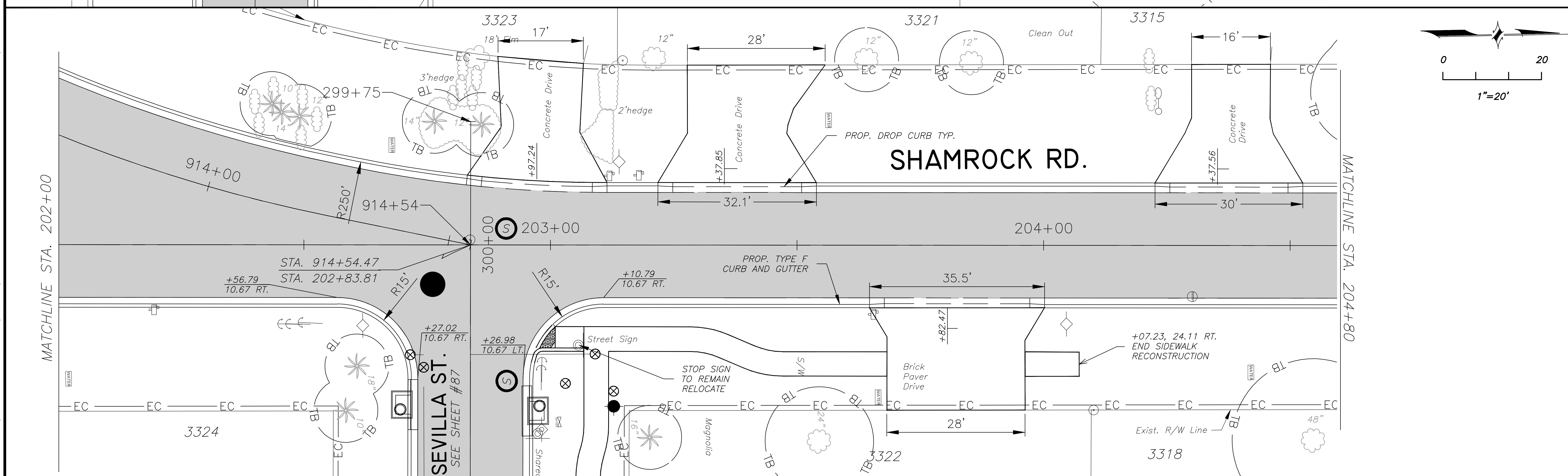
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 83E OF 105





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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
PAVEMENT OVERLAY & STRIPING PLAN

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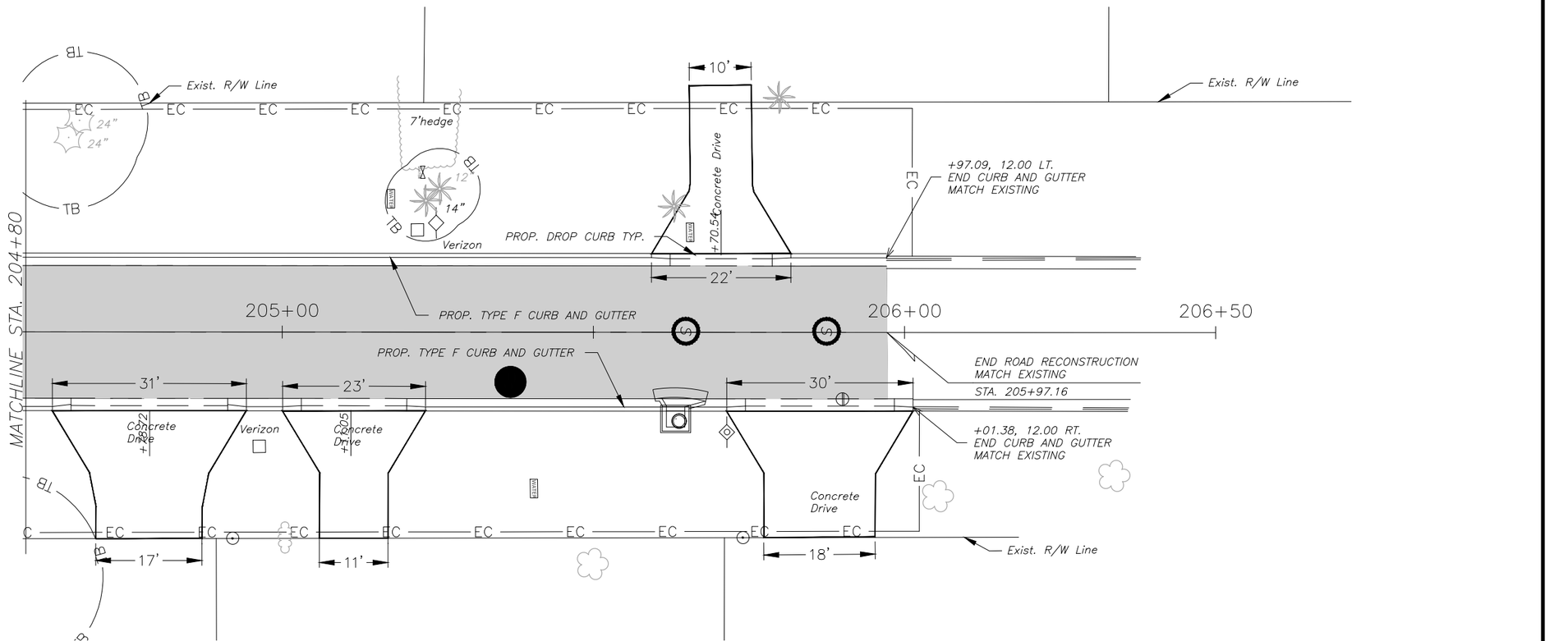
0 20

1"=20'



No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DATE: 10/13/15

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 85 of 105

SW

3327

3325

3323

SHAMROCK RD.

SHAMROCK RD.

W VASCONIA ST.

SEE SHEET #83A

SEE SHEET #84

4606

3328

911+00

912+00

913+00

14+00

201+00

202+00

PROP. STOP SIGN TO REMAIN

PROP. TYPE F CURB

PROP. DROP CURB

PROP. STOP SIGN TO REMAIN

Clean Out

Stop Sign

Brick Paver Drive

17.4'

22.6'

+52.33

4" magnolia

Electric

Verizon

Basketball

Concrete Drive

18.7'

26'

+23.06

42"

10"

8"

14"

12"

36"

+37.02
10.67 RT.

+39.83
10.67 LT.

+39.48
10.67 RT.

+66.25
10.67 LT.

R6'

R16'

Stop Sign

Exist. R/W Line

Pet Waste

3'hedge

Concrete Drive

+28.19
10.67 LT.

0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 86 OF 105

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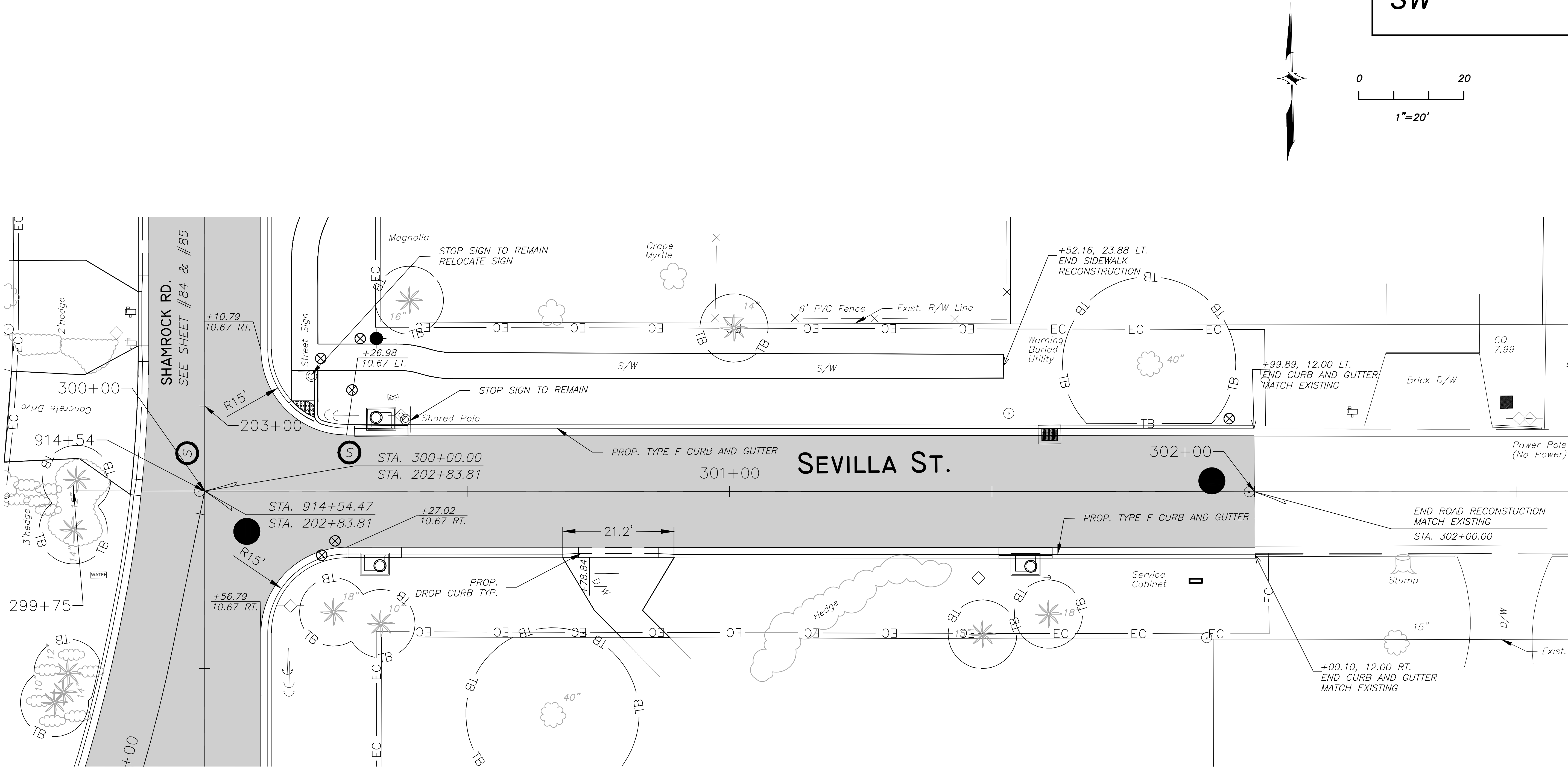
SW



No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation
and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SEVILLA ST.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 87
OF 105

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SW

0 20

1"=20'

500+00

Exist. R/W Line

BEGIN MILLING AND RESURFACING
MATCH EXISTING
STA. 500+16.59

Exist. R/W Line

6'Wood Fence

4'hedge

18"

12"

Cluster Crape Myrtle

Cluster Crape Myrtle

Crape Cluster

Crape Murtle Cluster

12'

Concrete Drive

Stop Sign

END MILLING AND RESURFACING
MATCH EXISTING
STA. 400+04.96

400+00

401+00

402+00

MATCHLINE STA. 402+70

STA. 400+49.82
STA. 500+43.19

HESPERIDES AVE.

EL PRADO BLVD.

SEE SHEET #89

Stop Sign

Speed Limit

SPEED LIMIT SIGN
TO REMAIN

Gte

Gte

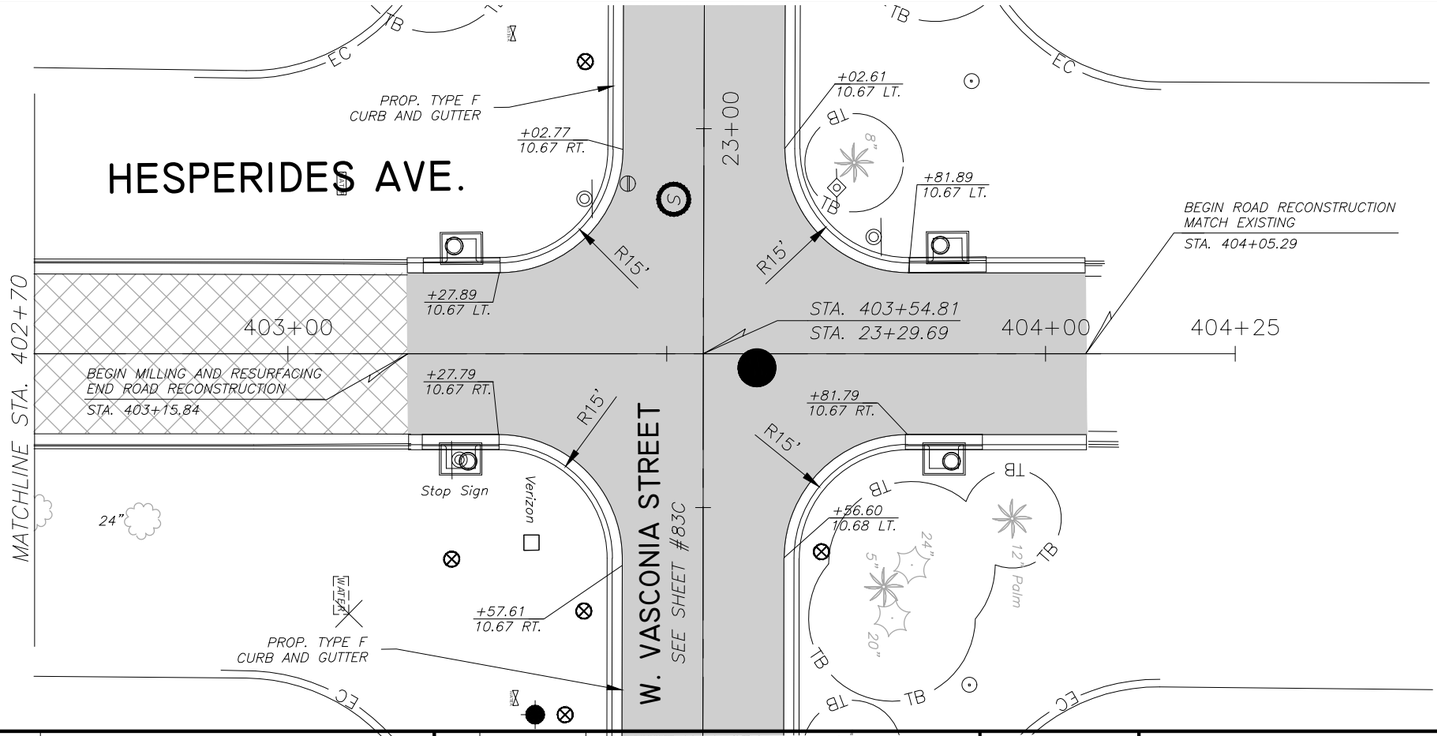
Cluster Of 10 Unknown

Concrete Drive

12"

15"

6'alum. Fence



0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HESPERIDES AVE.
PAVEMENT OVERLAY & STRIPING PLAN

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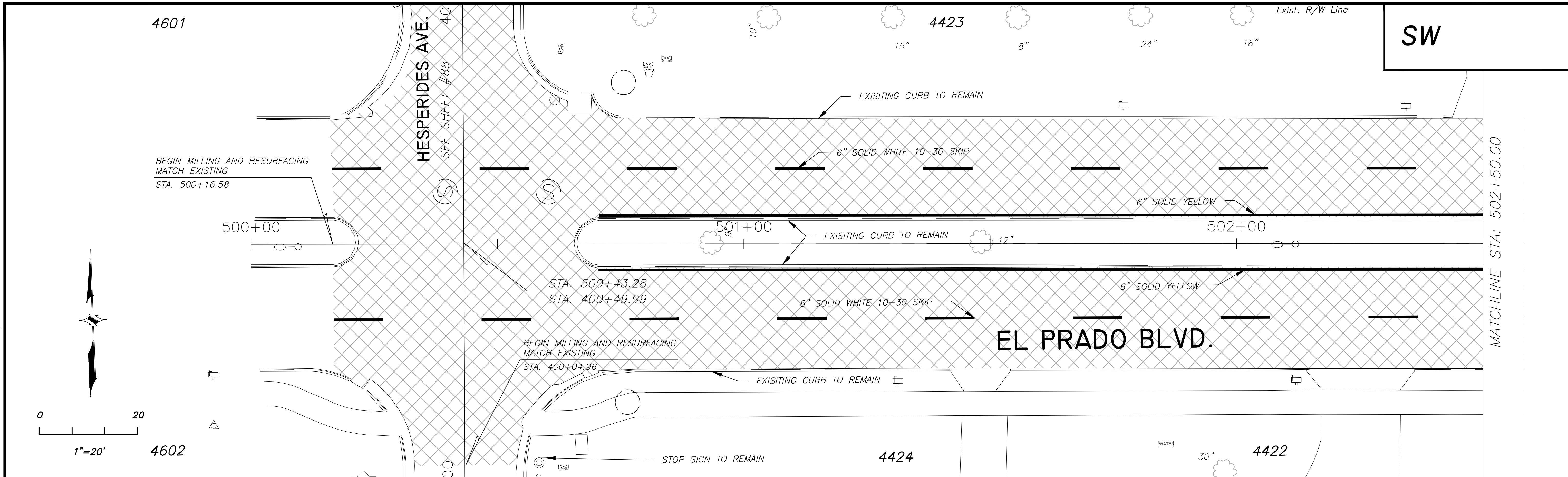

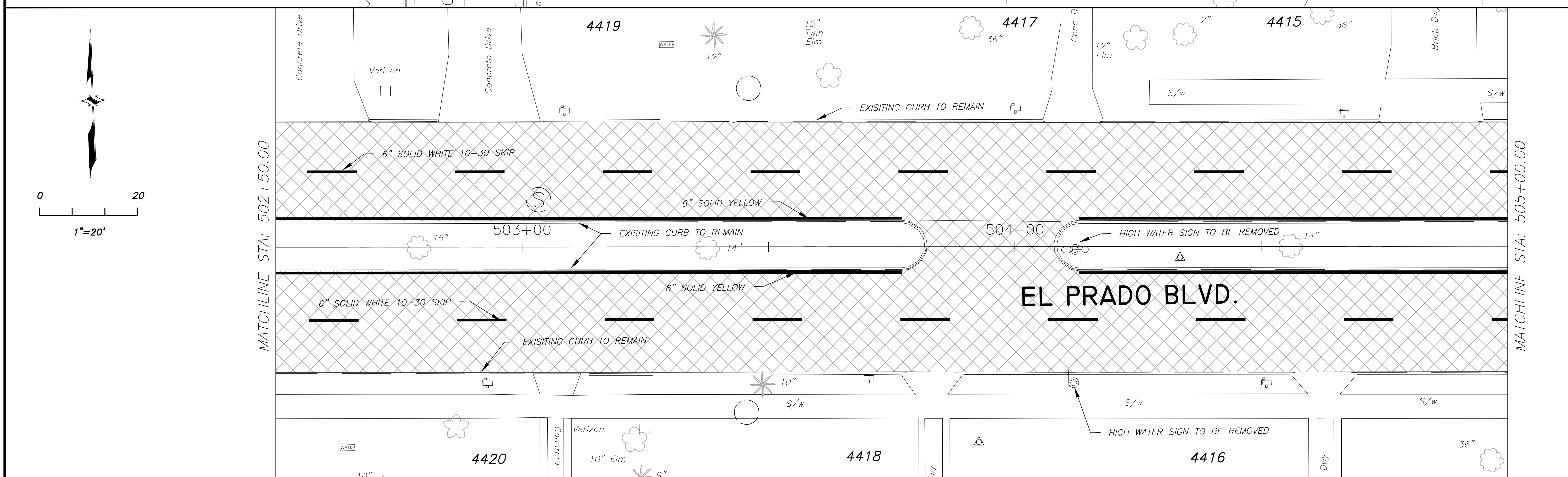

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET
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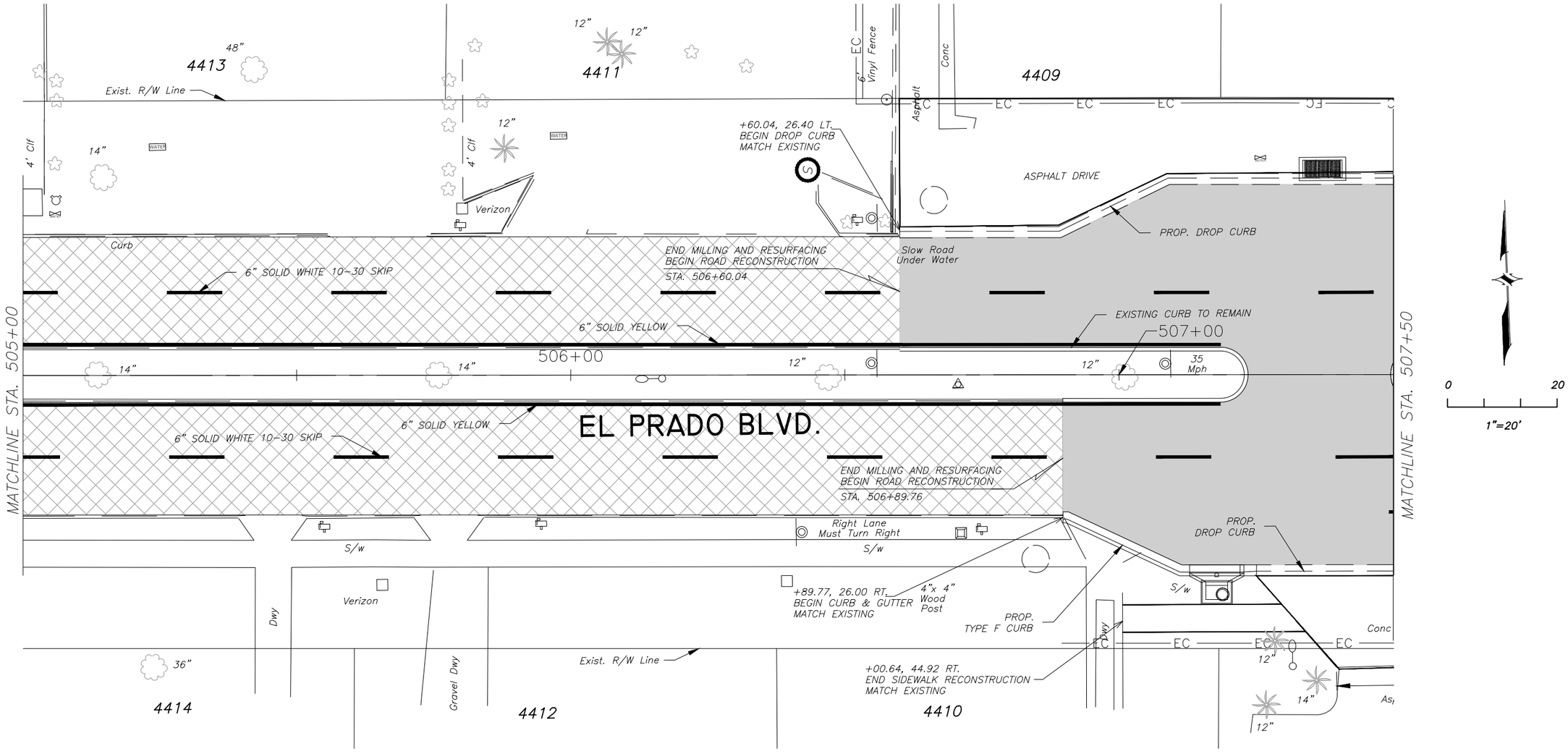
of 105

SW



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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 90 OF 105

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SW

0 20
1"=20'

6" SOLID WHITE (140 LF)
6" SOLID WHITE (50 LF)
ASPHALT DRIVE (REPAVE DISTURBED AREAS)
+35.36, 29.75 LT.
END CURB AND GUTTER
BEGIN DROP CURB
+35.42, 32.74 LT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING
3413
+17.31, 39.69 LT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING
POWER POLE TO REMAIN
Exist. R/W Line
ASPHALT DRIVE (REPAVE DISTURBED AREAS)
+11.95, 35.84 LT.
END DROP CURB
BEGIN CURB AND GUTTER
S. MANHATTAN AVE.
SEE SHEET #93
Asph
R22'
Tow Away Zone
SIGN TO REMAIN
SIGN TO REMAIN
+24.25
28.00 RT.
Business
4327
+35.31, 47.55 LT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING
PEDESTRIAN SIGNAL TO REMAIN
SIGN TO REMAIN
Right Lane Must Turn Right
+65.87, 35.00 LT.
END CURB AND GUTTER
MATCH EXISTING
+24.89
28.00 LT.
DOUBLE 6" SOLID YELLOW
R18'
R18'
RADIAL SIDEWALK RAMPS PER INDEX 304
+25.49
34.67 LT.
+20.15
33.67 LT.
605+00
Asph Crown
6" SOLID WHITE 10-30 SKIP
12" SOLID WHITE CROSS WALK TYP.
6" SOLID YELLOW TYP.
+16.86
5.00 LT.
+26.98
5.00 LT.
END ROAD RECONSTRUCTION
BEGIN MILLING AND RESURFACING
STA. 509+65.85
6" SOLID WHITE (120 LF)
6" SOLID WHITE (50 LF)
6" SOLID WHITE 10-30 SKIP
ONLY
MATCHLINE STA. 507+50
508+00
509+00
510+00
MATCHLINE STA. 510+50
9" No Trucks
NO TRUCKS SIGN TO REMAIN
15" No Trucks
NO TRUCKS SIGN TO REMAIN
STA. 508+72.62
STA. 604+71.07
24" SOLID WHITE STOP BAR TYP.
6" SOLID WHITE (75 LF)
6" SOLID WHITE (65 LF)
TURN ARROW TYP.
Curb
+16.86
5.00 RT.
+28.10
34.67 RT.
+16.76
34.34 RT.
+26.98
5.00 RT.
EL PRADO BLVD.
6" SOLID WHITE 10-30 SKIP
END ROAD RECONSTRUCTION
BEGIN MILLING AND RESURFACING
STA. 509+46.10
+46.07, 35.57 RT.
END CURB AND GUTTER
MATCH EXISTING
Asph
+20.57
28.00 RT.
R15'
R15'
+52.55
Dwy
RIGHT LANE MUST TURN RIGHT SIGN TO REMAIN
4" Metal
24'
Tob
Tos
ph
PEDESTRIAN SIGNAL TO REMAIN
+11.46, 48.01 LT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING
3501
Crosswalk Signal
DOUBLE 6" SOLID YELLOW
+19.90
28.00 LT.
604+00
+37.10, 41.29 RT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING
PEDESTRIAN SIGNAL TO REMAIN
Conc Pedestal For Large Traffic Signal Control Box
X-cut
+20.35, 33.16 RT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING
+18.76, 29.12 RT.
BEGIN CURB AND GUTTER
END DROP CURB
END ROAD RECONSTRUCTION
MATCH EXISTING
STA. 604+03.85
4320
Exist. R/W Line
Asph

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 91 of 105

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SW

0 20
1"=20'

MATCHLINE STA: 510+50.00

MATCHLINE STA: 513+00.00

Center Line

6" SOLID WHITE 10-30 SKIP

6" SOLID YELLOW TYP.

511+00

512+00

6"

18"

EL PRADO BLVD.

Conc S/w

Speed limit 30

Hart Bus Stop

SPEED LIMIT SIGN TO REMAIN

BUS STOP SIGN TO REMAIN

Asphalt

WATER

Exist. R/W Line

ASPHALT DRIVE (REPAVE DISTURBED AREAS)

+25.00, 33.67 LT.
END DROP CURB
MATCH EXISTING

+65.89
33.67 LT.

+58.49, 33.67 LT.
END CURB AND GUTTER
BEGIN DROP CURB

END ROAD RECONSTRUCTION
BEGIN MILLING AND RESURFACING
STA. 513+25.00

701+00

HUBERT AVE.

SEE SHEET #94

+30.61
33.67 LT.

+42.03, 34.59 LT.
END CURB AND GUTTER
BEGIN DROP CURB

+00.00, 34.67 LT.
END DROP CURB
MATCH EXISTING

EC

END ROAD RECONSTRUCTION
STA. 515+00.10

10'

20'

+24.96
5.00 LT.

514+00

+71.08
5.00 LT.

6" SOLID WHITE 10-30 SKIP

6" SOLID YELLOW TYP.

515+00

10"

8"

LIGHT POLE TO REMAIN

+71.08
5.00 RT.

+24.96
5.00 RT.

END ROAD RECONSTRUCTION
BEGIN MILLING AND RESURFACING
STA. 513+25.00

STA. 513+97.68
STA. 604+73.05

20.67'

+25.00, 34.34 RT.
END DROP CURB
MATCH EXISTING

+55.69, 34.34 RT.
END CURB AND GUTTER
BEGIN DROP CURB

+64.14
34.34 RT.

PROP. TYPE F
CURB AND GUTTER

+30.81
34.34 RT.

+43.97, 35.51 RT.
END CURB AND GUTTER
BEGIN DROP CURB

END ROAD RECONSTRUCTION
STA. 515+00.00

+00.00, 34.34 RT.
END DROP CURB
MATCH EXISTING

+55.60, 44.20 RT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING

RADIAL SIDEWALK RAMPS
PER INDEX 304

+51.68, 43.28 RT.
END SIDEWALK RECONSTRUCTION
MATCH EXISTING

12"

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 92 of 105

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SW

S. MANHATTAN AVE.

MATCHLINE STA: 603+00.00

MATCHLINE STA: 606+00.00

MATCHLINE STA: 606+00.00

MATCHLINE STA: 609+00.00

EL PRADO BLVD.

SEE SHEET #90

W. VASCONIA ST.

SEE SHEET #83D

W. VASCONIA ST.

Parking Blockers

Crosswalk
+20.61 Signal
28.00 LT.

+28.10
34.67 RT.

+25.49
34.67 LT.

ASPHALT DRIVE
(REPAVE DISTURBED AREAS)

0 20
1"=20'

Speed Limit 40

C & G

+03.93, 30.00 LT.
BEGIN CURB AND GUTTER
MATCH EXISTING

PROP. TYPE F
CURB AND GUTTER.

R15'

R18'

Eop

+25.26
28.00 LT.

+35.41, 29.20 LT.
END CURB AND GUTTER
BEGIN DROP CURB

24" SOLID WHITE
STOP BAR TYP.

6" SOLID WHITE
(50 LF)

604+00

605+00

Asph Crown

12'

11'

11'

END ROAD RECONSTRUCTION
MATCH EXISTING
STA. 604+03.81

STA. 604+71.07
STA. 508+72.62

TURN
ARROW
TYP.

12" SOLID WHITE
CROSS WALK TYP.

509+00

PROP. TYPE F
CURB AND GUTTER.

R15'

R18'

+20.15
33.67 LT.

47'

Eop

+19.96
28.00 RT.

+16.76
34.34 RT.

+03.77, 30.00 RT.
BEGIN CURB AND GUTTER
MATCH EXISTING

Asph

X-cut

+24.25
28.00 RT.

61.37'

Asph

R22'

30'

PROP. DROP
CURB TYP.

S/w

EC

PROP. DROP CURB TYP.

ASPHALT DRIVE
(REPAVE TO DISTURBED AREAS)

PROP. DROP CURB TYP.

Stop

Eop

PROP. TYPE F
CURB AND GUTTER.

6" SOLID WHITE
(10-30 SKIP)

6" SOLID WHITE
(10-30 SKIP)

Traffic Signal

+50.39
28.00 LT.

+06.40
28.00 LT.

6" SOLID WHITE
(140 LF)

+46.90, 28.00 LT.
END CURB AND GUTTER
BEGIN DROP CURB

PROP. RADIAL
CURB RAMP
PER INDEX 304

+39.18, 29.33 LT.
END CURB AND GUTTER
MATCH EXISTING

0 20
1"=20'

607+00

Asph Crown

608+00

END ROAD RECONSTRUCTION
MATCH EXISTING
STA. 608+39.59

STA. 31+62.47
STA. 607+85.81

DOUBLE
6" SOLID YELLOW

DOUBLE
6" SOLID YELLOW

S. MANHATTAN AVE.

6" SOLID WHITE
(10-30 SKIP)

+23.94, 29.00 RT.
END DROP CURB
BEGIN CURB AND GUTTER

+43.94, 29.00 RT.
END CURB AND GUTTER
BEGIN DROP CURB

6" SOLID WHITE

PROP. TYPE F
CURB AND GUTTER.

C & G

+65.18
28.00 RT.

PROP. TYPE F
CURB AND GUTTER.
+21.17
28.00 RT.

+40.01, 29.33 RT.
END CURB AND GUTTER
MATCH EXISTING

PROP. TYPE F CURB AND GUTTER.

PROP. DROP CURB TYP.

Speed Limit 40

5'

S/w

S/w

32+00

W. VASCONIA ST.

EC

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 93 of 105

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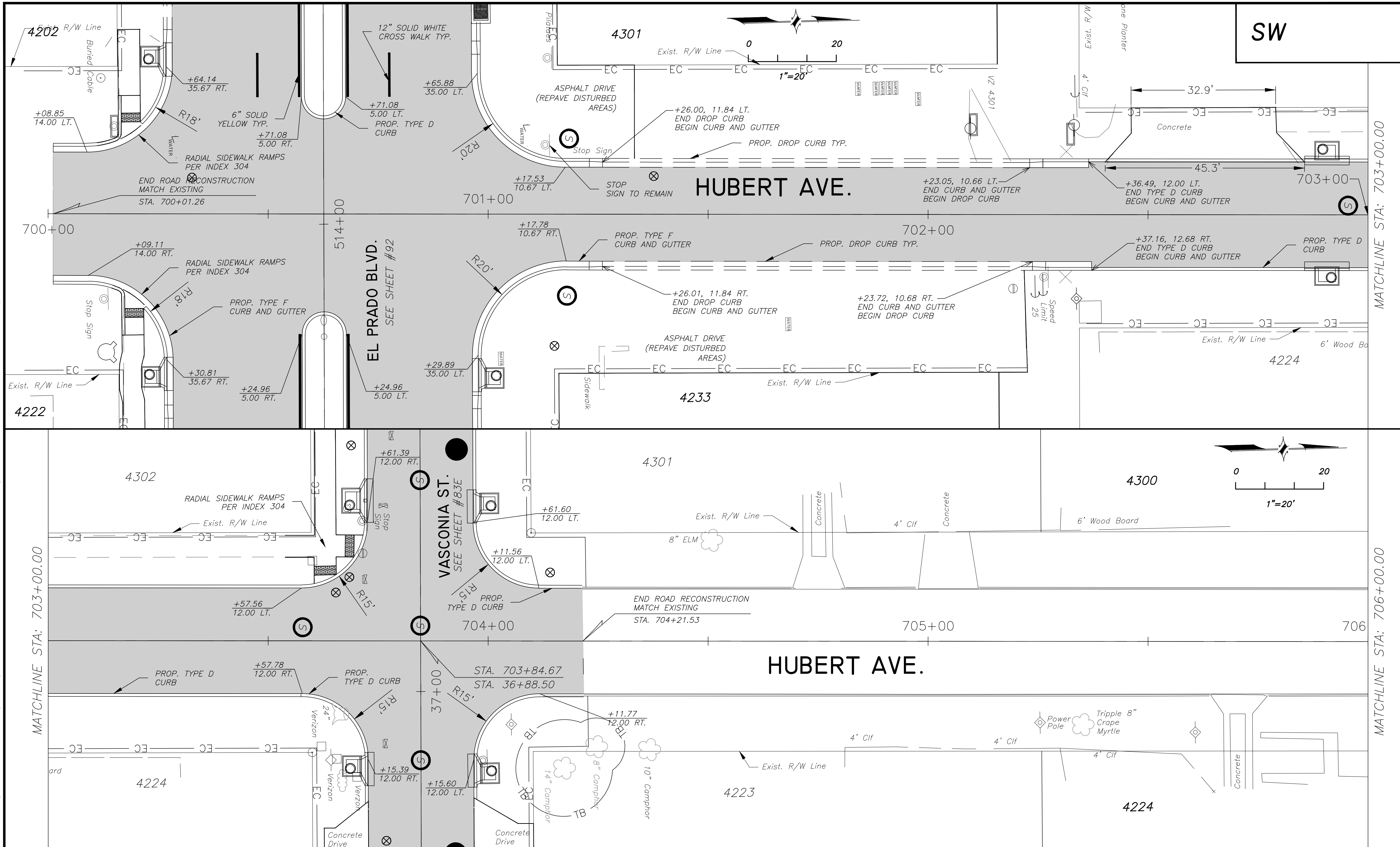

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

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DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVE.
PAVEMENT OVERLAY & STRIPING PLAN

SHEET 94 OF 105

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SW

W. SEVILLA ST.

W. VASCONIA ST.

HESPERIDES AVE.

VASCONIA ST
DETOUR

VASCONIA ST
DETOUR

TEMPORARY
ON STREET
PARKING
AREA

TEMPORARY
"PRE-CONSTRUCTED
ELEVATED
WALKWAY"

100'
roadway closure

TEMPORARY CLOSE
DRIVEWAYS/SIDEWALKS

END
DETOUR

DETOUR
500 FT

ROAD
CLOSED
AHEAD

DETOUR

ROAD CLOSED
TO
THRU TRAFFIC

TEMPORARY
"PRE-CONSTRUCTED
ELEVATED
WALKWAY"

TEMPORARY
CLOSE DRIVEWAYS

ROAD CLOSED AHEAD
LOCAL
TRAFFIC ONLY

DETOUR

END
DETOUR

WORK AREA

BLOCK AFFECTED

TYPICAL BLOCK DETOUR SIGNING

NTS

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

TRAFFIC CONTROL PLAN I

SHEET
94A
OF
105

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SW

W SEVILLA ST

W. SEVILLA ST.

HESPERIDES AVE.

S. MANHATTAN AVE.

HUBERT AVE.

EL PRADO BLVD.

W VASCONIA ST.
MANHATTAN AVE.
DETOUR

END DETOUR

ROAD CLOSED TO THRU TRAFFIC

ROAD CLOSED AHEAD

ROAD CLOSED

WORK AREA

TYPICAL INTERSECTION DETOUR SIGNING

NTS

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

TRAFFIC CONTROL PLAN II

SHEET 94B
OF 105

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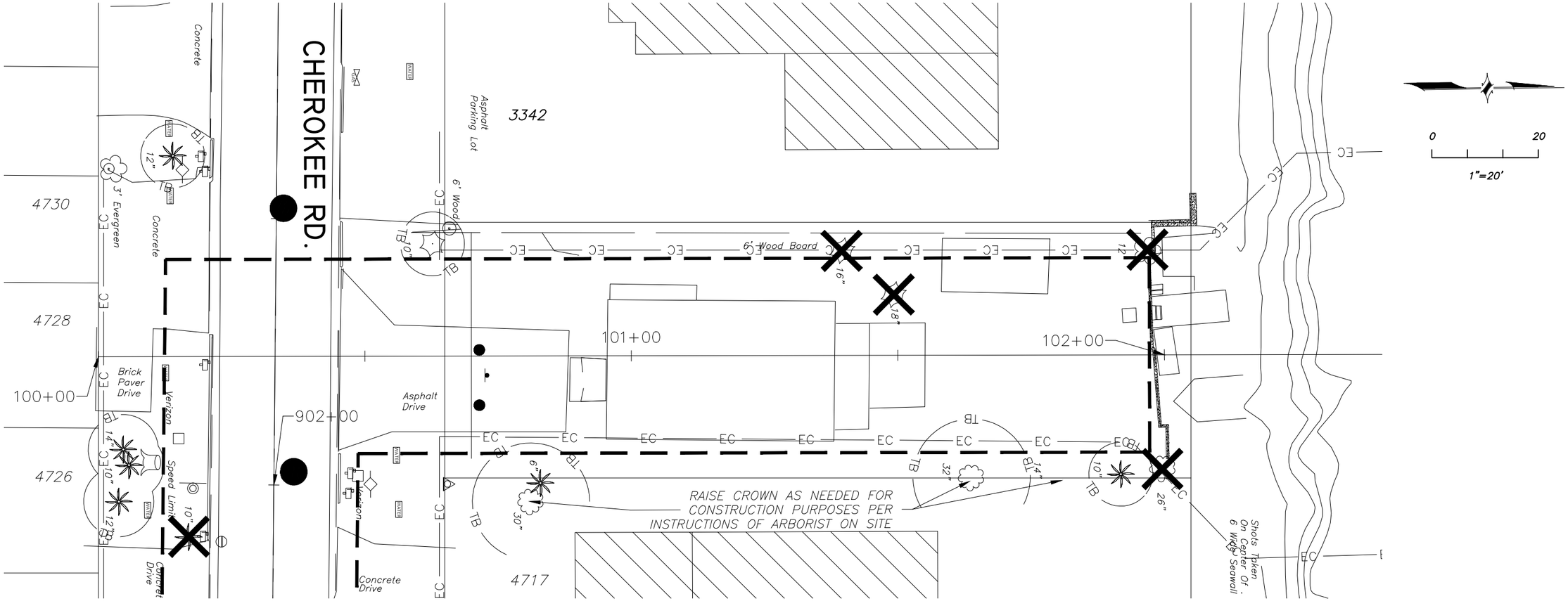
SW



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1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
OUTFALL
TREE REMOVAL PLAN

SHEET 95 of 105

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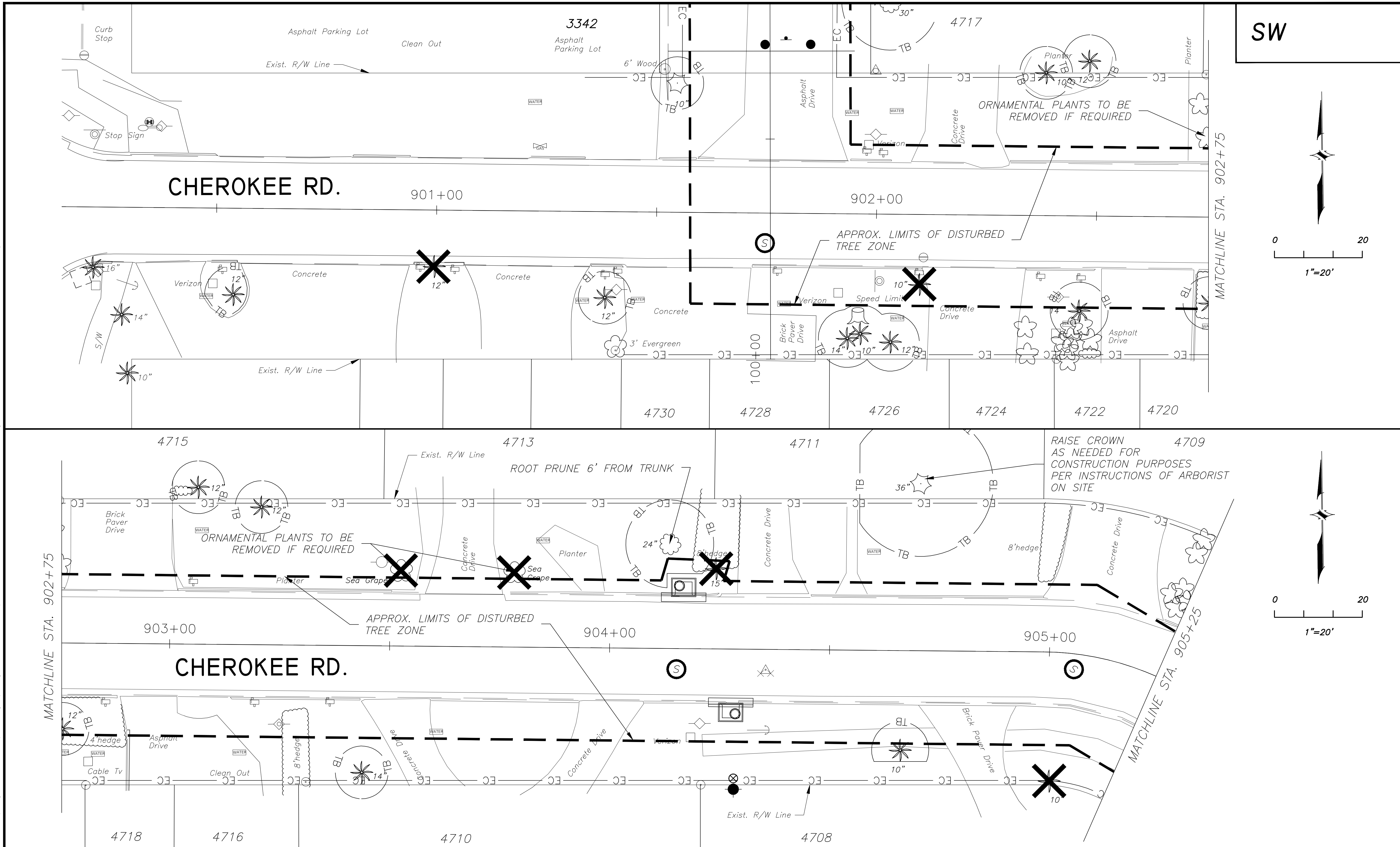

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

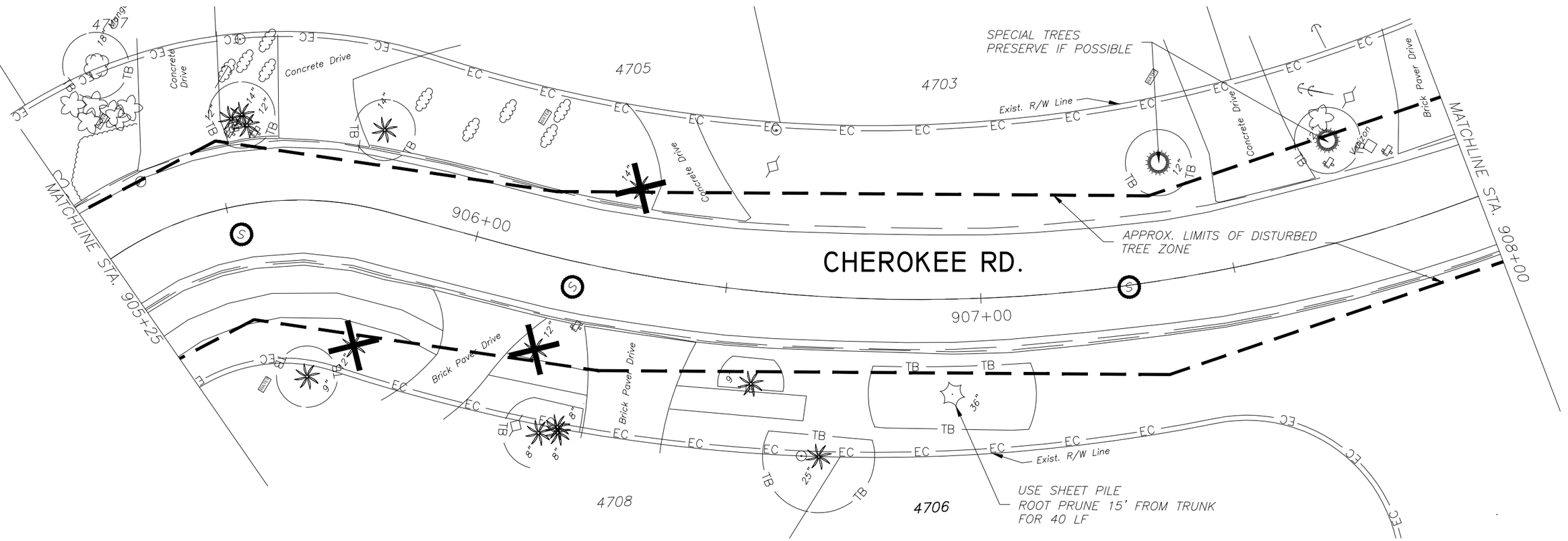
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
TREE REMOVAL PLAN

SHEET 95A
of 105

SW

0 20

1"=20'



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DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD.
TREE REMOVAL PLAN

SHEET 96 OF 105

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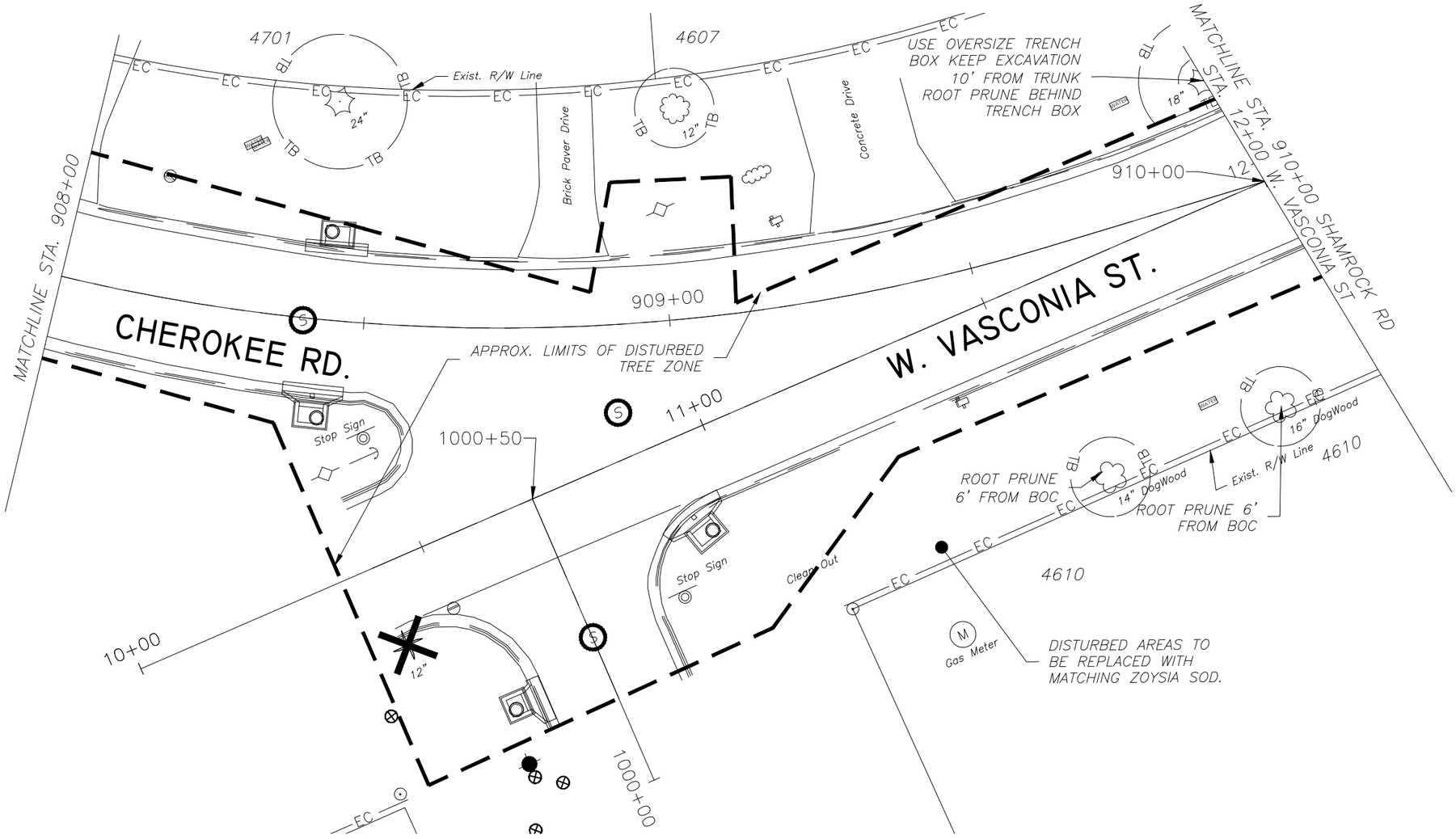
SW



No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. & W. VASCONIA ST.
TREE REMOVAL PLAN

SHEET 97 OF 105

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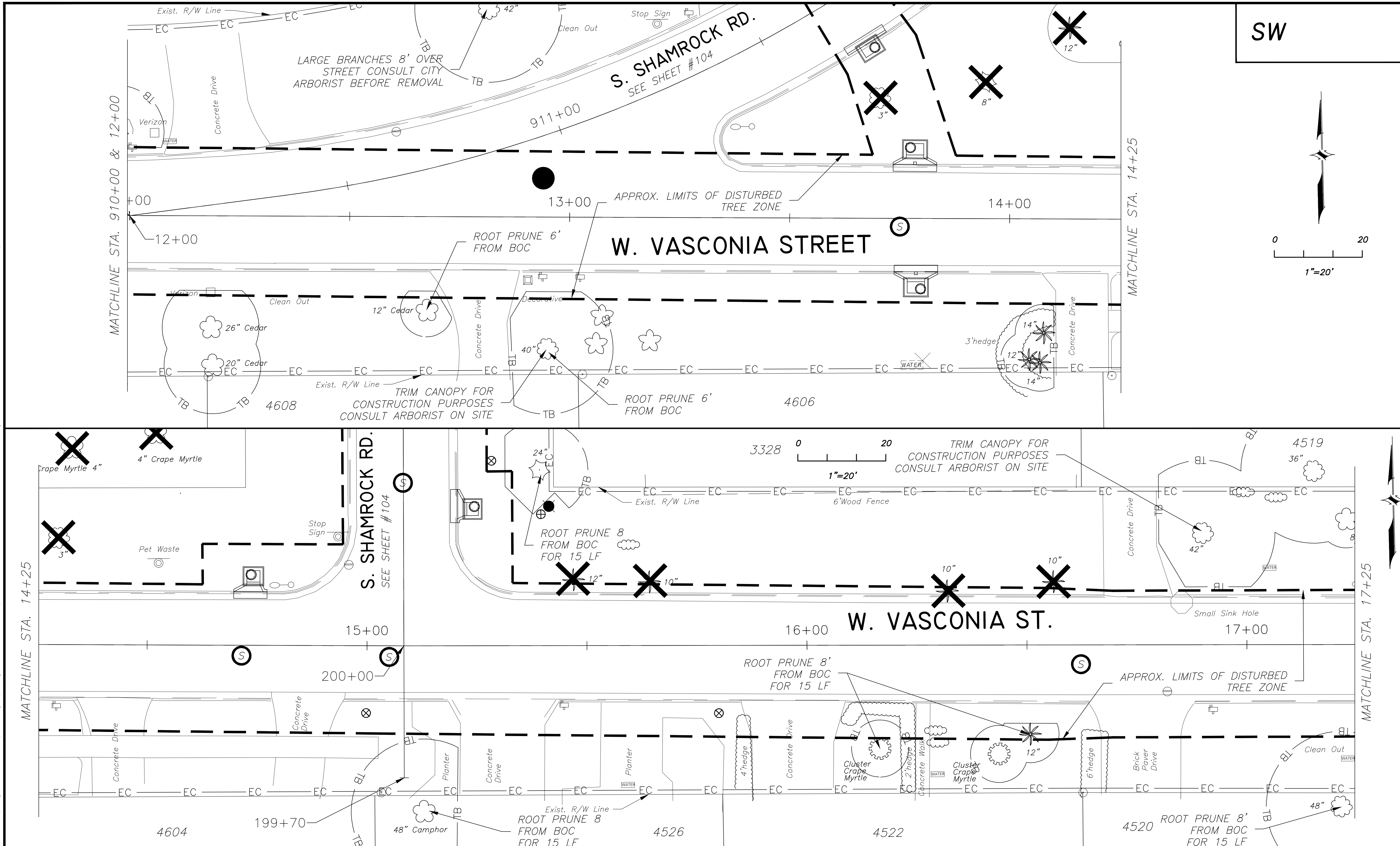

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST.
TREE REMOVAL PLAN

SHEET 98 OF 105

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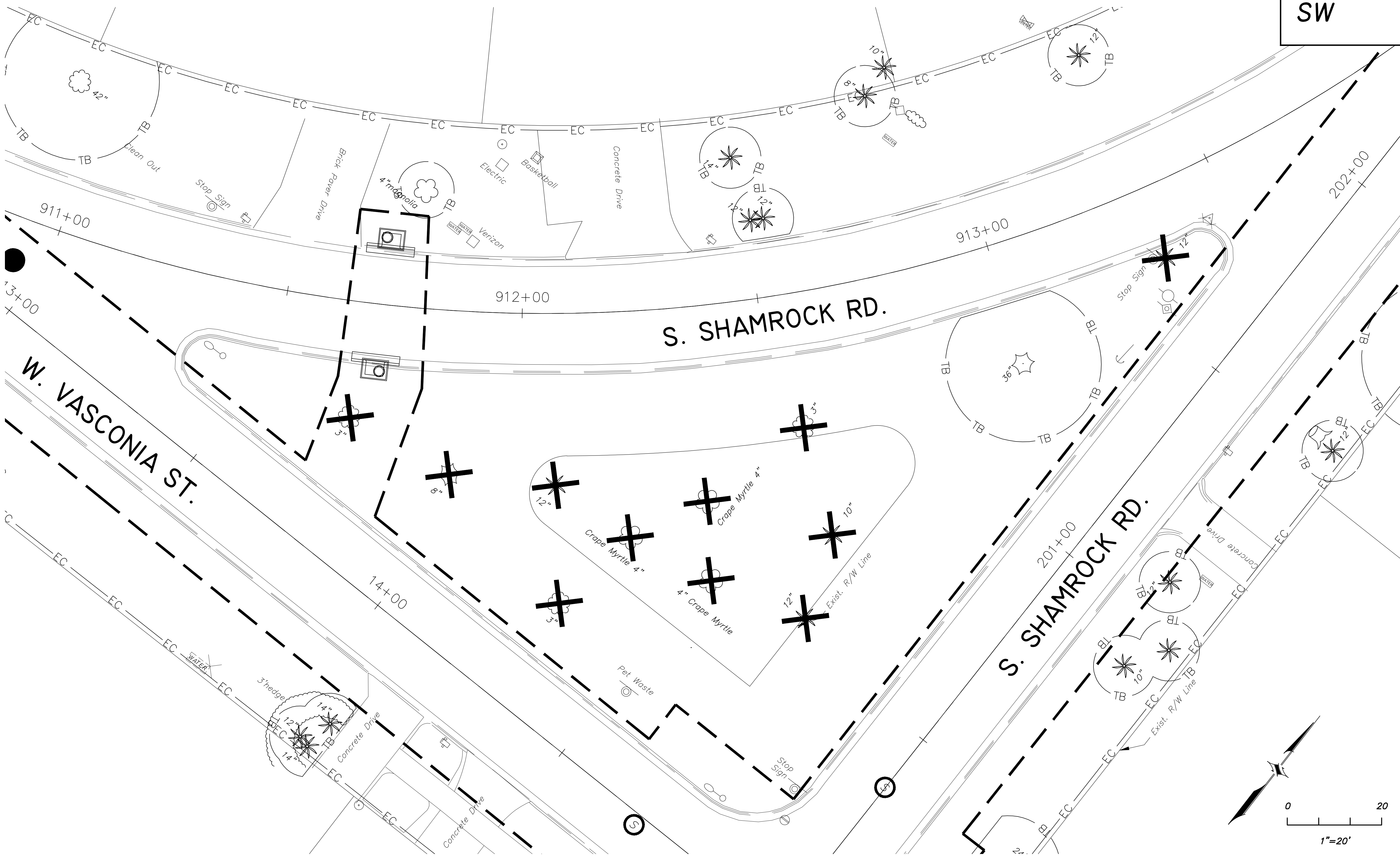
SW



No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

DES: ALC
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CKD: MDC
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CITY of TAMPA

Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST. & SHAMROCK RD.
TREE REMOVAL PLAN

SHEET
98A
105

SW

RECOMMENDED REMOVAL, BELOW AVERAGE CONDITION

4517

Exist. R/W Line

ROOT PRUNE 2' FROM BOC

4513

TRIM CANOPY FOR CONSTRUCTION PURPOSES CONSULT ARBORIST ON SITE

4509

0 20

1"=20'

MATCHLINE STA. 17+25

18+00

19+00

20+00

MATCHLINE STA. 20+25

APPROX. LIMITS OF DISTURBED TREE ZONE

W. VASCONIA STREET

Exist. R/W Line

ROOT PRUNE 2' FROM BOC

4516

TRIM CANOPY FOR CONSTRUCTION PURPOSES CONSULT ARBORIST ON SITE

4510

ROOT PRUNE 8' FROM BOC

4508

4507

4503

4501

Exist. R/W Line

MATCHLINE STA. 20+25

21+00

22+00

MATCHLINE STA. 22+75

APPROX. LIMITS OF DISTURBED TREE ZONE

W. VASCONIA STREET

MINOR CROWN RAISING

Exist. R/W Line

4506

4504

ROOT PRUNE 8' FROM BOC

4502

0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST.
TREE REMOVAL PLAN

SHEET 99 of 105

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SW

0 20

1"=20'

404+00

MATCHLINE STA. 22+75

23+00

24+00

25+00

MATCHLINE STA. 25+75

HESPERIDES AVE.

W. VASCONIA STREET

15" Pine

22"

8"

12" Palm

24"

5"

20"

16"

ROOT PRUNE 2' FROM BOC

4423

4419

Brick Walk

WATER

24"

32"

TRIM CANOPY FOR CONSTRUCTION PURPOSES CONSULT ARBORIST ON SITE

Exist. R/W Line

18x18 Brick

Concrete Walk

18x18 Brick

18x18 Brick

APPROX. LIMITS OF DISTURBED TREE ZONE

20"

ROOT PRUNE 8' FROM BOC

18"

19"

8"

Verizon

Stop Sign

9"

Concrete Drive

ROOT PRUNE 8' FROM BOC

9"

5"

ROOT PRUNE 8' FROM BOC

4"

Brick Drive

Clean Out

20"

Crape Myrtle Cluster

Brick Drive

Underground Lp Tank

4424

Exist. R/W Line

4422

4418

4415

4411

Exist. R/W Line

Brick Drive

8"

14"

10" Magnolia

30"

24"

4" Crape Myrtle

4" Crape Myrtle

4" Crape Myrtle

Concrete

Clean Out

5" Elm

Verizon

Concrete Drive

TRIM CANOPY FOR CONSTRUCTION PURPOSES CONSULT ARBORIST ON SITE

26"

Brick Walk

35"

ROOT PRUNE 25 LF

ROOT PRUNE 15 LF

0 20

1"=20'

26+00

27+00

28+00

MATCHLINE STA. 25+75

MATCHLINE STA. 28+75

W. VASCONIA STREET

APPROX. LIMITS OF DISTURBED TREE ZONE

Concrete Walk

Verizon

15"

27"

Brick Drive

5'hedge

Brick Drive

10"

Decorative

Decorative

WATER

6"

5"

9"

Clean Out

24"

Concrete Drive

Brick Drive

34"

Exist. R/W Line

4416

4414

4410

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST.
TREE REMOVAL PLAN

SHEET 100 of 105

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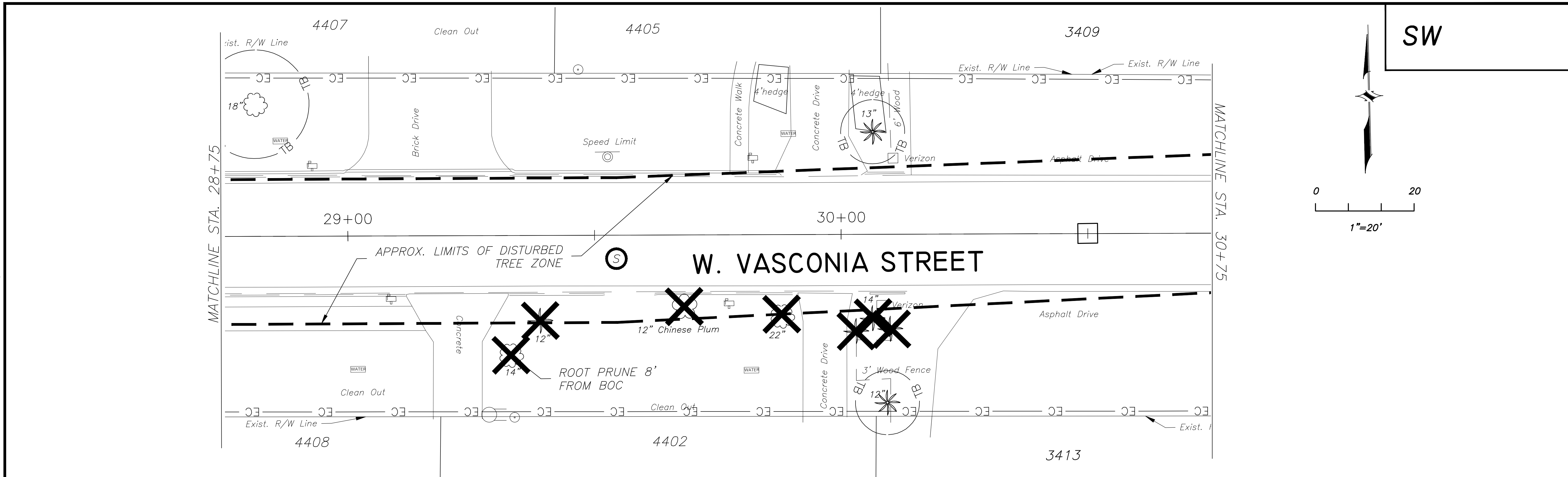

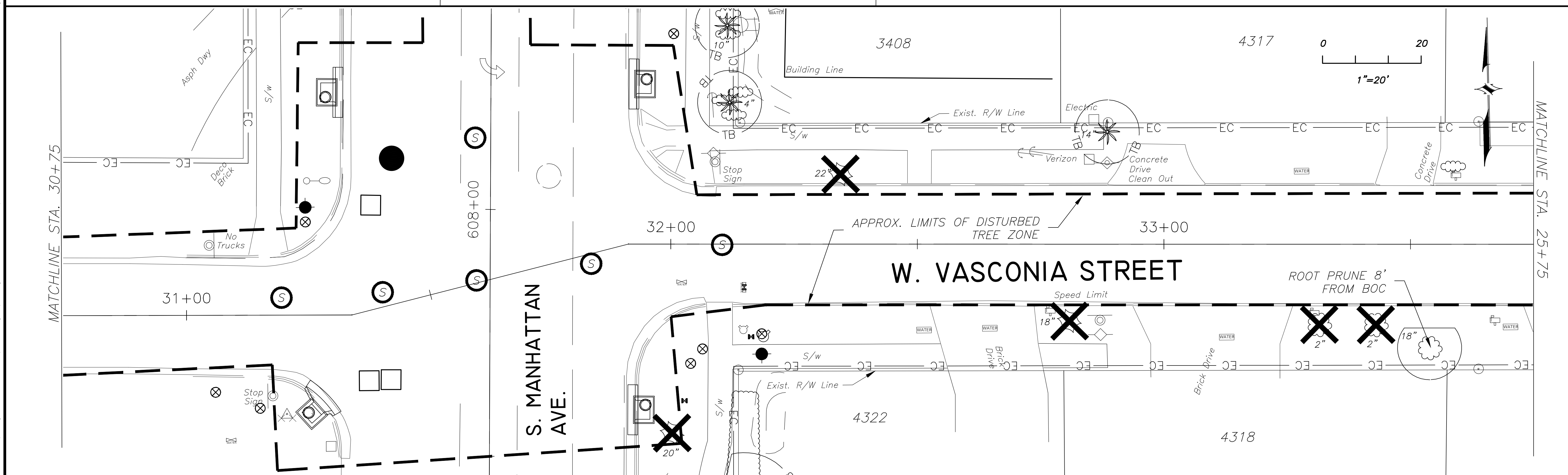

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST.
TREE REMOVAL PLAN

SHEET 101
105

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SW

4313 | 4309 | 4305

MATCHLINE STA. 33+75

Concrete Walk | Brick Drive | Concrete | Concrete Walk | Clean Out | Concrete Drive | Exist. R/W Line | 4"unknown | Verizon | Brick Walk | Exist.

34+00 | 35+00 | 36+00

APPROX. LIMITS OF DISTURBED TREE ZONE

W. VASCONIA STREET

Buried Gas Pipeline | Concrete Drive | Concrete Drive | Concrete Drive | Concrete Walk | Clean Out | Verizon | Concrete Walk | Exist. R/W Line | Exist. R/W L

30" | ROOT PRUNE 10' FROM BOC | TRIM CANOPY FOR CONSTRUCTION PURPOSES CONSULT ARBORIST ON SITE | Concrete | Brick Drive

4314 | 4310 | M 4306

MATCHLINE STA. 36+25

0 20

1"=20'

4301 | 4223 | 4219 M | 4217

8" Camphor | 14" Camphor | Exist. R/W Line | Concrete Drive | Clean Out | Concrete Walk | Verizon | Concrete | Concrete Drive | 3" Spruce | 2'hedge | Spruce 4"

MATCHLINE STA. 36+25

704+00

37+00 | 38+00 | 39+00

APPROX. LIMITS OF DISTURBED TREE ZONE

W. VASCONIA STREET

Stop Sign | Verzon | Verizon | 24" Verizon | Concrete Drive | 14" Wood Fence | 9" | 4" | 6" | 5" | Exist. R/W Line | ROOT PRUNE 6' FROM BOC | Concrete Drive | Brick Drive | Brick Drive | 5'hedge | 3'hedge

HUBERT AVE.

4302 | 4224 | 4216 | 4214

MATCHLINE STA. 39+25

0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA ST.
TREE REMOVAL PLAN

SHEET 102 OF 105

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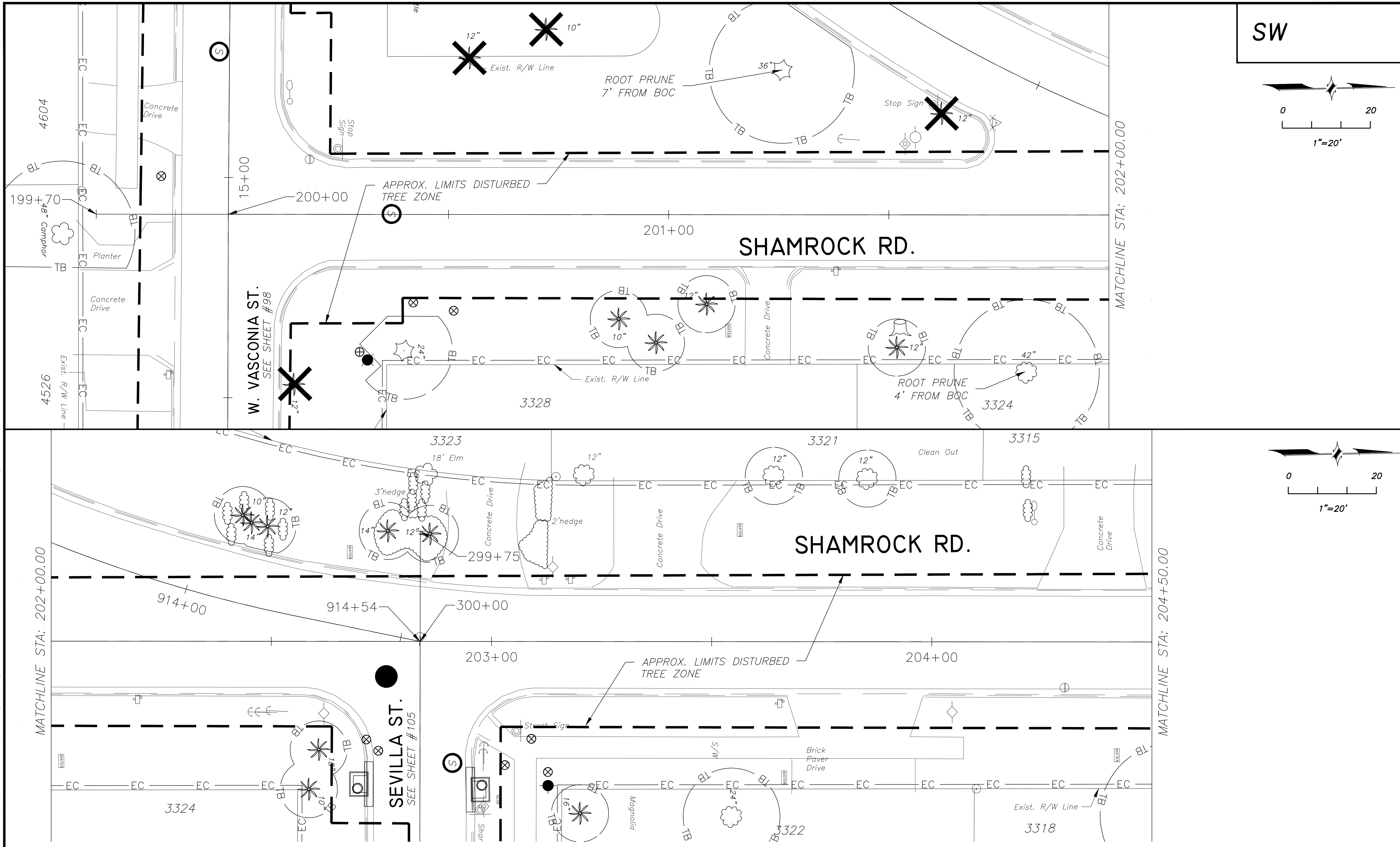

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

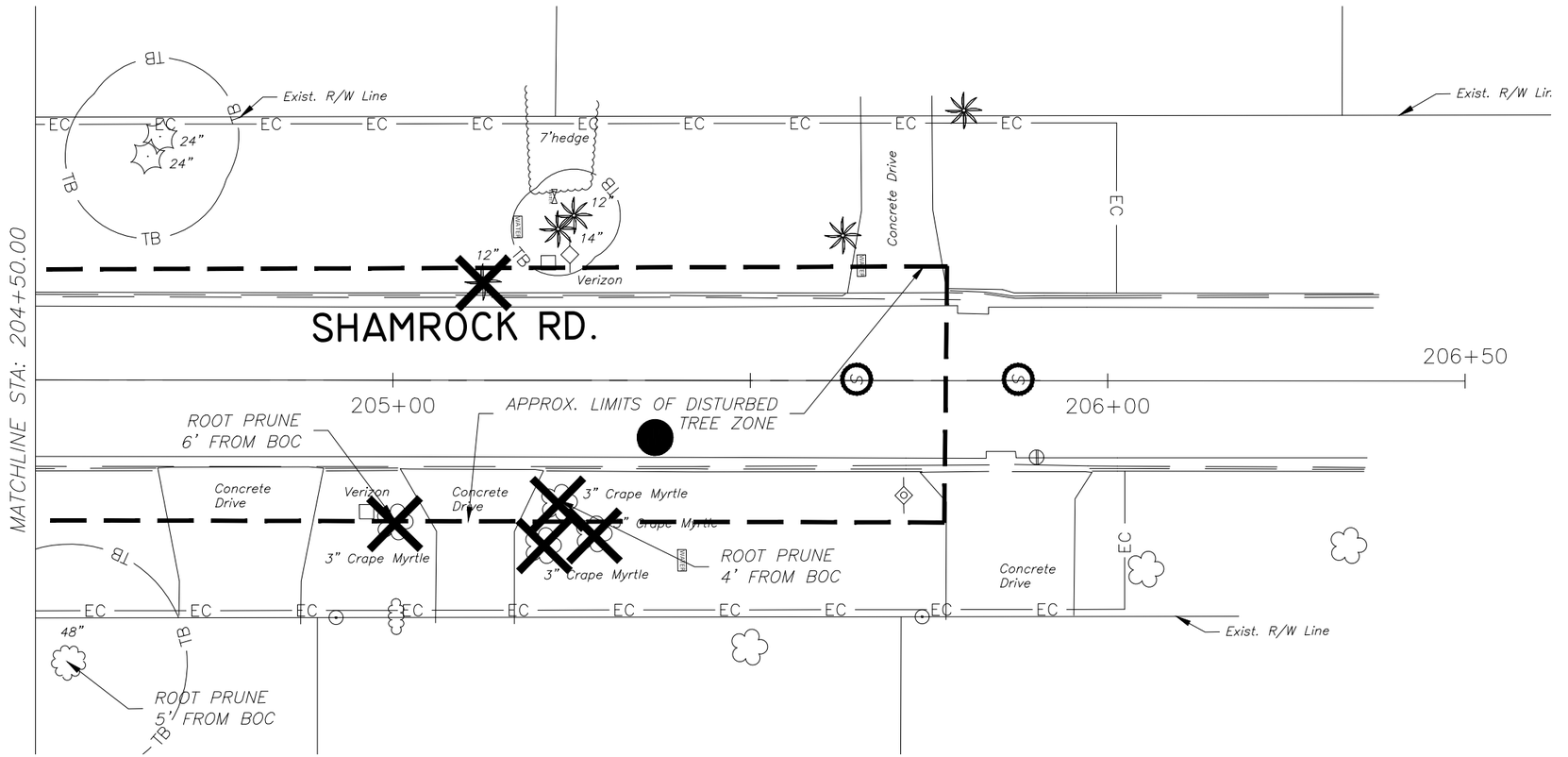
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
TREE REMOVAL PLAN

SHEET 103 OF 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK-TR.dwg - Printed Feb 11, 2016-11:07am by: JenP

SW



No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
TREE REMOVAL PLAN

SHEET 104 OF 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK-TR.dwg - Printed Feb 11, 2016-11:07am by: JenP

SW

3327

3325

3323

911+00

912+00

913+00

13+00

14+00

201+00

SHAMROCK RD.

SHAMROCK RD.

42"

Clean Out

Stop Sign

Brick Paver Drive

4" Magnolia

Electric

Basketball

Concrete Drive

Verizon

10"

8"

14"

12"

12"

12"

Stop Sign

ROOT PRUNE
7' FROM BOC

36"

APPROX. LIMITS
TREE ZONE

LIMITS DISTURBED

Concrete Drive

10"

Exist. R/W Line

3"

8"

12"

Crape Myrtle 4"

Crape Myrtle 4"

4" Crape Myrtle

12"

Exist. R/W Line

Pet Waste

Stop Sign

4606

3'hedge

14"

12"

14"

Concrete Drive

Concrete Drive

3328

0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

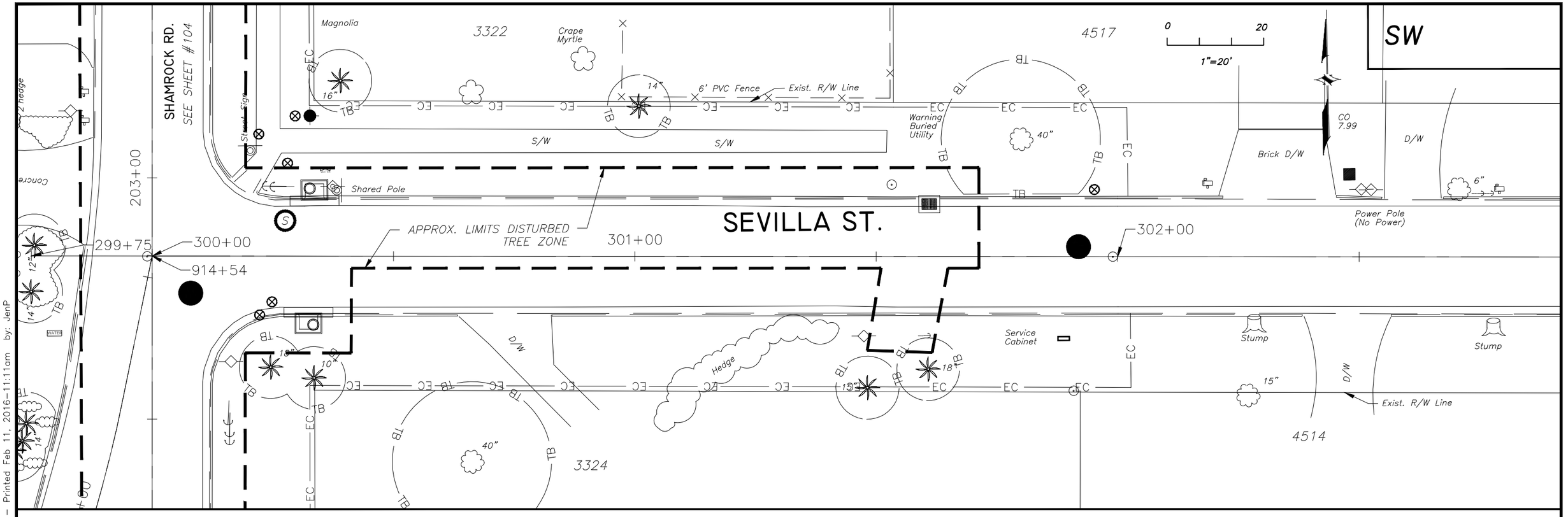
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

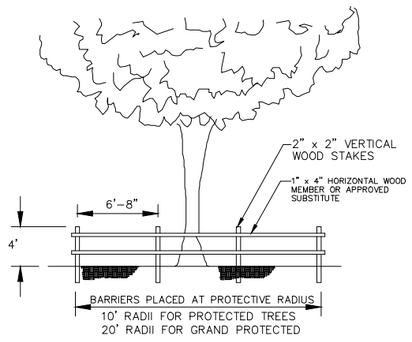
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD.
TREE REMOVAL PLAN

SHEET
104A
of 105

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK-TR - 2.dwg - Printed Feb 11, 2016-11:09am by: JenP



TREE PROTECTION NOTES



PROTECTIVE BARRIERS are used during land alteration and construction activities to protect trees and natural areas to be retained on a site.

PROTECTIVE BARRIERS must be erected around TREES to be retained within an area where land alteration and construction activities will occur as well as along NATURAL AREAS where such areas are adjacent to permitted land alteration or construction activities. A PROTECTIVE BARRIER must remain in place until the land alteration and construction activities are completed or until commencement of grade finishing and sodding. No ground disturbance must occur within the barricaded area.

BARRIER SPECIFICATIONS FOR TREES:

Four corner upright stakes of no less that 2" x 2" lumber connected by horizontal members of no less than 1" x 4" lumber.

NATURAL AREAS – To restrict access into areas where land alteration and construction activities are not authorized, a physical structure not less than 3 feet in height is placed along the perimeter of such areas.

CITY OF TAMPA – Section 13-164. Tree protection standards:

Development on parcels shall comply with the following tree protection requirement:

1) Protective barricades shall be placed around all protected trees and grand trees during site clearing to create a protective radius and shall remain in place until land alteration, site clearing and construction activities are complete. Barricades for the protective radius shall be erected at a minimum distance of ten (10) feet from the edge of trunk of protected trees and twenty (20) feet from the edge of trunk of grand trees.

2) A minimum distance of ten (10) feet from all protected trees and twenty (20) feet from all grand trees shall be maintained when installing underground utilities. If this results in unreasonable hardship, a soil auger shall be used to tunnel under the root systems.

3) Installation of artificial barriers such as protective barricades, fences, posts or walls shall not destroy or irreversibly harm the root system of projected trees and grand trees. Footers for walls shall end at the point where larger roots are encountered, and the roots shall be bridged. Post holes and trenches located close to protected trees or grand trees shall be adjusted to avoid damage to major roots.

4) All roots to be removed during the site clearing phase shall be severed clean at the perimeter of the designated protective radius.

5) A two-inch layer of mulch shall be applied over the surface of exposed roots of protected trees and grand trees during the site clearing phase.

6) A protective dry well and drainage/aeration system shall be provided where protected trees or grand trees will be adversely affected by raising the grade.

7) A protective retaining wall shall be constructed at the perimeter of the protective radius around a protected tree or grand tree where the protected tree or grand tree will be adversely affected by lowering the grade.

8) All trimming of protected trees and grand trees during development shall be done by a qualified, licensed tree service.

TREE TABLE & LANDSCAPE CALCULATIONS

CREDIT TABLE:

Diameter in Inches	*Retained on Site	Multiplier for Credit	Credit
5" TO 7"	6	0	0
8" TO 12"	16	1	16
13" TO 19"	14	2	28
20" TO 29"	19	4	76
30" OR MORE	14	10	140
ALL PALMS	68	1	68
Total	140	~	328

DEBIT TABLE:

Diameter in Inches	*Removed on Site	Multiplier for Debit	Debit
5" TO 7"	0	0	0
8" TO 12"	8	1	8
13" TO 19"	14	2	28
20" TO 29"	9	4	36
30" OR MORE	2	Inch per Inch	142
ALL PALMS	29	1	29
Total	76	~	243

DEBIT FOR TREES TO BE REMOVED	+243
CREDIT FOR TREES TO REMAIN	-328
TOTAL REQUIRED 2" TREES TO BE PLANTED	= -85
TOTAL PROPOSED 2" TREES TO BE PLANTED	= -85

REMAINING BALANCE = -85 - -85 = 0 2" TREES
MITIGATE VIA PAID INTO TREE FUND

TREE LEGEND

- TREE
- TREE (PALM)
- TREE (PINE)
- TREE (OAK)

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SEVILLA ST.
TREE REMOVAL PLAN

SHEET 105 OF 105

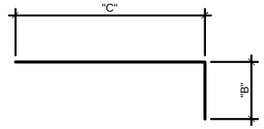
G:\Projects\14-041 – Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SEVILLA-TR.dwg – Printed Feb 11, 2016-11:11am by: JenP

JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 901+75.57	9	7	9	9	9	N/A	1	32	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			39	1			10-2					
7	102	10-2			39	1			10-2					
7	103	10-2			48	1			10-2					
7	104	10-2			43	1			10-2					
7	105	8-6 3/4			76	10			2-11 3/4			5-7		
7	106	8-6 3/4			76	10			2-11 3/4			5-7		
4	108	8-2			76	1			8-2					
3	109	34-8			12	1			34-8					
3	110	31-8			12	1			31-8					
3	111	31-0 1/4			12	1			31-0 1/4					
3	112	34-8			12	1			34-8					
3	113	31-8			16	1			31-8					
3	114	31-8			16	1			31-8					

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

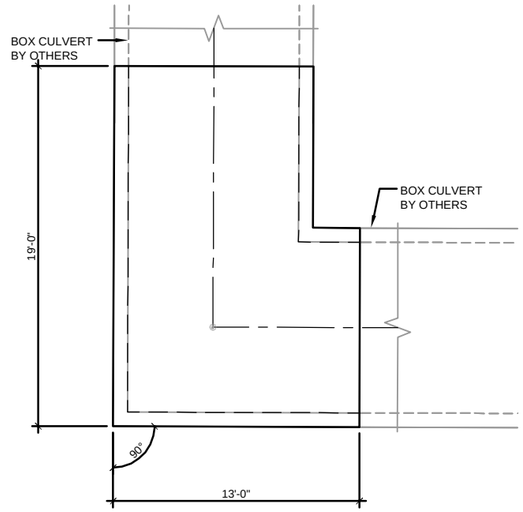


Bar Type 10

SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 12-14-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	7	9	7	23		23

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 12-14-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	9	9	10	10	10	-	10	12	12	12	12	12	12



S-1 Junction Box Plan - STA. 901+75.57

SCALE: 1/8" = 1'-0"

STRUCTURE S1 STA. 901+75.57 IS A CONFLICT STRUCTURE THAT REQUIRES CORING FOR 12" DIAMETER STEEL PIPE PER DETAIL ON SHEET S-11

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 8,100 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
5012 W. Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959

MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-1 OF S-14

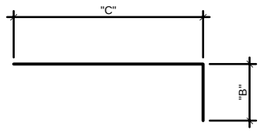
P:\2003 - Arehna Engineering\2003-003 Spring Lake Junction Boxes\Sdwg\Spring Lake - Plans.dwg - Printed Dec 14, 2015 - 4:48pm by: matt

JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 905+06.00	9	6	9	9	9	N/A	1	19.62	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	
6	101	10-2			25	1			10-2						
7	102	10-2			25	1			10-2						
7	103	10-2			31	1			10-2						
7	104	10-2			28	1			10-2						
7	105	8-0 3/4			48	10			2-11 3/4			5-1			
7	106	8-0 3/4			48	10			2-11 3/4			5-1			
4	108	7-2			48	1			7-2						
3	109	22-3 1/2			12	1			22-3 1/2						
3	110	19-3 1/2			12	1			19-3 1/2						
3	111	18-7 5/8			12	1			18-7 5/8						
3	112	22-3 1/2			12	1			22-3 1/2						
3	113	19-3 1/2			14	1			19-3 1/2						
3	114	19-3 1/2			14	1			19-3 1/2						

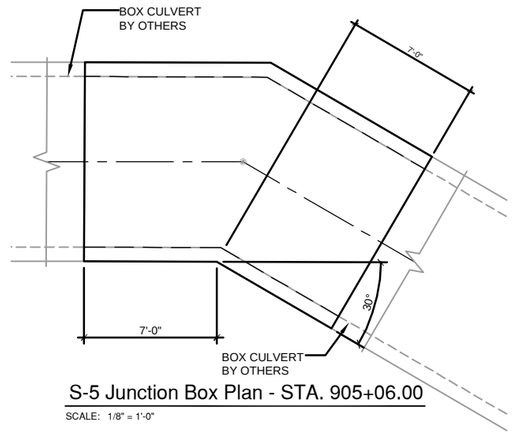
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE



Bar Type 10
SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	5	5	5	15		15

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



S-5 Junction Box Plan - STA. 905+06.00
SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 5,000 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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5012 W. Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959

MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

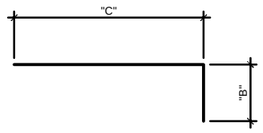
SHEET S-2 OF S-14

JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 905+51.92	9	6	9	9	9	N/A	1	19.12	VARIES

JUNCTION BOX BAR SCHEDULE														
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			24	1			10-2					
7	102	10-2			24	1			10-2					
7	103	10-2			31	1			10-2					
7	104	10-2			28	1			10-2					
7	105	8-0 3/4			46	10			2-11 3/4			5-1		
7	106	8-0 3/4			46	10			2-11 3/4			5-1		
4	108	7-2			46	1			7-2					
3	109	21-9 1/2			12	1			21-9 1/2					
3	110	18-9 1/2			12	1			18-9 1/2					
3	111	18-1 5/8			12	1			18-1 5/8					
3	112	21-9 1/2			12	1			21-9 1/2					
3	113	18-9 1/2			14	1			18-9 1/2					
3	114	18-9 1/2			14	1			18-9 1/2					

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

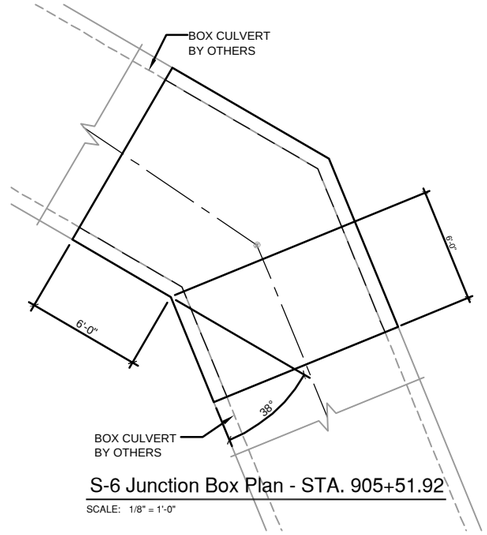


Bar Type 10

SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	5	4	5	14		14

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



S-6 Junction Box Plan - STA. 905+51.92

SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 5,200 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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MATTHEW D. BRAKEFIELD
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

DES: MDB
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

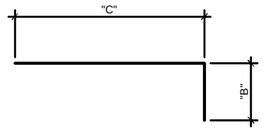
SHEET S-3 OF S-14

JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 906+20.47	9	6	9	9	9	N/A	1	12	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	
6	101	10-2			15	1			10-2						
7	102	10-2			15	1			10-2						
7	103	10-2			21	1			10-2						
7	104	10-2			19	1			10-2						
7	105	8-0 3/4			28	10			2-11 3/4			5-1			
7	106	8-0 3/4			28	10			2-11 3/4			5-1			
4	108	7-2			28	1			7-2						
3	109	14-8			12	1			14-8						
3	110	11-8			12	1			11-8						
3	111	11-0 1/4			12	1			11-0 1/4						
3	112	14-8			12	1			14-8						
3	113	11-8			14	1			11-8						
3	114	11-8			14	1			11-8						

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

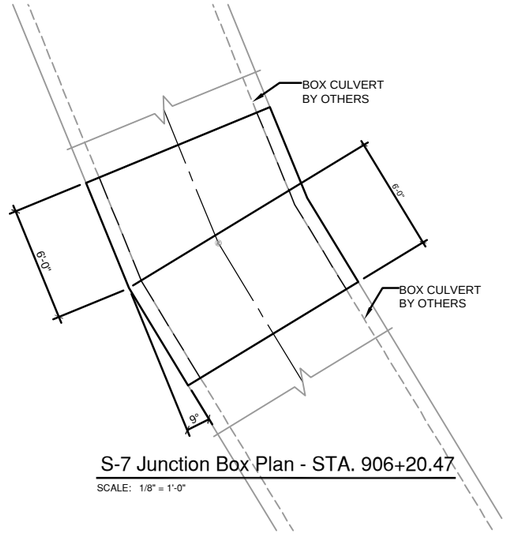


Bar Type 10

SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	4	3	4	11		11

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



S-7 Junction Box Plan - STA. 906+20.47

SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 3,100 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
5012 W. Lemon Street, Tampa, FL 33609
Phone 813.944.3464 | Fax 813.944.4959

MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-4 OF S-14

P:\2003 - Arehna Engineering\2003-003 Spring Lake Junction Boxes\Sdwg\Spring Lake - Plans.dwg - Printed Dec 14, 2015 - 4:49pm by: matt

JUNCTION BOX DATA TABLE

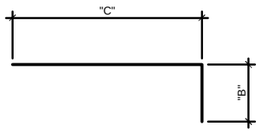
BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 907+29.17	9	6	9	9	9	N/A	1	14	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			18	1			10-2					
7	102	10-2			18	1			10-2					
7	103	10-2			24	1			10-2					
7	104	10-2			21	1			10-2					
7	105	8-0 3/4			34	10			2-11 3/4			5-1		
7	106	8-0 3/4			34	10			2-11 3/4			5-1		
4	108	7-2			34	1			7-2					
3	109	16-8			12	1			16-8					
3	110	13-8			12	1			13-8					
3	111	13-0 1/4			12	1			13-0 1/4					
3	112	16-8			12	1			16-8					
3	113	13-8			14	1			13-8					
3	114	13-8			14	1			13-8					

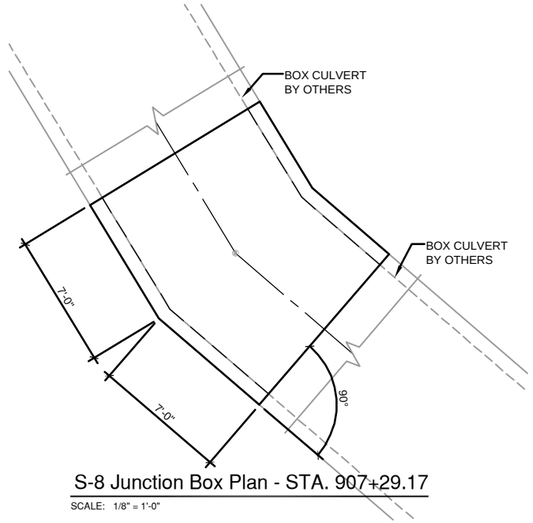
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	4	4	4	12		12

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	9	10	10	10	-	10	12	12	12	12	12	12



Bar Type 10
SCALE: N.T.S.



S-8 Junction Box Plan - STA. 907+29.17
SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 3,700 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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CITY of TAMPA
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-5 OF S-14

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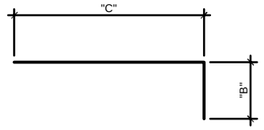
JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 10+97.49	9	6	9	9	9	N/A	1	29	VARIES

JUNCTION BOX BAR SCHEDULE														
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.		
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR
6	101	10-2			36	1			10-2					
7	102	10-2			36	1			10-2					
7	103	10-2			39	1			10-2					
7	104	10-2			39	1			10-2					
7	105	8-0 3/4			70	10			2-11 3/4			5-1		
7	106	8-0 3/4			70	10			2-11 3/4			5-1		
4	108	7-2			70	1			7-2					
3	109	31-8			12	1			31-8					
3	110	28-8			12	1			28-8					
3	111	28-0 1/4			12	1			28-0 1/4					
3	112	31-8			12	1			31-8					
3	113	28-8			14	1			28-8					
3	114	28-8			14	1			28-8					

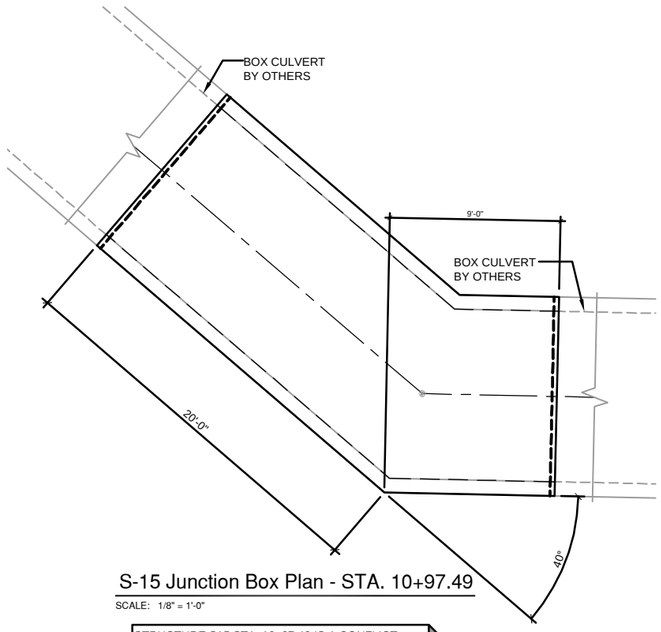
NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE



Bar Type 10
SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	8	7	8	23		23

MAIN STEEL REINFORCEMENT SPACING (inches)														TABLE DATE 09-04-15
STRUCTURE	BOX													
	101	102	103	104	105	106	107	108	109	110	111	112	113	114
JUNCTION BOX	10	10	10	10	10	10	-	10	12	12	12	12	12	12



S-15 Junction Box Plan - STA. 10+97.49
SCALE: 1/8" = 1'-0"

STRUCTURE S15 STA. 10+97.49 IS A CONFLICT STRUCTURE THAT REQUIRES CORING FOR 12" DIAMETER STEEL PIPE PER DETAIL ON SHEET S-11

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 7,100 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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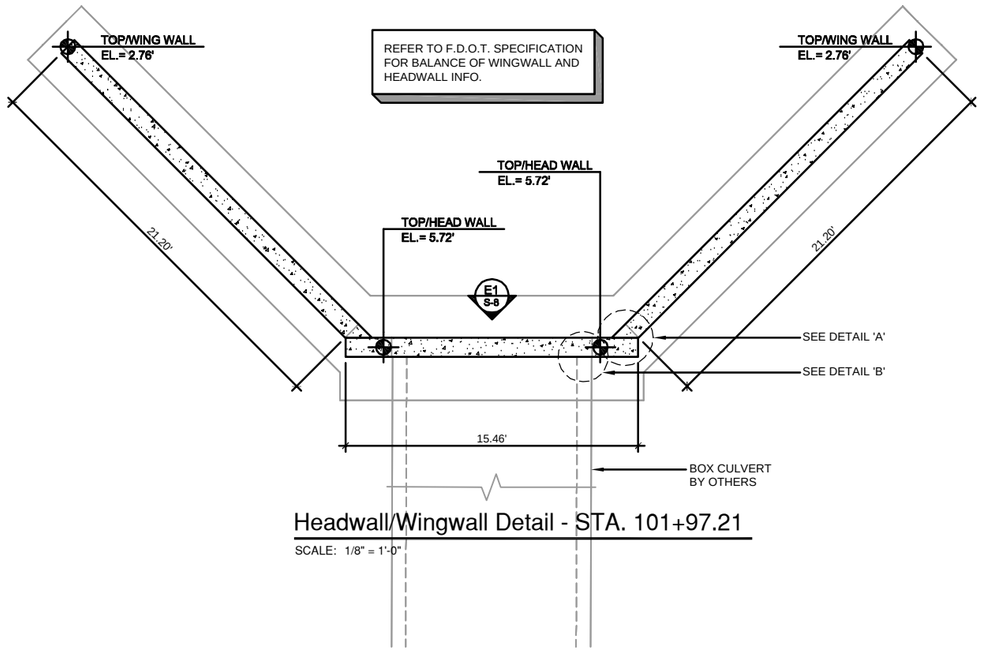
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-6 OF S-14



Headwall/Wingwall Detail - STA. 101+97.21

SCALE: 1/8" = 1'-0"

WINGWALL DATA TABLES

LEFT SIDE WINGWALL DATA TABLE (inches unless shown otherwise)									TABLE DATE 09-04-15
LOCATION	LEFT END WINGWALL								
	Rt	Rw	Rh	Rd	SW (deg)	ƀ (deg)	He (ft)	Hs (ft)	Lw (ft)
STA 101+97.21	36	12	6	12	135	0	11.2	12.8	21.2

RIGHT SIDE WINGWALL DATA TABLE (inches unless shown otherwise)									TABLE DATE 09-04-15
LOCATION	RIGHT END WINGWALL								
	Rt	Rw	Rh	Rd	SW (deg)	ƀ (deg)	He (ft)	Hs (ft)	Lw (ft)
STA 101+97.21	36	12	6	12	135	0	11.2	12.8	21.2

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE						
	LEFT WALL	RIGHT WALL	FOOTING	SUB TOTAL		WINGWALL TOTAL
WINGWALLS	10	10	0	20		20

MAIN STEEL REINFORCEMENT SPACING (inches)									TABLE DATE 09-04-15
LOCATION	LEFT END WINGWALL				RIGHT END WINGWALL				
	401 407 (8)	402 (403)	404 (405)	406	601 607 (8)	602 (603)	604 (605)	606	
STA 101+97.21	10	12	12	10	10	12	12	10	

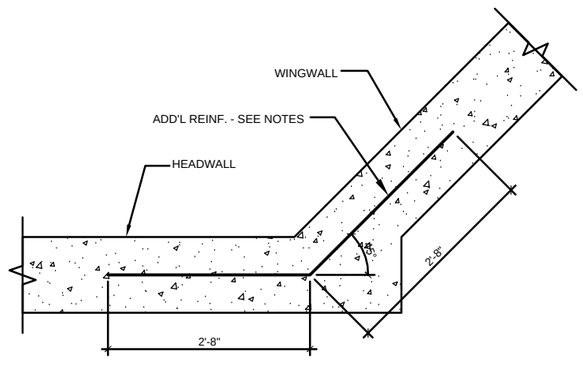
SW

LEFT/RIGHT END WINGWALL BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	
6	401, 601	VARIES: 12-6 ⅜ TO 10-11 1/2			27	1			VARIES: 12-6 ⅜ TO 10-11 1/2						
3	402, 602	20-10 5/16			12	1			20-10 5-16						
3	403, 603	14-2 7/8			1	1			14-2 7/8						
3	404, 604	20-10 5/16			12	1			20-10 5/16						
3	405, 605	14-2 7/8			1	1			14-2 7/8						
6	406, 606	VARIES: 12-6 ⅜ TO 10-11 1/2			27	1			VARIES: 12-6 ⅜ TO 10-11 1/2						
6	407, 607	7-4			27	10			3-8			3-8			

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

WINGWALL NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE: 30 DEGREES
   - MODULUS OF SUBGRADE REACTION: 50 PSI/IN
   - NORMAL BEARING RESISTANCE: 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL
   - WINGWALLS (LEFT AND RIGHT): 3,000 LBS
6. CAST-IN-PLACE WINGWALLS AND HEADWALL SHOWN FOR ILLUSTRATION ONLY. WINGWALLS AND HEADWALL SHALL BE PER F.D.O.T. STANDARD INDEX NO. 289.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

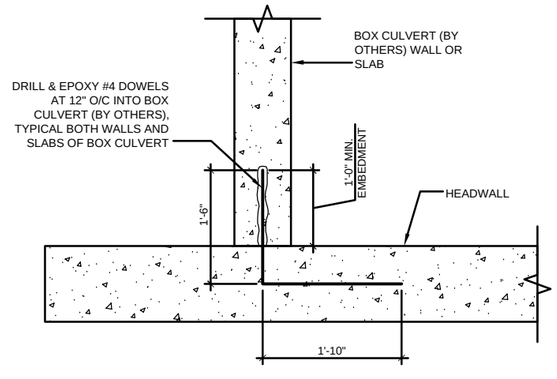


HEADWALL TO WINGWALL CONNECTION NOTES:

1. ADDITIONAL #6 BARS (BAR TYPE 12) SPACED 12" VERTICALLY, REQ'D AT HEADWALL TO WINGWALL CONNECTION (BOTH WINGWALLS).
2. SECTION SHOWS ADDITIONAL REINFORCING ONLY.

Detail 'A'

SCALE: N.T.S.



HEADWALL TO BOX CULVERT (BY OTHERS) CONNECTION NOTES:

1. ADDITIONAL #4 BARS (BAR TYPE 10) SPACED 12" (MAX.) VERTICALLY AND/OR HORIZONTALLY, REQUIRED AT HEADWALL TO BOX CULVERT (BY OTHERS), BOTH WALLS AND BOTH SLABS OF BOX CULVERT.
2. SECTION SHOWS ADDITIONAL REINFORCING ONLY.

Detail 'B'

SCALE: N.T.S.

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-7 OF S-14

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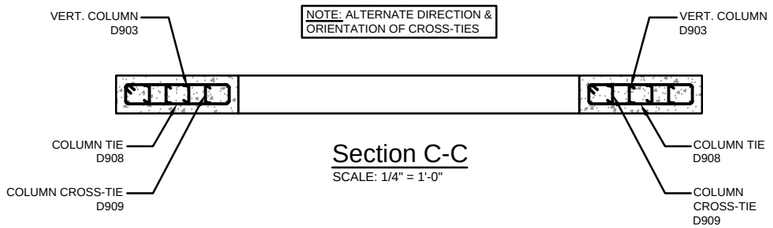
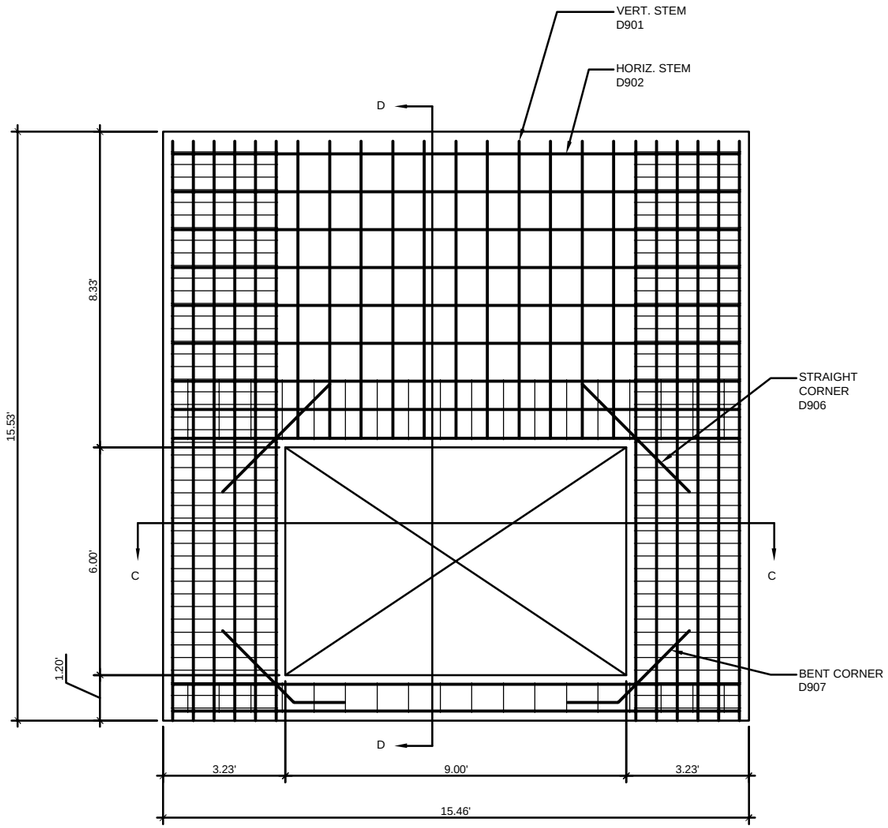
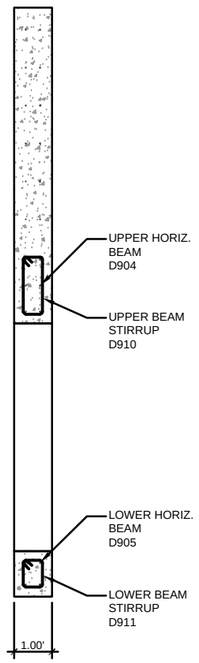


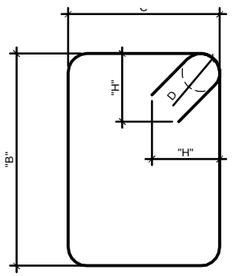
Section C-C
SCALE: 1/4" = 1'-0"



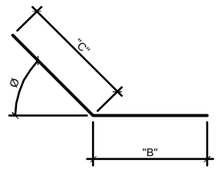
E1 Headwall - Front View
SCALE: 1/4" = 1'-0"



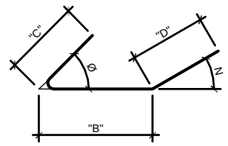
Section D-D
SCALE: 1/4" = 1'-0"



Bar Type 4, w/ 135° Hooks
SCALE: N.T.S.



Bar Type 12
SCALE: N.T.S.



Bar Type 15
SCALE: N.T.S.

HEADWALL DATA TABLES

HEADWALL BAR SCHEDULE																					
MARK		LENGTH			NO.	TYPE	STY 135° HOOKS		'B' DIM.			'C' DIM.			'D' DIM.			Ø	N
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	D	H	FT	IN	FR	FT	IN	FR	FT	IN	FR	DEG	DEG
6	901	7-10			22	1			7-10										
3	902	14-11 1/2			12	1			14-11 1/2										
6	903	15-3 3/8			24	1			15-3 3/8										
6	904	14-11 1/2			6	1			14-11 1/2										
6	905	14-11 1/2			4	1			14-11 1/2										
4	906	4-0			4	1			4-0										
4	907	4-0			4	12			1-4			2-8						45	
3	908	7-0 1/2			90	4	1 1/2	2 1/2	0-6			2-8 3/4							
3	909	1-0			360	15			0-6			0-3 1/2			0-2 1/2			45	90
3	910	4-7			18	4	1 1/2	2 1/2	1-6			0-6							
3	911	2-11 13/16			18	4	1 1/2	2 1/2	0-8 3/8			0-6							

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 09-04-15
STRUCTURE	HEADWALL					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		TOTAL CONCRETE
HEADWALL	0	7	0	7		7

MAIN STEEL REINFORCEMENT SPACING (inches)											TABLE DATE 09-04-15
STRUCTURE	HEADWALL										
	901	902	903	904	905	906	907	908	909	910	911
HEADWALL	10	12	6 1/4	8 1/4	6 7/8	---	---	4	4	10	10

HEADWALL NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 5,000 LBS
6. CAST-IN-PLACE HEADWALL BOX SHOWN FOR ILLUSTRATION ONLY. HEADWALL SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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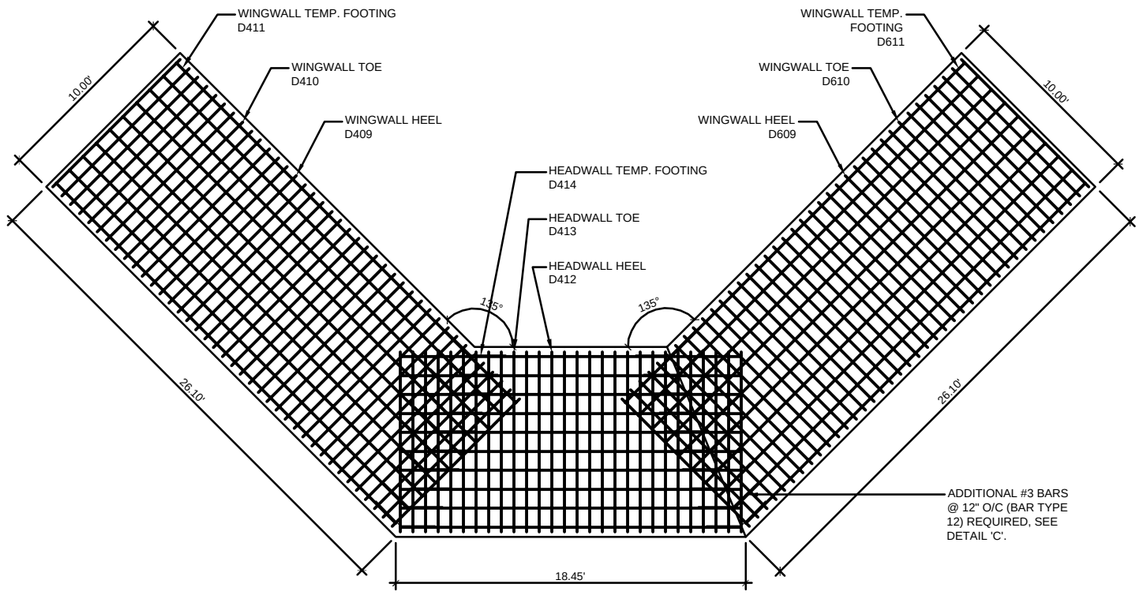
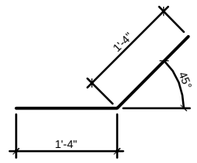
PHASE II (VASCONIA OUTFALL)

SHEET S-8 OF S-14



Wall Footing Rebar Layout

SCALE: 1/8" = 1'-0"



Detail 'C'

SCALE: N.T.S.

WINGWALL/HEADWALL FOOTING DATA TABLES

WINGWALL/HEADWALL FOOTING BAR SCHEDULE												
MARK		LENGTH			NO.	TYPE	STY 135° HOOKS		'B' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	D	H	FT	IN	FR
5	409, 609	9-6			39	1			9-6		
5	410, 610	9-6			39	1			9-6		
3	411, 611	25-4			10	1			25-4		
5	412	9-6			28	1			9-6		
5	413	9-6			28	1			9-6		
3	414	18-0			20	1			18-0		

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

ESTIMATED CONCRETE QUANTITIES (CY)			TABLE DATE 09-04-15
STRUCTURE	SUB TOTAL		WINGWALL / HEADWALL FOOTING TOTAL
WINGWALL / HEADWALL FOOTING	24		24

MAIN STEEL REINFORCEMENT SPACING (inches)						TABLE DATE 09-04-15
STRUCTURE	WALL FOOTING					
	409, 609	410, 610	411, 611	412	413	414
WINGWALL / HEADWALL FOOTING	8	8	12	8	8	12

WINGWALL/HEADWALL FOOTING NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL
   - WINGWALL/HEADWALL FOOTING 2,700 LBS
6. CAST-IN-PLACE WINGWALLS AND HEADWALL SHOWN FOR ILLUSTRATION ONLY. WINGWALLS AND HEADWALL SHALL BE PER F.D.O.T. STANDARD INDEX NO. 289.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

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Phone 813.944.3464 | Fax 813.944.4959

MATTHEW D. BRAKEFIELD
FL. LIC. NO. 70852

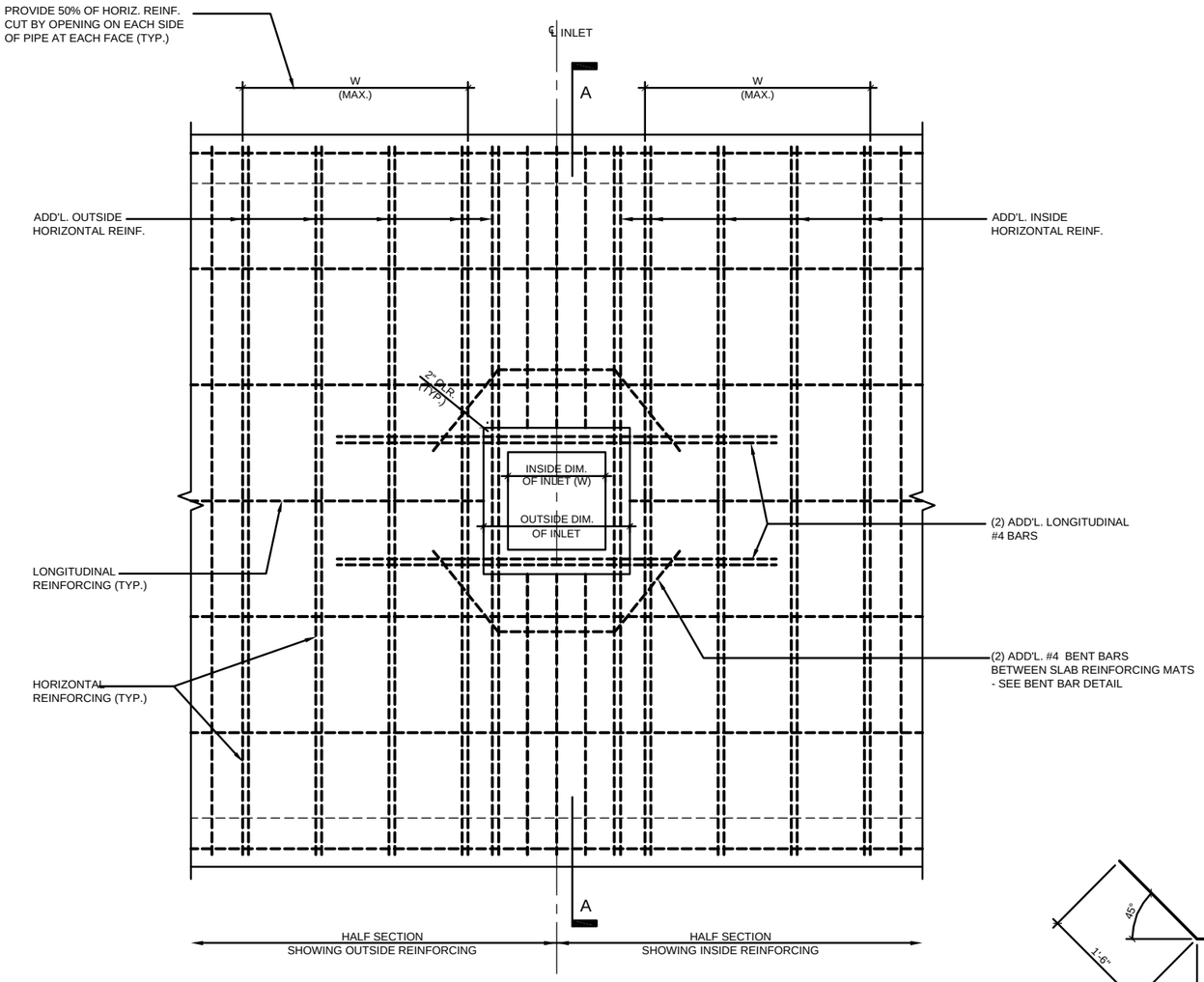
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDB
DRN: MPS
CKD: JPF
DATE: 12/21/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

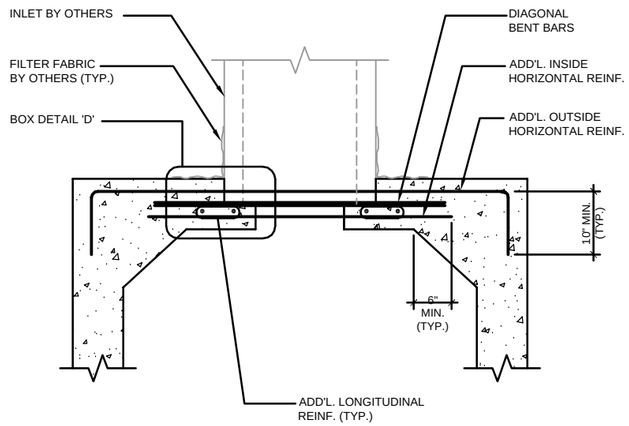
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-9 OF S-14



Plan View - Inlet Opening in Top Slab

SCALE: N.T.S.

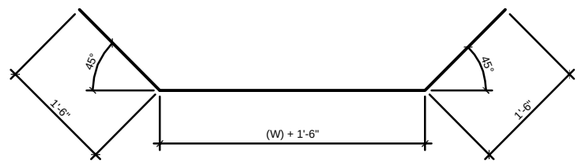


INLET OPENING NOTES:

1. CUT BOX CULVERT REINFORCEMENT AS REQUIRED TO MAINTAIN 2" CONCRETE COVER.
2. BETWEEN INLET AND BOX CULVERT USE AN ADHESIVE BONDING MATERIAL SYSTEM IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS SECTIONS 416 AND 937.

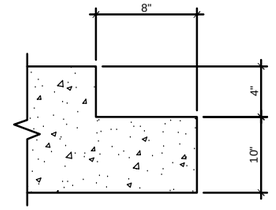
Section A-A

SCALE: N.T.S.



Bent Bar Detail

SCALE: N.T.S.



REINFORCING NOT SHOWN FOR CLARITY

Box Detail 'D'

SCALE: N.T.S.

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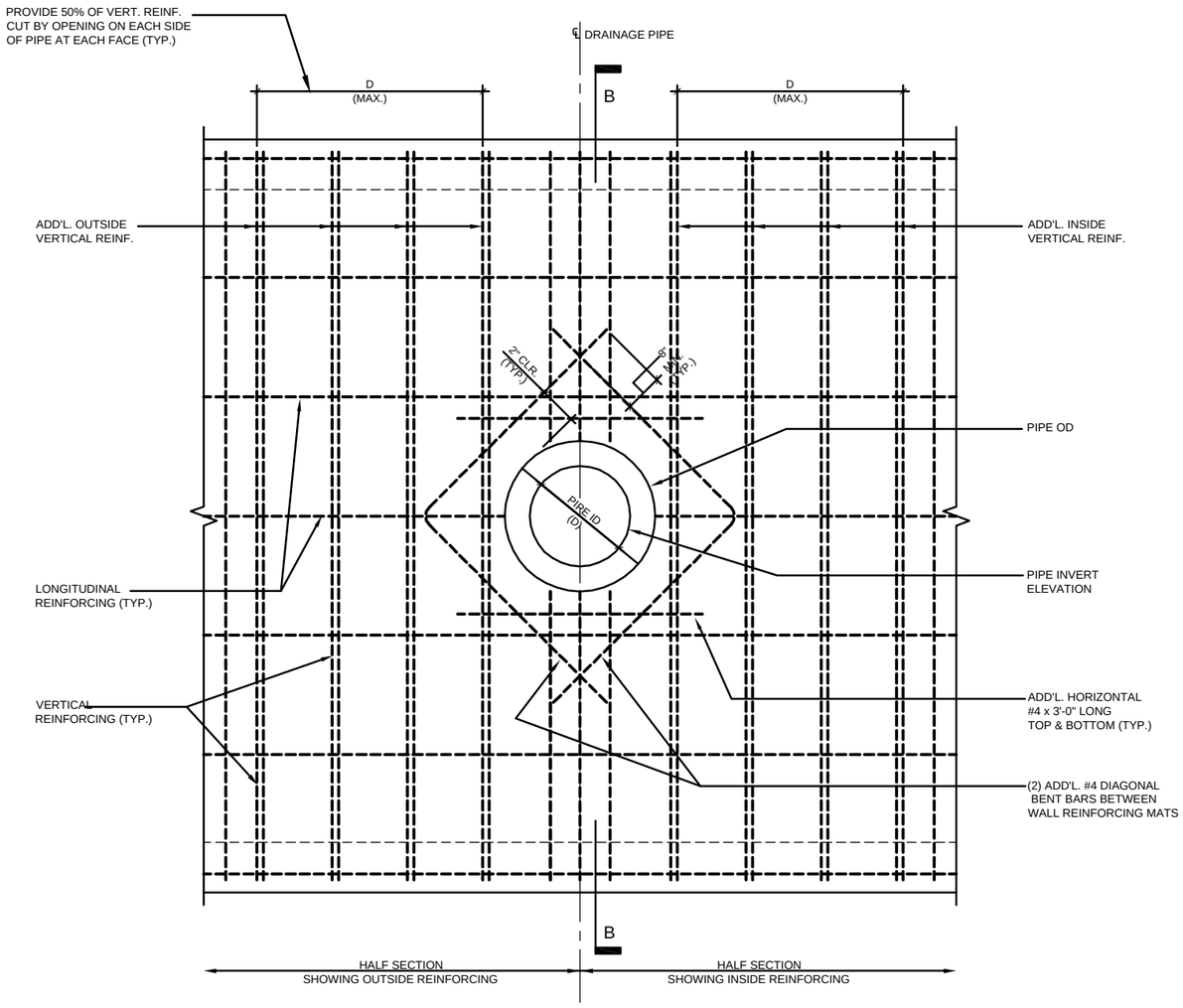
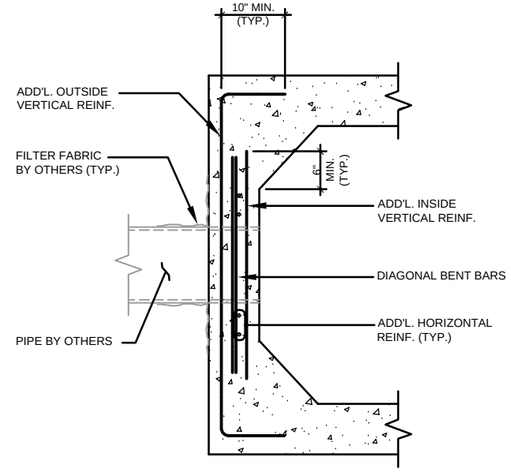
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-10 OF S-14



Elevation View - Pipe Opening Detail

SCALE: N.T.S.



PIPE OPENING NOTES:

1. CUT BOX CULVERT REINFORCEMENT AS REQUIRED TO MAINTAIN 2" CONCRETE COVER.
2. SECTION SHOWS ADDITIONAL OPENING REINFORCING ONLY.

Section B-B

SCALE: N.T.S.

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MATTHEW D. BRAKEFIELD
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CITY of TAMPA
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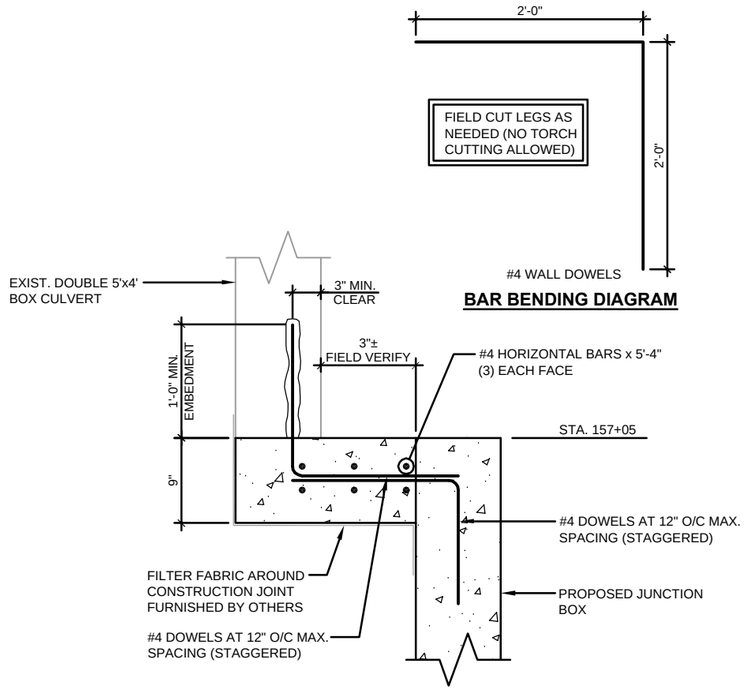
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-11 OF S-14

P:\2003 - Arehna Engineering\2003-003 Spring Lake Junction Boxes\Sdwg\Spring Lake - Plans.dwg - Printed Dec 14, 2015 - 4:51pm by: matt

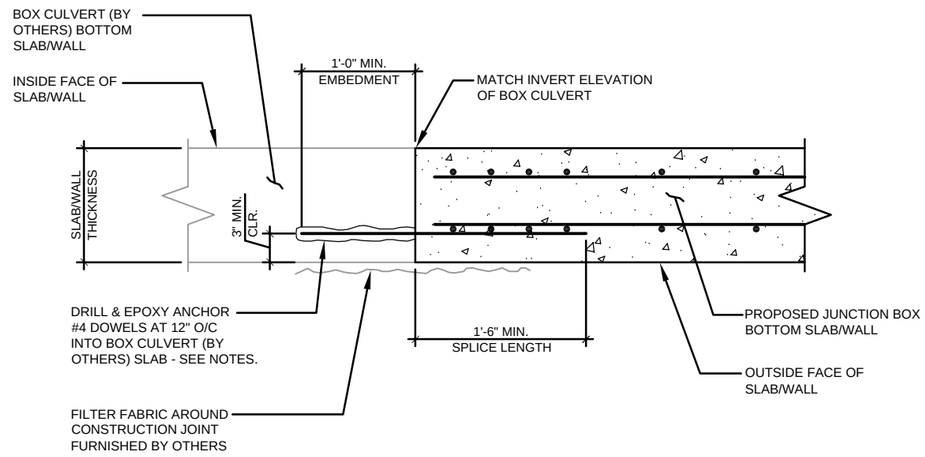


BOX CULVERT/JUNCTION BOX CONNECTION DETAIL NOTES:

1. THE BOX CULVERT DATA TABLES AND REINFORCING BAR LISTS DO NOT INCLUDE THE ADDITIONAL QUANTITIES NEEDED FOR DOWEL CONNECTIONS, REINFORCING STEEL OR CONCRETE FOR TRANSITIONS BETWEEN BOX CULVERTS AND JUNCTION BOXES. THE COST FOR ADDITIONAL REINFORCEMENT AND THICKENED CONCRETE IN THE TRANSITIONAL AREAS SHALL BE INCLUDED IN THE COST FOR THE BOX CULVERTS.
2. COST FOR REMOVAL AND DISPOSAL OF MATERIAL FROM THE EXISTING BOX CULVERT AND COST OF CLEANING, STRAIGHTENING, AND EXTENDING OR DOWELING LONGITUDINAL REINFORCING STEEL SHALL BE INCLUDED IN THE COST OF THE BOX CULVERT.
3. IF NECESSARY, REMOVE EXISTING CONCRETE WHILE AVOIDING DAMAGE TO EXISTING REINFORCEMENT. CLEAN AND STRAIGHTEN EXISTING REINFORCEMENT, LAP AND TIE ONTO BOX CULVERT REINFORCEMENT.
4. DOWEL IN #4 BARS AT 12" MAXIMUM SPACING INTO THE CENTER OF WALL/SLAB. USE AN ADHESIVE BONDING MATERIAL SYSTEM IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS SECTIONS 416 AND 937.

Box Culvert/Junction Box Connection Detail

SCALE: N.T.S.



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Box Culvert/Junction Box Connection Detail

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-12 OF S-14

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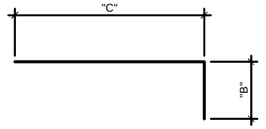
JUNCTION BOX DATA TABLE

BOX DATA TABLE (inches unless shown otherwise)									TABLE DATE 12-14-15
LOCATION	BOX								
	Wc(ft)	Hc(ft)	Tt	Tw	Tb	Ti	# CELLS	Lc(ft)	COVER
STA 205+84.33	VARIES - SEE PLAN	4	9	9	9	9	2	40	VARIES

JUNCTION BOX BAR SCHEDULE															
MARK		LENGTH			NO.	TYPE	STY		'B' DIM.			'C' DIM.			
SIZE	BAR DESIG.	FT	IN	FR	BARS	BAR	A	G	FT	IN	FR	FT	IN	FR	
7	101	16-11			49	1			16-11						
7	102	16-11			54	1			16-11						
7	103	16-11			58	1			16-11						
7	104	16-11			52	1			16-11						
7	105	7-0 3/4			96	10			2-11 3/4			4-1			
7	106	7-0 3/4			96	10			2-11 3/4			4-1			
7	107	13-5			192	10			9-4			4-1			
7	108	5-2			96	1			5-2						
3	109	42-4			18	1			42-4						
5	110	34-4			22	1			34-4						
5	111	38-8 1/4			22	1			38-8 1/4						
3	112	42-4			18	1			42-4						
3	113	39-4			10	1			39-4						
3	114	39-4			10	1			39-4						
3	115	38-8 1/4			10	1			38-8 1/4						

NOTE:
STEEL DETAILER/PROVIDER TO VERIFY ALL LENGTHS AND QUANTITIES OF BARS PROVIDED IN THIS BAR SCHEDULE

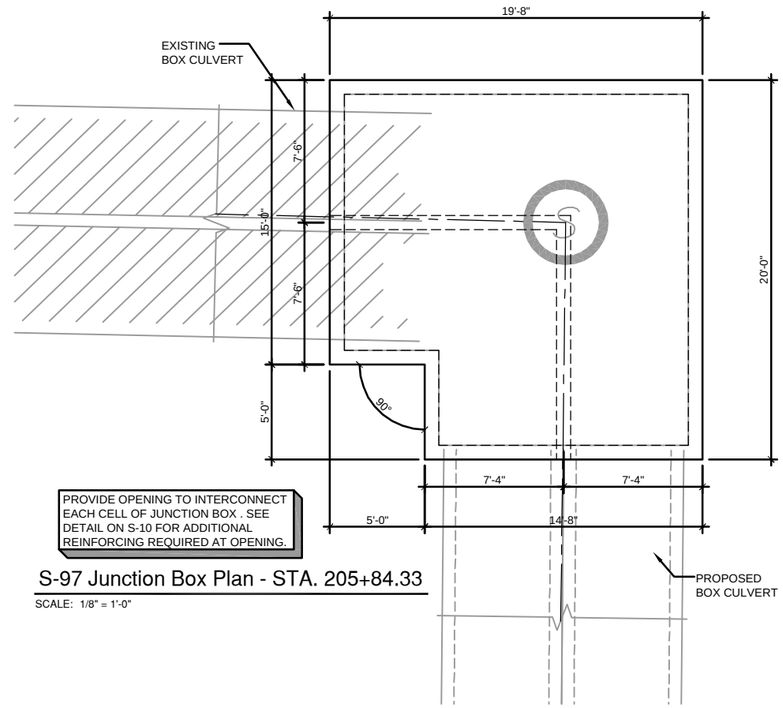


Bar Type 10

SCALE: N.T.S.

ESTIMATED CONCRETE QUANTITIES (CY)						TABLE DATE 12-14-15
STRUCTURE	BOX					
	BOTTOM SLAB	WALLS	TOP SLAB	SUB TOTAL		JUNCTION BOX TOTAL
JUNCTION BOX	11	8	11	30		30

MAIN STEEL REINFORCEMENT SPACING (inches)													TABLE DATE 12-14-15		
STRUCTURE	BOX														
	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115
JUNCTION BOX	10	9	9	10	10	10	10	10	12	10	10	12	12	12	12



S-97 Junction Box Plan - STA. 205+84.33

SCALE: 1/8" = 1'-0"

BOX CULVERT NOTES:

1. ENVIRONMENTAL CLASS: CLASS 1
2. REINFORCING STEEL: GRADE 60
3. CONCRETE CLASS IV: F'c = 5.5 KSI
4. SOIL PROPERTIES:
   - FRICTION ANGLE 30 DEGREES
   - MODULUS OF SUBGRADE REACTION 50 PSI/IN
   - NORMAL BEARING RESISTANCE 2,500 PSF
5. TOTAL ESTIMATED QUANTITY REINFORCING STEEL 20,900 LBS
6. CAST-IN-PLACE JUNCTION BOX SHOWN FOR ILLUSTRATION ONLY. JUNCTION BOX SHALL BE PRECAST PER F.D.O.T. STANDARD INDEX NO'S. 291 AND 292.
7. WORK THIS DRAWING WITH F.D.O.T. DESIGN STANDARD INDEX NO. 289.

AREHNA | Engineering,Inc.
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MATTHEW D. BRAKEFIELD
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-13 OF S-14

NEW OPENING IN EXISTING BOX CULVERT DETAIL NOTES:

1. THE BOX CULVERT DATA TABLES AND REINFORCING BAR LISTS DO NOT INCLUDE THE ADDITIONAL QUANTITIES NEEDED FOR DOWEL CONNECTIONS, REINFORCING STEEL OR CONCRETE FOR TRANSITIONS BETWEEN BOX CULVERTS AND JUNCTION BOXES. THE COST FOR ADDITIONAL REINFORCEMENT AND THICKENED CONCRETE IN THE TRANSITIONAL AREAS SHALL BE INCLUDED IN THE COST FOR THE BOX CULVERTS.
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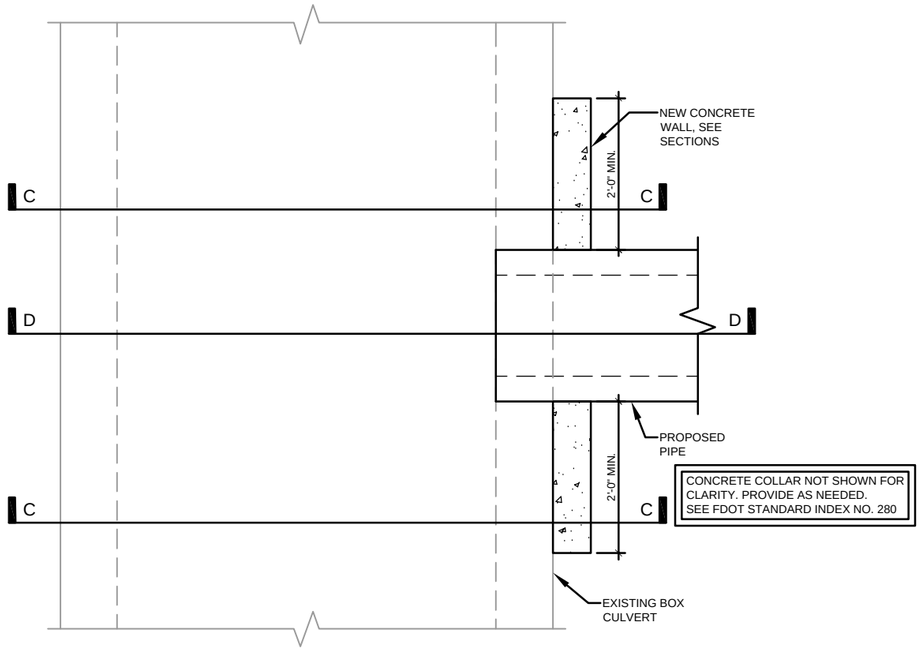
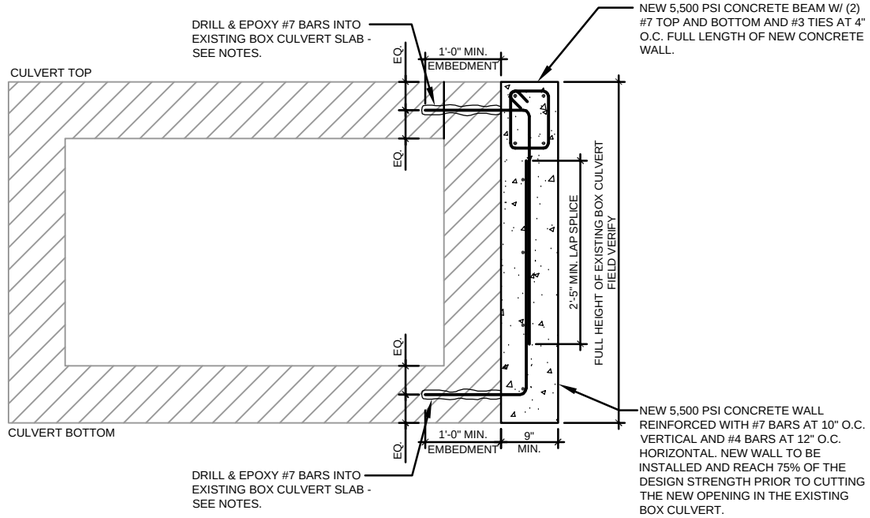
4. USE AN ADHESIVE BONDING MATERIAL SYSTEM IN ACCORDANCE WITH F.D.O.T. STANDARD SPECIFICATIONS SECTIONS 416 AND 937.



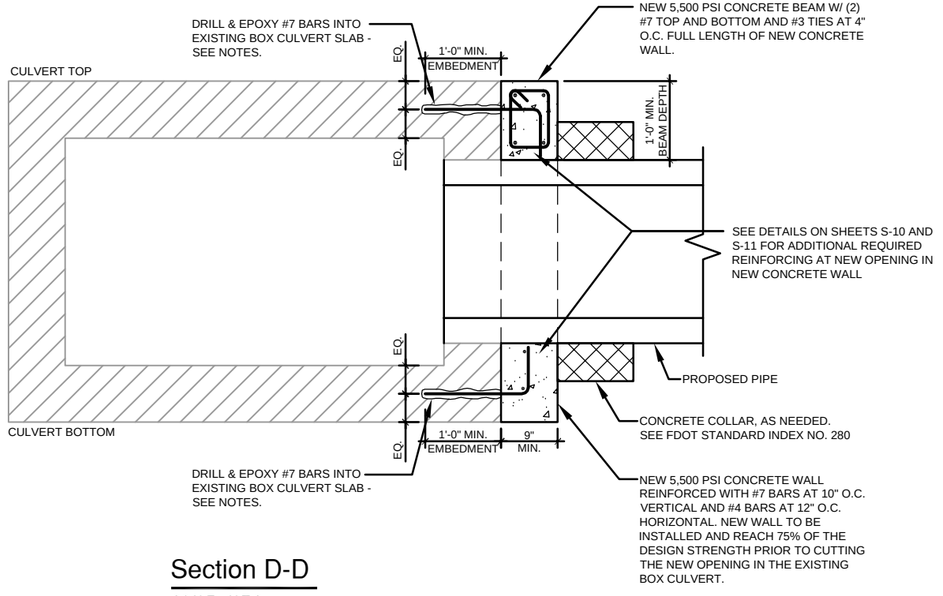
Top View - New Opening in Existing Box Culvert Detail

SCALE: N.T.S.



Section C-C

SCALE: N.T.S.



Section D-D

SCALE: N.T.S.

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MATTHEW D. BRAKEFIELD
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CITY of TAMPA
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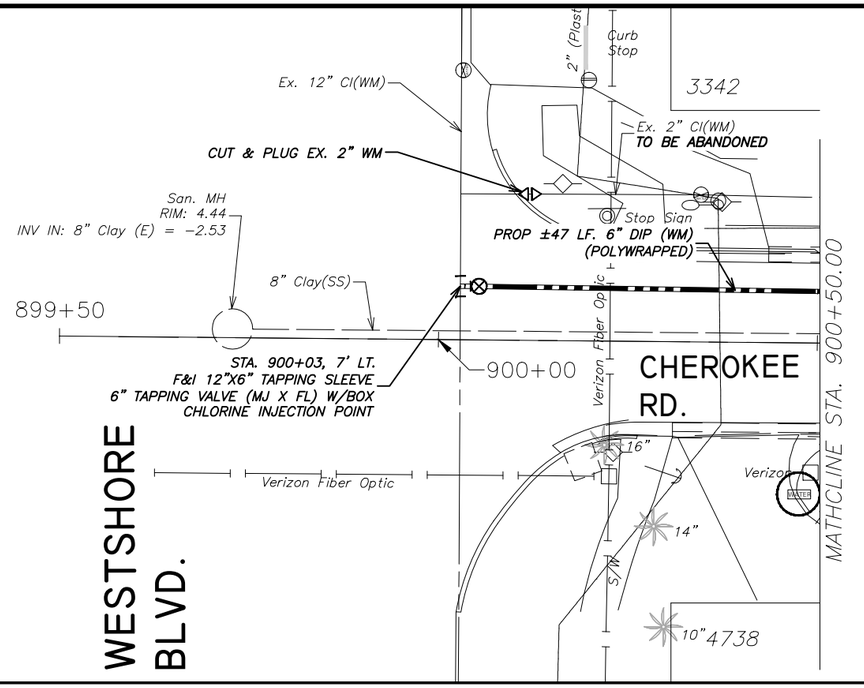
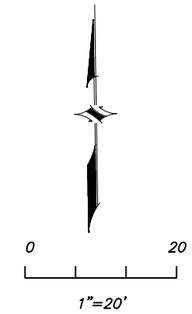
Stormwater Engineering Division

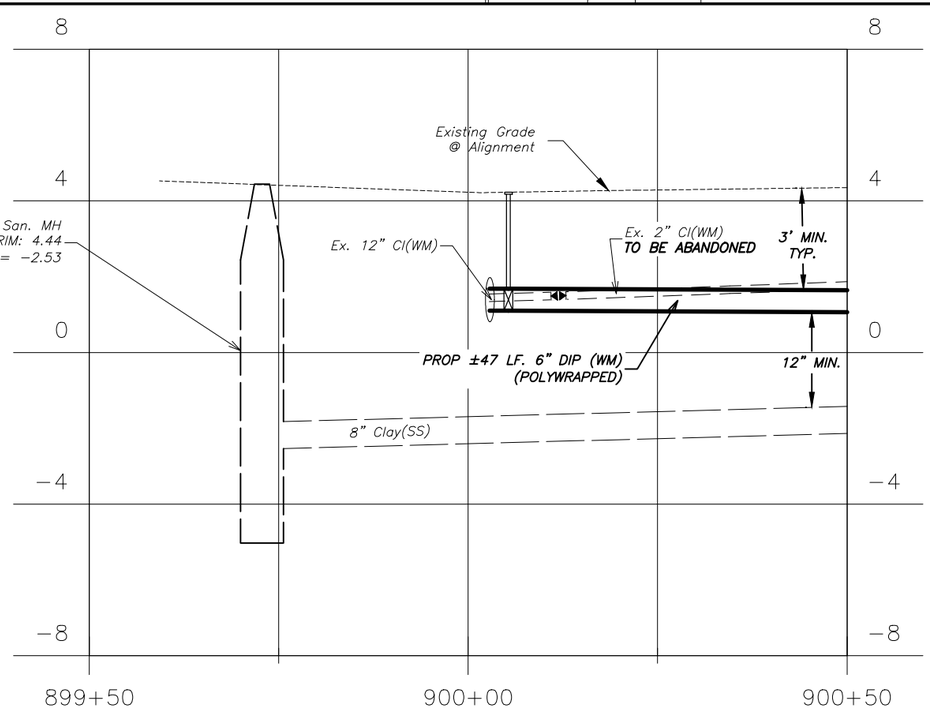
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SHEET S-14 OF S-14



SW





CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN
PLAN & PROFILE

SHEET
W-100
of W-125

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SW

Asphalt Parking Lot
Clean Out
Exist. R/W Line
3342
Asphalt Parking Lot
Ex. 2" CI(WM) TO BE REMOVED
STA. 901+60, 7' LT. 6' Wood BEGIN HOR. DEFLECTION
San. MH TO BE REMOVED RIM: 4.94
INV IN: 8" Clay (E) = -1.06
INV OUT: 8" Clay (W) = -1.06
Planter
4717
Planter
4715
2" CI(WM) TO BE ABANDONED
PROP ±275 LF. 6" DIP (WM) (POLYWRAPPED)
CUT & CAP EX. 2" WM
STA. 901+93, 10' LT. END HOR. DEFLECTION
Asphalt Drive
CUT & CAP EX. 2" WM
Concrete Drive
Verizon
APPROXIMATE LATERAL INV EL: 1.17
Brick Paver Drive
8" Clay(SS) TO BE REMOVED
2" DIP(WM) TO BE ABANDONED
2" (Plastic) (Gas)
MATHCLINE STA. 900+50.00
8" Clay(SS)
901+00
APPROXIMATE LATERAL INV EL: 0.97
8" PVC(SS)
8" PVC(SS)
MH-33
MH-34
3.02'
S-1
CONFLICT STRUCTURE
3.01'
902+00
8" Clay(SS) TO BE REMOVED
9'X6' CONCRETE BOX CULVERT(ST)
903+00
MATCHLINE STA. 903+25.00
CHEROKEE RD.
Concrete
Concrete
Verizon Fiber Optic
Concrete
Verizon
Speed Limit
Concrete Drive
Brick Paver Drive
100+00
3' Evergreen
Asphalt Drive
4'hedge
Cable Tv
Asphalt Drive
Clean Out
4738 Exist. R/W Line
4736
4734
4732
4730
4728
4726
4724
4722
4720
4718
4716

0 20
1"=20'

8 8

PROPOSED GRADE @ ALIGNMENT
MH-34
4.62
Ex. 2" CI(WM) TO BE REMOVED
0.30%
Ex. 2" CI(WM) TO BE ABANDONED
5.02
MH-33
3' MIN. TYP.
Ex. 2" CI(WM) TO BE ABANDONED
PROP ±275 LF. 6" DIP (WM) (POLYWRAPPED)
12" MIN. OVER BOX
8" PVC(SS)
8" PVC(SS)
8" Clay(SS)
CONNECT EXISTING 8" CLAY(SS) TO MH-34 @ INV. ELE. -1.59
PROP STEEL CASING
S-1
STA. 901+74.69, 6.81' RT.
CUSTOM J-BOX/CONFLICT STRUCTURE W/MH RISER
INV EL: 9'X6' CONCRETE BOX CULVERT (E) = -7.00
INV EL: 9'X6' CONCRETE BOX CULVERT (N) = -7.04
INV EL: 8" PVC SANITARY CROSSING (E) = -1.38
INV EL: 8" PVC SANITARY CROSSING (W) = -1.42
MH RISER RIM: 4.62
9'X6' CONCRETE BOX CULVERT(ST)
4
0
-4
-8
900+50
901+00
902+00
903+00
903+25

CHEROKEE RD. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN
PLAN & PROFILE

SHEET W-101
CF W-125

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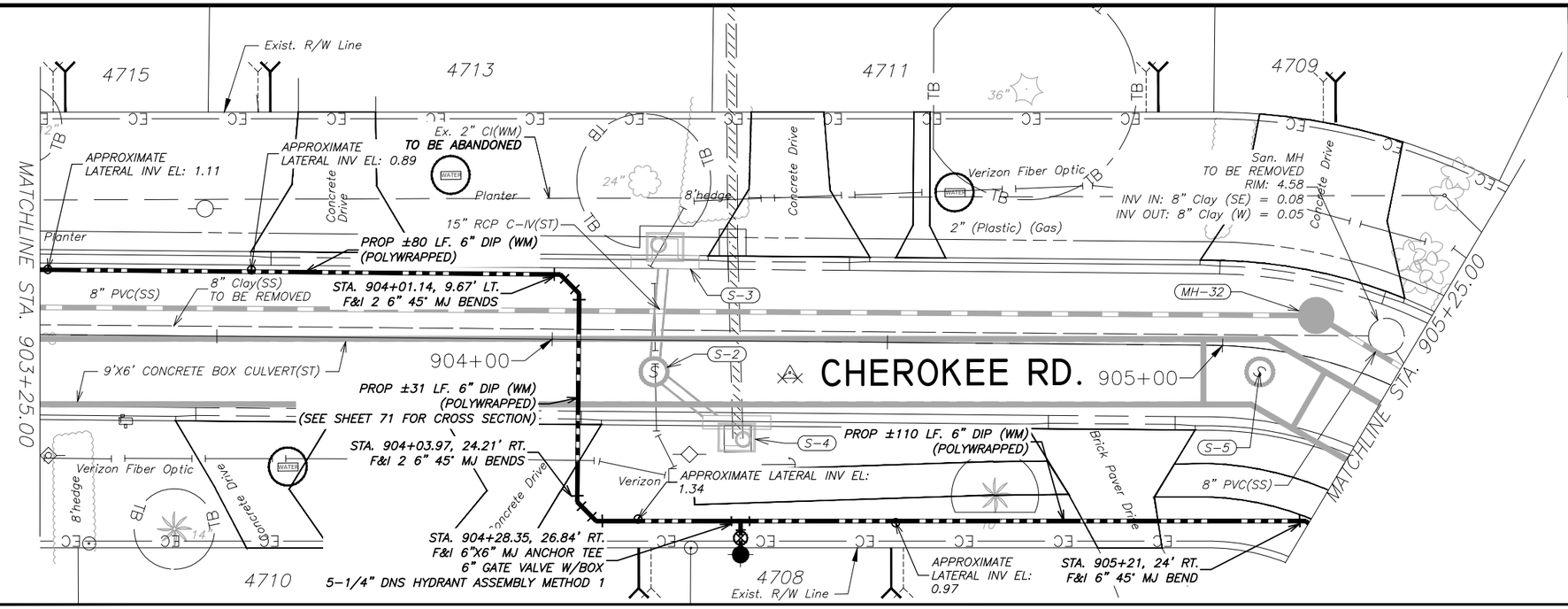

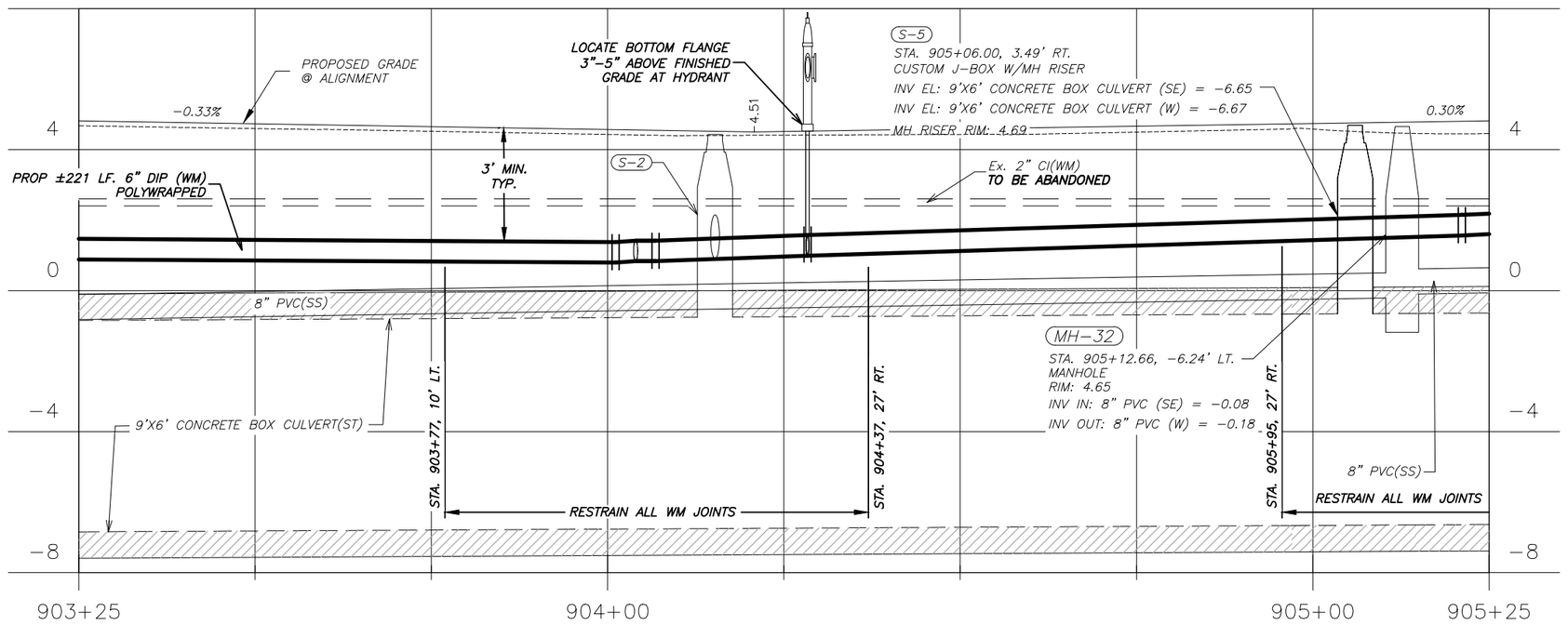

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN
PLAN & PROFILE

SHEET W-102
OF W-125

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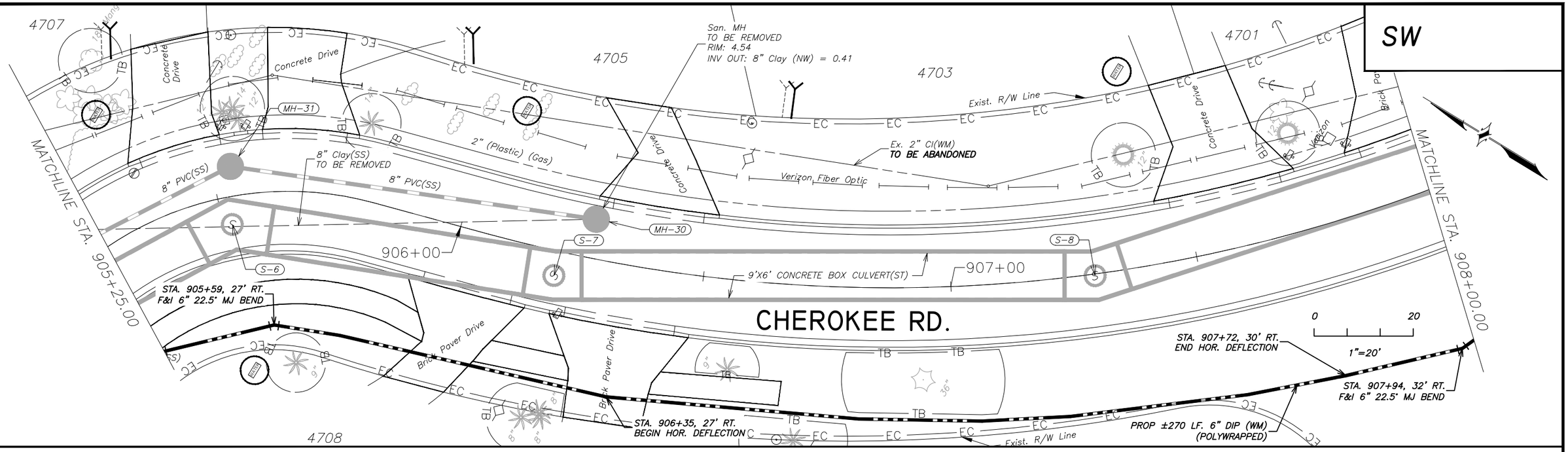

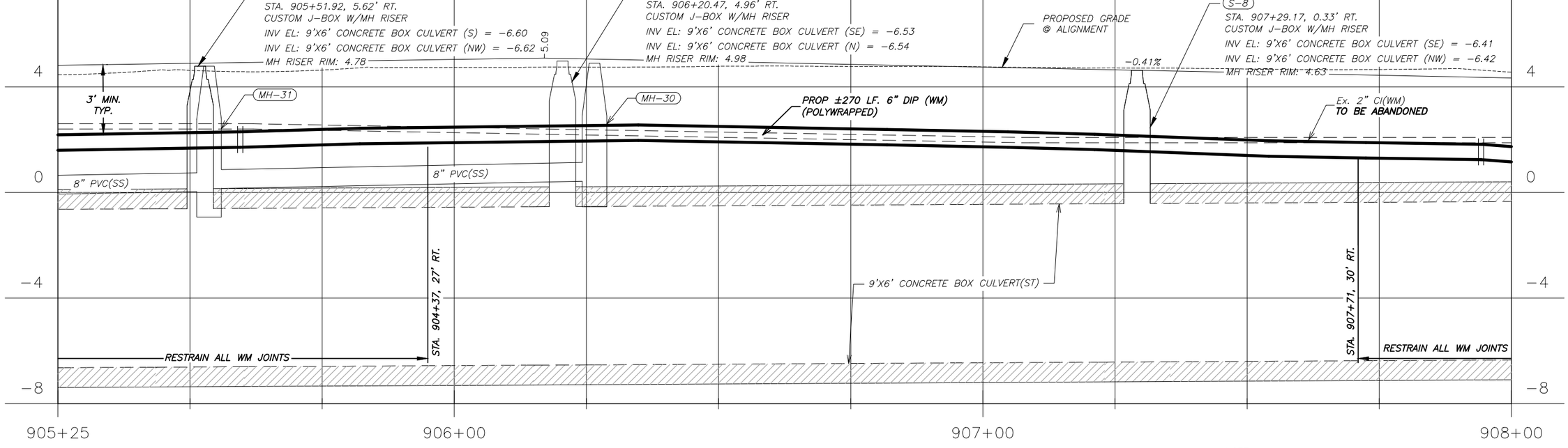

CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN
PLAN & PROFILE

SHEET W-103
OF W-125

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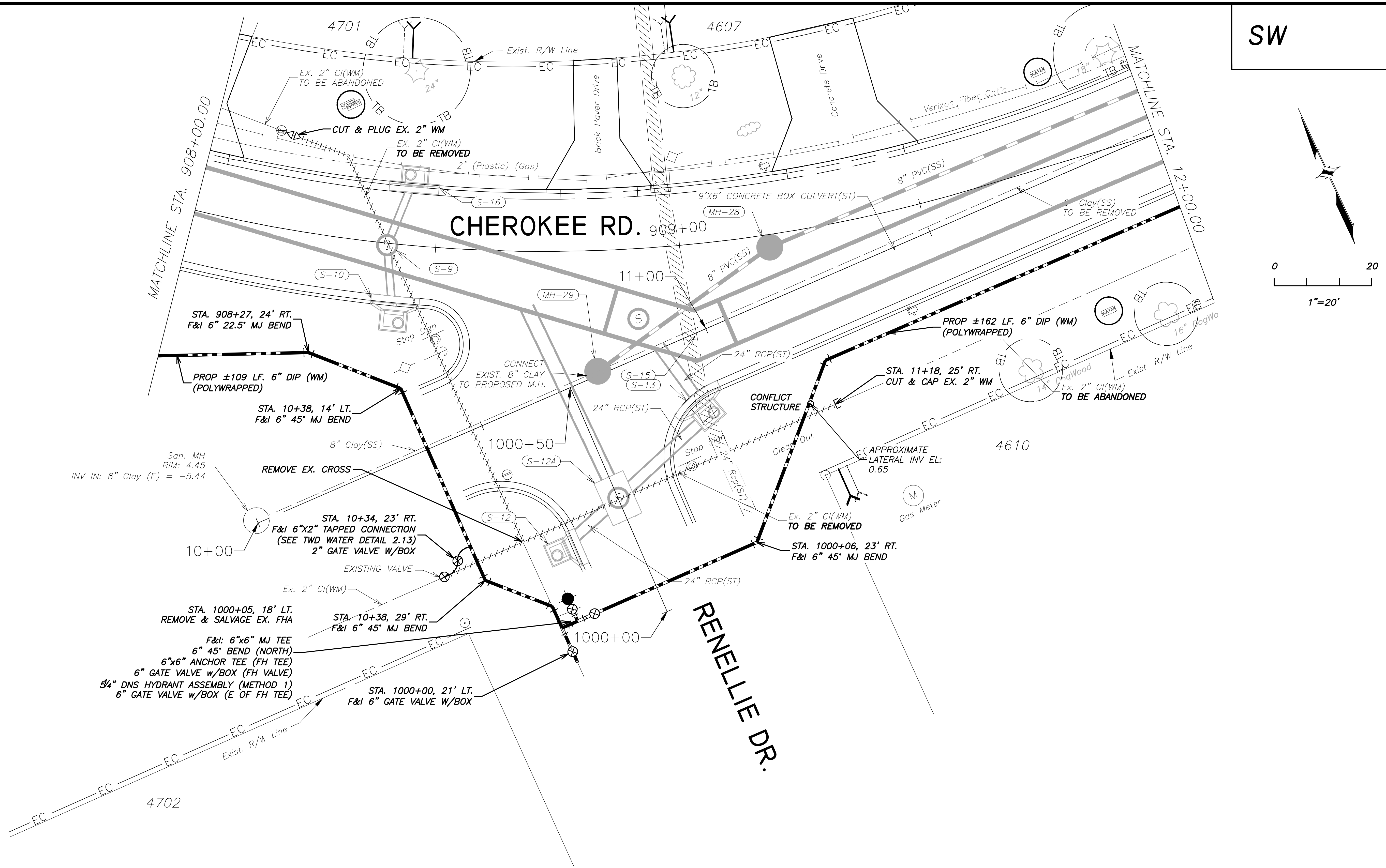
SW



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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN
PLAN

SHEET W-104 OF W-125

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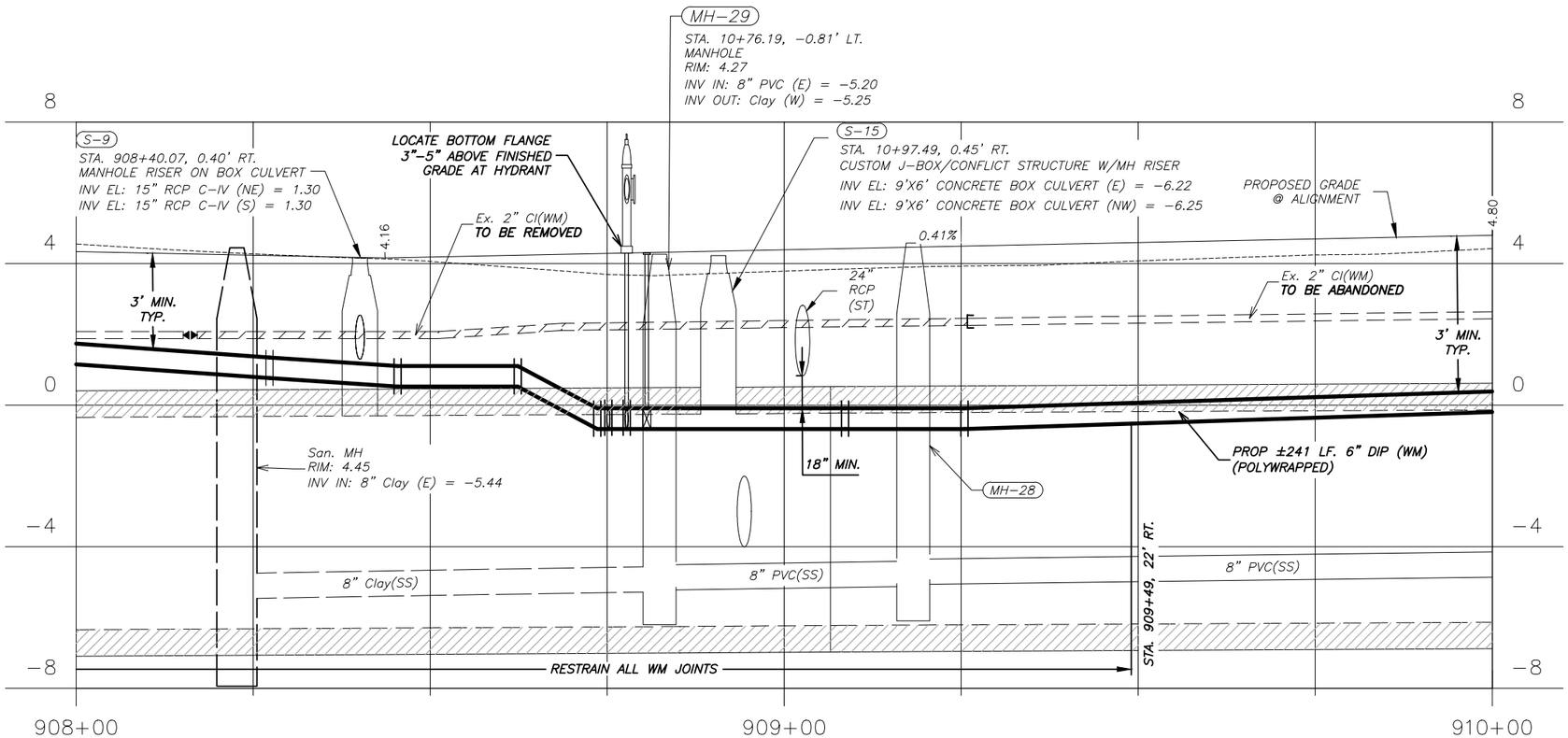

CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

(SEE SHEET W–104 FOR PLAN VIEW)

NOTE:
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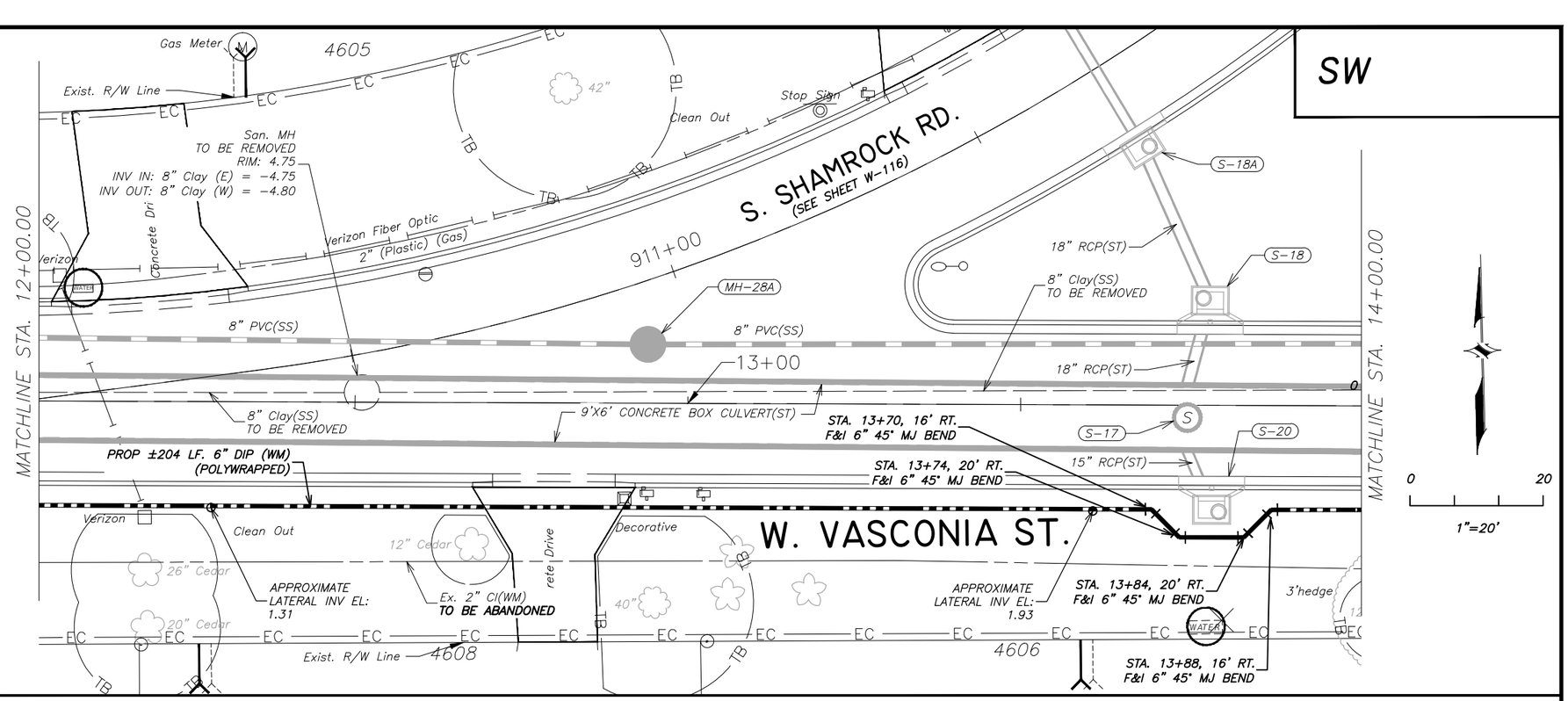
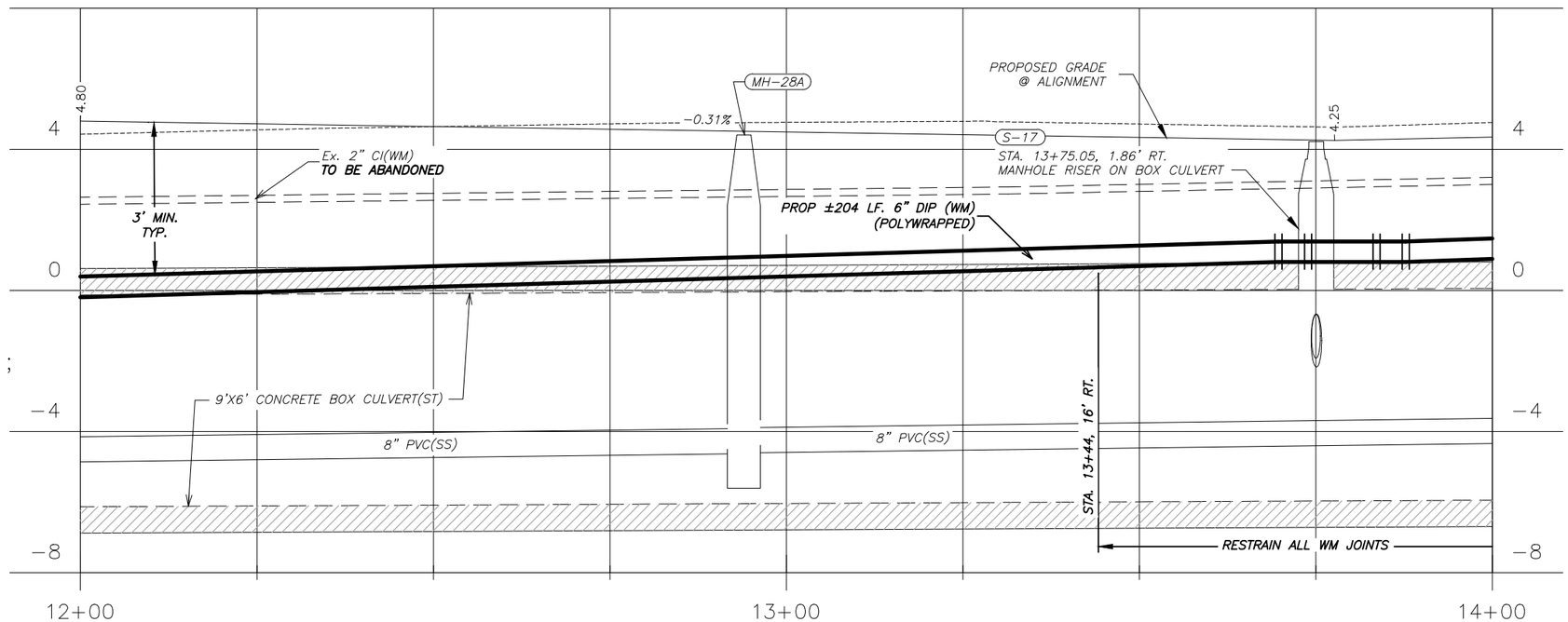
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - WATER MAIN
PROFILE

SHEET W-105
of W-125





W. VASCONIA ST. PROFILE
Scale: 1" = 20' Horizontal ;
1" = 4' Vertical

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Department of Transportation and Stormwater Services
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UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET W-106
of W-125

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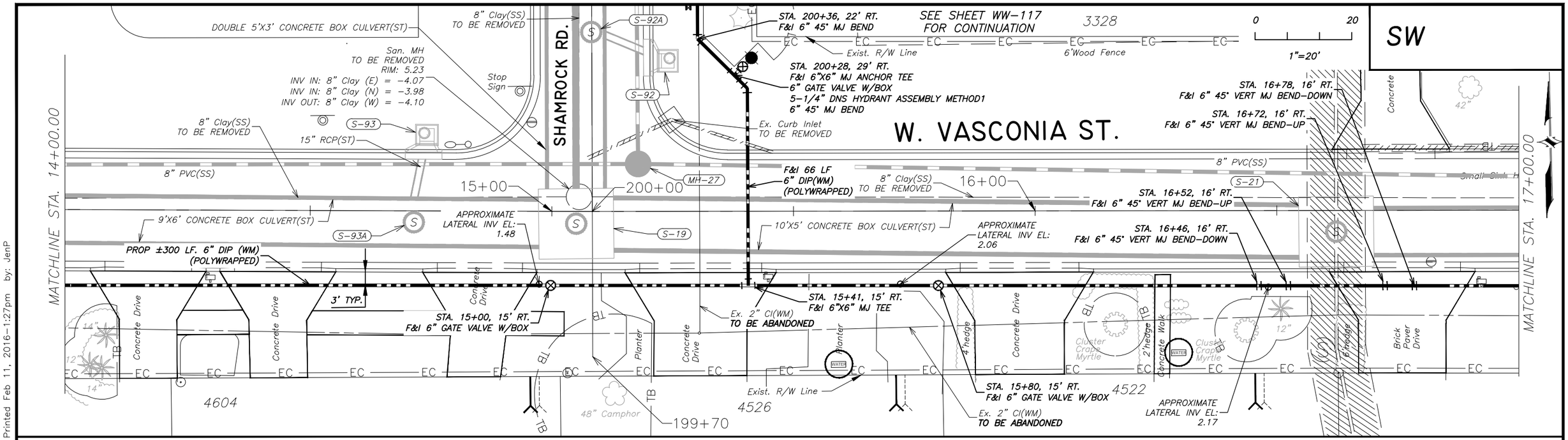

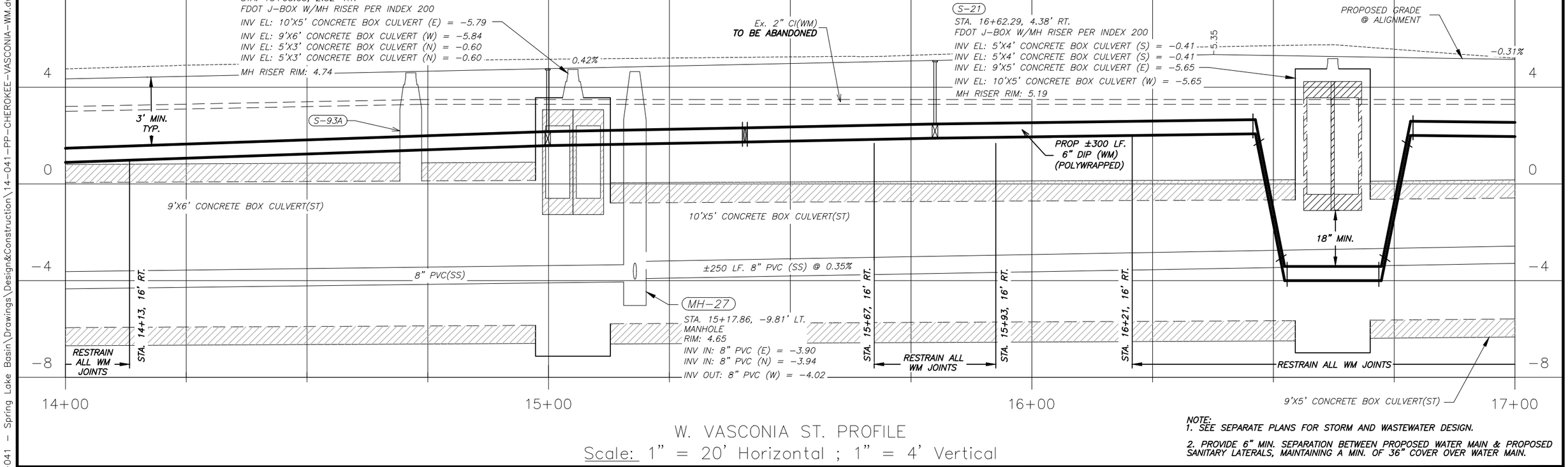

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Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET W-107 of W-125

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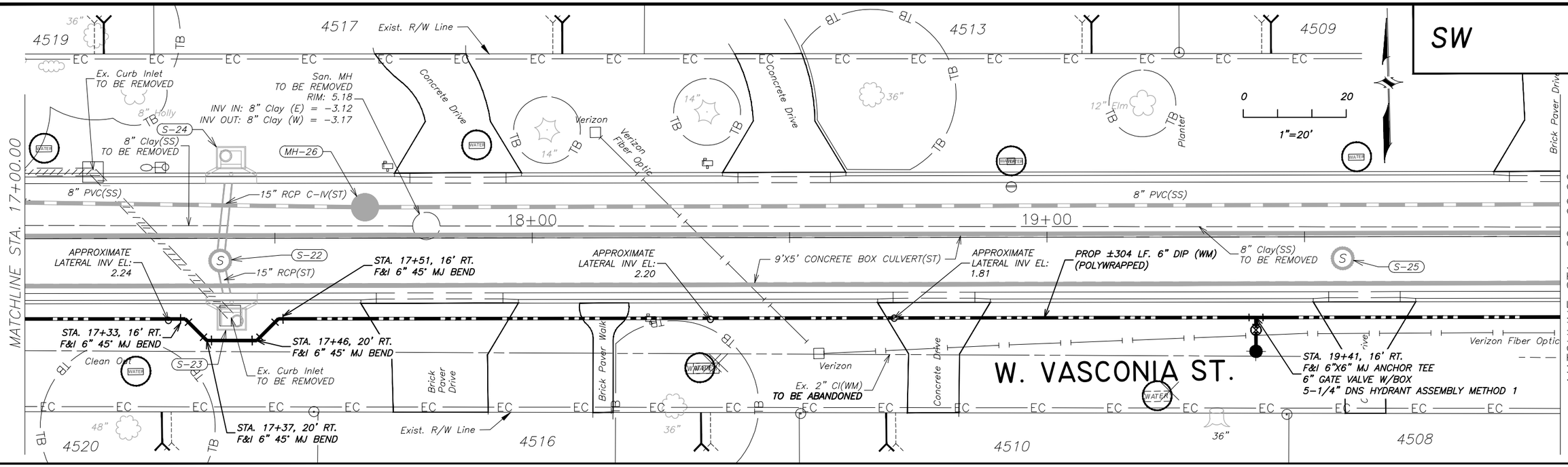
SW



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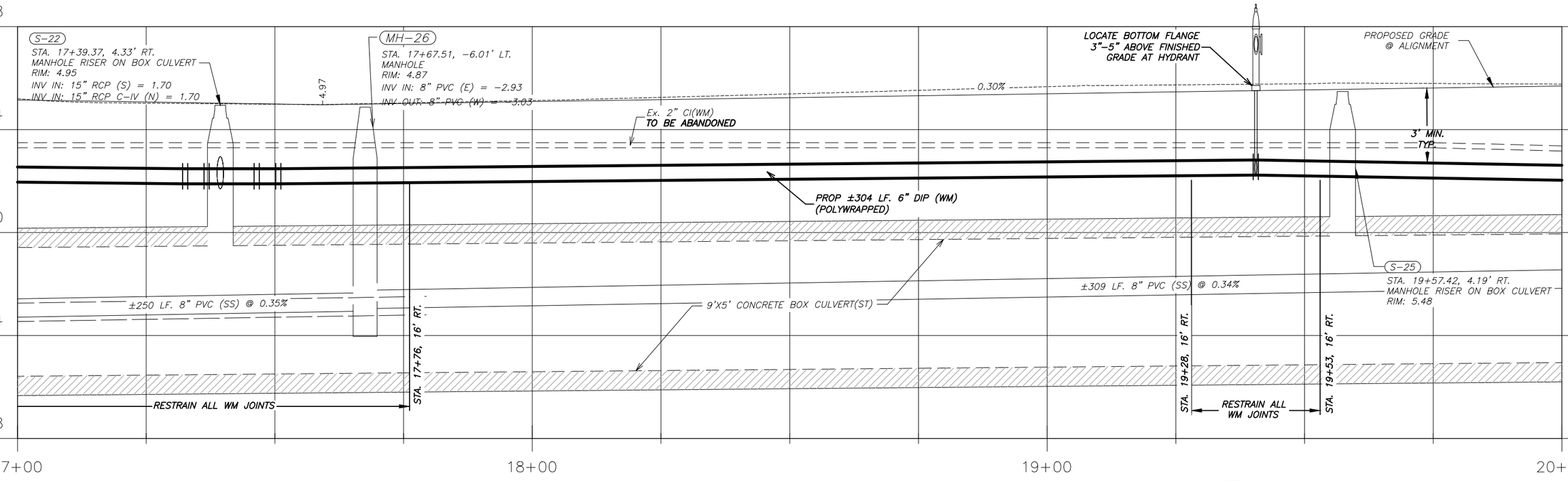

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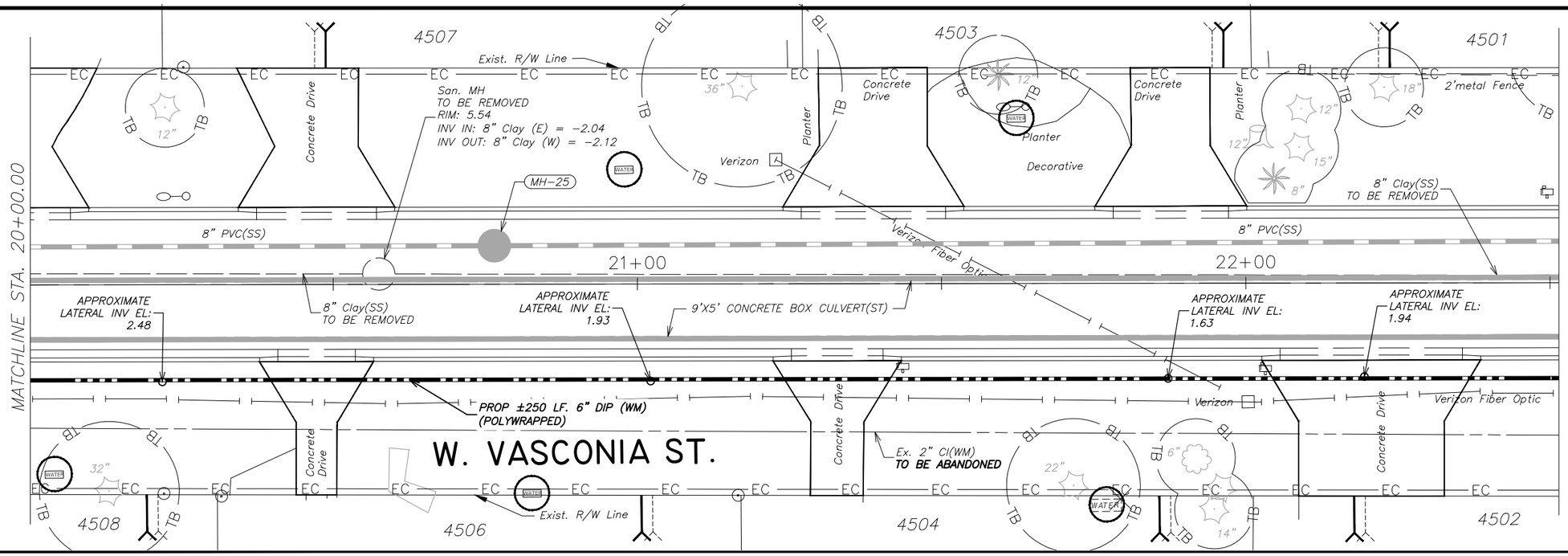
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

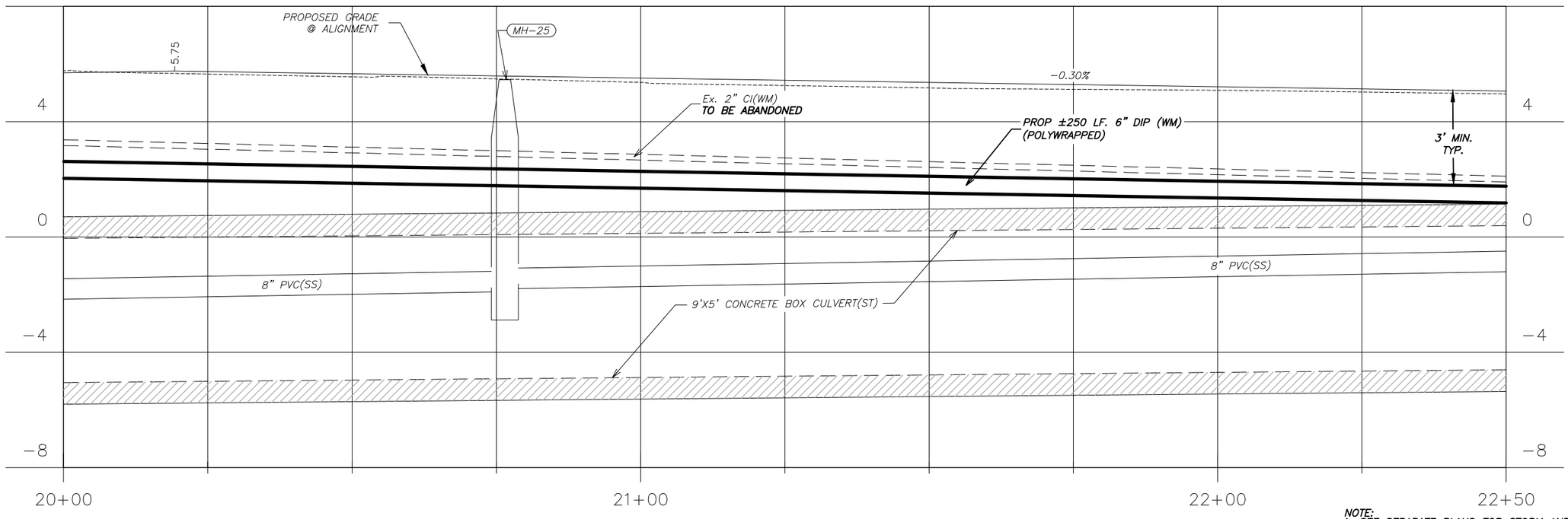
SHEET W-108
OF WW-129



SW

0 20

1"=20'



W. VASCONIA ST. PROFILE

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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET
W-109
OF
W-125

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SW

404+00 | 4423 | 4419 | 23+00 | 24+00 | 25+00

STA. 403+89, 26' RT.
F&I 6" LINE STOP

STA. 23+56, 14' LT.
F&I 6" 45° VERT MJ BEND–ROLLED
6" GATE VALVE W/BOX
6" MJ SOLID SLEEVE

PROP ±60 LF. 6" DIP (WM)
(POLYWRAPPED)

STA. 23+61, 8' LT.
F&I 6" 45° VERT MJ BEND–ROLLED

STA. 23+61, 16' RT.
F&I 6"X6" MJ TEE–ROLLED DOWN
6" GATE VALVE W/BOX
6" 90° VERT MJ BEND

STA. 22+91, 16' RT.
F&I 6" GATE VALVE W/BOX

STA. 23+77, 16' RT.
F&I 6"X6" MJ ANCHOR TEE
6" GATE VALVE W/BOX
5-1/4" DNS HYDRANT ASSEMBLY METHOD 1

STA. 25+12, 16' RT.
F&I 6" 45° MJ BEND

STA. 25+28, 22' RT.
F&I 6" 22.5° MJ BEND

STA. 23+58, 16' RT.
F&I HORIZONTAL 6"X6" MJ TEE

STA. 403+20, 26' RT.
F&I 6" 45° VERT MJ BEND–ROLLED

MATCHLINE STA. 22+50.00

MATCHLINE STA. 25+50.00

W. VASCONIA ST.

HESPERIDES AVE. SEE SHEET W-120

Ex. 2" CI(WM) TO BE ABANDONED

Ex. 6" CI(WM) TO BE REMOVED

Ex. 2" CI(WM) TO BE ABANDONED

Exist. R/W Line

Exist. R/W Li

San. MH TO BE REMOVED
RIM: 4.86
INV IN: 8" Clay (E) = -0.99
INV OUT: 8" Clay (W) = -1.01

(SEE SHEET W-120 FOR WM CROSS SECTION)

8" Clay(SS) TO BE REMOVED

8" PVC(SS)

12" Rcp(ST) TO BE REMOVED

18" RCP(ST)

15" RCP(ST)

15" Rcp(ST) TO BE REMOVED

18" Rcp(ST)

15" RCP(ST)

18" Rcp(ST) 6" MJ SOLID SLEEVE

APPROXIMATE LATERAL INV EL: 1.57

APPROXIMATE LATERAL INV EL: 2.03

PROP ±234 LF. 6" DIP (WM)
(POLYWRAPPED)

9'X5' CONCRETE BOX CULVERT(ST)

Concrete Drive

Brick Drive

Stop Sign

Verizon

Clean Out

Crape Myrtle Cluster

Brick Walk

Concrete Walk

18x18 Brick

1"=20'

0 20

S-26 | S-27 | S-29 | S-30 | S-32 | MH-24

---

8 | 4 | 0 | −4 | −8

S-26
STA. 23+09.31, 3.96' RT.
MANHOLE RISER ON BOX CULVERT
RIM: 4.80

MH-24

4.82

12" Rcp(ST) TO BE REMOVED

LOCATE BOTTOM FLANGE 3"–5" ABOVE FINISHED GRADE AT HYDRANT

0.43%

5.39

PROPOSED GRADE @ ALIGNMENT

-0.47%

3' MIN. TYP.

Ex. 2" CI(WM) TO BE ABANDONED

PROP ±234 LF. 6" DIP (WM)
(POLYWRAPPED)

8" PVC(SS)

8" PVC(SS)

PROP 18" RCP
INV EL: −1.80 (S)

STA. 23+58, 16' RT.
HORIZONTAL 6"X6" MJ TEE

STA. 23+61, 16' RT.
6"X6" MJ TEE–ROLLED DOWN

9'X5' CONCRETE BOX CULVERT(ST)

STA. 22+85, 16' RT.

STA. 23+85, 16' RT.

STA. 24+87, 16' RT.

STA. 25+50, 16' RT.

RESTRAIN ALL WM JOINTS

RESTRAIN ALL WM JOINTS

22+50 | 23+00 | 24+00 | 25+00 | 25+50

W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN PLAN & PROFILE

SHEET W-110 OF W-125

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SW

MATCHLINE STA. 25+50.00

MATCHLINE STA. 28+50.00

0 20

1"=20'

4415

4411

4418

4416

4414

4412

Exist. R/W Line

Clean Out

5" Elm

10" Magnolia

4" Crape Myrtle

4" Crape Myrtle

4" Crape Myrtle

Brick Drive

Concrete

Concrete Drive

Brick Walk

18x18 Brick

S-36

San. MH
RIM: 5.25
TO BE REMOVED
INV IN: 8" Clay (E) = 0.27
INV OUT: 8" Clay (W) = 0.26

8" PVC(SS)

MH-23

26+00

27+00

28+00

S-37

S-38

S-34A

S-34

8" Clay(SS)
TO BE REMOVED

8" Clay(SS)
TO BE REMOVED

W. VASCONIA ST.

9'X5' CONCRETE BOX CULVERT(ST)

APPROXIMATE
LATERAL INV EL:
2.49

APPROXIMATE
LATERAL INV EL:
2.22

APPROXIMATE
LATERAL INV EL:
2.02

Verizon Fiber Optic

PROP ±300 LF. 6" DIP (WM)
(POLYWRAPPED)

Concrete Walk

Verizon Fiber Optic

Ex. 2" CI(WM)
TO BE ABANDONED

5'hedge

Decorative

Decorative

Clean Out

STA. 28+30, 22' RT.
F&I 6"X6" MJ ANCHOR TEE
6" GATE VALVE W/BOX
5-1/4" DNS HYDRANT ASSEMBLY METHOD 1
(LOCATE FH BONNET ALONG PROPERTY LINE
BETWEEN ADJACENT PROPERTIES)

ground Lp Tank

MH-23

PROPOSED GRADE
@ ALIGNMENT

LOCATE BOTTOM FLANGE
3"-5" ABOVE FINISHED
GRADE AT HYDRANT

4.90

5.53

5.31

0.31%

-0.30%

3' MIN.
TYP.

S-34A

S-38

Ex. 2" CI(WM)
TO BE ABANDONED

PROP ±300 LF. 6" DIP (WM)
(POLYWRAPPED)

8" PVC(SS)

8" PVC(SS)

9'X5' CONCRETE BOX CULVERT(ST)

PROP 15" RCP
INV EL: -1.21 (SE)

PROP 15" RCP
INV EL: -2.24 (N)

PROP 15" RCP
INV EL: -2.11 (N)

PROP 15" RCP
INV EL: -1.40 (SE)

8 4 0 -4 -8

25+50 26+00 27+00 28+00 28+50

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET
W-III
of
W-125

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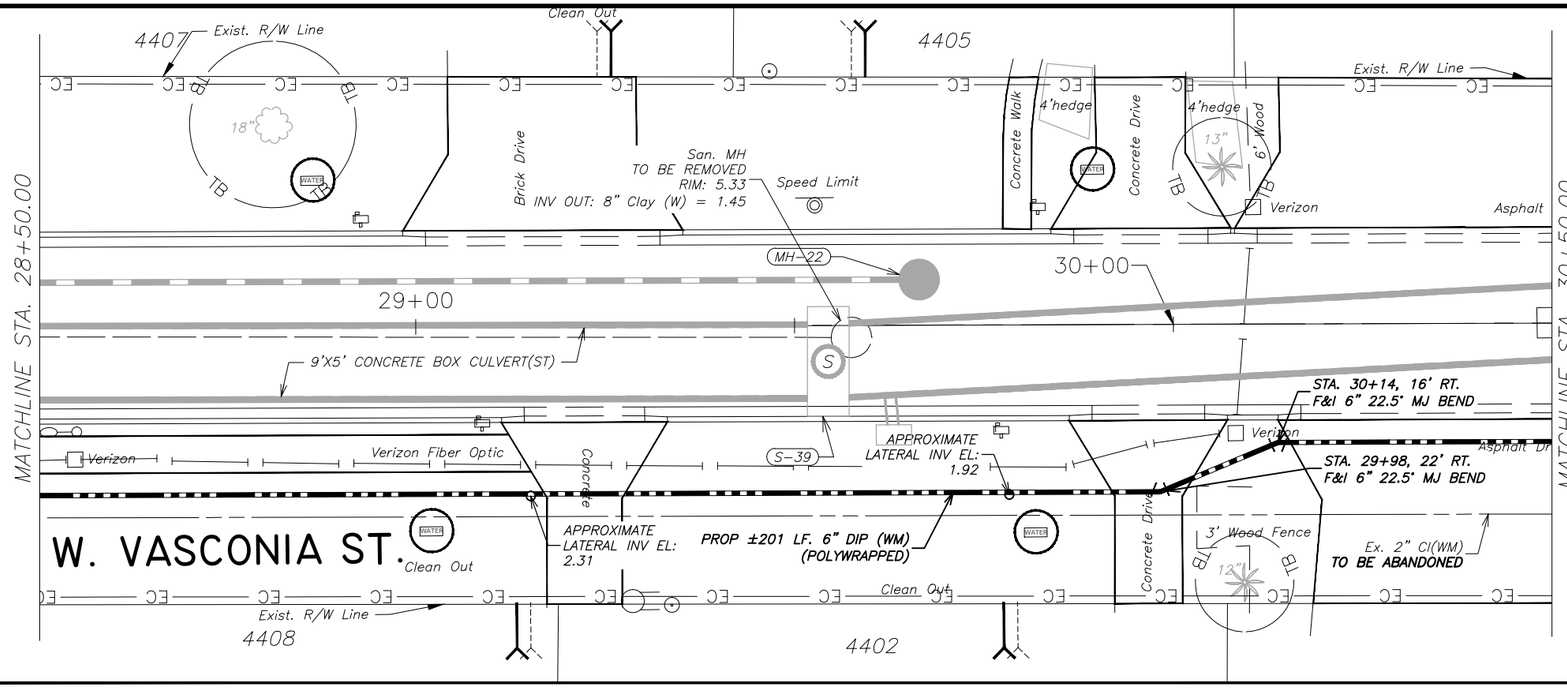
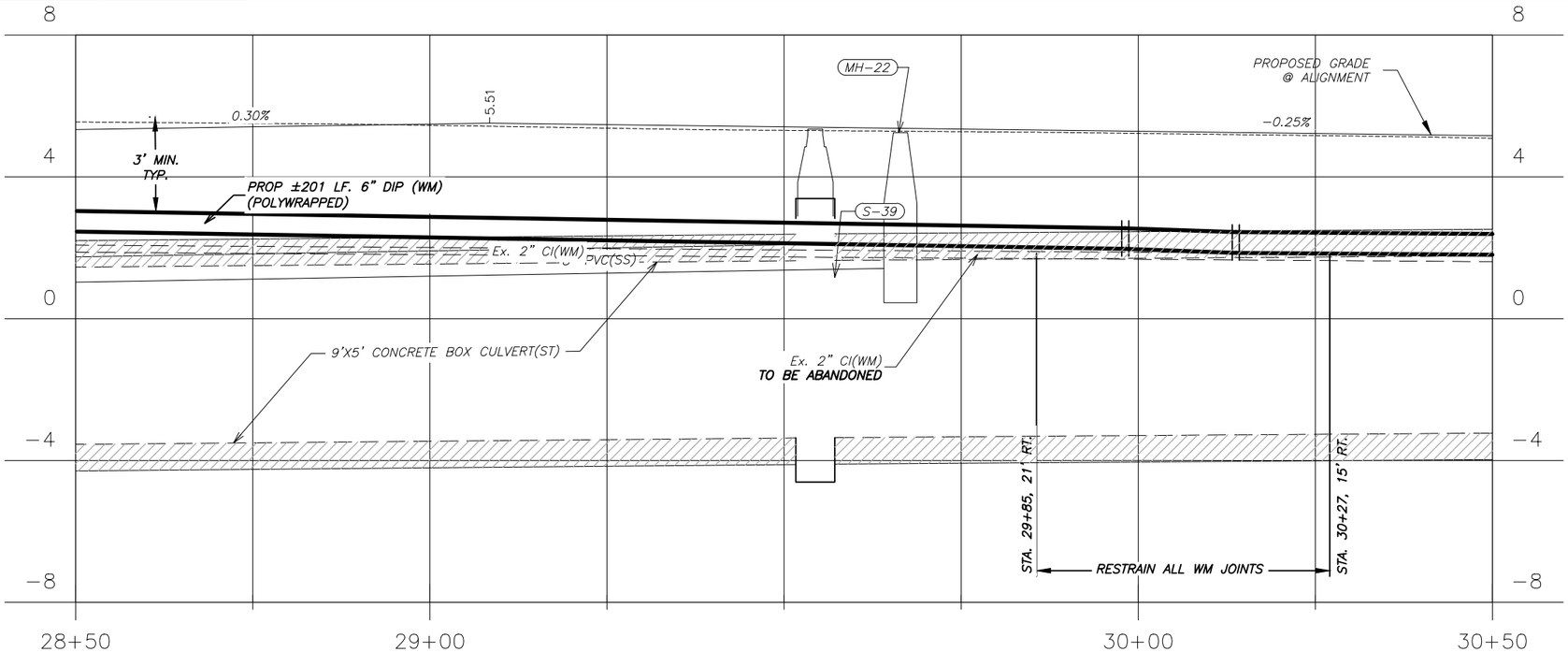


SW

0 20

1"=20'



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PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET
W-112
OF
WW-129

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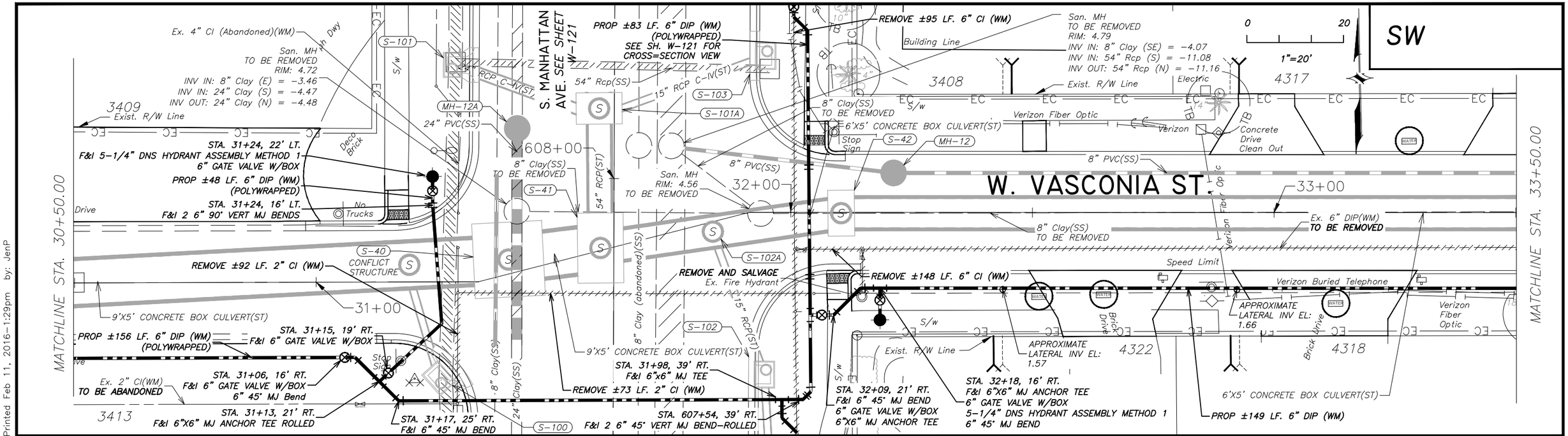

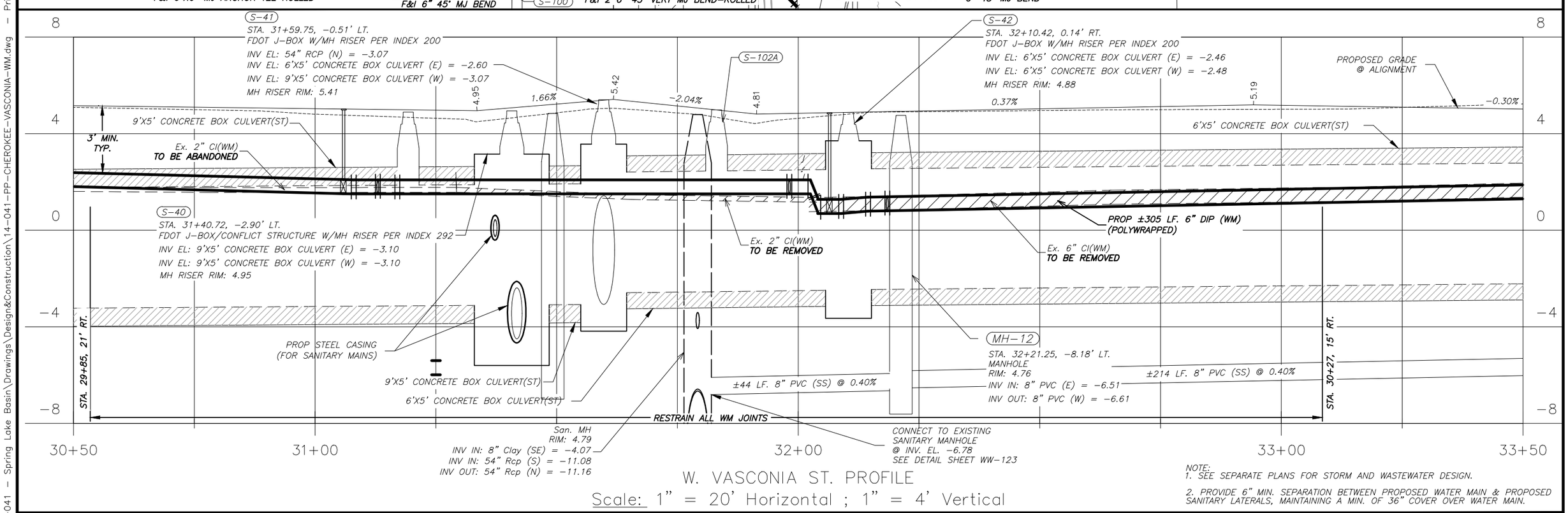

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UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET W-113 OF W-125

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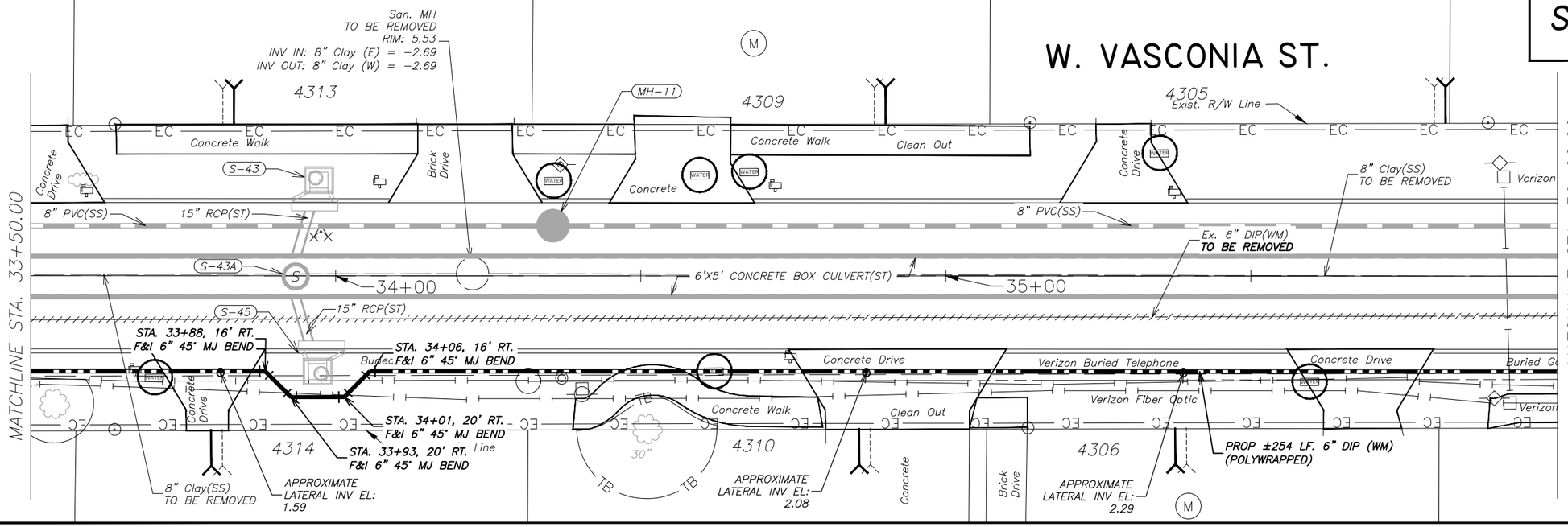
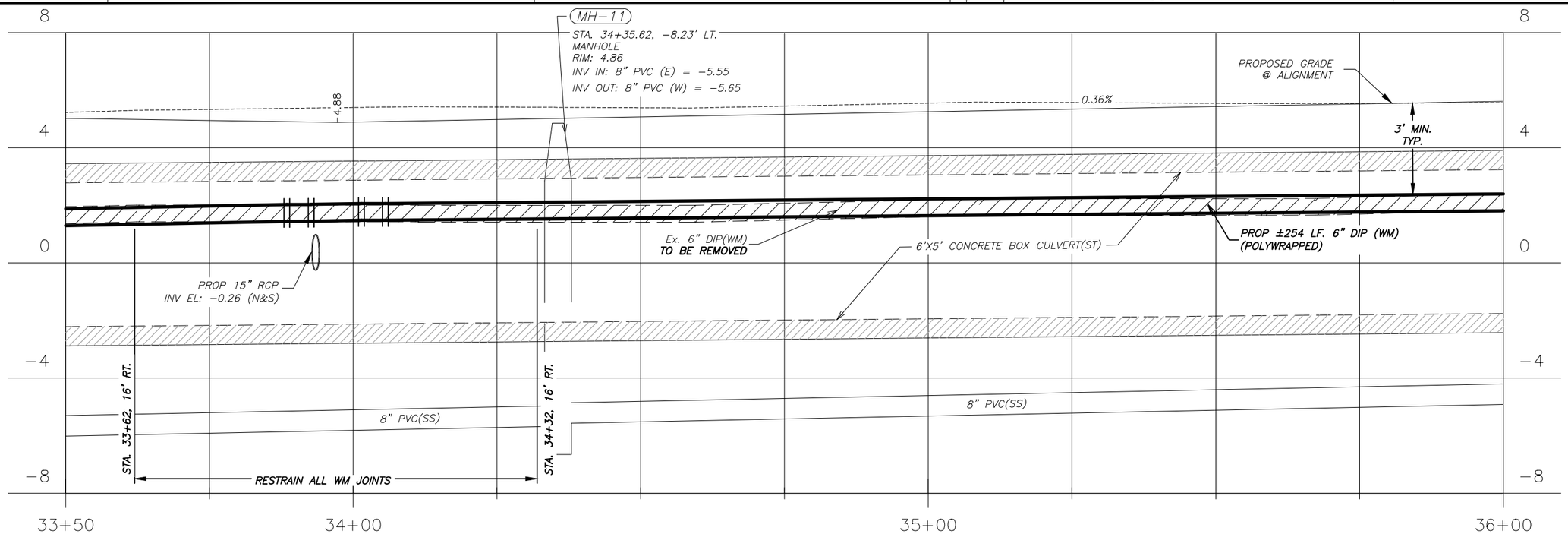
SW

W. VASCONIA ST.





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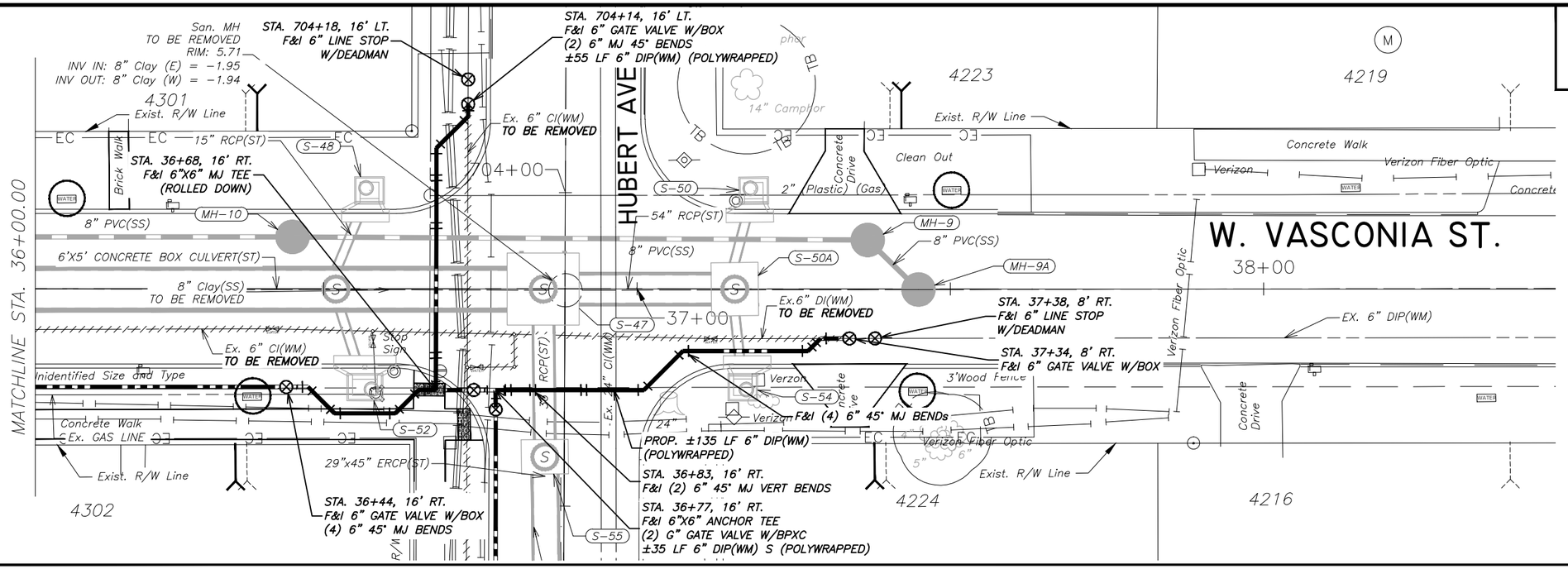
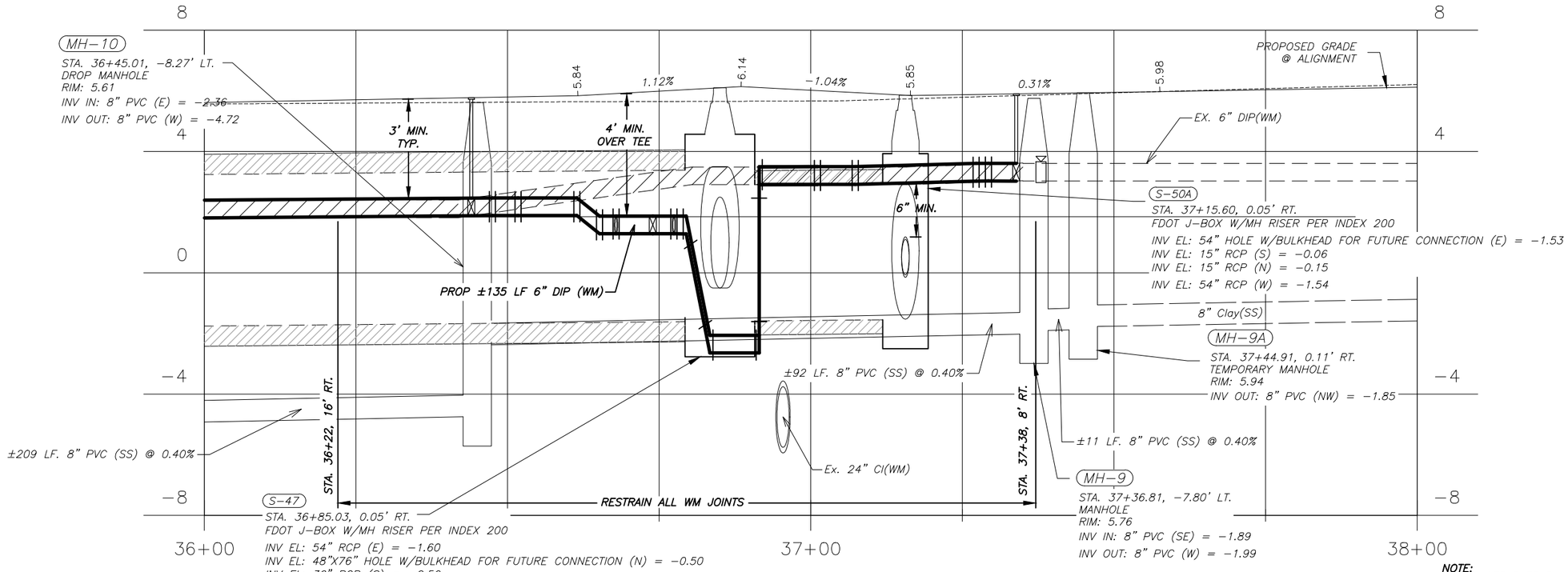
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET
W-114
of
W-125

SW





W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - WATER MAIN
PLAN & PROFILE

SHEET
W-115
of
W-125

SW

4605

3327

3325

3323

S. SHAMROCK RD.

911+00

912+00

913+00

202+00

201+00

13+00

14+00

MH-28A

S-18B

S-18A

S-18

S-17

S-20

15" RCP(ST)

18" RCP(ST)

8" PVC(SS)

9'X6' CONCRETE BOX CULVERT(ST)

5'X3' CONCRETE BOX CULVERT(ST)

Clean Out

Stop Sign

Brick Paver Drive

4" magnolia

Electric

Basketball

Concrete Drive

Verizon

2" (Plastic) (Gas)

42"

10"

8"

12"

14"

W. VASCONIA ST.
SEE SHEET W-107

SHAMROCK RD.
SEE SHEET W-117

Exist. R/W Line

Pet Waste

Ex. 6" DIP (WM)
CONSTRUCTED JAN 2016 BY OTHERS.
CONTRACTOR SHALL OBTAIN AS-BUILTS
OF THE RECENTLY CONSTRUCTED
PHASE PRIOR TO SCHEDULING OF
CONSTRUCTION

4606

3328

3'hedge

Concrete Drive

Stop Sign

36"

0 20

1"=20'

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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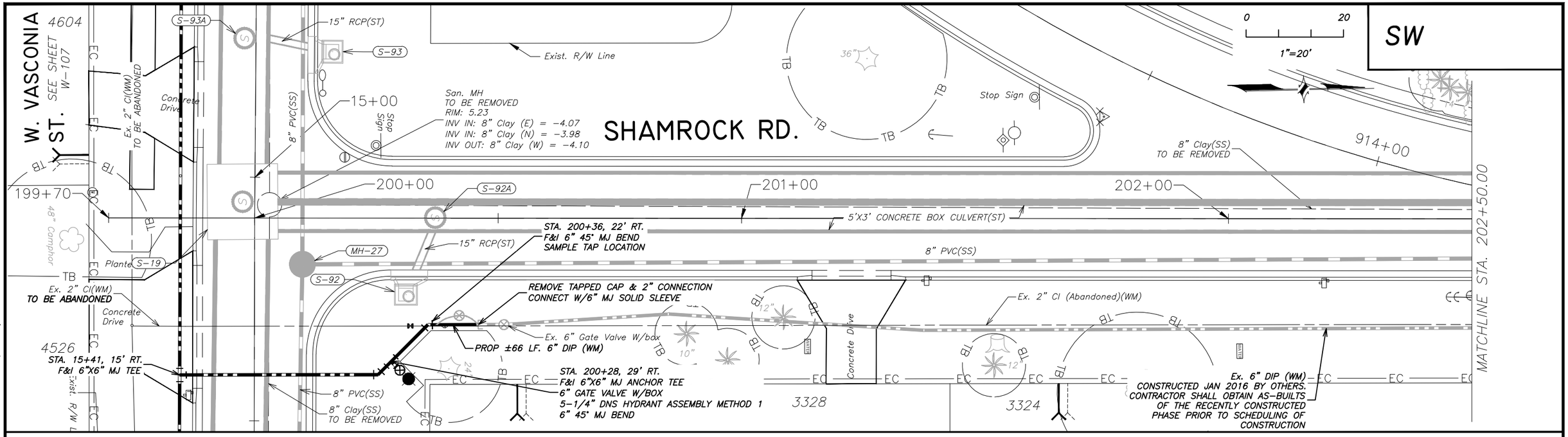
DATE: 10/13/15

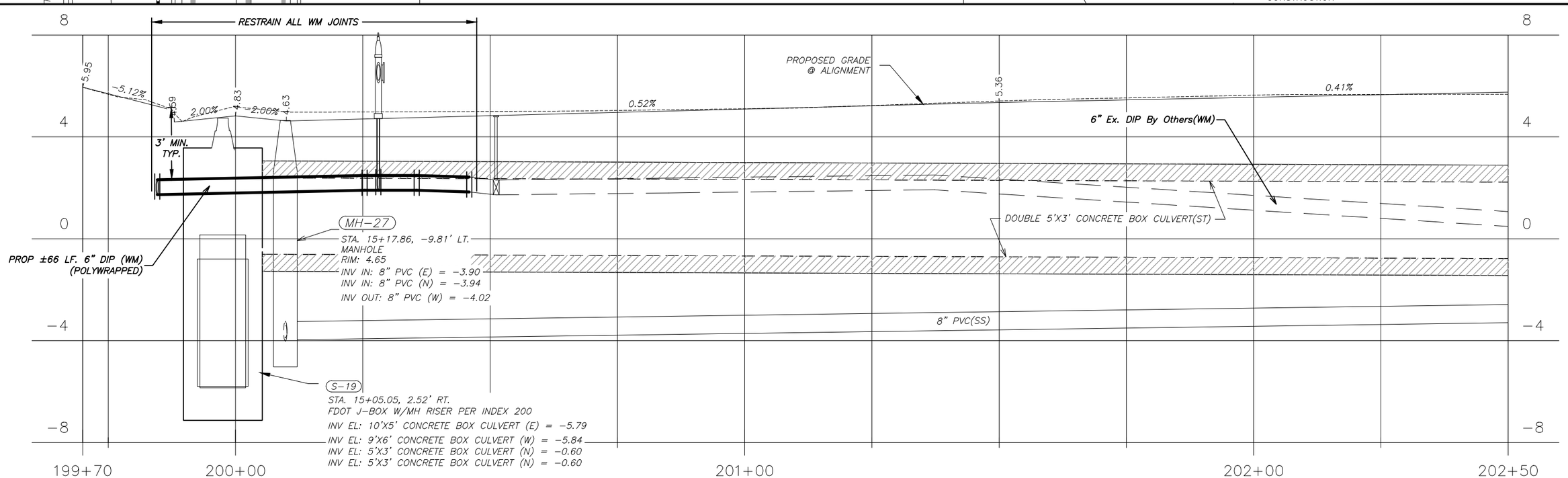
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - WATER MAIN
PLAN

SHEET W-116
OF W-125

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-SHAMROCK-WM2.dwg - Printed Feb 11, 2016-1:32pm by: JenP





SHAMROCK RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

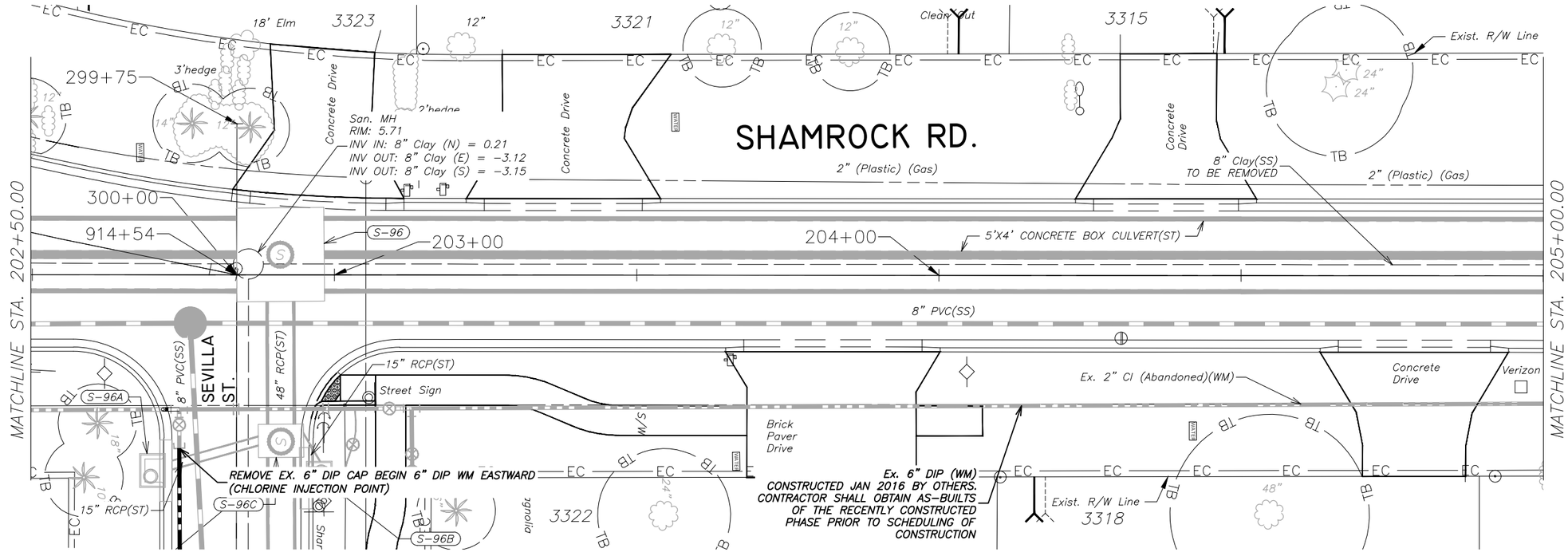
DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

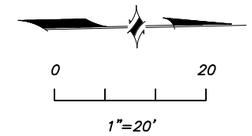
CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

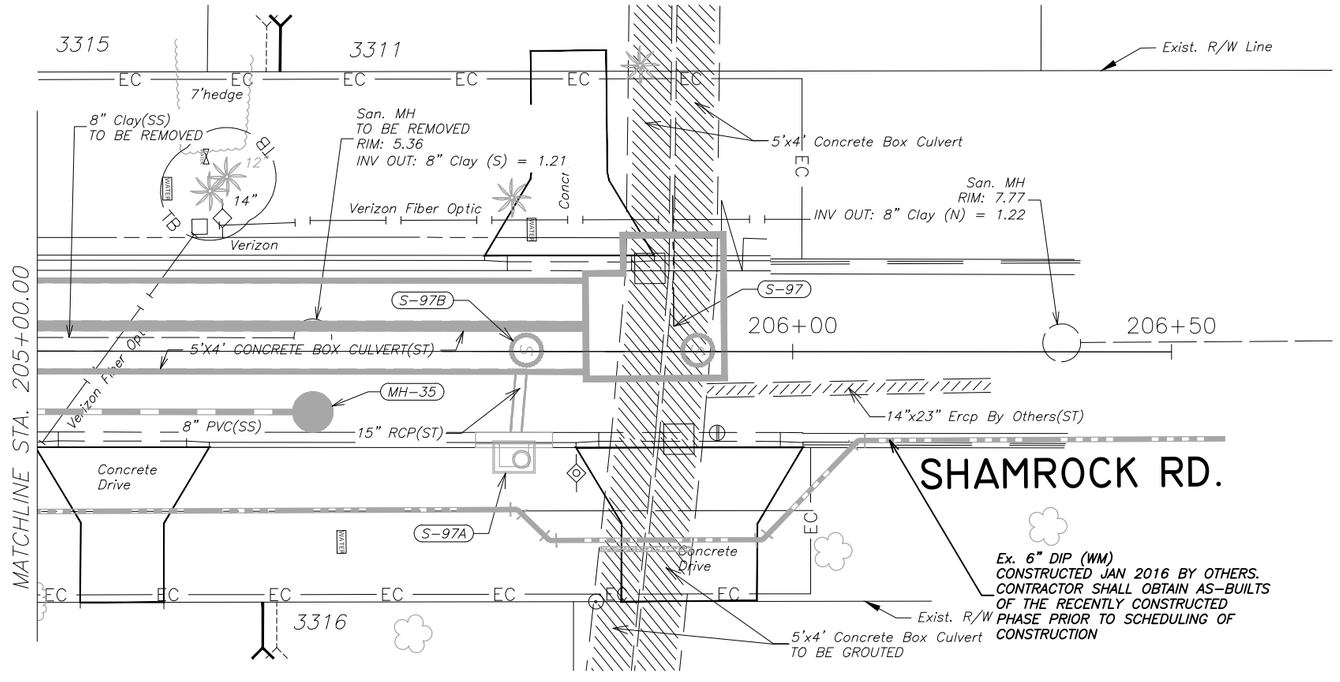
UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - WATER MAIN
PLAN & PROFILE

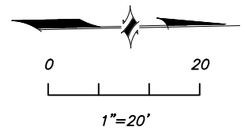
SHEET W-117
OF W-125

SW









NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
SHAMROCK RD. - WATER MAIN
PLAN & PROFILE

SHEET W-118
OF W-125

SW

0 20
1"=20'

DOUBLE 5'X4' CONCRETE BOX CULVERT(ST)
Ex. 2" CI (Abandoned)(WM)
6" Ex. DIP By Others(WM)
Crape Myrtle
DOUBLE 5'x4' Concrete Box Culvert(ST) TO BE GROUTED IN PLACE
3322
6' PVC Fence
Exist. R/W Line
SHAMROCK RD.
12"
2'hedge
Street Sign
8" PVC(SS)
AFTER NEW WM ACTIVATED CLOSE CORP. CUT AND PLUG 2" HDPE @ CORP
S-96B
S/W
2" (Plastic) (Gas)
S/W
Ex. 2" CI(WM)
Shared Pole
8" Clay(SS) TO BE REMOVED
DOUBLE 5'x4' Concrete Box Culvert(ST) TO BE REMOVED
203+00
Concrete Drive
18' Elm
48" RCP(ST)
15" RCP(ST)
48" RCP(ST)
301+00
MH-27A
S-96C
15" RCP(ST)
8" PVC(SS)
3'hedge
299+75
300+00
914+54
S-96A
PROP ±163 LF. 6" DIP (WM) (POLYWRAPPED)
REMOVE EX. 6" DIP CAP BEGIN 6" DIP WM EASTWARDS (CHLORINE INJECTION POINT)
Ex. 2" CI (Abandoned)(WM)
DOUBLE 5'X3' CONCRETE BOX CULVERT(ST)
3324
DOUBLE 5'x4' Concrete Box Culvert(ST) TO BE GROUTED IN PLACE
STA. 301+53, 7' RT.
F&I 6" 45° VERT MJ BEND-DOWN
STA. 301+55, 7' RT.
F&I 6" 45° VERT MJ BEND-UP
4517
Warning Buried Utility
CUT & PLUG EX. 2" WM ABANDON 2" WM TO THE WEST
STA. 301+95, 14' LT.
F&I 2" GATE VALVE W/BOX (SAMPLE TAP LOCATION)
CO 7.99
D/W
S-98
302+00
Verizon Fiber Optic
MH-27B
SEVILLA ST.
INSTALL 2" HDPE WM UNDER 42" RCP
STA. 301+65, 7' RT.
F&I 6" 45° VERT MJ BEND-DOWN
STA. 301+62, 7' RT.
F&I 6" 45° VERT MJ BEND-UP
Cabinet
S-99
STA. 301+92, 7' RT.
F&I 6"X2" TAPPED CAP
2" TAPPED CONNECTION W/20' OF 2" HDPE
Verizon Fiber Op
15"
4514

RESTRAIN ALL WM JOINTS

6.14 −0.07% 5.63 2.03% 5.90 −2.00% 5.69 −1.13% 5.48 0.53% 5.79 −0.33% 5.55 0.65%

Ex. 2" CI(WM)
3' MIN. TYP.
PROP ±163 LF. 6" DIP (WM) (POLYWRAPPED)
12" MIN.
S-96
48" RCP(ST)
42" Rcp(ST)
Ex. 6" Ex. DIP By Others(WM)
8" PVC(SS)
8" Clay(SS)
S-98
MH-27A
MH-27B

8 4 0 −4 −8

299+75 300+00 301+00 302+00 302+50

SEVILLA ST. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SEVILLA ST. - WATER MAIN
PLAN & PROFILE

SHEET W-119
cf W-125

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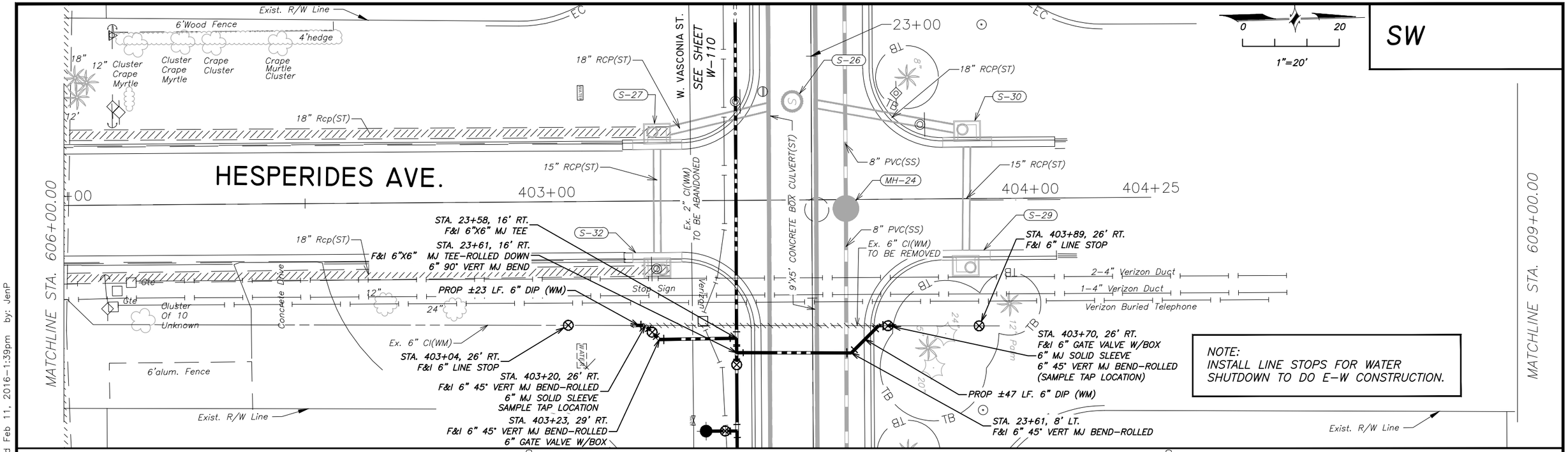

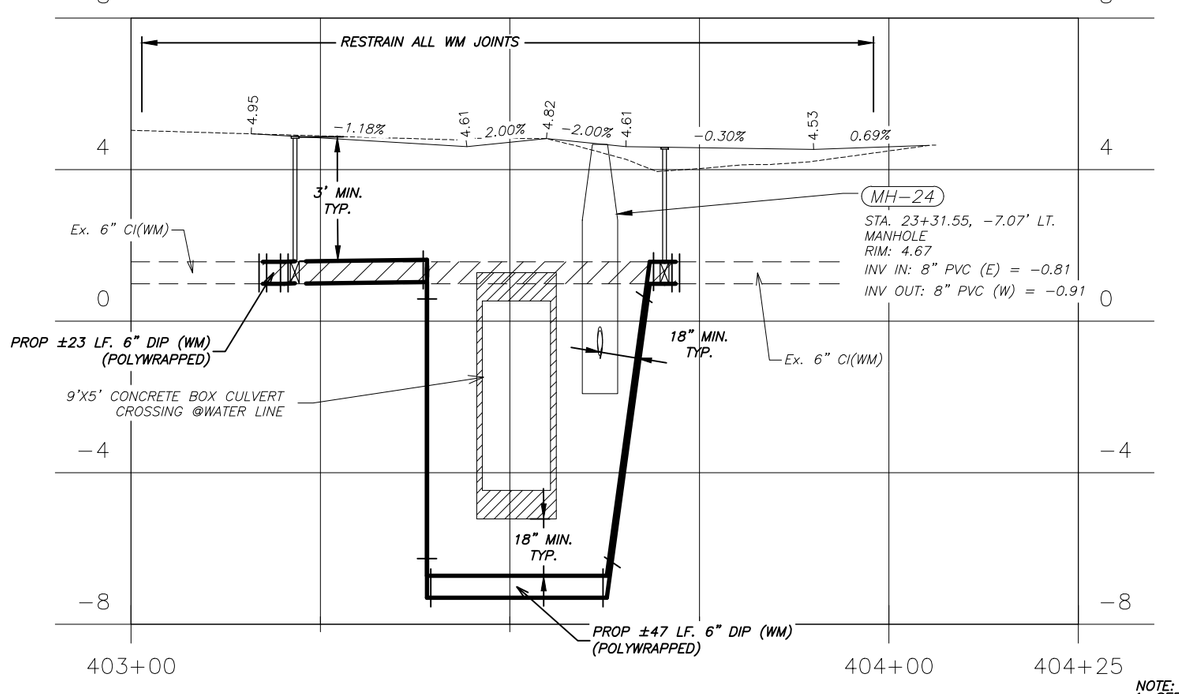

HESPERIDES AVE PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

DES: ALC
DRN: ASA
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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HESPERIDES AVE. - WATER MAIN
PLAN & PROFILE

SHEET W-120 OF W-125

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SW

0 20

1"=20'

W. KENSINGTON AVE.

S. MANHATTAN AVE.

MATCHLINE STA. 600+00.00

MATCHLINE STA. 603+00.00

600+00

601+00

602+00

Straight Endwall

3.93

Exist. R/W Line

Stop
W. Manhattan Ave.
W. Kensington Ave.

Ex. 2" CI(WM)
TO REMAIN

Manhattan Nails

Tos

Tob

Eop

SAN

Exist. R/W Line

S/w

EC

Tob

Eop

Tos

S/w

Asph

Exist. R/W Line

S/w

Eop

Relic
Home-garden

Asph

Exist. R/W Line

S/w

WATER

Driveway

18" RCP(ST)
REMOVE EXISTING PIPE

S/w

24" RCP(ST)
REMOVE EXISTING PIPE

C & G

Eop

C & G

S-1444

C & G

24" Clay(SS)

54" Rcp(SS)

C & G

Eop

C & G

C & G

C & G

24"

Curb

Curb

Asph

Ex. 8" CI(WM)

Curb

Curb

48"

S/w

Exist. R/W Line

Chiropractic
Entrance

Conc

C & G

C & G

Stop

16"

Planter

Conc

Ex. 8" CI(WM)

16"

16"

Gravel

Gravel

Ex. 2" CI(WM)

Baisden
Company

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
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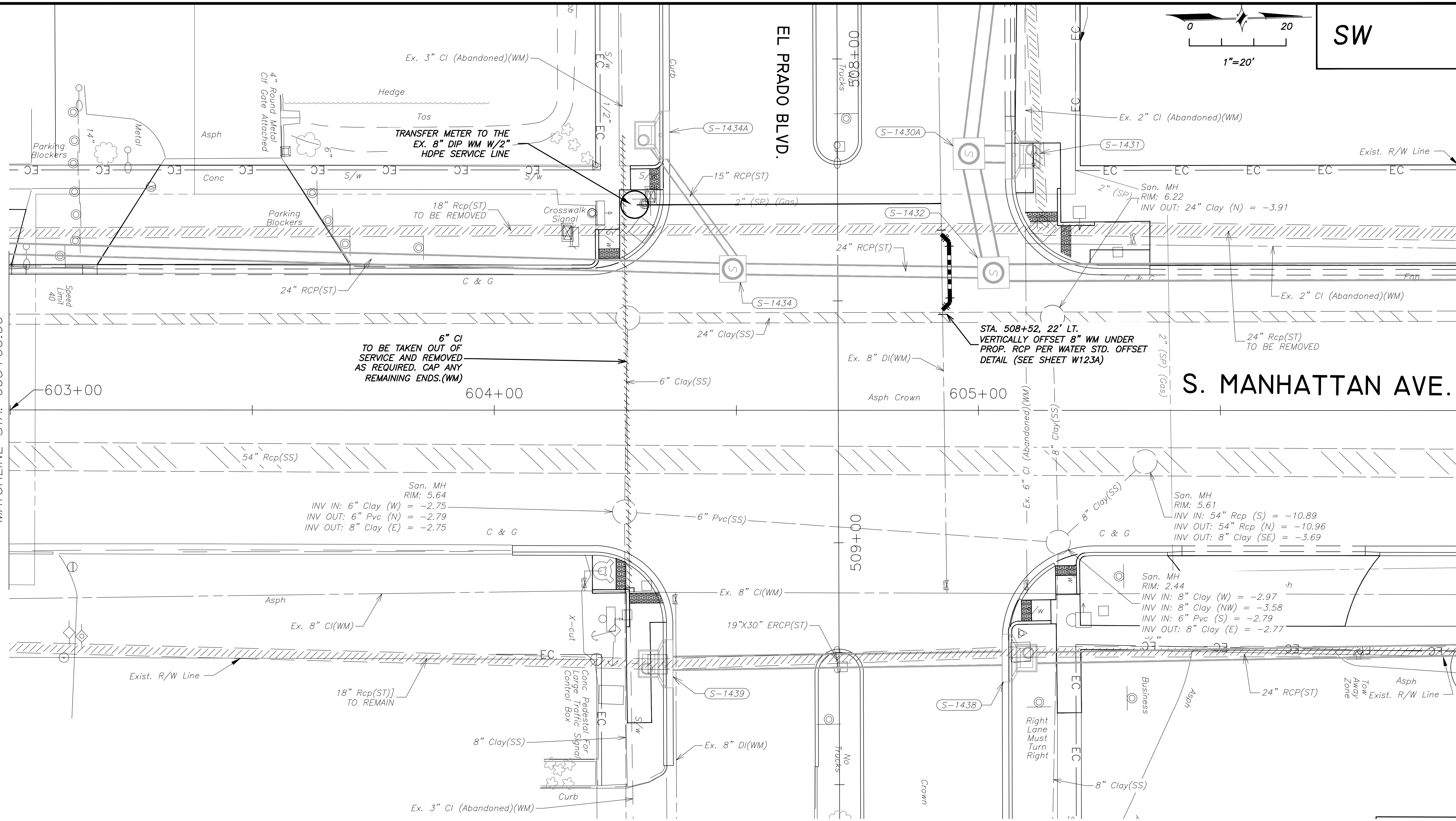
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - WATER MAIN
PLAN & PROFILE

SHEET
W-120A
OF
W-125

G:\Projects\14-041 - Spring Lake Basin\Drawings\Design&Construction\14-041-PP-MANHATTAN - WM.dwg - Printed Feb 11, 2016-1:41pm by: JenP



EL PRADO BLVD.
S. MANHATTAN AVE.
MATCHLINE STA. 603+00.00
MATCHLINE STA. 606+00.00
603+00
604+00
605+00
508+00
509+00
1"=20'
TRANSFER METER TO THE EX. 8" DIP WM W/2" HDPE SERVICE LINE
6" CI TO BE TAKEN OUT OF SERVICE AND REMOVED AS REQUIRED. CAP ANY REMAINING ENDS.(WM)
STA. 508+52, 22' LT. VERTICALLY OFFSET 8" WM UNDER PROP. RCP PER WATER STD. OFFSET DETAIL (SEE SHEET W123A)
Ex. 3" CI (Abandoned)(WM)
Ex. 2" CI (Abandoned)(WM)
Ex. 8" DI(WM)
Ex. 8" CI(WM)
Ex. 6" CI (Abandoned)(WM)
S-1434A
S-1430A
S-1431
S-1432
S-1434
S-1439
S-1438
15" RCP(ST)
18" Rcp(ST) TO BE REMOVED
18" Rcp(ST)] TO REMAIN
24" RCP(ST)
24" Rcp(ST) TO BE REMOVED
19"X30" ERCP(ST)
54" Rcp(SS)
24" Clay(SS)
6" Clay(SS)
6" Pvc(SS)
8" Clay(SS)
2" (SP) (Gas)
San. MH RIM: 6.22 INV OUT: 24" Clay (N) = -3.91
San. MH RIM: 5.64 INV IN: 6" Clay (W) = -2.75 INV OUT: 6" Pvc (N) = -2.79 INV OUT: 8" Clay (E) = -2.75
San. MH RIM: 5.61 INV IN: 54" Rcp (S) = -10.89 INV OUT: 54" Rcp (N) = -10.96 INV OUT: 8" Clay (SE) = -3.69
San. MH RIM: 2.44 INV IN: 8" Clay (W) = -2.97 INV IN: 8" Clay (NW) = -3.58 INV IN: 6" Pvc (S) = -2.79 INV OUT: 8" Clay (E) = -2.77
Exist. R/W Line
Hedge
Parking Blockers
Crosswalk Signal
Conc Pedestal For Large Traffic Signal Control Box
Right Lane Must Turn Right
Asph Crown
C & G
Curb

SW

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - WATER MAIN
PLAN & PROFILE

SHEET W-120B of W-125

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SW

0 20

1"=20'

MATCHLINE STA. 606+00.00

MATCHLINE STA. 609+00.00

S. MANHATTAN AVE.

W. VASCONIA ST.

24" Rcp(ST)

Eop

8" Clay(SS)

24" Clay(SS)

Traffic Signal

24" PVC(SS)

S-40

S-100

MH-12A

S-101

24" RCP C-IV(ST)

S-41

San. MH (Abandoned)
Buried Under Pavement
(NOT FOUND BY SURVEYOR)
RIM: 4.77
INV IN: 8" Clay (abandoned) (N) = -0.43

607+00

Asph Crown

608+00

S-101A

6'X5' CONCRETE BOX CULVERT(ST)

5'x3' Concrete Box Culvert(ST)

8" Clay (abandoned)(SS)

54" Rcp(SS)

STA. 607+80, 41' RT.
F&I 6" 90° MJ BEND

STA. 607+72, 41' RT.
F&I 6"X6" MJ ANCHOR TEE
2 6" GATE VALVE W/BOX
6" 45° MJ BEND

S-102A

STA. 607+54, 35' RT.
F&I 6"X6" MJ ANCHOR TEE

STA. 607+51, 35' RT.
F&I 6" 45° VERT MJ BEND-ROLLED

S-102

15" RCP(ST)

C & G

PROP ±14 LF. 6" DIP (WM)

32+00

S-103

STA. 608+03, 40' RT.
F&I 6" 90° MJ BEND

STA. 608+36, 37' RT.
F&I 6" TEAM INSERTION VALVE W/BOX
6" 45° VERT MJ BEND-ROLLED
6" DIP NIPPLE

Ex. 8" CI(WM)
TO BE REMOVED

Verizon Fiber Optic

S-102B

15" RCP(ST)

Ex. 8" CI(WM)

STA. 607+44, 38' RT.
F&I 6" TEAM INSERTION VALVE W/BOX
6" 45° VERT MJ BEND-ROLLED
6" DIP NIPPLE

STA. 607+54, 39' RT.
F&I 6" 45° VERT MJ BEND-ROLLED

PROP ±98 LF. 6" DIP (WM)

S/w

STA. 607+56, 41' RT.
F&I 6" 45° VERT MJ BEND-ROLLED

CONCRETE BOX CULVERT

STA. 608+31, 40' RT.
F&I 6" 45° VERT MJ BEND-ROLLED

6' Wood Board Fence

Exist. R/W Line

24"

Sign

Exist. R/W Line

PROPOSED GRADE
@ ALIGNMENT

-0.38%

5.09

1.26%

5.42

-0.61%

5.18

0.30%

3' MIN. TYP.

PROP ±14 LF. 6" DIP (WM)

Ex. 8" CI(WM)

Ex. 8" CI(WM)
TO BE REMOVED

Ex. 8" CI(WM)

PROP ±95 LF. 6" DIP (WM)

6'X5' CONCRETE BOX CULVERT
CROSSING @WATER LINE

San. MH
RIM: 4.79
INV IN: 8" Clay (SE) = -4.07
INV IN: 54" Rcp (S) = -11.08
INV OUT: 54" Rcp (N) = -11.16
INV IN 8" PVC (SE) = -6.79

54" Rcp(SS)

4
0
-4
-8

606+00 607+00 608+00 609+00

S. MANHATTAN AVE. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
S. MANHATTAN AVE. - WATER MAIN
PLAN & PROFILE

SHEET W-121
OF W-125

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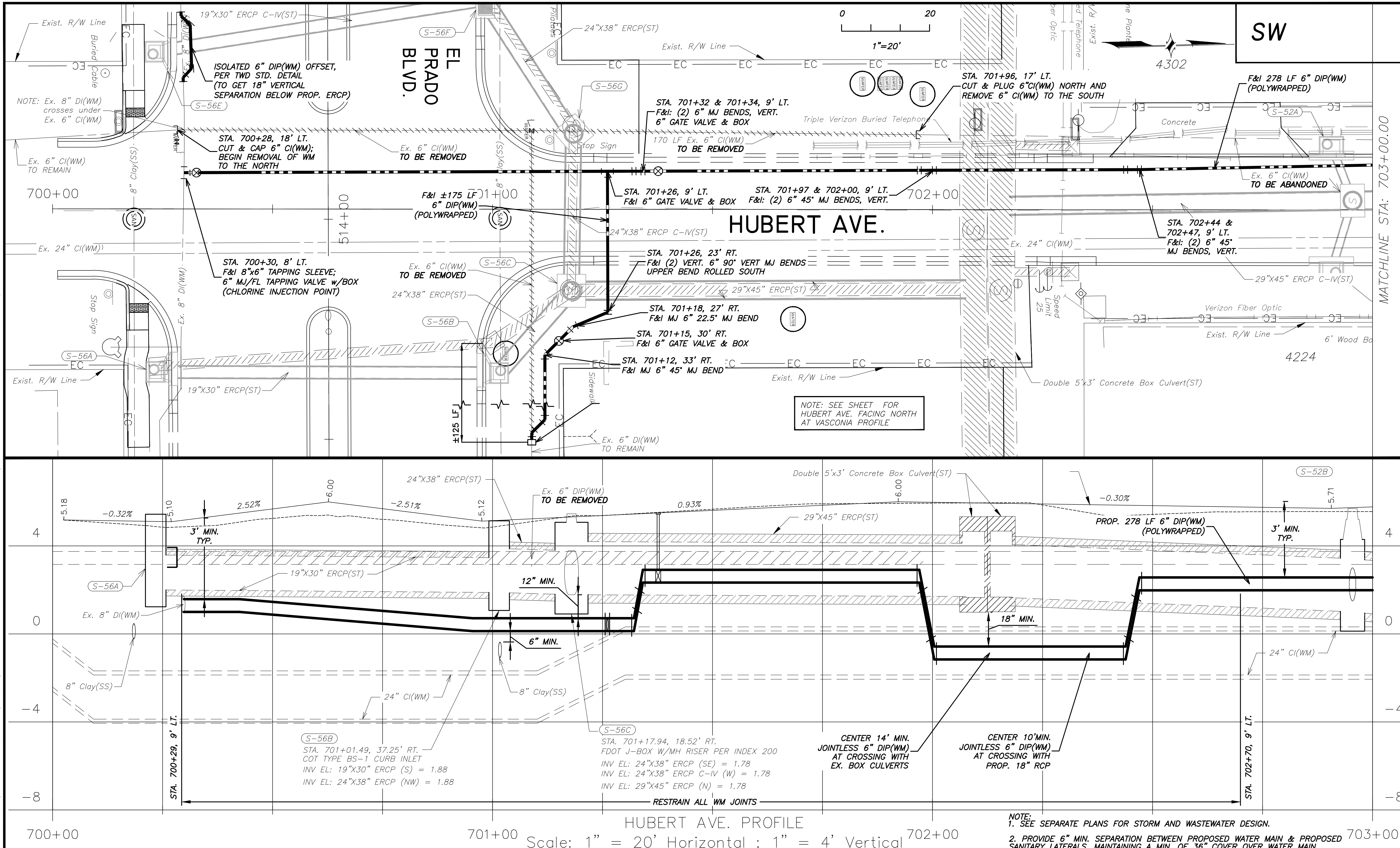

HUBERT AVE. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - WATER MAIN PLAN & PROFILE

SHEET W-122 of W-125

SW

SEE SHEET W-122
MATCHLINE STA: 703+00.00

6'X5' CONCRETE BOX CULVERT(ST)
MH-10
8" PVC(SS)
S-52
S-48A
S-48
STA. 703+74, 21' LT.
F&I 6" MJ 45° VERT BEND
STA. 703+68, 21' LT.
F&I 6" MJ TEE
(ROLLED DOWN)
STA. 703+95, 21' LT.
F&I 6" MJ 45° VERT BEND
STA. 704+02, 21' LT.
F&I 6" MJ 45° VERT BEND
STA. 704+07, 21' LT.
F&I 6" MJ 6" 45° MJ BEND
STA. 704+12, 16' LT.
F&I 6" MJ 6" 45° VERT BEND
4302
4301
4300
Ex. 6" CI(WM)
Exist. R/W Line
Stop Sign
Concrete
4' Clf
6' Wood Board
Buried Gas Unidentified Size and Type
Triple Verizon Buried Telephone
Verizon Fiber Optic
STA. 703+65, 11' LT.
F&I: 6"x6" ANCHOR TEE
6" GATE VALVE W/BOX
(SAMPLE TAP LOCATION)
STA. 704+14, 16' LT.
F&I SOLID SLEEVE
6" GATE VALVE W/BOX
(SAMPLE TAP LOCATION)
Verizon Fiber Optic
STA. 704+18, 16' LT.
F&I 6" LINE STOP
W/DEADMAN (FOR SHUTDOWN)
Ex. 6" CI(WM)
0 20
1"=20'
HUBERT AVENUE
29"X45" ERCP(ST)
29"X45" ERCP(ST)
36" RCP(ST)
704+00
705+00
STA. 703+33, 11' LT.
BEGIN HORIZONTAL
DEFLECTION
S-55
S-47
PROP. ±55 LF 6" DIP(WM)
(POLYWRAPPED)
24" CI(WM)
24" CI(WM)
37+00
VASCONIA ST.
PROP. ±70 LF 6" DIP(WM)
(POLYWRAPPED)
Verizon
S-54A
Verizon Fiber Optic
54" RCP(ST)
S-50A
S-50
Power Pole
Tripple 8" Crape Myrtle
4' Clf
4' Clf
4' Clf
S-54
4224
4223
Exist. R/W Line
4224
Concrete

8

PROP. WM @ 11' LT.
PROP. WM @ 21' LT.

8

36" RCP(ST)
0.69%
−0.30%
2.00%
−2.00%
0.39%
6.01
5.90
6.14
5.90
Ex. 6" CI(WM)
(TO REMAIN)
11' LT: PROP. 70 LF
6" DIP(WM)
(POLYWRAPPED)
3' MIN.
TYP.
4' MIN.
OVER TEE
PROP ±55 LF. 6" DIP (WM)
29"X45" ERCP(ST)
24" CI(WM)
18" MIN.
6" MIN.
S-47
STA. 703+84.60, −3.47' LT.
FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 54" RCP (E) = −1.60
INV EL: 48"X76" HOLE W/BULKHEAD FOR FUTURE CONNECTION (N) = −0.50
INV EL: 36" RCP (S) = −0.50
INV EL: 6'X5' CONCRETE BOX CULVERT (W) = −1.60
S-55
STA. 703+57.85, −3.09' LT.
FDOT J-BOX W/MH RISER PER INDEX 200
INV EL: 29"X45" ERCP (S) = −0.16
INV EL: 36" RCP (N) = −0.16
8" PVC(SS)
24" CI(WM)
STA. 703+45, 11' LT.
STA. 704+18, 23' LT.
RESTRAIN ALL WM JOINTS
4
0
−4
−8
703+00
704+00
705+00
706+00

HUBERT AVE. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HUBERT AVENUE - WATER MAIN
PLAN & PROFILE

SHEET W-123 of W-125

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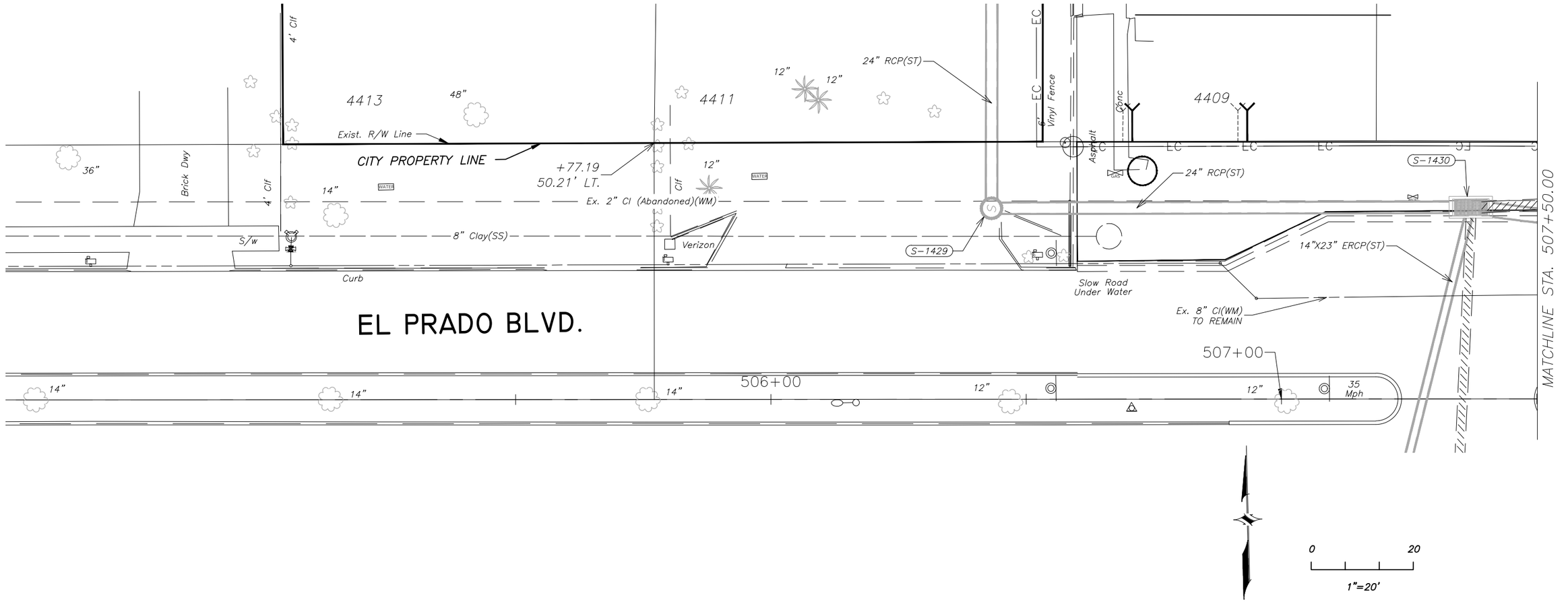
SW



EL PRADO BLVD.

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.

2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD - WATER MAIN
PLAN & PROFILE

SHEET
W-123A
of
W-125

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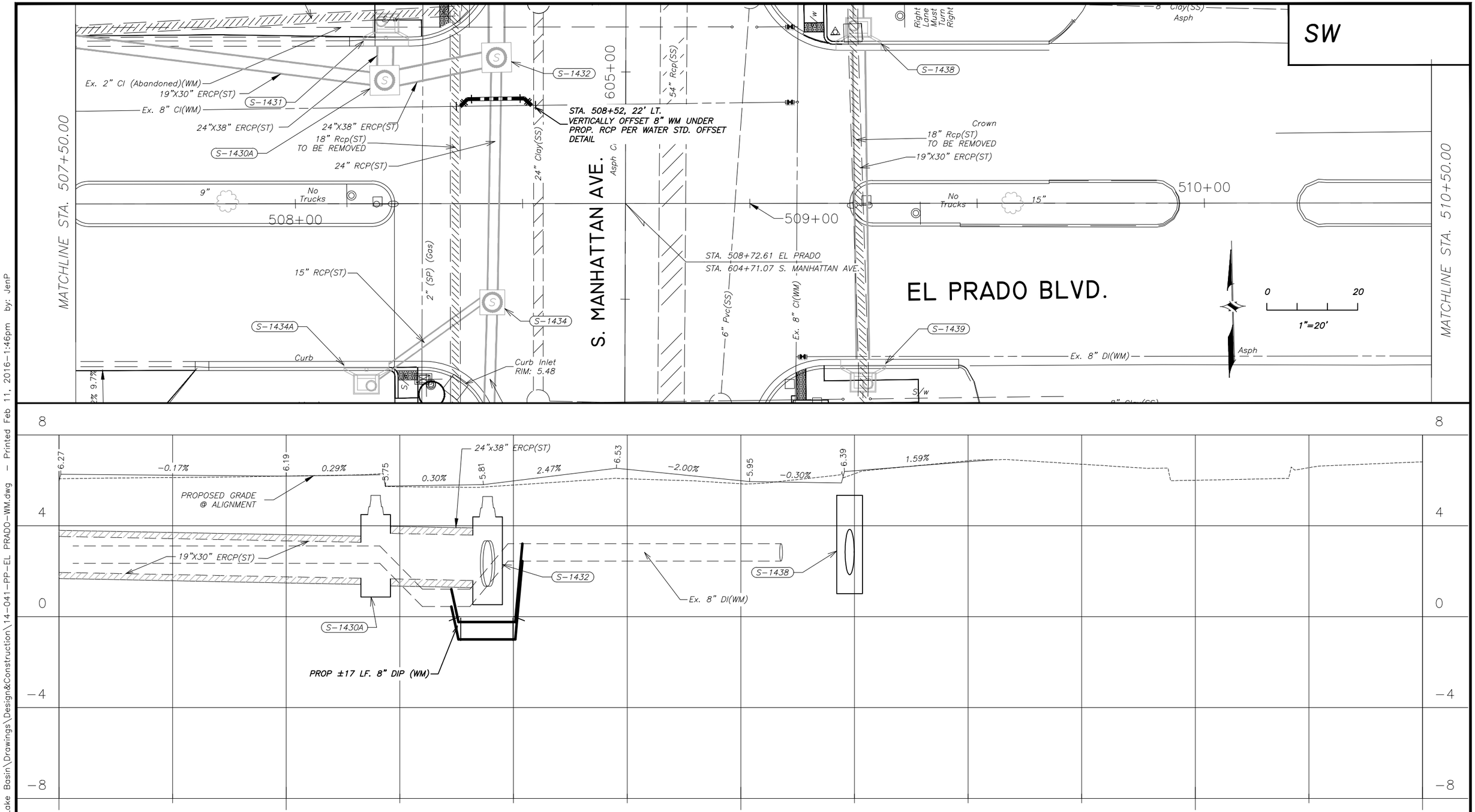

EL PRADO PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD - WATER MAIN
PLAN & PROFILE

SHEET W-123B
cf W-125

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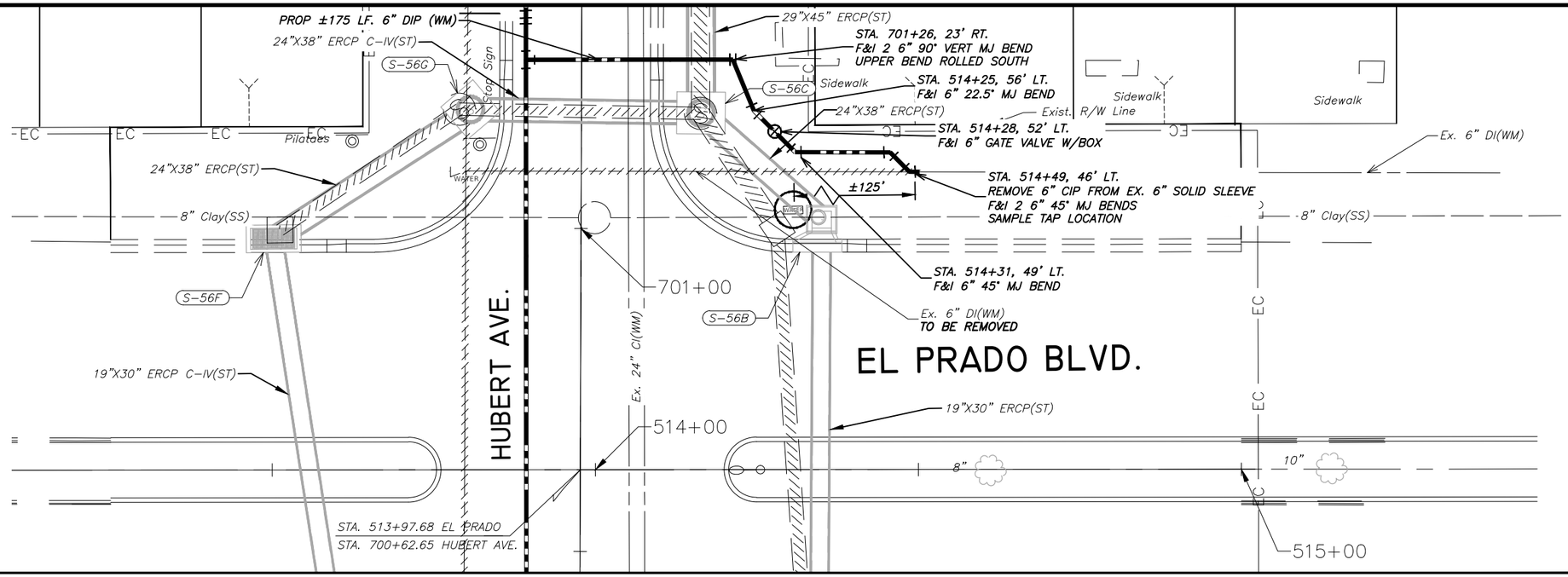

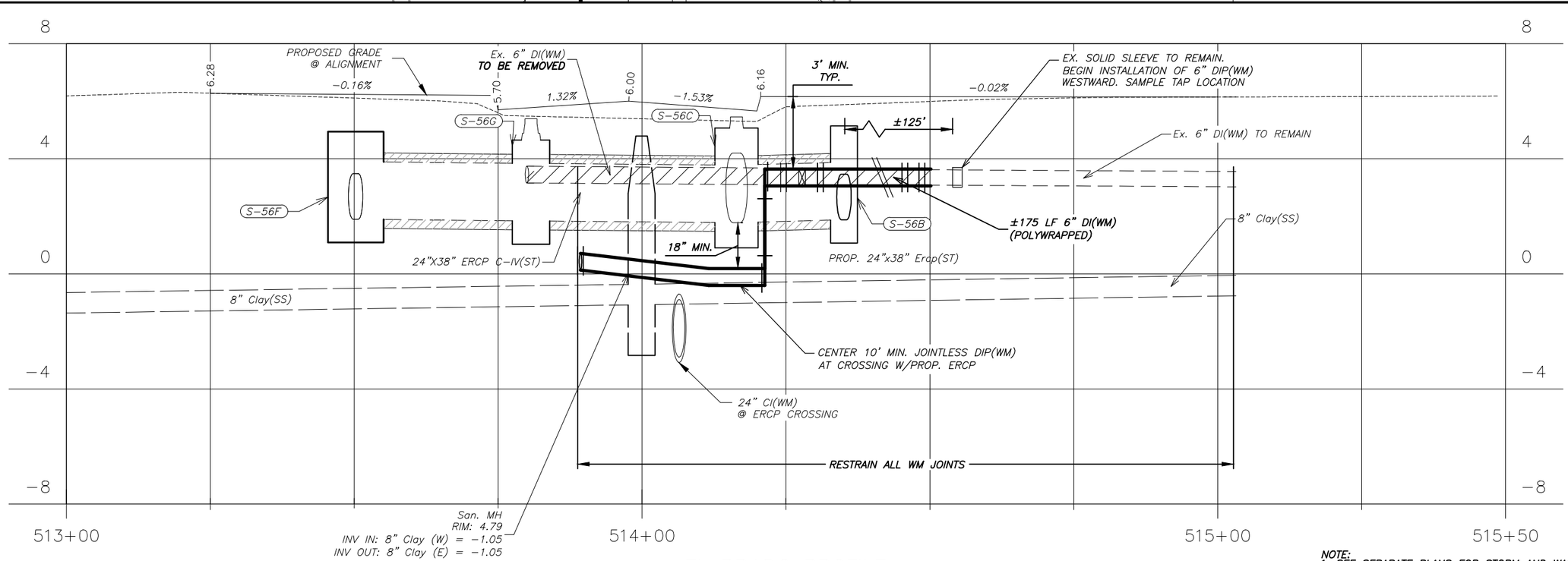

EL PRADO PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
1. SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN.
2. PROVIDE 6" MIN. SEPARATION BETWEEN PROPOSED WATER MAIN & PROPOSED SANITARY LATERALS, MAINTAINING A MIN. OF 36" COVER OVER WATER MAIN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
EL PRADO BLVD - WATER MAIN
PLAN & PROFILE

SHEET W-123C of W-125

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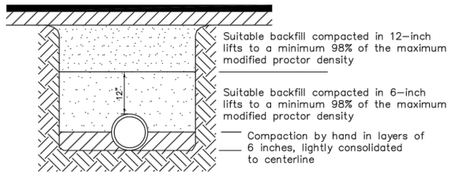

NOTES:

1. Type 2 trench is defined as a flat–bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right–of–Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL TRENCHING, BEDDING AND BACKFILL DETAIL FOR PAVED AREAS	2.01

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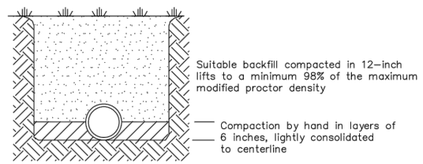

NOTES:

1. Type 2 trench is defined as a flat–bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right–of–Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL TRENCHING,BEDDING AND BACKFILL DETAIL FOR NON–PAVED AREAS	2.02

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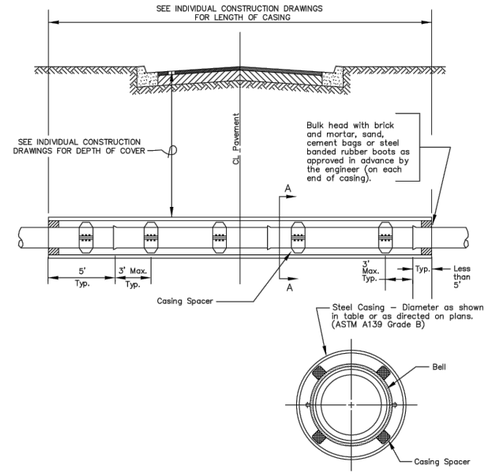


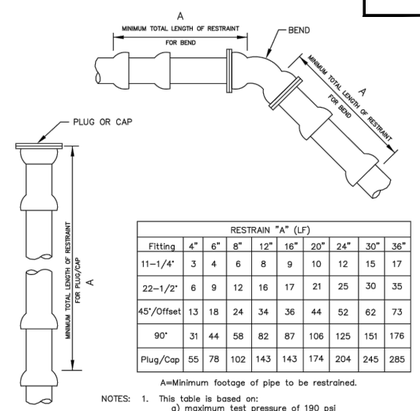
SECTION A – A

D.I.P. Carrier Pipe (P.O.) Nominal Diameter (Inches)	Casing O.D. (Inches)	Thickness
2	4	1/4"(.250)
4	12	1/4"(.250)
6	14	9/32"(.28125)
8	16	9/32"(.28125)
12	20	11/32"(.34375)
16	24	13/32"(.40625)
20	30	15/32"(.46875)
24	36	17/32"(.53125)
30	42	9/16"(.5625)
36	48	9/16"(.5625)

NOTES: 1. Pipelines with bends less than 20' from casing entrance shall be secured by both retainer glands and thrust blocks.
2. Casing pipe sizes listed are for push–on joint carrier pipe only.
3. Two spacers per joint minimum spaced as shown or as directed by the Engineer.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	JACKING & BORING FOR PAVEMENT CROSSING	2.03

K:\Standard Details 02\211



RESTRAIN "A" (LF)									
Fitting	4"	6"	8"	12"	16"	20"	24"	30"	36"
11–1/4°	3	4	6	8	9	10	12	15	17
22–1/2°	6	9	12	16	17	21	25	30	35
45°/Offset	13	18	24	34	36	44	52	62	73
90°	31	44	58	82	87	106	125	151	176
Plug/Cap	55	78	102	143	143	174	204	245	285

A=Minimum footage of pipe to be restrained.

NOTES: 1. This table is based on:
a) maximum test pressure of 190 psi
b) laying condition type 2 (see Details 2.01 and 2.02)
c) poor soil conditions
d) using D.I.P.
e) 3 feet of cover for 12" and smaller mains; 4 feet of cover for 16" and larger mains
f) Horizontal bends only – Engineer to submit calculations for vertical restraints

2. For polywrapped D.I.P., multiply the footage by 1.25
3. For PVC pipe, multiply footage by 1.2.
4. Restrained pipe shall be manufactured restrained pipe, push–on restraints or mechanical joint pipe restrained by Megalug or equivalent.
5. Any additional fittings within the restrained section shall be restrained accordingly.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, AND CAPS	2.11

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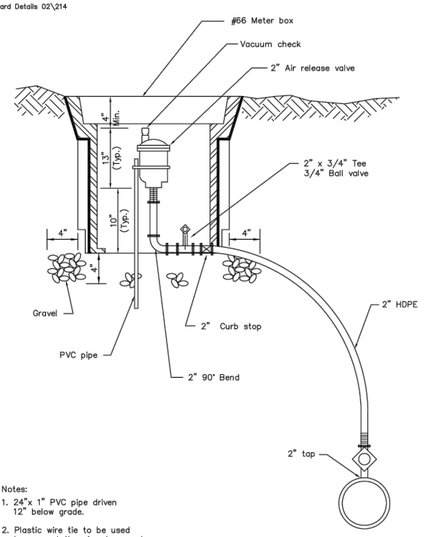

Notes:
1. 24"x 1" PVC pipe driven 12" below grade.
2. Plastic wire tie to be used to connect the air release valve to PVC pipe in order to keep the valve in the vertical position.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SUB–SURFACE AIR RELEASE VALVE	2.14

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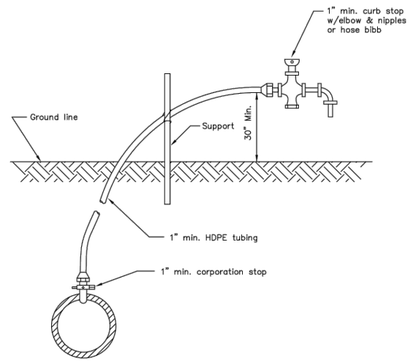

Notes:
1. Water outlet shall be held up off the ground so as not to interfere with the sampling process.
2. Corporation stop to be removed and plugged after operation.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TEMPORARY SAMPLE TAP INSTALLATION	2.17

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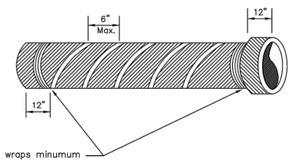

SPIRAL WRAP

NOTES:
1. To ensure proper adhesion, each pipe run shall be wrapped with a continuous run of tape.
2. All tape shall be min. 2" blue vinyl tape for potable water.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	PIPE IDENTIFICATION DETAIL D.I.P. ONLY	2.19

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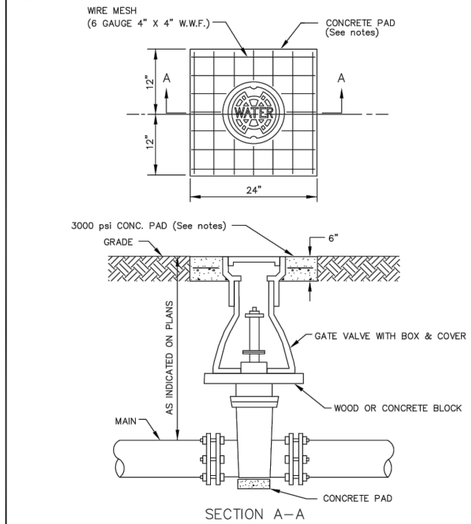

SECTION A–A

Notes :
1. Pad required for all applications.
2. Cast iron valve boxes shall be firmly supported and centered plumb over the operating nut of the valve by the contractor with valve box cover flush with the surface of the finished pavement or at such other level as may be directed.
3. Locate discs required for all valves.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL GATE VALVE VALVE BOX AND PAD INSTALLATION	3.01

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

WATER DETAILS (1 OF 2)

SHEET W-124 OF W-125

SW

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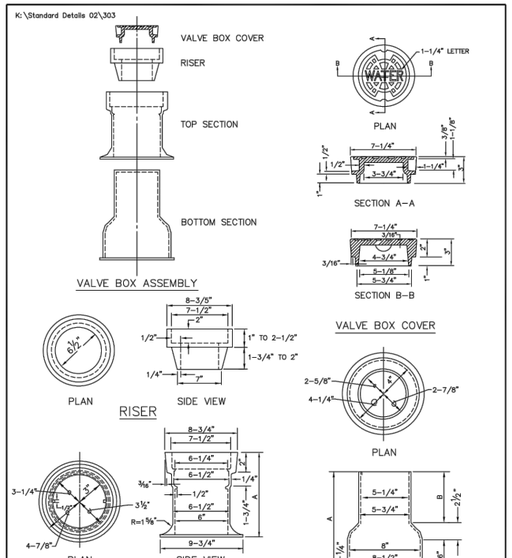

TOP SECTION	SIZE	A
	10"	10"
	16"	16"

BOTTOM SECTION	SIZE	A	B
	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

TAMPA WATER DEPARTMENT	APPROVED	REVISED	VALVE BOX	3.03

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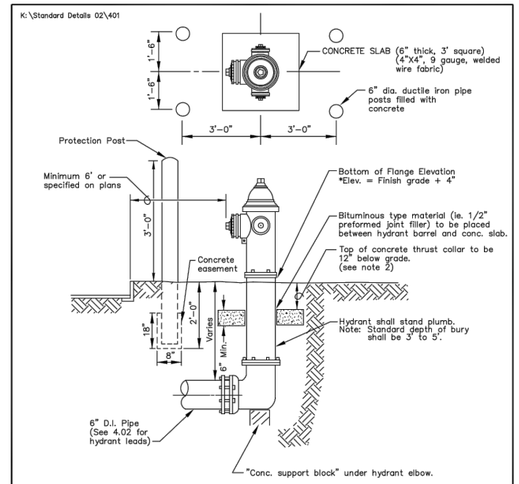

NOTES:
1. All fire hydrants shall be painted with a high grade enamel, Federal Safety Yellow (OSHA approved) above the ground line. Paint used for flow test color coding shall also be OSHA approved.
2. Concrete slab may be eliminated in areas where hydrant is set in sidewalk and sidewalk has been installed prior to final acceptance of the hydrant.
3. Thrust restraint for hydrant:
   a) hydrant shall be firmly supported under elbow in all methods by support block
   b) all backfill shall be thoroughly compacted under support block and under thrust collar
   c) all hydrant leads shall be restrained by Megalugs or equivalent mechanical restraints
4. Protection posts are required when hydrant is less than 6 feet from edge of pavement, or as directed by the Engineer.
5. For PVC mains, install concrete support block under all hydrant tees.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TYPICAL FIRE HYDRANT INSTALLATION	4.01

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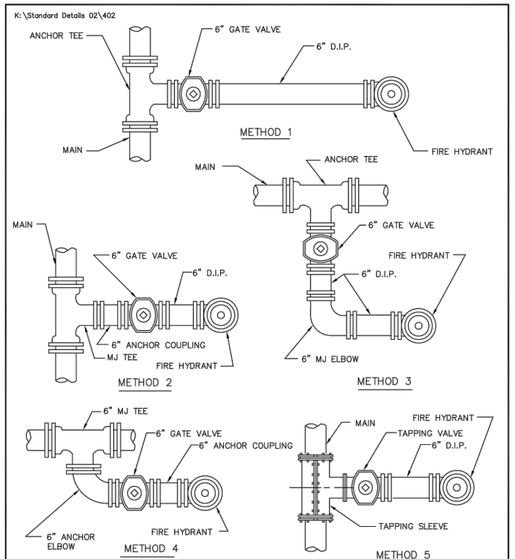

1. Valve shall be set in accordance with Detail 3.01. For hydrant set, see Detail 4.01.
2. All valves shall be anchored to branch of tee on all hydrant installations.
3. All hydrant leads shall be restrained by Megalugs or equivalent.
4. For PVC mains, install concrete support block under hydrant tees.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	FIRE HYDRANT LEADS METHOD OF INSTALLATION	4.02

WATER MAIN DIVERSION NOTES:

1. PRIOR TO STARTING ANY WORK CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING THROUGH CITY OF TAMPA WATER CONTRACT ADMIN/INSPECTION TEAM AT (813) 635-3400 TO DISCUSS PROCEDURES FOR SHUTTING DOWN THE WATER LINE. ITEMS TO DISCUSS AT MEETING: 1)WHAT VALVES DOES THE CONTRACTOR PROPOSED TO CLOSE?; 2) ARE THESE VALVES OPERABLE? 3) WHAT IS PLAN "B" IF THESE VALVE DO NOT WORK (SCHEDULE A PRE-VALVE EXERCISE) 4) HOW LONG DOES THE CONTRACTOR PROPOSE THE LINE TO BE OUT OF SERVICE AND HOW MANY CUSTOMERS WILL BE IMPACTED? IF LINE IS OUT OF SERVICE TOO LONG OR TOO MANY CUSTOMERS IMPACTED, LINE STOPS WILL BE NECESSARY.
2. CONTRACTOR TO COORDINATE WITH CITY OF TAMPA WATER DEPARTMENT ON THE EXISTING WATER MAIN DIVERSION. CLOSE OFF SEGMENT OF THE WATER MAIN TO TWO CLOSEST VALVES.
3. CUT WATER MAIN AND INSTALL TWO (2) GATE VALVES AT EITHER ENDS.
4. TEST AND DISINFECT NEW DIVERTED WATER MAIN SEGMENTS AND PULL AT LEAST ONE BACTERIOLOGICAL TEST.
5. TURN ON THE WATER AND COMPLETE A VISUAL INSPECTION ON THE TWO TOP 45° MJ FITTINGS TO INSURE NO LEAKS.
6. FLUSH GENTLY FROM THE NEAREST FIRE HYDRANT TO INSURE NO SEDIMENTS OR DIRTY WATER.
7. COMPLETE BACK FILL WITH COMPACTION AND PROCURE DENSITY TESTS.
8. AS-BUILT THE NEW ELEVATIONS AND VERIFY THE SEPARATION BETWEEN THE WATER MAIN AND THE NEW STORM AFTER THE WATER IS DIVERTED.
9. ALL PIPING TO BE DUCTILE IRON, ALL PIPING AND FITTINGS TO BE POLY WRAPPED.

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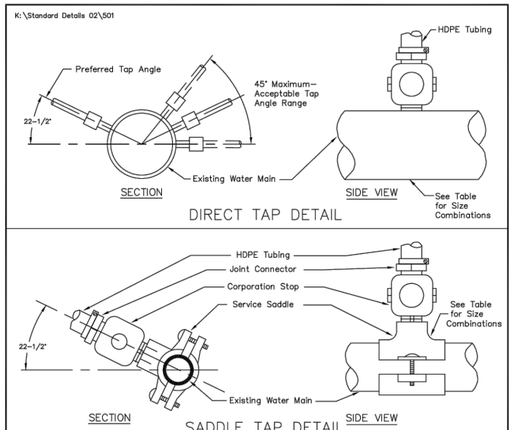

PIPE	SIZE	CORPORATION TAP SIZE 1"	2"
DI/CI	12"	DT	DT
	8"	DT	SS
	6"	DT	SS
	4"	SS	SS
PVC	2",2-1/2"	SS	NA
	8" C-900	SS	SS
	6" C-900	SS	SS
	2"-SDR21	SS	NA
OTHER*	12"	SS	SS
	10"	SS	SS
	8"	SS	SS
	6"	SS	SS
	4"	SS	NA
	3"	SS	NA
	2",2-1/2"	SS	NA

LEGEND
DT- Direct Tap Can be Allowed
SS- Service Saddle is Required
NA- Not Allowed
*Asbestos Cement, Steel, Galvanized Iron Pipe, Non Std PVC, etc.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TAPPING DETAIL FOR 3/4", 1", 1-1/2" & 2" CORPORATION STOP	5.01

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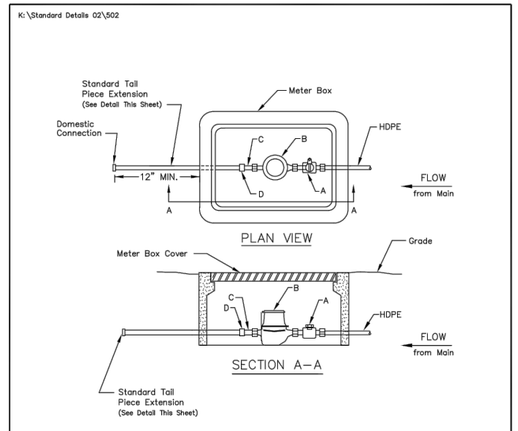
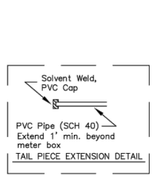


METER INSTALLATION
-PARTS LIST-

ITEM	DESCRIPTION
A	HDPE CJ X METER, SWIVEL NUT
B	METER
C	BRASS METER COUPLING
D	*PVC FIP X WELD COUPLING



* All PVC pipe and fittings shall be SCH 80 except for standard tail piece section which will be SCH 40.
NOTE: Parts list is for standard installation; actual parts required may vary as directed by the Engineer.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SINGLE METER SET DETAIL 3/4", 1", 1-1/2", 2"	5.02

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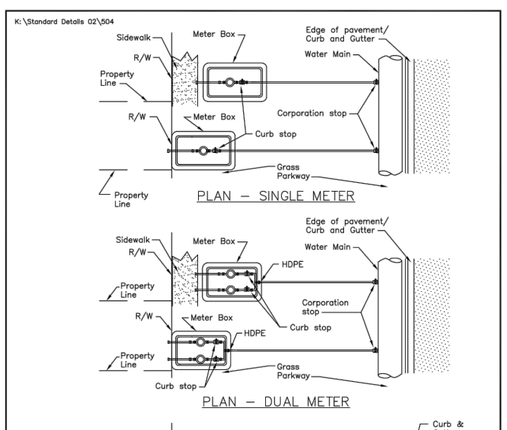

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY ENGINEER.

SINGLE METER SIZE (inches)	SERVICE LINE SIZE (inches) (0-15')
3/4	1
1	1
1-1/2	2
2	2

DUAL METER SIZE (inches)	SERVICE LINE SIZE (inches) (0-15')
3/4	2
1	N/A
1-1/2	N/A
2	N/A

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SINGLE & DUAL METERED SERVICE - SHORT SIDE 3/4", 1", 1-1/2" AND 2"	5.04

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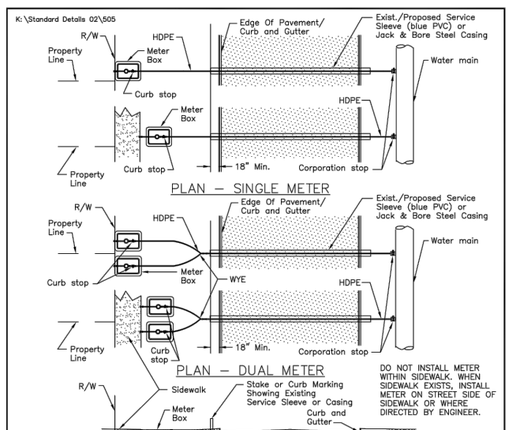

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY ENGINEER.

CASING SPECIFICATION:
1. If pushed-SCH 40 steel pipe (min.)
2. If layed in open trench-SCH 40 steel pipe or SCH 80 PVC solvent weld pipe.

*36" min. or greater if required by appropriate agency.
**These line size requirements are also for 2" S.D.C.V.s

SINGLE METER SIZE (inches)	SERVICE LINE SIZE (inches) (>15'-80')	SERVICE LINE SIZE (inches) (>80'-150')	CASING SIZE (inches)
3/4	1	2	2 4
1	2	2	4
1-1/2	2	2	4
2**	4" D.I.P.	4" D.I.P.	12

DUAL METER SIZE (inches)	SERVICE LINE SIZE (inches) (>15'-80')	SERVICE LINE SIZE (inches) (>80'-150')	CASING SIZE (inches)
3/4	2	2	4
1	2	4" D.I.P.	4 12
1-1/2	N/A	N/A	N/A
2	N/A	N/A	N/A

TAMPA WATER DEPARTMENT	APPROVED	REVISED	SINGLE & DUAL METERED SERVICE - LONG SIDE 3/4", 1", 1-1/2" AND 2"	5.05

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)

WATER DETAILS (2 OF 2)

SHEET W-125 OF W-125

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WASTEWATER STRUCTURE TABLE

STRUCTURE NUMBER	DESCRIPTION	RIM ELEV.	STATION & OFFSET	COMMENTS
C-1	Connect to Existing 8" Clay	0.40	STA: 608+00.78, OFFSET: -24' LT.	
C-2	Connect to Existing 8" Clay	0.54	STA: 607+65.22, OFFSET: -24' LT.	
C-12A	Connect to Existing 24" Clay	-2.25	STA: 607+65.46, OFFSET: -20' LT.	
MH-9	Manhole	5.76	STA: 37+36.81, OFFSET: -8' LT.	
MH-9A	Temporary Manhole	5.94	STA: 37+44.91, OFFSET: 0' RT.	
MH-10	Drop Manhole	5.61	STA: 36+45.01, OFFSET: -8' LT.	
MH-11	Manhole	4.86	STA: 34+35.62, OFFSET: -8' LT.	
MH-12	Manhole	4.76	STA: 32+21.25, OFFSET: -8' LT.	
MH-12A	Manhole	4.84	STA: 608+10.27, OFFSET: -20' LT.	
MH-22	Manhole	5.25	STA: 29+66.44, OFFSET: -6' LT.	
MH-23	Manhole	5.06	STA: 26+58.59, OFFSET: -6' LT.	
MH-24	Manhole	4.67	STA: 23+31.55, OFFSET: -7' LT.	
MH-25	Manhole	5.45	STA: 20+76.48, OFFSET: -6' LT.	
MH-26	Manhole	4.87	STA: 17+67.51, OFFSET: -6' LT.	
MH-27	Manhole	4.65	STA: 15+17.86, OFFSET: -10' LT.	
MH-27A	Manhole	5.64	STA: 202+76.12, OFFSET: 8' RT.	
MH-27B	Manhole	5.72	STA: 301+91.87, OFFSET: -2' LT.	
MH-28	Manhole	4.58	STA: 11+18.62, OFFSET: -10' LT.	
MH-28A	Manhole	4.41	STA: 12+93.98, OFFSET: -9' LT.	
MH-29	Manhole	4.27	STA: 10+76.19, OFFSET: -1' LT.	
MH-30	Manhole	4.90	STA: 906+26.51, OFFSET: -8' LT.	
MH-31	Manhole	4.78	STA: 905+53.61, OFFSET: -6' LT.	
MH-32	Manhole	4.65	STA: 905+12.66, OFFSET: -6' LT.	
MH-33	Manhole	4.75	STA: 901+97.48, OFFSET: -4' LT.	
MH-34	Manhole	4.65	STA: 901+48.04, OFFSET: -1' LT.	
MH-35	Manhole	4.99	STA: 205+36.68, OFFSET: 8' RT.	
MHC-12	Connect to Existing Manhole	-6.06	STA: 31+81.45, OFFSET: -16' LT.	

SANITARY SEWER PIPE TABLE

STRUC. START	STRUC. END	PIPE SIZE & MATERIAL	LENGTH	SLOPE %	START INV.	END INV.	FALL IN FEET
C-2	C-1	8" PVC	36	0.38%	-0.19	-0.32	0.13
MH-9	MH-10	8" PVC	92	0.40%	-1.99	-2.36	0.37
MH-9A	MH-9	8" PVC	11	0.40%	-1.85	-1.89	0.05
MH-10	MH-11	8" PVC	209	0.40%	-4.72	-5.55	0.84
MH-11	MH-12	8" PVC	214	0.40%	-5.65	-6.51	0.86
MH-12	MHC-12	8" PVC	44	0.40%	-6.61	-6.79	0.18
MH-12A	C-12A	24" PVC	45	-0.18%	-4.49	-4.41	0.08
MH-22	MH-23	8" PVC	308	0.34%	1.45	0.40	1.05
MH-23	MH-24	8" PVC	327	0.34%	0.30	-0.81	1.11
MH-24	MH-25	8" PVC	255	0.34%	-0.91	-1.78	0.87
MH-25	MH-26	8" PVC	309	0.34%	-1.88	-2.93	1.05
MH-26	MH-27	8" PVC	250	0.35%	-3.03	-3.90	0.87
MH-27	MH-27A	8" PVC	266	0.28%	-3.94	-3.19	0.75
MH-27	MH-28A	8" PVC	224	0.25%	-4.02	-4.58	0.56
MH-27B	MH-27A	8" PVC	184	0.27%	-2.62	-3.11	0.49
MH-28	MH-29	8" PVC	43	0.25%	-5.09	-5.20	0.11
MH-28A	MH-28	8" PVC	175	0.25%	-4.60	-5.04	0.44
MH-30	MH-31	8" PVC	75	0.40%	0.46	0.16	0.30
MH-31	MH-32	8" PVC	44	0.33%	0.06	-0.08	0.15
MH-32	MH-33	8" PVC	316	0.33%	-0.18	-1.22	1.04
MH-33	MH-34	8" PVC	49	0.33%	-1.32	-1.49	0.16
MH-35	MH-27A	8" PVC	261	0.40%	-2.13	-3.17	1.04

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)

SANITARY STRUCTURE & PIPE TABLE

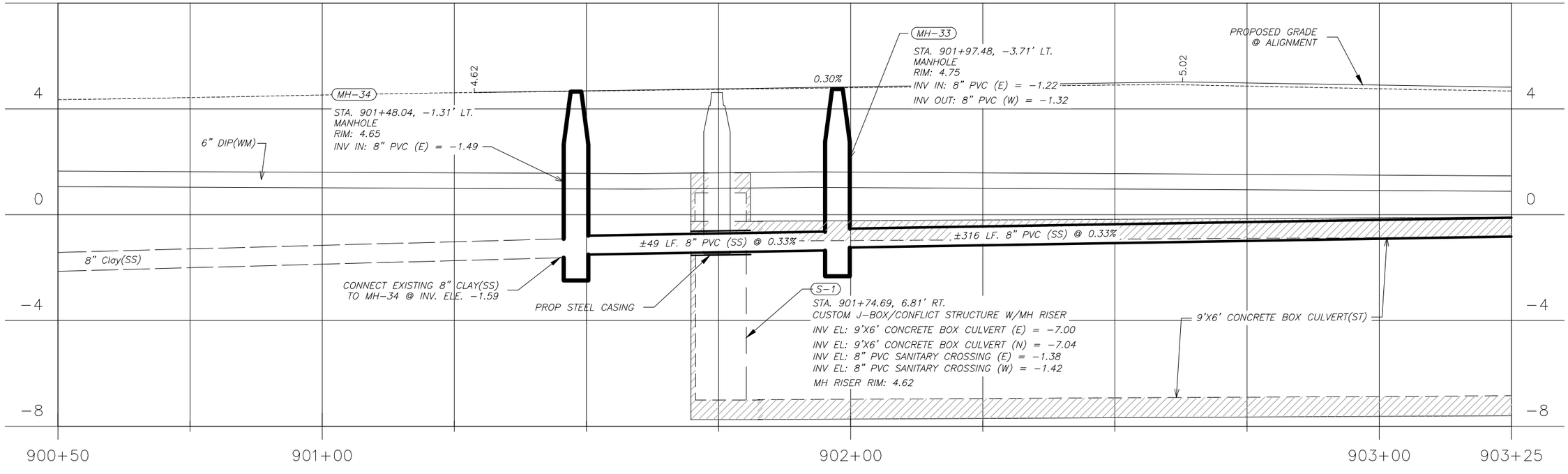
SHEET WW-100
of WW-129

SW

Asphalt Parking Lot
Clean Out
3342
Asphalt Parking Lot
Exist. R/W Line
6' Wood
EC
TB
San. MH
TO BE REMOVED
RIM: 4.94
INV IN: 8" Clay (E) = -1.06
INV OUT: 8" Clay (W) = -1.06
Planter
4717
Planter
4715
Brick Paver Drive
2" CI(WM)
TO BE ABANDONED
2" (Plastic) (Gas)
6" DIP(WM)
Asphalt Drive
Concrete Drive
Verizon
8" Clay(SS)
TO BE REMOVED
STA. 900+50.00
8" Clay(SS)
901+00
MH-34
8" PVC(SS)
MH-33
8" PVC(SS)
CHEROKEE RD.
S-1
CONFLICT STRUCTURE
902+00
8" Clay(SS)
TO BE REMOVED
9'X6' CONCRETE BOX CULVERT(ST)
903+00
MATCHLINE STA. 903+25.00
Concrete
Concrete
Verizon Fiber Optic
Concrete
Verizon
Speed Limit
Concrete Drive
Brick Paver Drive
100+00
3' Evergreen
Asphalt Drive
4'hedge
Cable Tv
Clean Out
Exist. R/W Line
4730
4728
4726
4724
4722
4720
4718
4716

0 20
1"=20'

8 8



CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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2			5		
1			4		

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DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - SANITARY SEWER
PLAN & PROFILE

SHEET
WW-100A
of
WW-129

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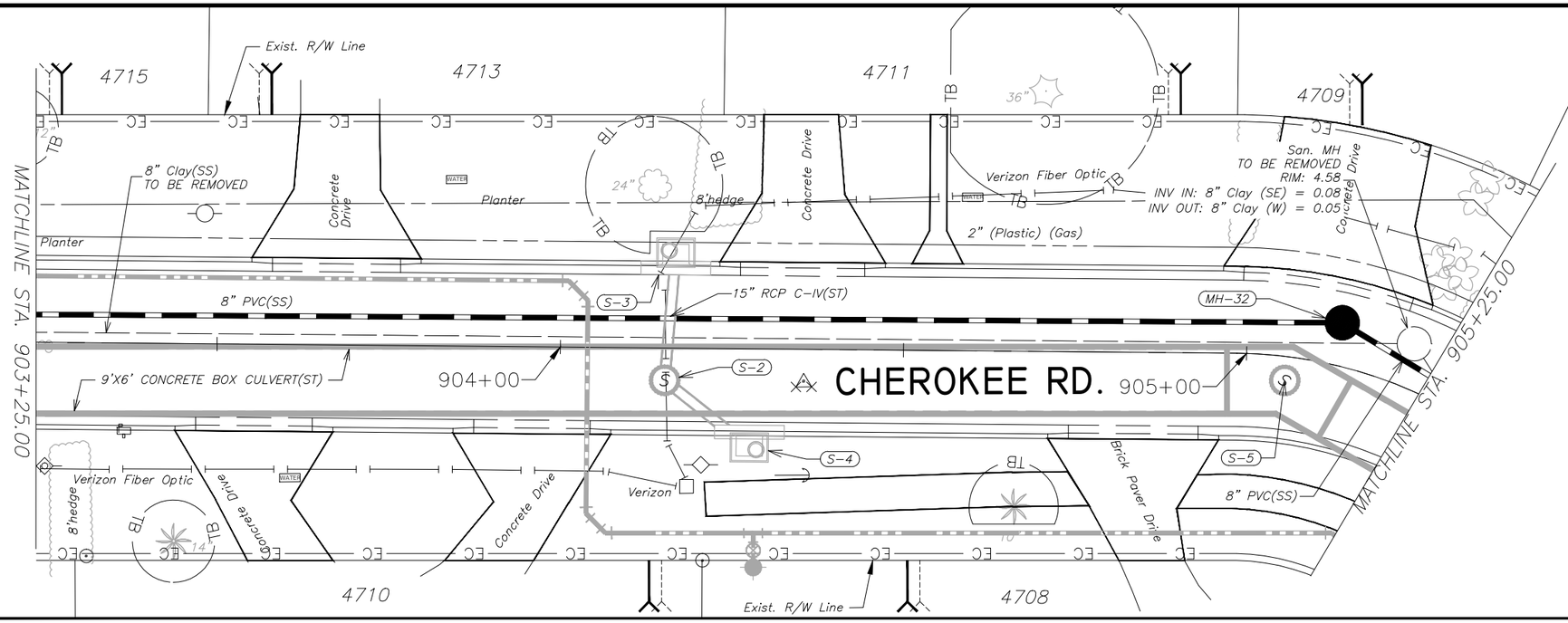

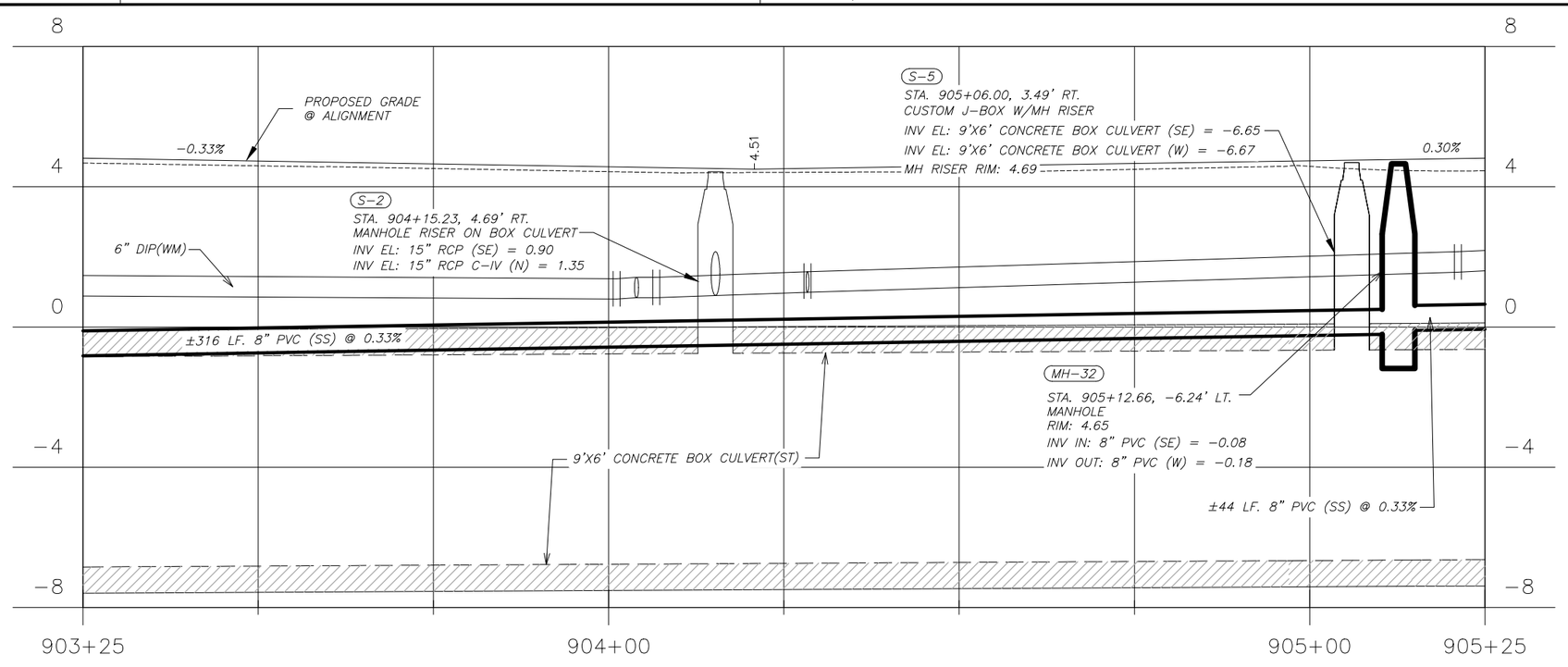

CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - SANITARY SEWER
PLAN & PROFILE

SHEET
WW-101
OF
WW-129

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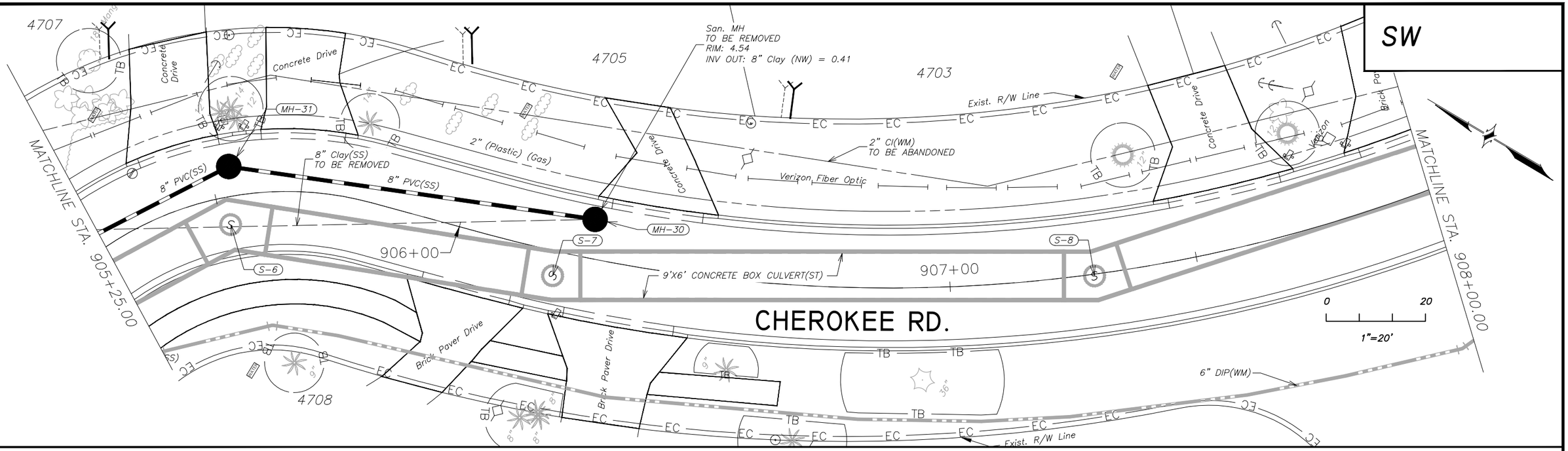
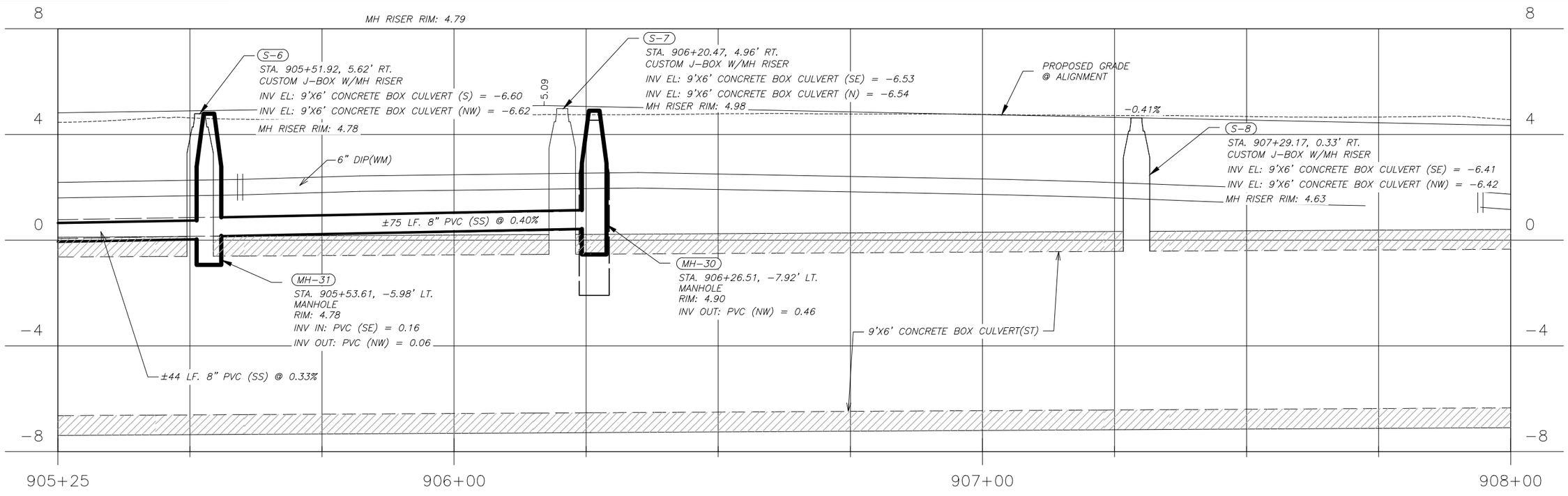
SW





CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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1			4		

DES: ALC
DRN: ASA
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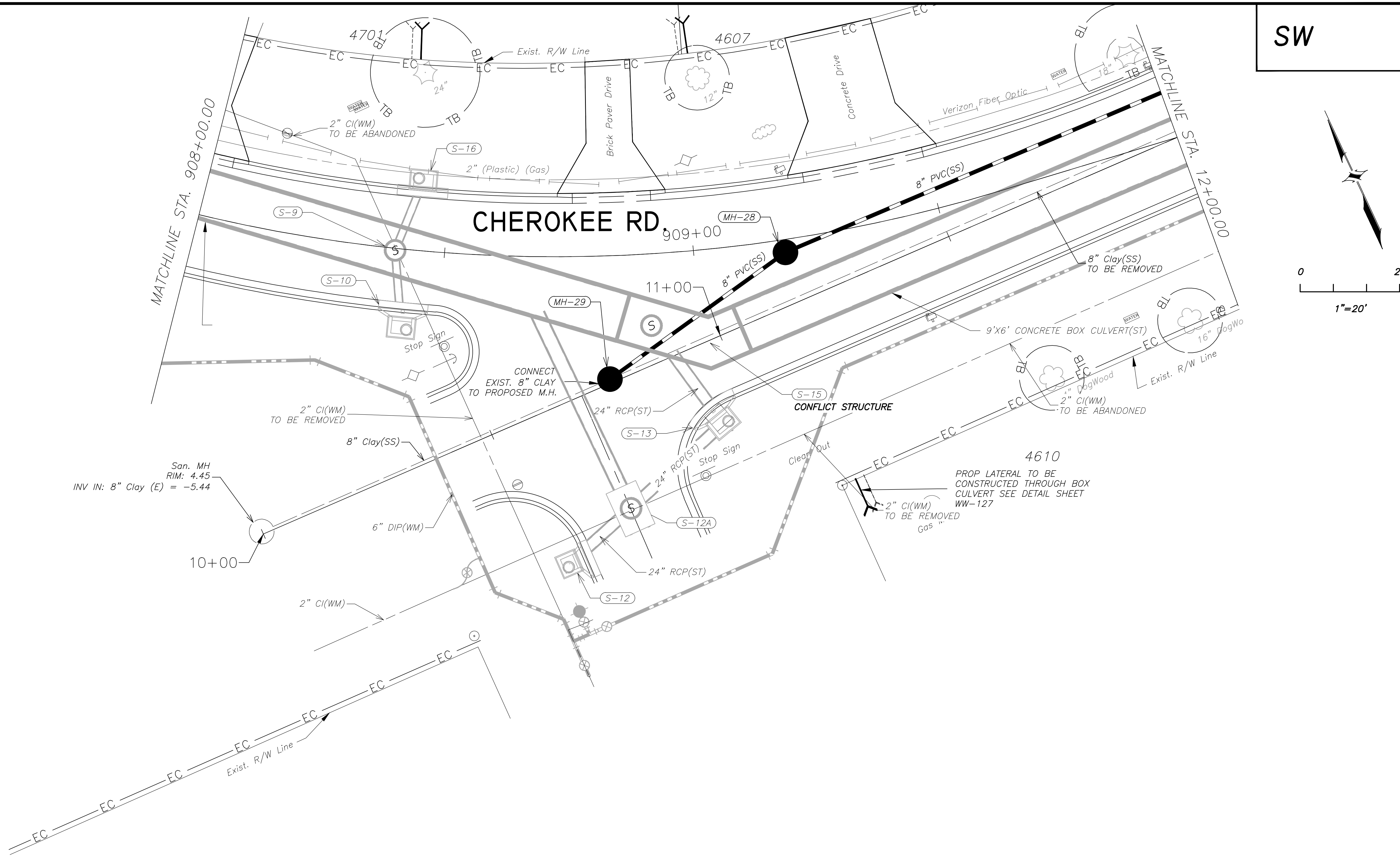
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - SANITARY SEWER
PLAN & PROFILE

SHEET
WW-102
OF
WW-129

SW



0 20 1"=20'

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - SANITARY SEWER
PLAN

SHEET WW-103
OF WW-129

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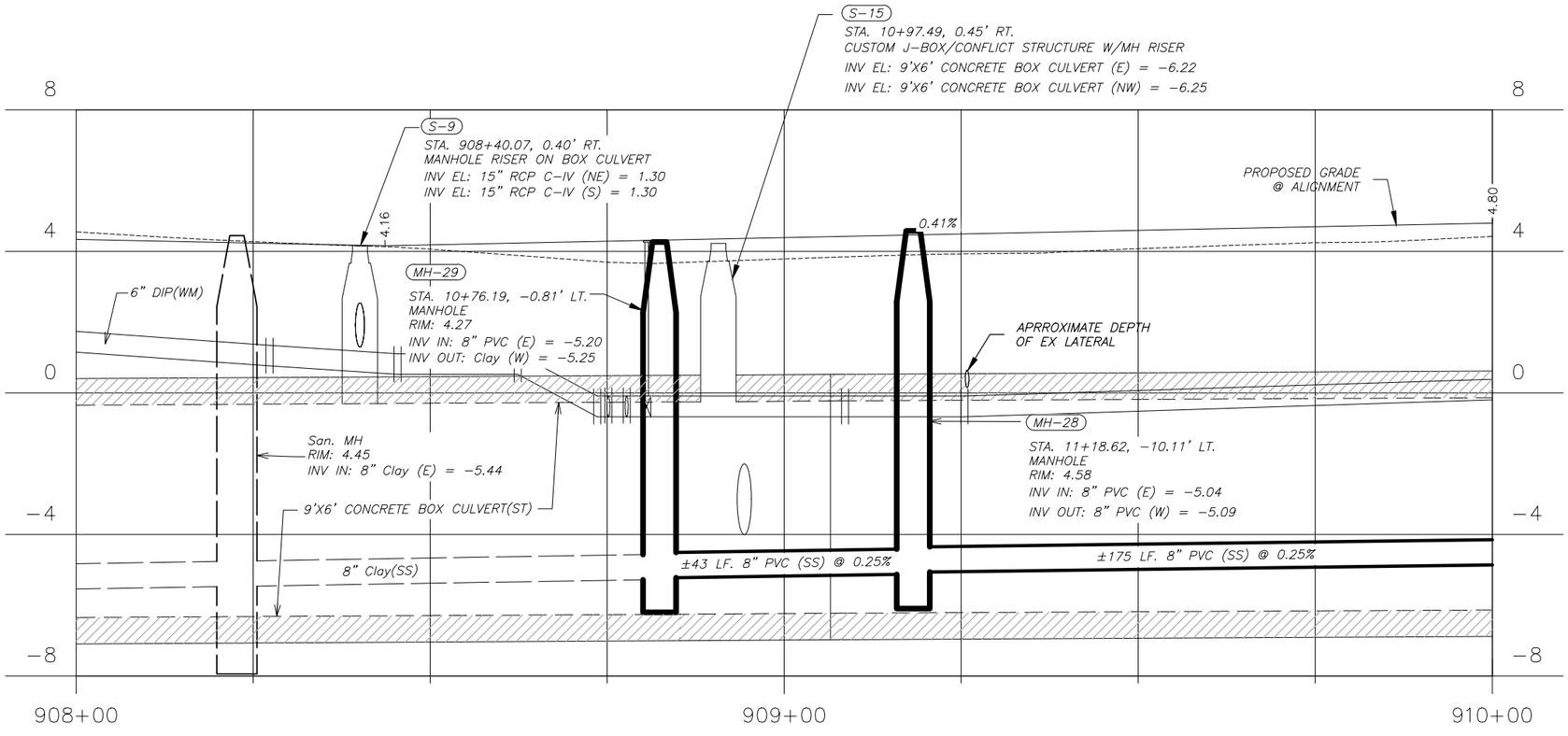
SW



CHEROKEE RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CHEROKEE RD. - SANITARY SEWER
PROFILE

SHEET
WW-104
OF
WW-129

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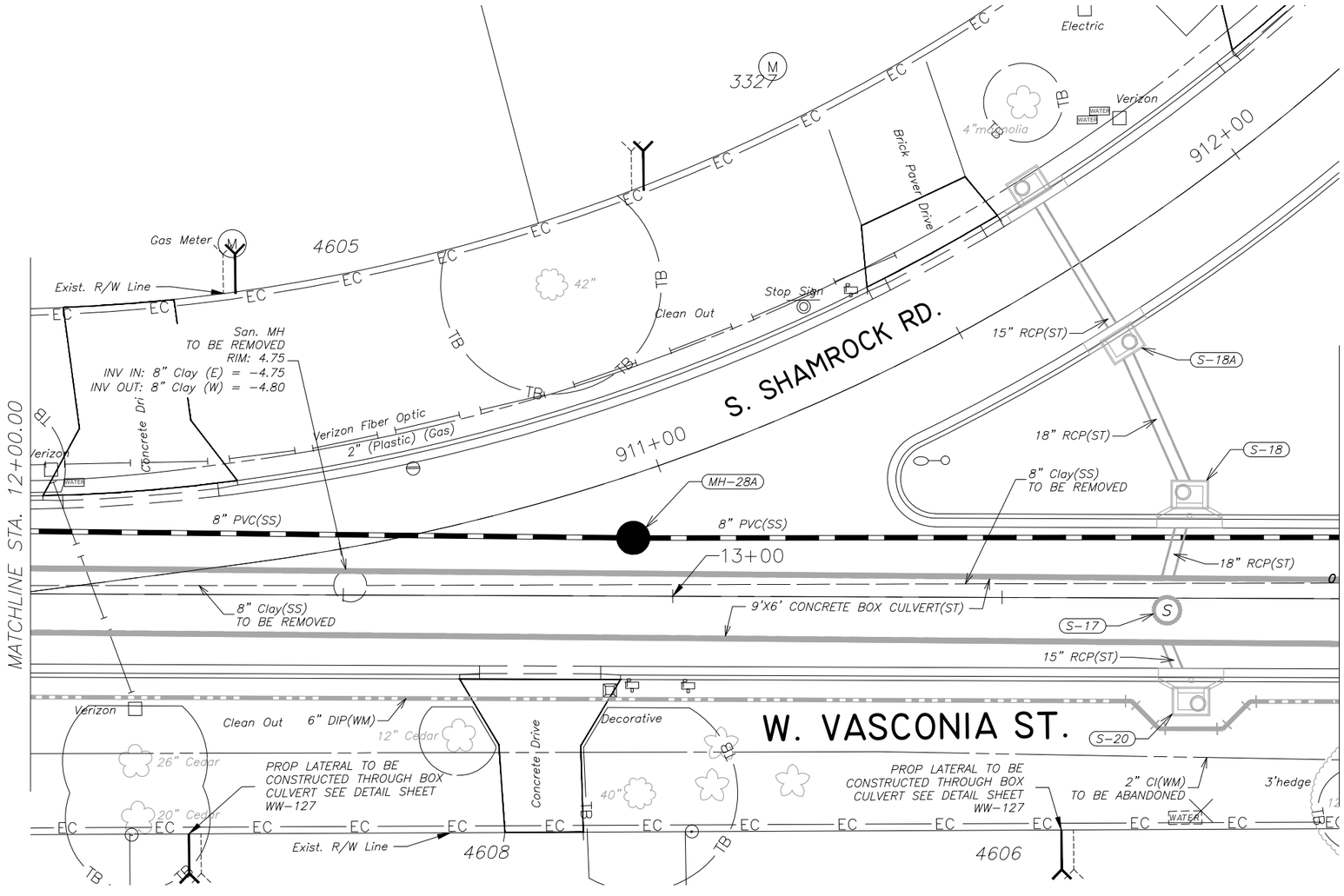
SW



NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN

SHEET
WW-105
of
WW-129

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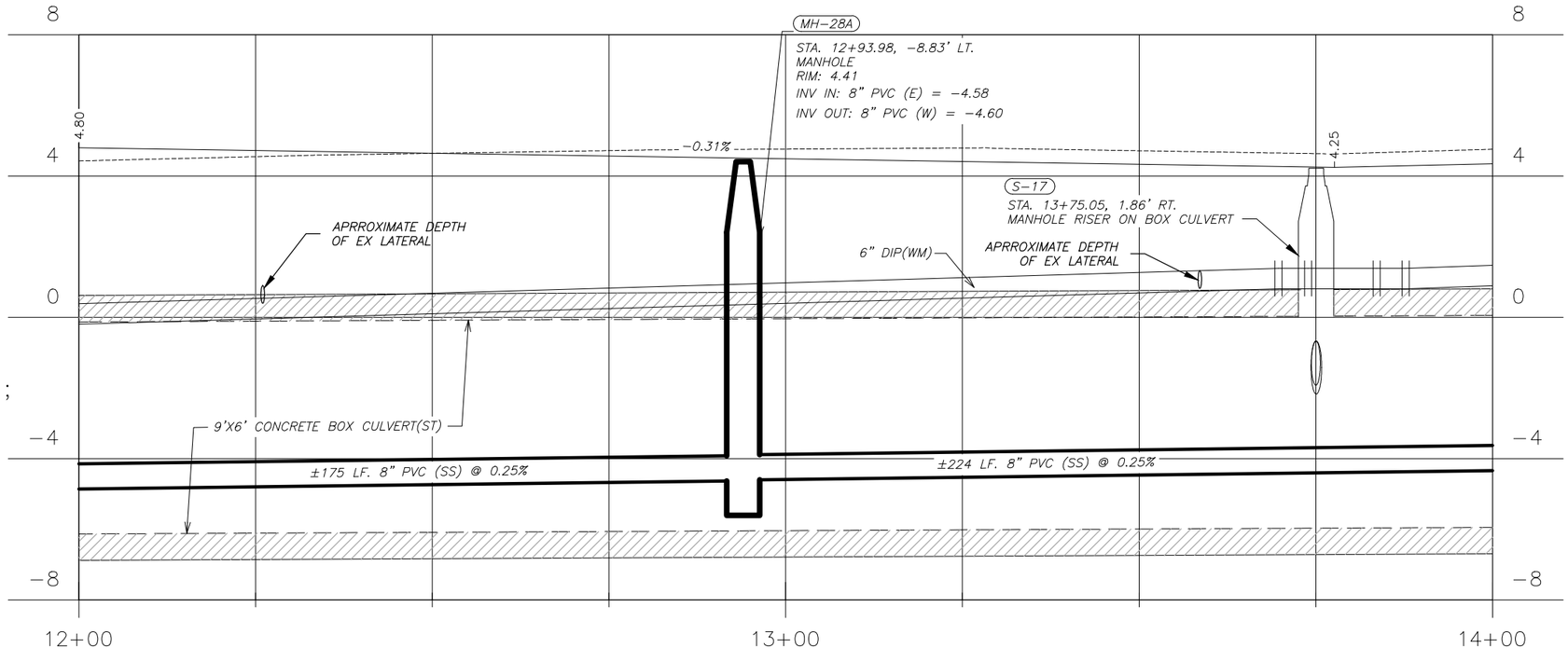
SW



W. VASCONIA ST. PROFILE
Scale: 1" = 20' Horizontal ;
1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER PROFILE

SHEET
WW-105A
OF
WW-129

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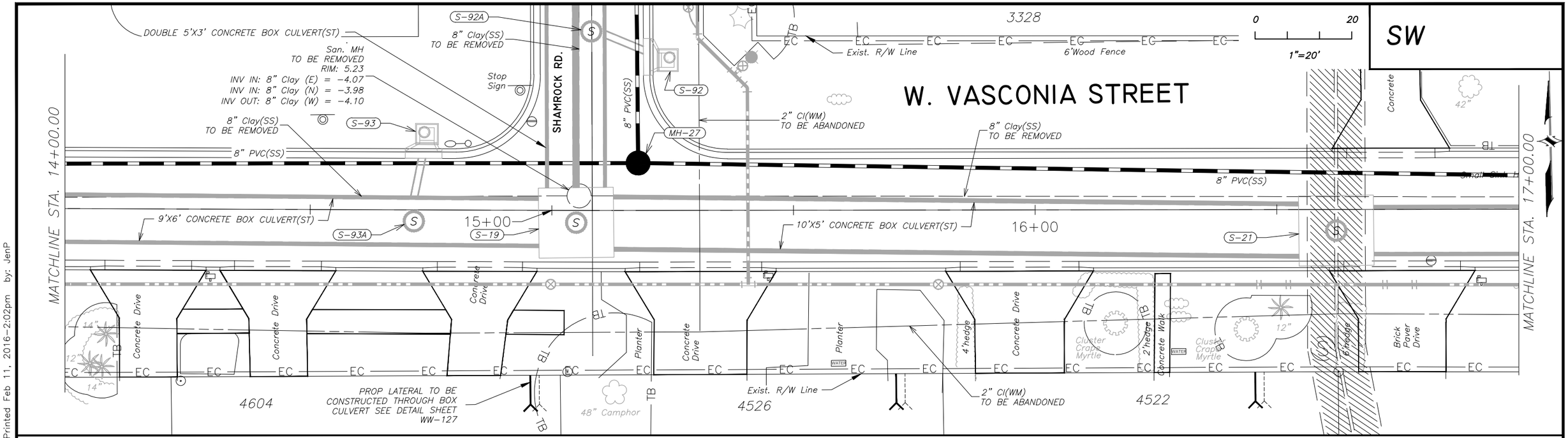

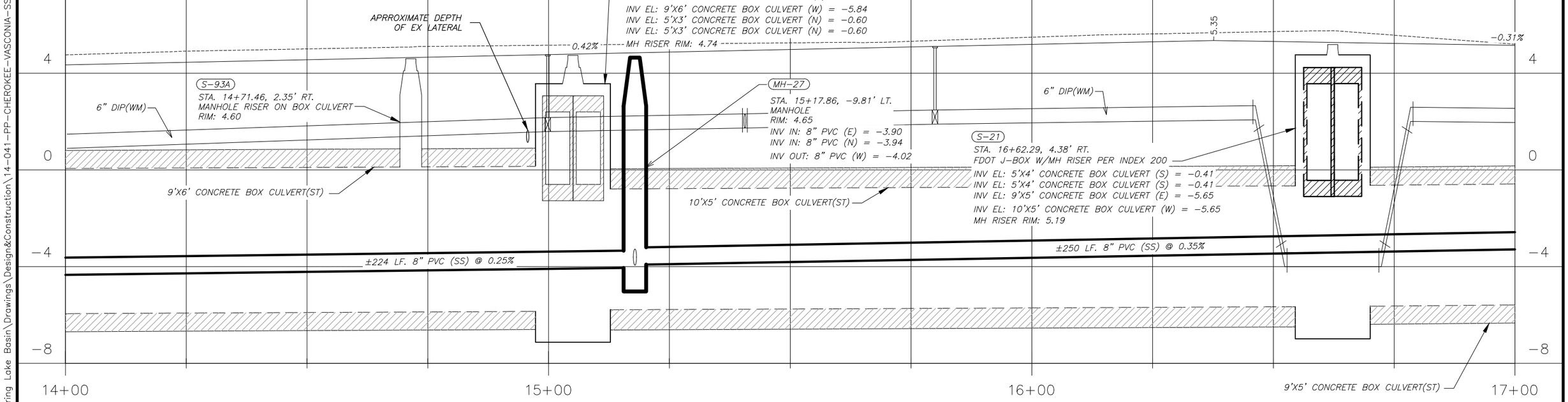

W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN & PROFILE

SHEET WW-106
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SW

4519 36" 4517 4513 4509

Exist. R/W Line

San. MH
TO BE REMOVED
RIM: 5.18
INV IN: 8" Clay (E) = -3.12
INV OUT: 8" Clay (W) = -3.17

8" Holly
12" Elm
Planter
Concrete Drive
Brick Paver Drive
Verizon
Verizon Fiber Optic
0 20
1"=20'

MATCHLINE STA. 17+00.00

S-24 MH-26 S-22 S-23 S-25

8" PVC(SS)
8" Clay(SS) TO BE REMOVED
18+00
19+00
9'X5' CONCRETE BOX CULVERT(ST)
6" DIP(WM)
Clean Out
Brick Paver Walk
Concrete Drive
Verizon Fiber Optic

W. VASCONIA ST.

2" CI(WM) TO BE ABANDONED

MATCHLINE STA. 20+00.00

4520 48" 4516 36" 4510 36" 4508

Exist. R/W Line

8 8

S-22
STA. 17+39.37, 4.33' RT.
MANHOLE RISER ON BOX CULVERT
RIM: 4.95
INV IN: 15" RCP (S) = 1.70
INV IN: 15" RCP C-IV (N) = 1.70

4.97

MH-26
STA. 17+67.51, 6.01' LT.
MANHOLE
RIM: 4.87
INV IN: 8" PVC (E) = -2.93
INV OUT: 8" PVC (W) = -3.03

0.30%

S-25
STA. 19+57.42, 4.19' RT.
MANHOLE RISER ON BOX CULVERT
RIM: 5.48

6" DIP(WM)

±250 LF. 8" PVC (SS) @ 0.35%
9'X5' CONCRETE BOX CULVERT(ST)
±309 LF. 8" PVC (SS) @ 0.34%

4
0
-4
-8

17+00 18+00 19+00 20+00

W. VASCONIA ST. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

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CITY of TAMPA
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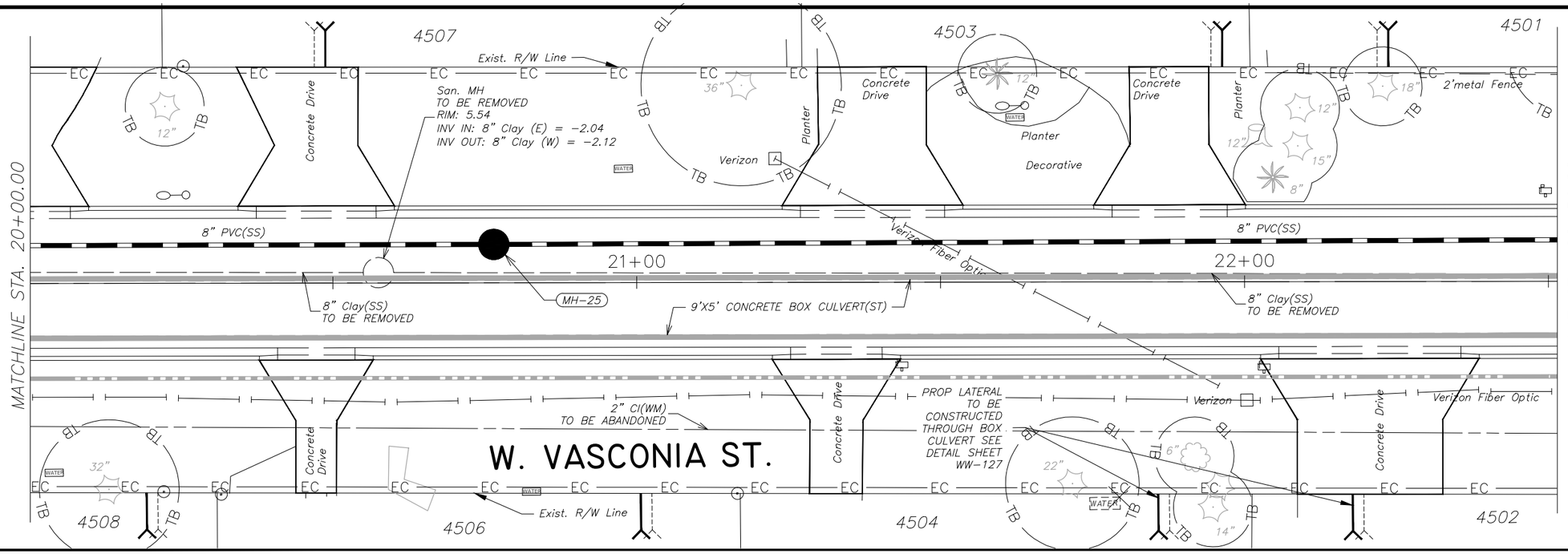
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN & PROFILE

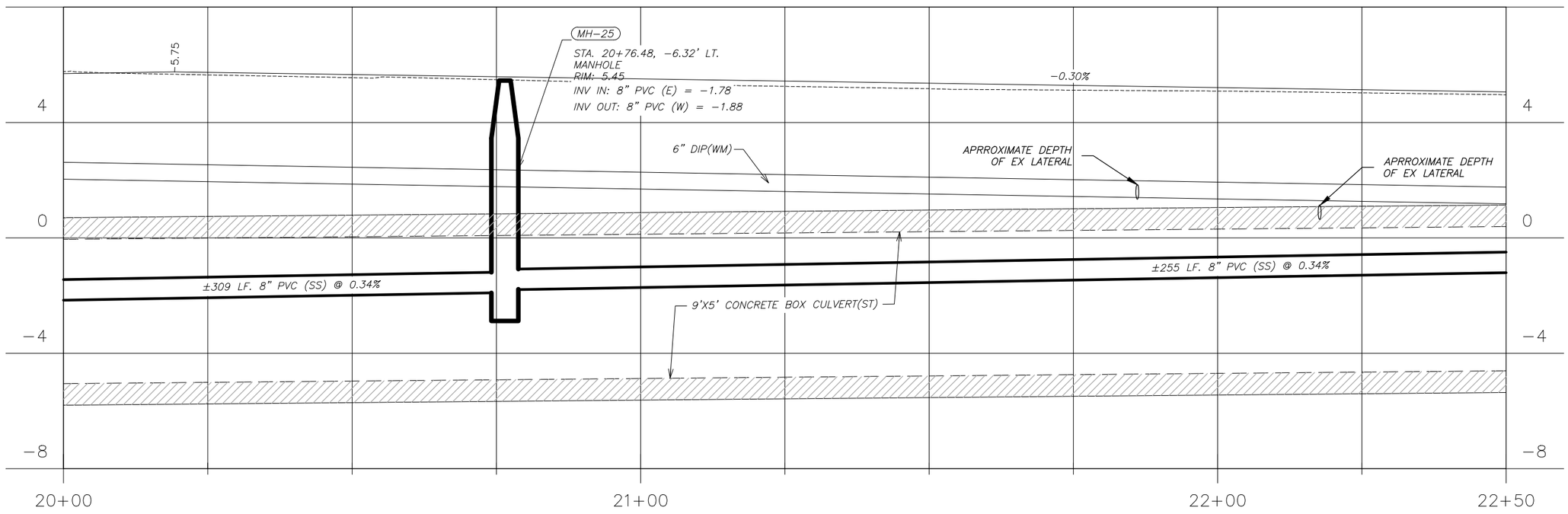
SHEET WW-107
OF WW-129



SW

0 20

1"=20'



W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN & PROFILE

SHEET
WW-108
of
WW-129

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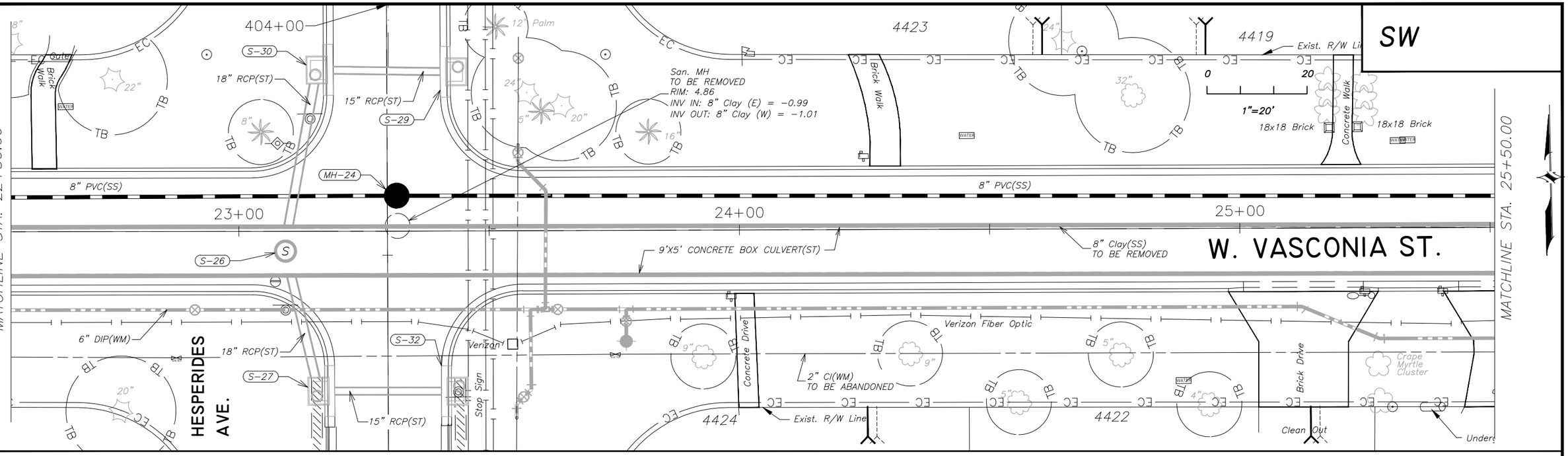

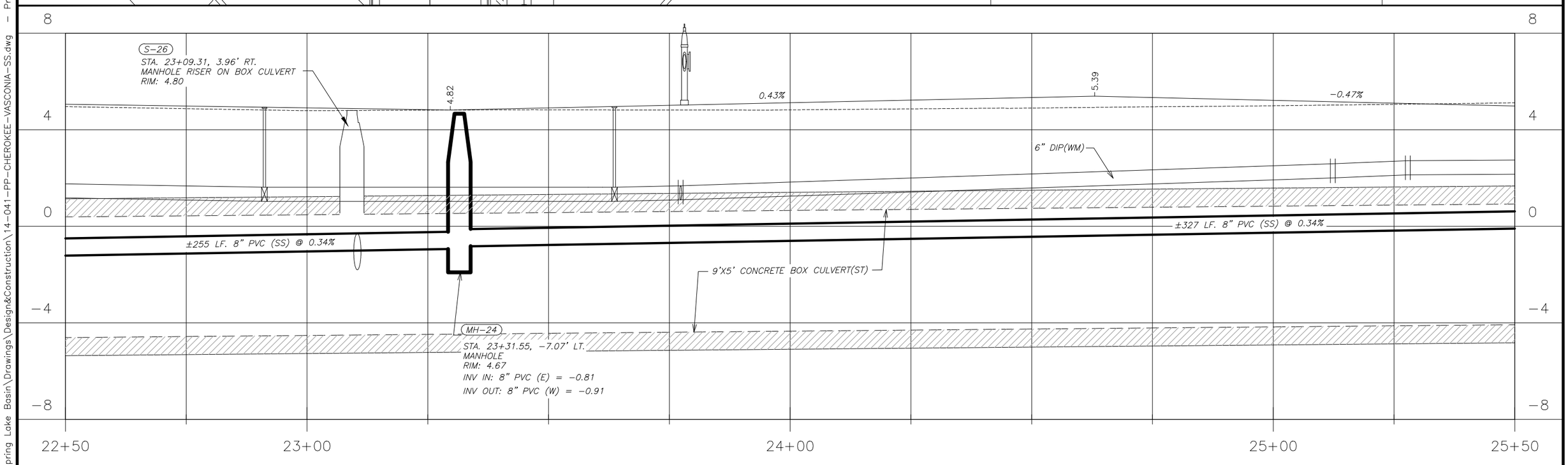

W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN & PROFILE

SHEET WW-109
OF WW-129

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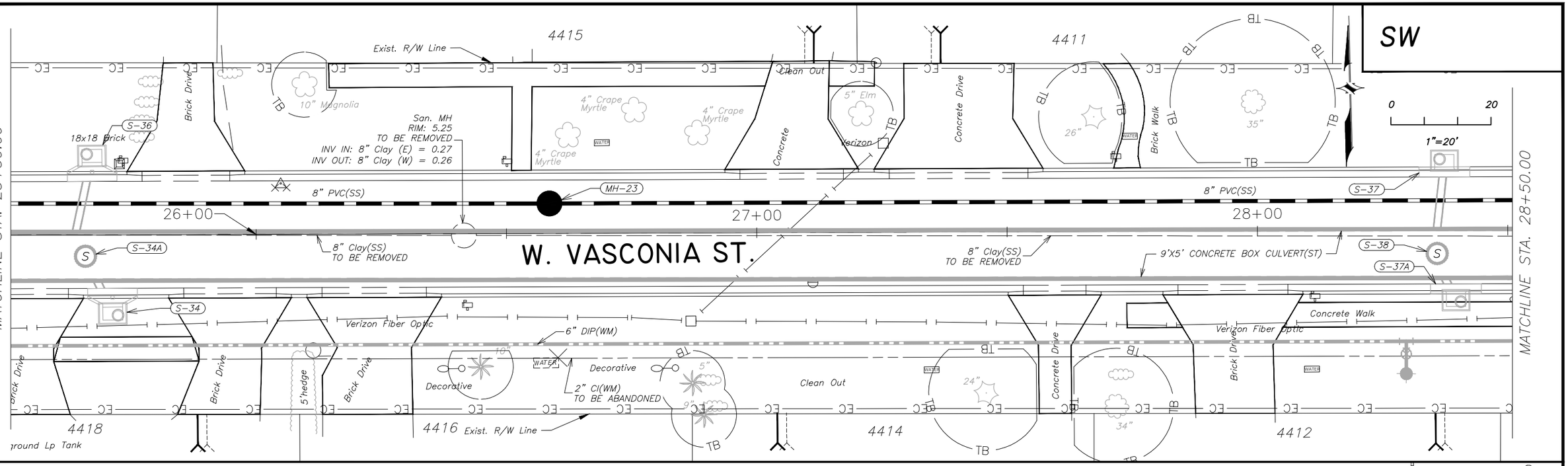

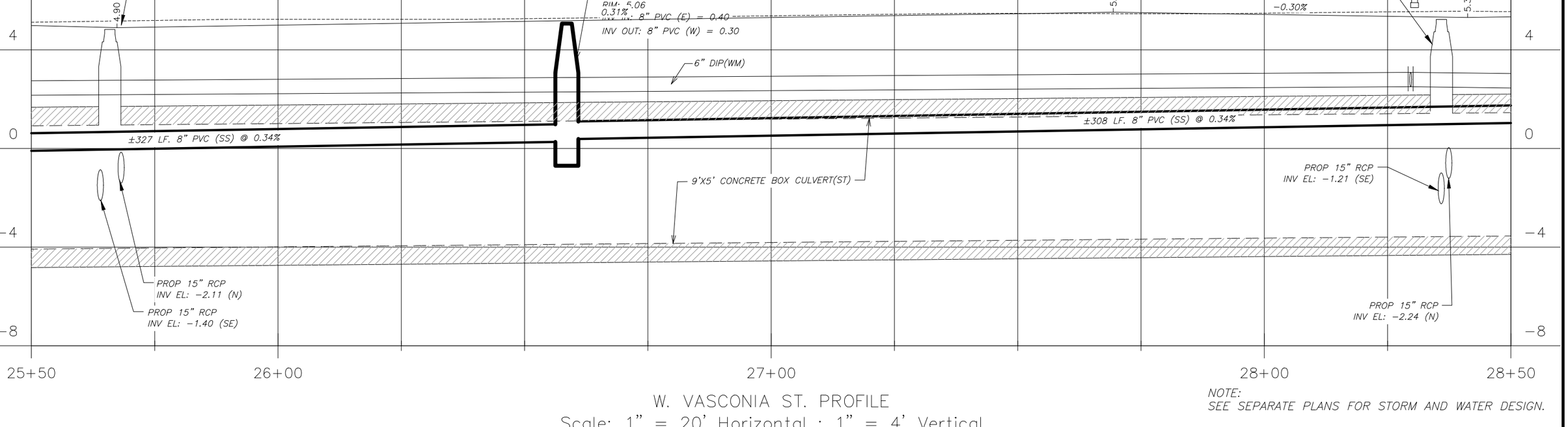

W. VASCONIA ST. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER PLAN & PROFILE

SHEET
WW-110
OF
WW-129

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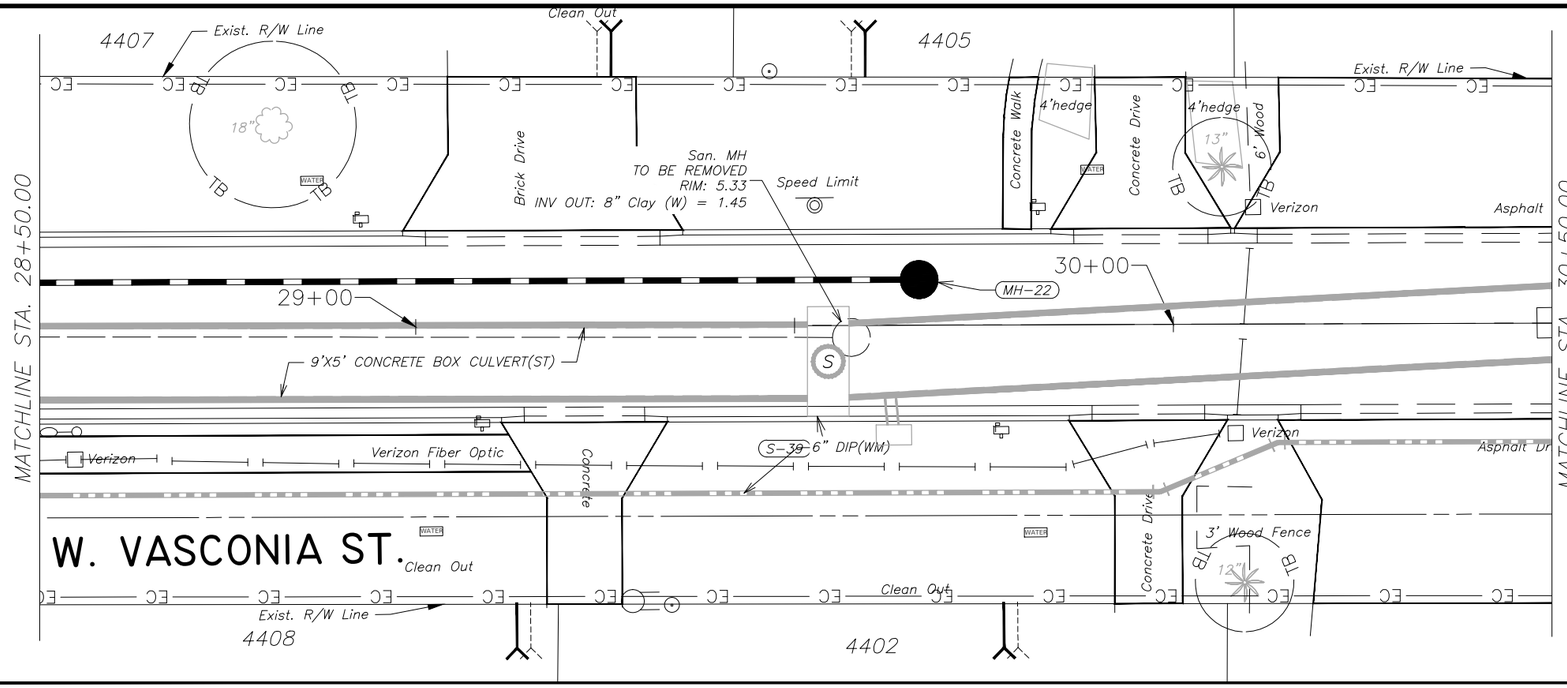
SW



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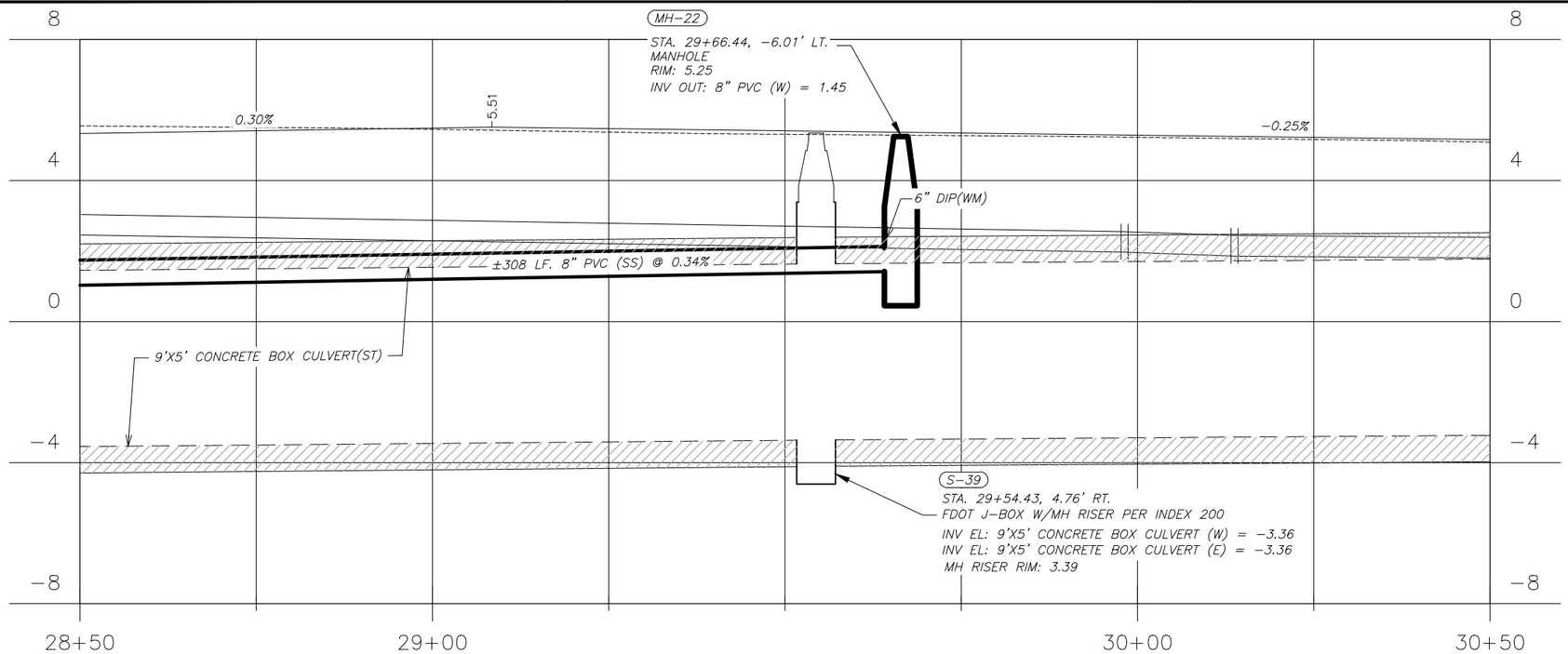

W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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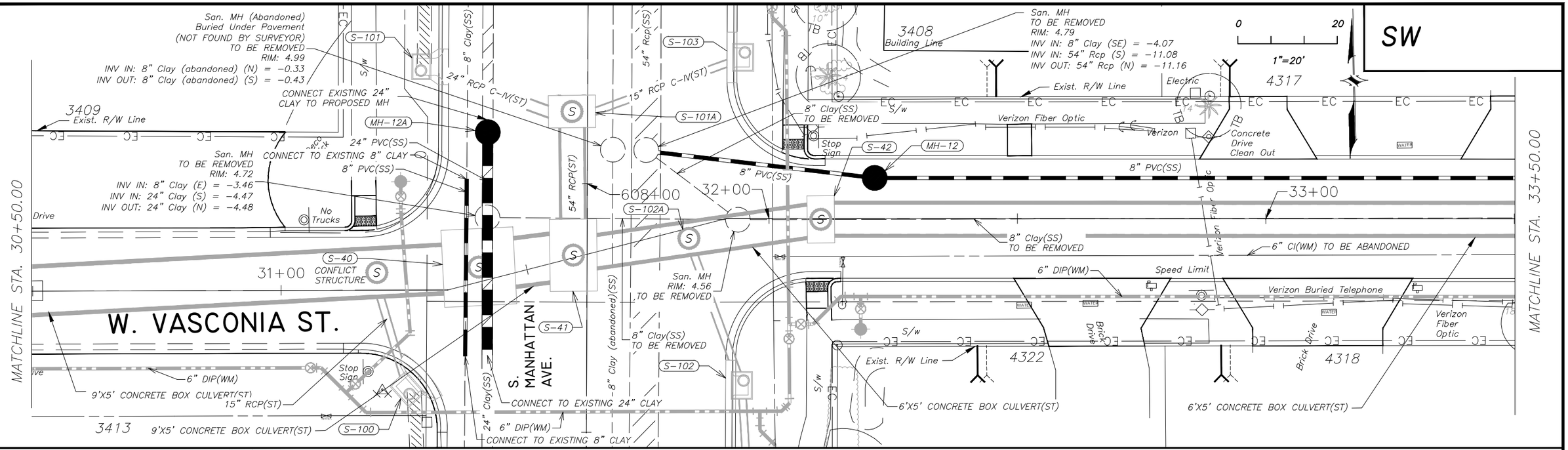
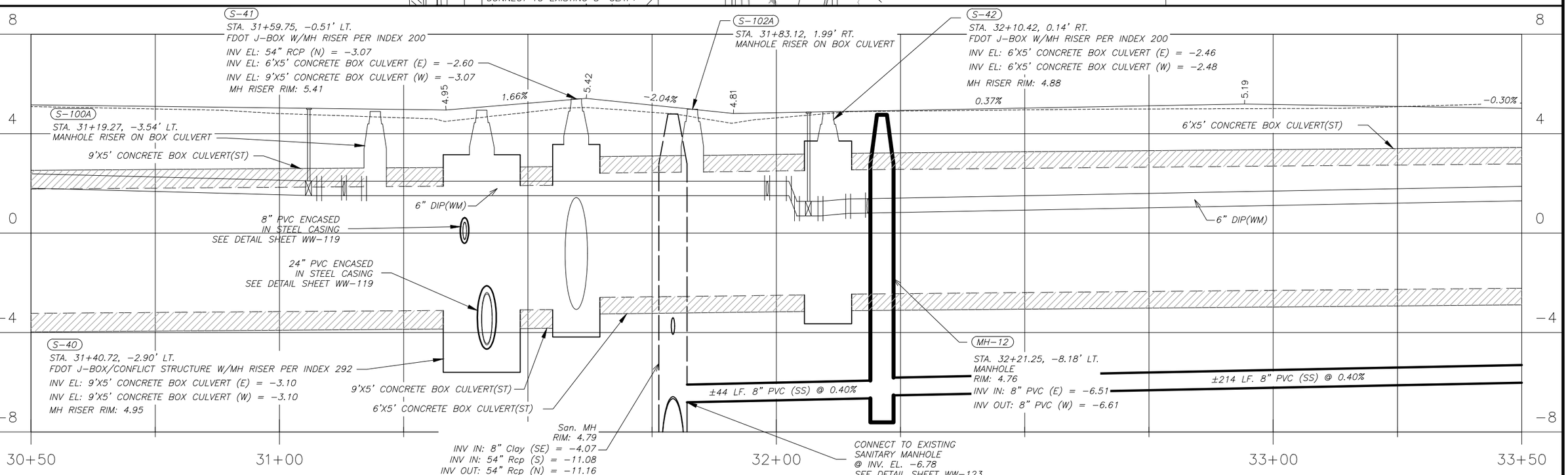
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER PLAN & PROFILE

SHEET
WW-111
OF
WW-129





W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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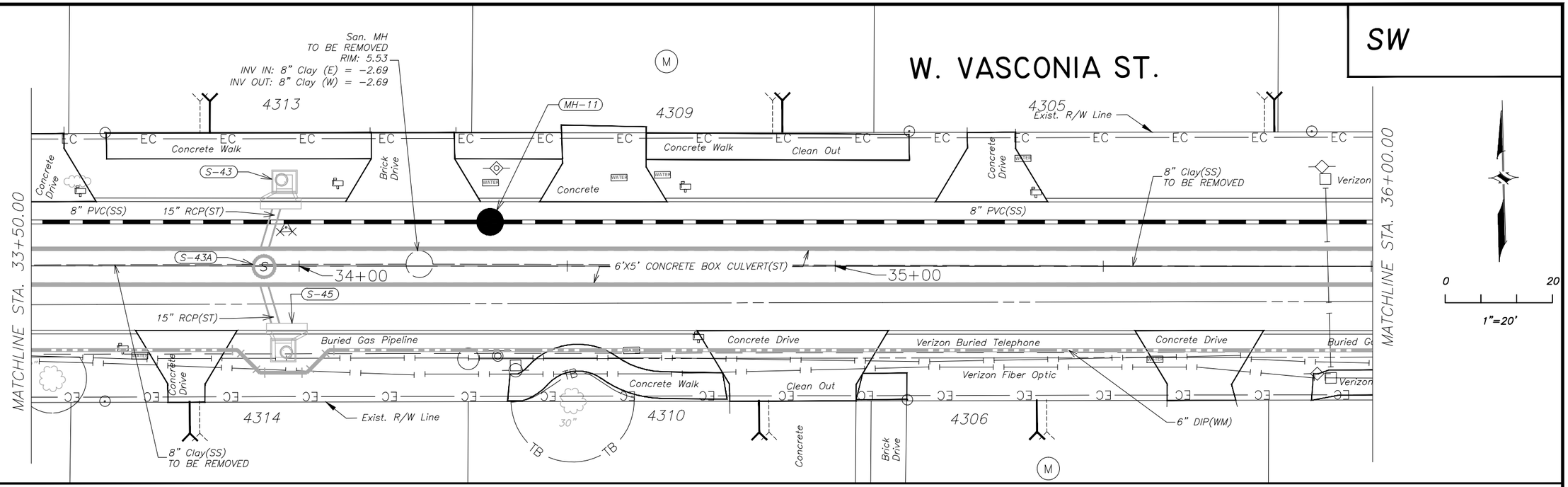
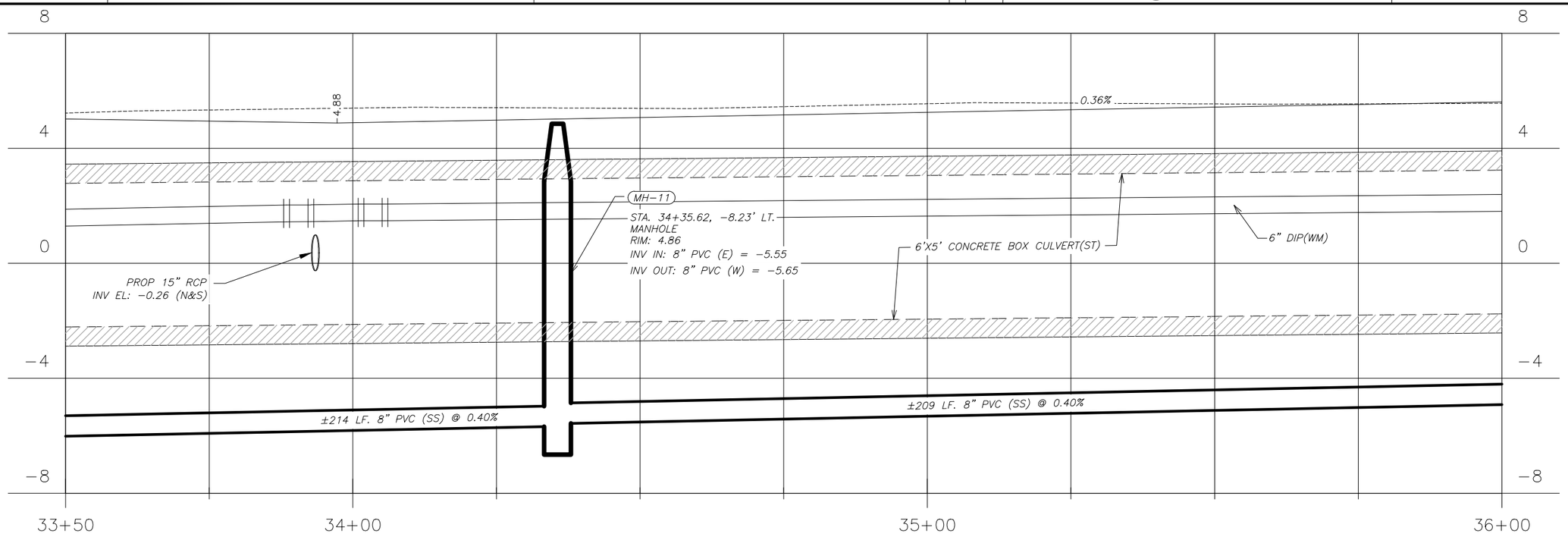
UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER PLAN & PROFILE

SHEET
WW-112
OF
WW-129





W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN & PROFILE

SHEET
WW-113
OF
WW-129

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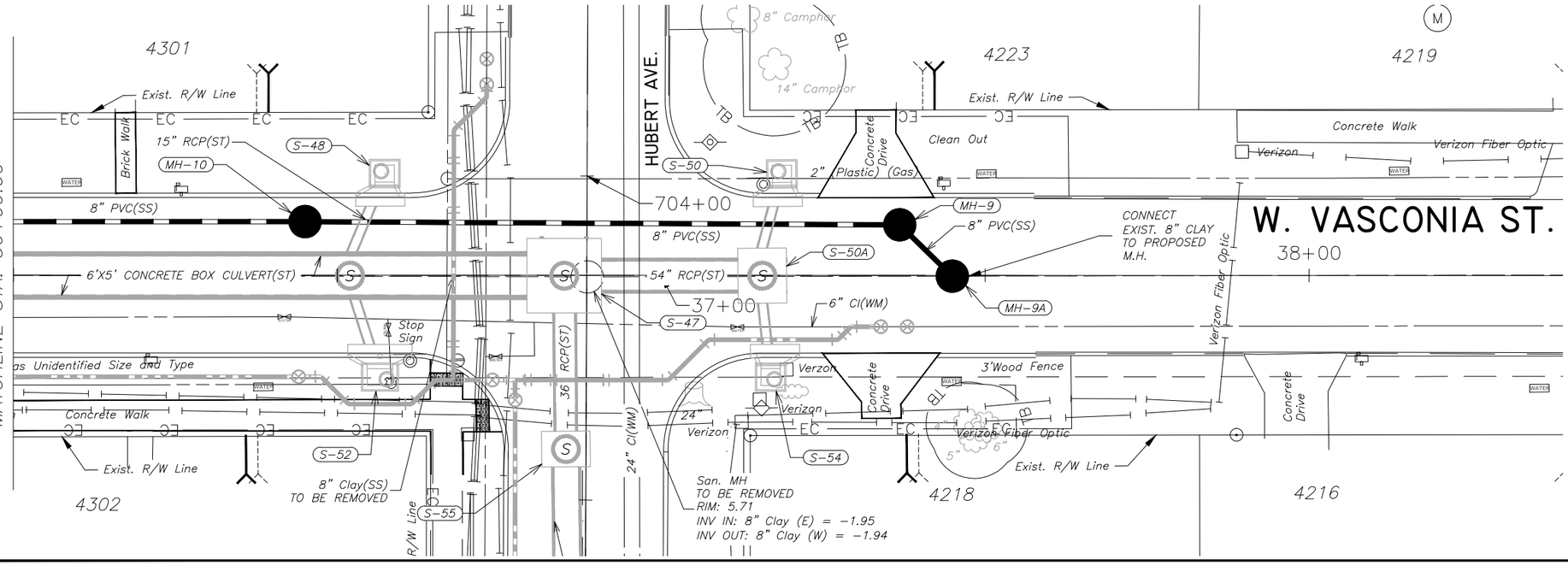

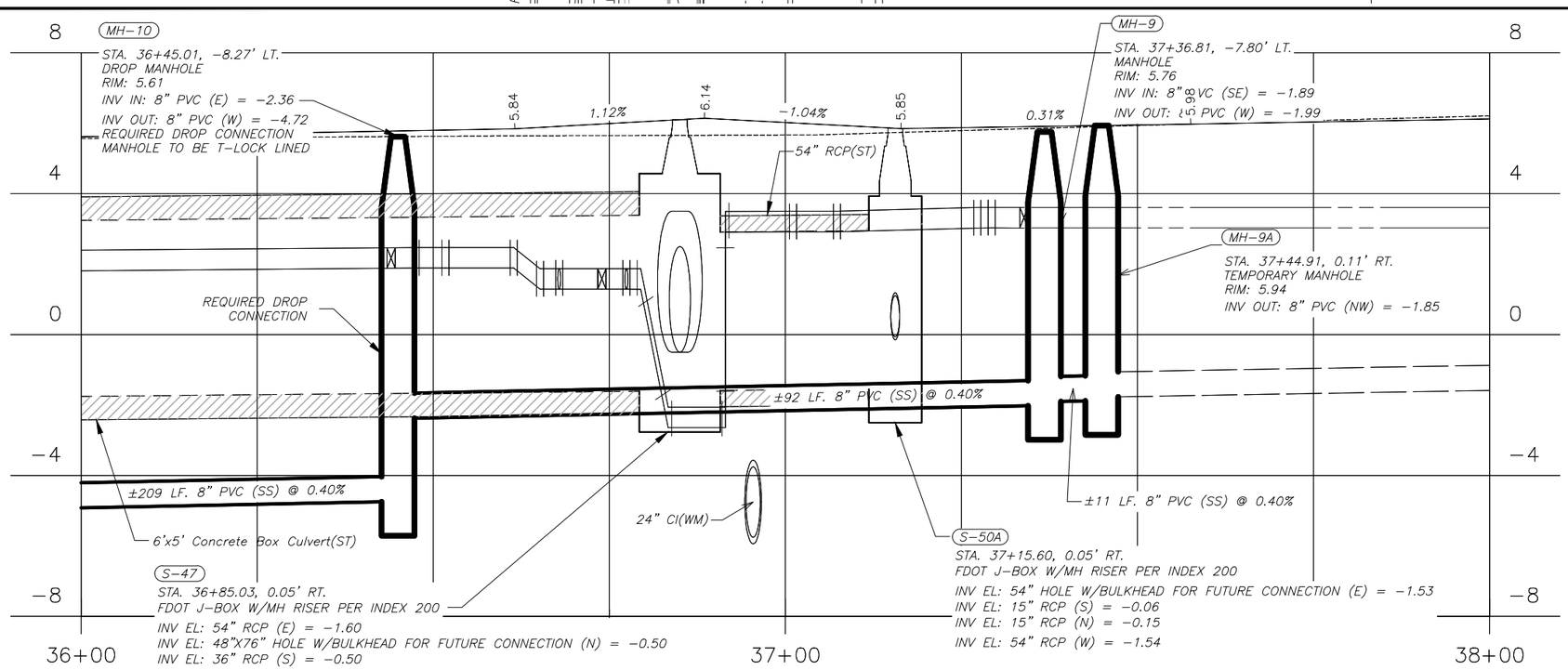

W. VASCONIA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
W. VASCONIA STREET - SANITARY SEWER
PLAN & PROFILE

SHEET
WW-114
of
WW-129

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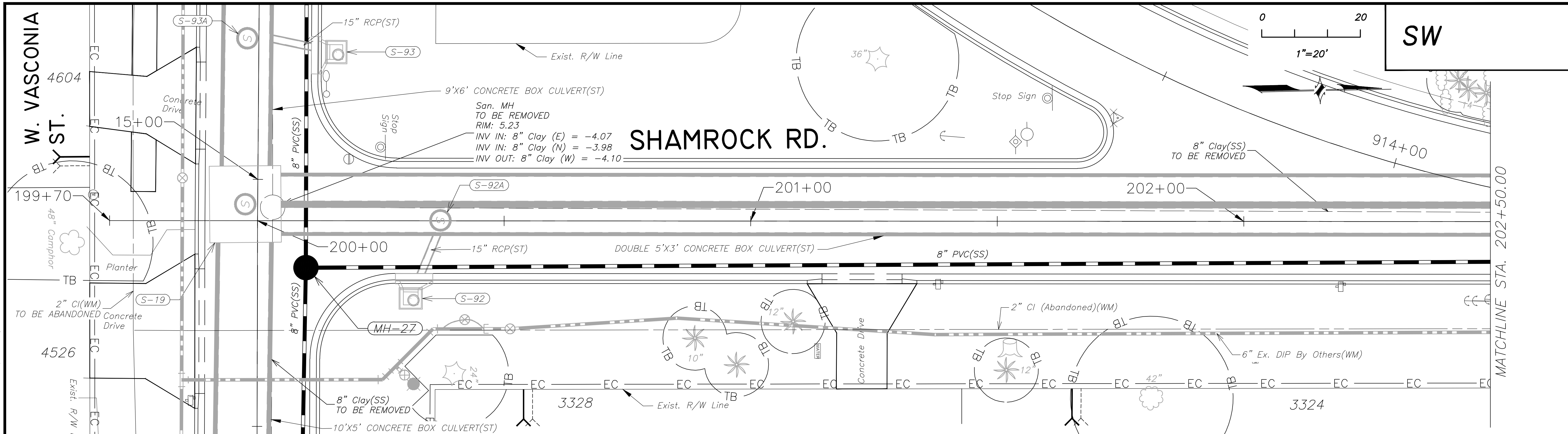

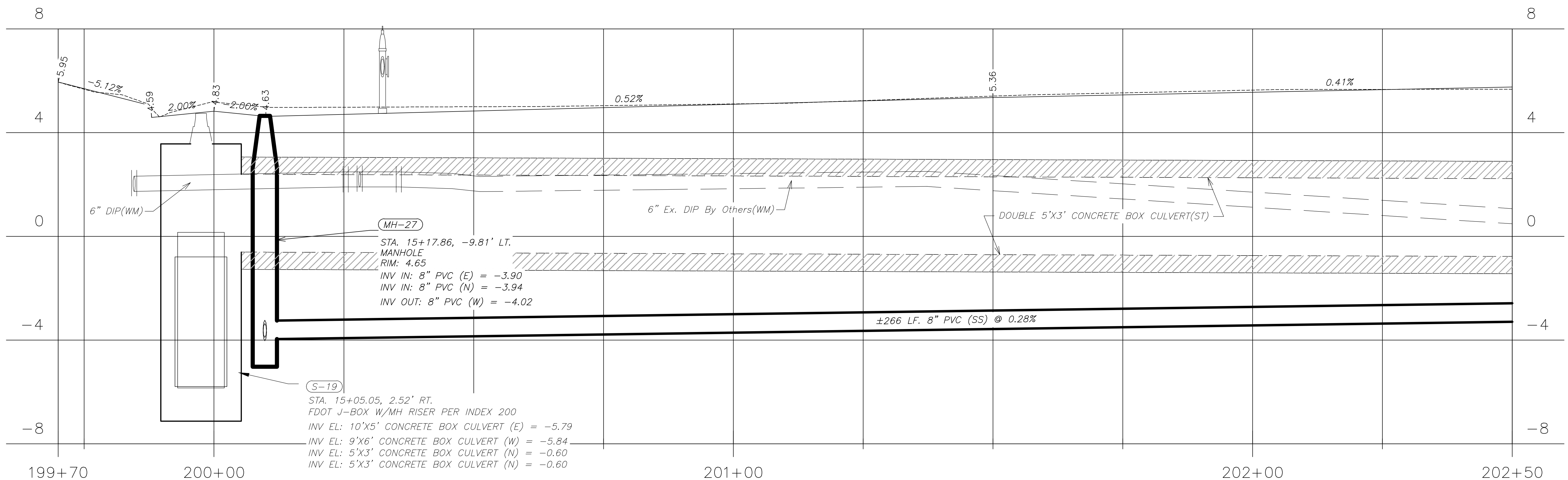

SHAMROCK RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CKD: MDC
DATE: 10/13/15

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD - SANITARY SEWER
PLAN & PROFILE

SHEET WW-115 of WW-129

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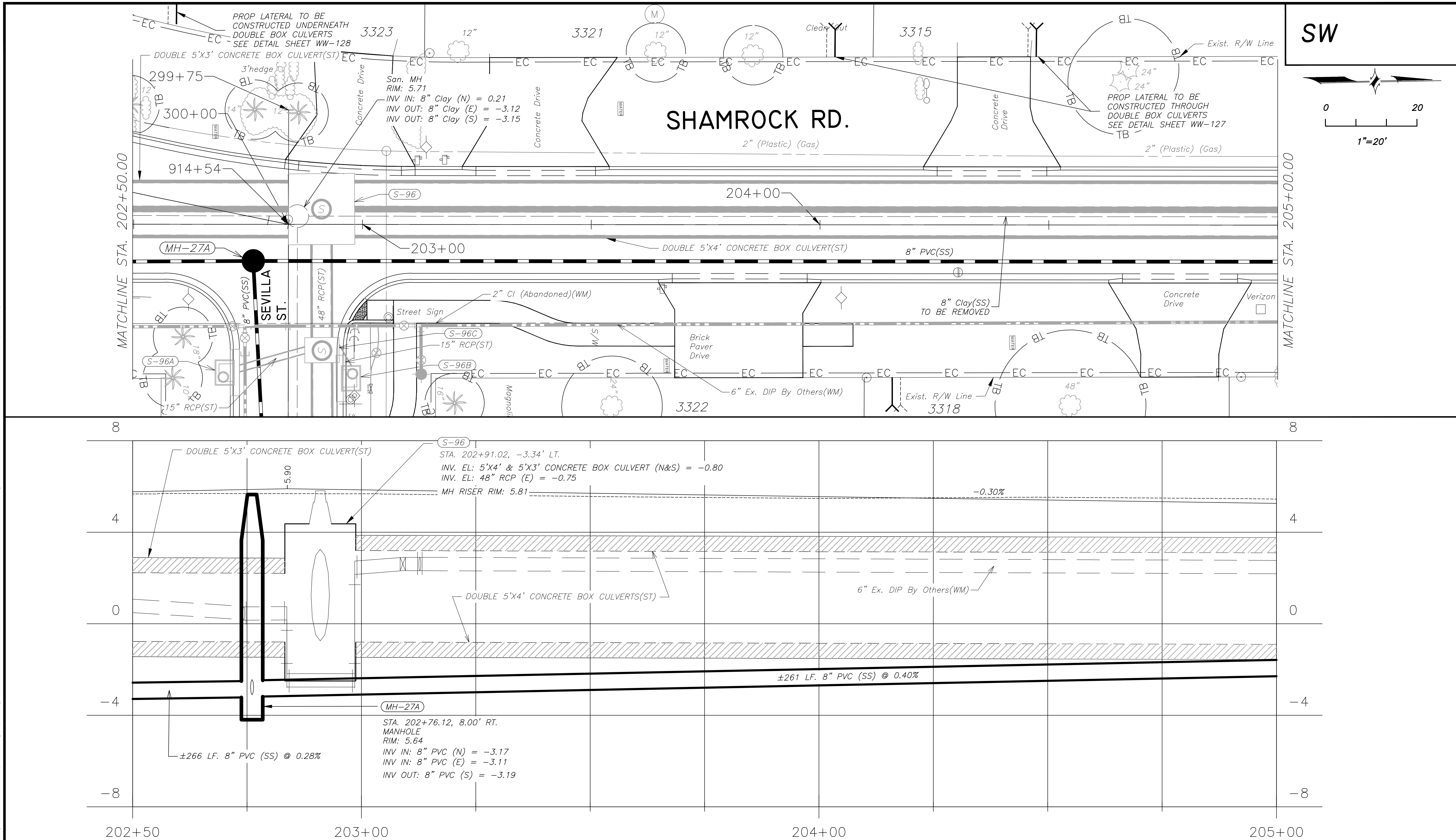

SHAMROCK RD. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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DES: ALC
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DATE: 10/13/15

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UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD - SANITARY SEWER
PLAN & PROFILE

SHEET WW-116
OF WW-129

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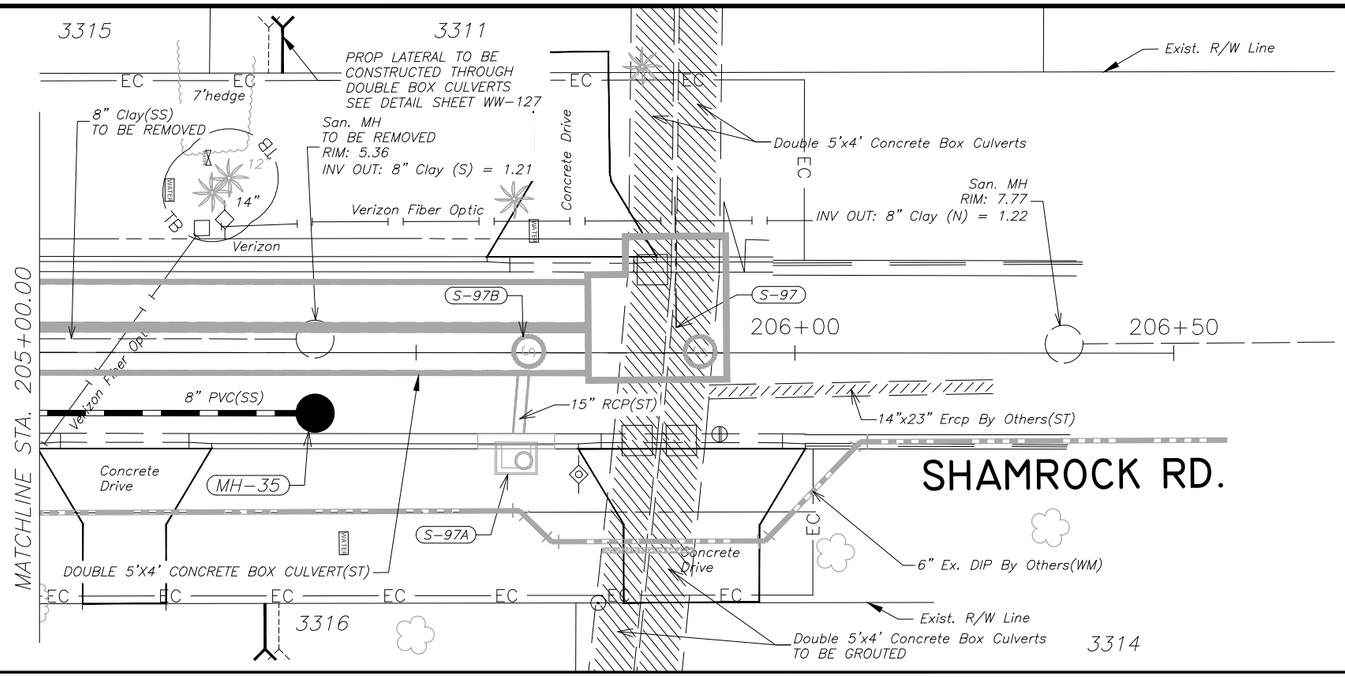

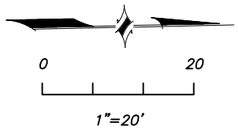

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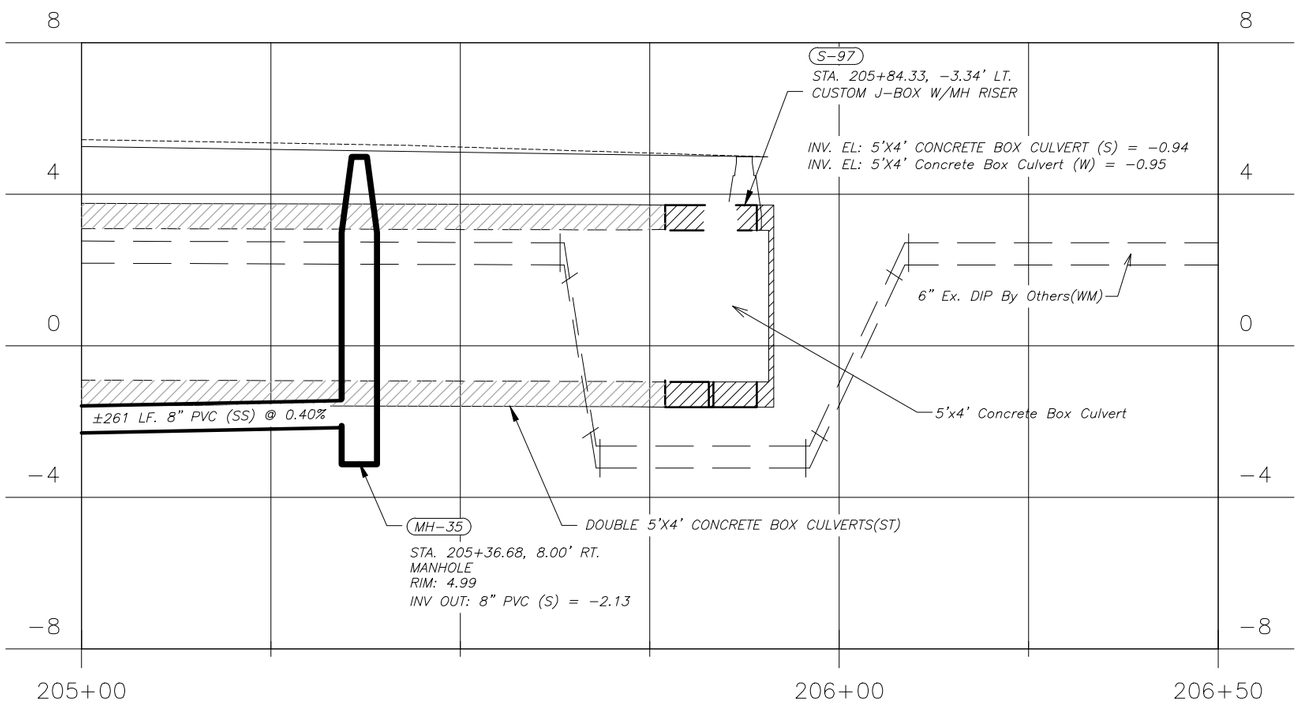

SHAMROCK RD. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
SHAMROCK RD - SANITARY SEWER
PLAN & PROFILE

SHEET WW-117 OF WW-129

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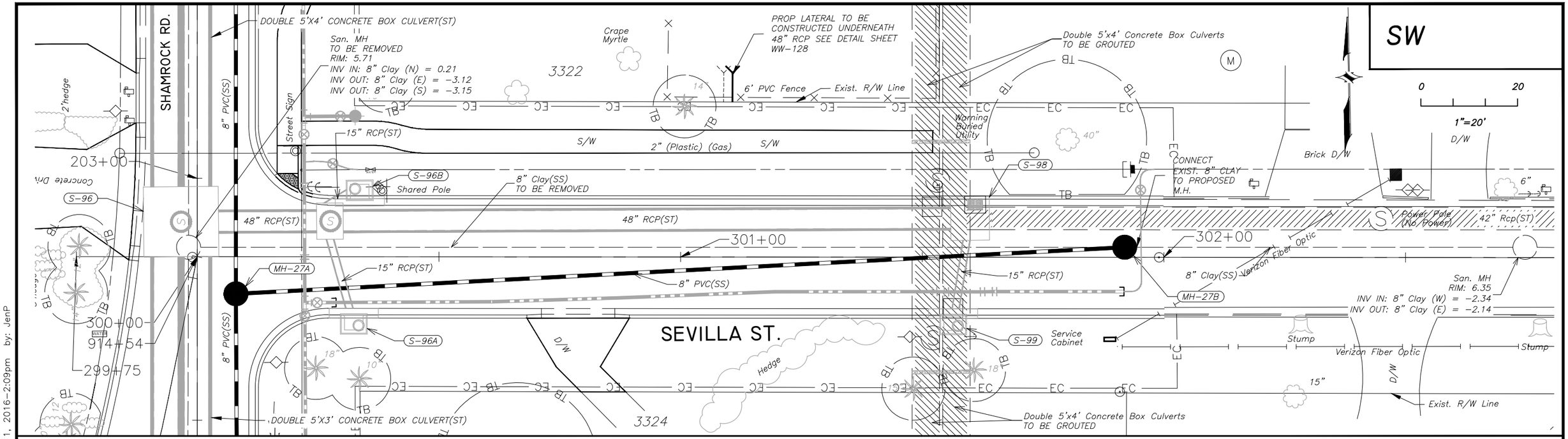

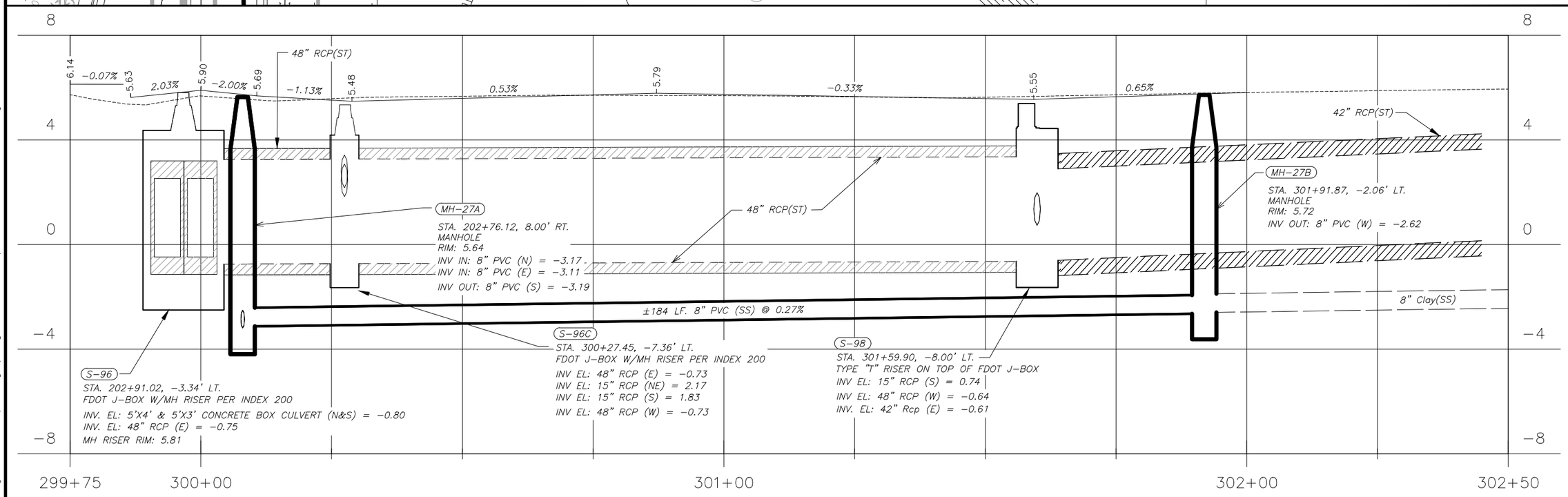

SEVILLA ST. PROFILE

Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS PHASE II (VASCONIA OUTFALL)
SEVILLA ST - SANITARY SEWER
PLAN & PROFILE

SHEET WW-118
of WW-129

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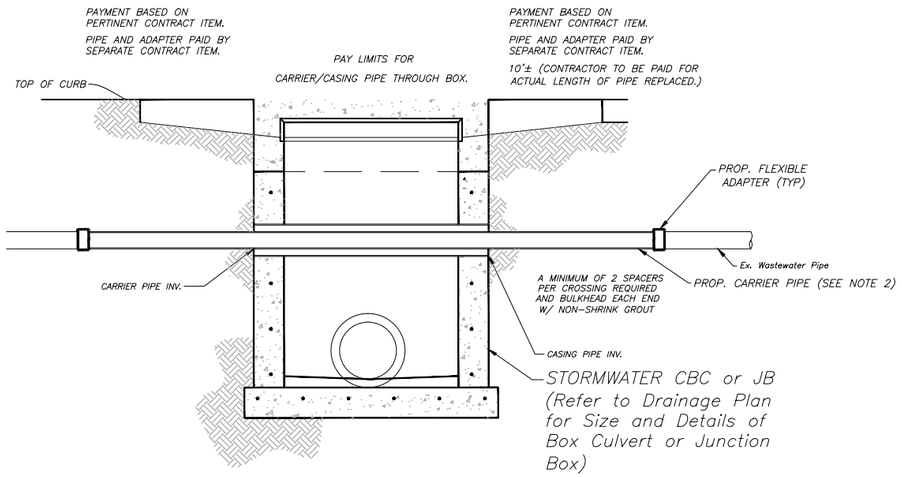

TYPICAL CASING DETAIL
CROSS SECTION
(N.T.S.)

NOTES:

1. CASING PIPE SHALL BE THE SMALLEST DIAMETER CASING PIPE POSSIBLE THAT WILL ACCOMMODATE CASCADE CASING SPACERS. THE CASING PIPE SHALL BE SCHEDULE 40 STEEL PIPE IN ACCORDANCE WITH ANSI B36.10, DUCTILE IRON PIPE (PC-350) OR STEEL CASING IN ACCORDANCE WITH AWWA-C200 AND ASTM A-139, GRADE B. A MINIMUM OF 2 SPACERS PER CROSSING IS REQUIRED.
2. THE CARRIER PIPE SHALL BE ASTM D3034 (SDR-35) PVC PIPE.
3. SEE SHEET S-11 FOR CORING DETAILS.

CONFLICT STRUCTURES

STA.	STR.	SHEET NO.	TYPE	CARRIER PIPE	CARRIER PIPE INVERT	CASING PIPE DIA.	CASING PIPE INVERT
901+75.57	S-1	WW-100A	9'X6' CONC. BOX CULV.	8" PVC	INV IN = -1.40 INV OUT = -1.44	12"	INV IN = -1.57 INV OUT = -1.61
10+97.49	S-15	WW-103	9'X6' CONC. BOX CULV.	8" PVC	INV IN = -5.09 INV OUT = -5.12	12"	INV IN = -5.26 INV OUT = -5.29
31+40.78	S-40	WW-112	8'X5' CONC. BOX CULV.	24" PVC 8" PVC	INV IN = -4.44 INV OUT = -4.46 INV IN = -0.24 INV OUT = -0.27	30" 12"	INV IN = -4.69 INV OUT = -4.71 INV IN = -0.41 INV OUT = -0.44

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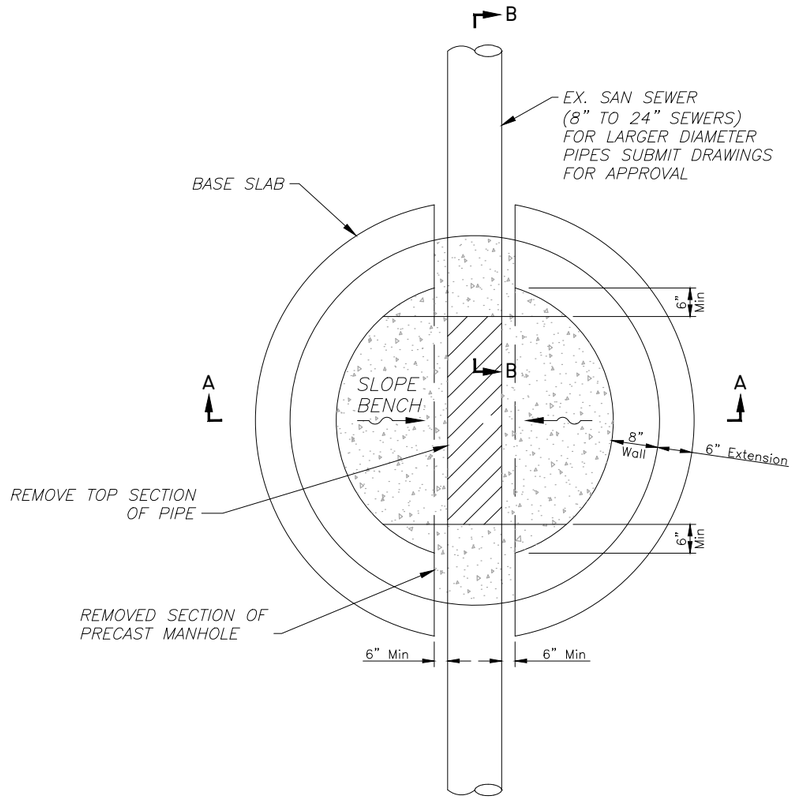
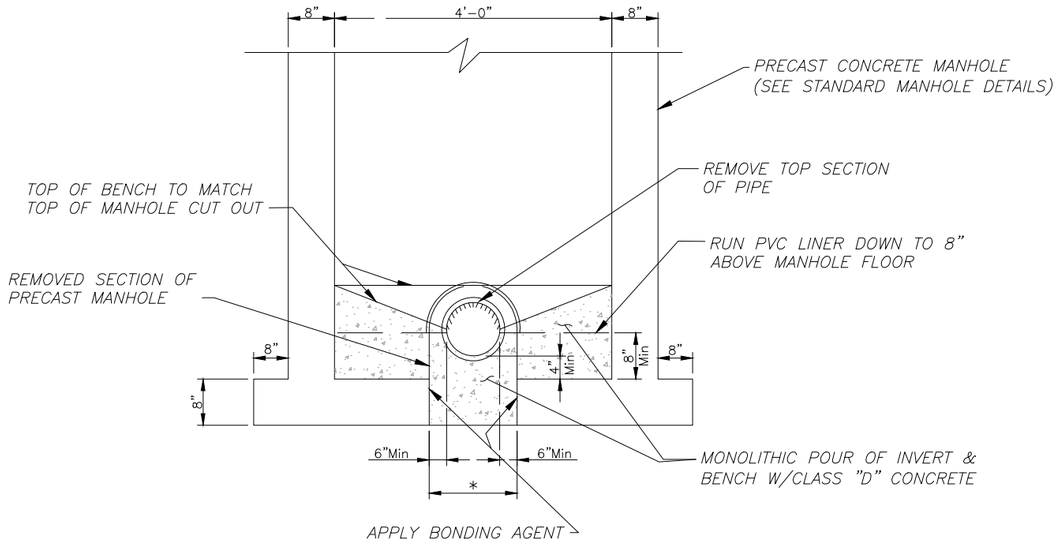
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
TYPICAL CASING DETAIL &
CONFLICT STRUCTURE TABLE

SHEET WW-119
OF WW-129



DOGHOUSE MANHOLE PLAN VIEW

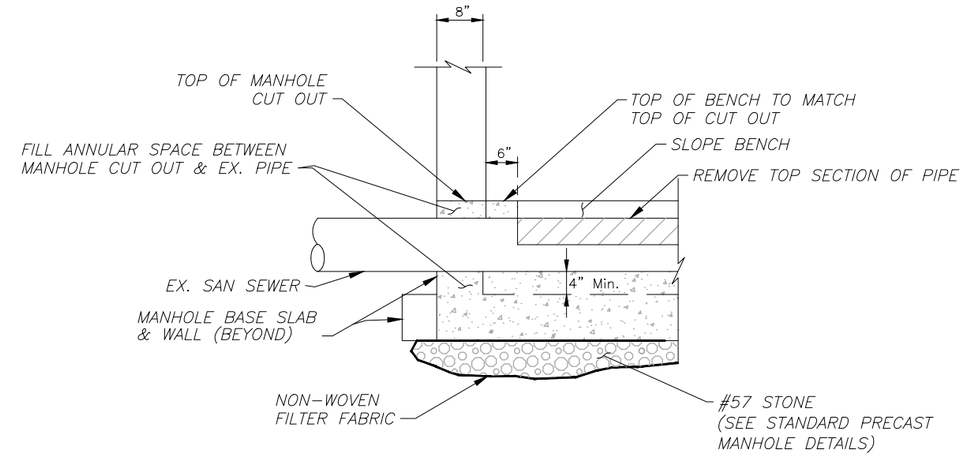
Not to Scale



SECTION A-A

Not to Scale

* TYPICAL WIDTH OF OPENING IS 24" FOR AN EX. 8" PIPE



SECTION B-B

Not to Scale

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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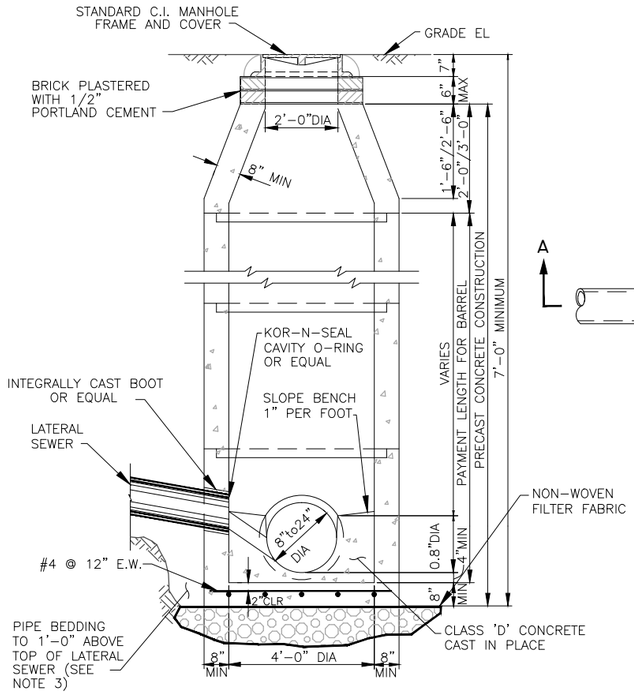
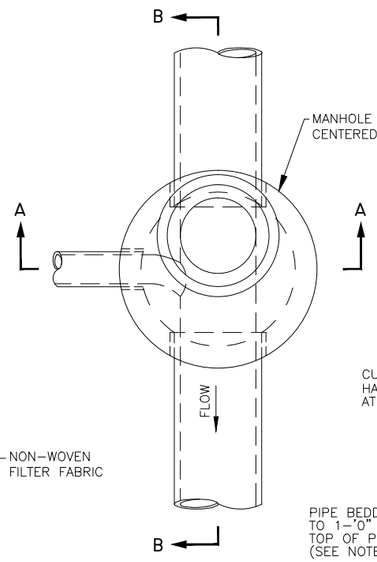
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
DOGHOUSE MANHOLE

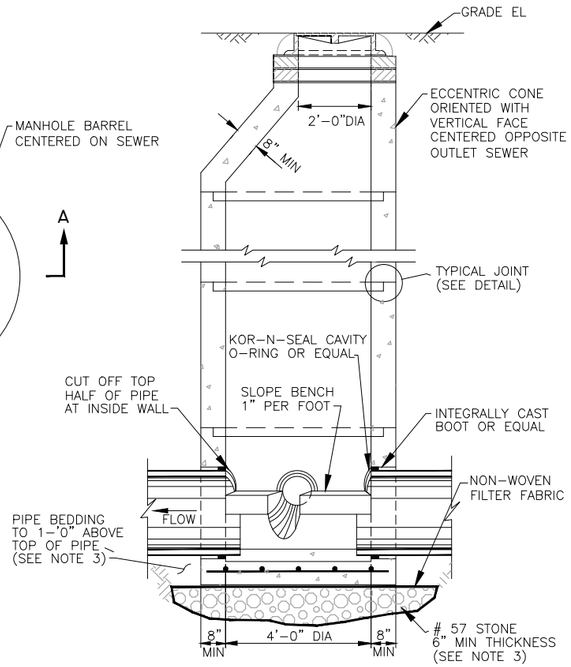
SHEET
WW-120
OF
WW-129



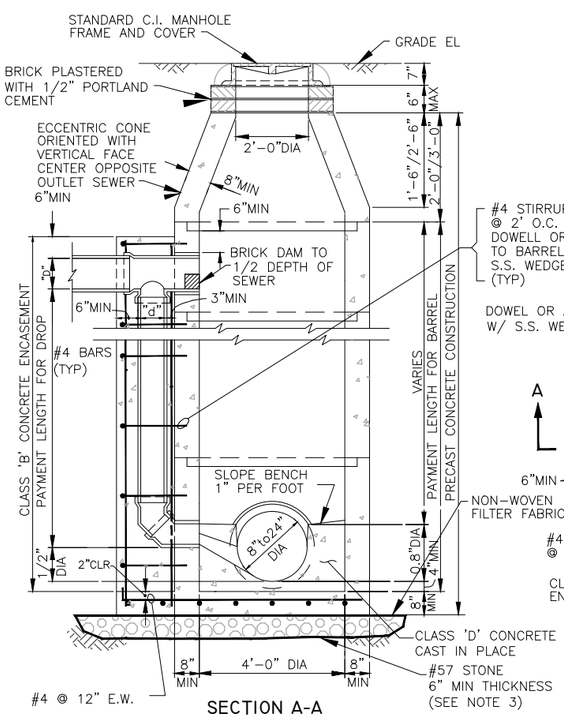
SECTION A-A



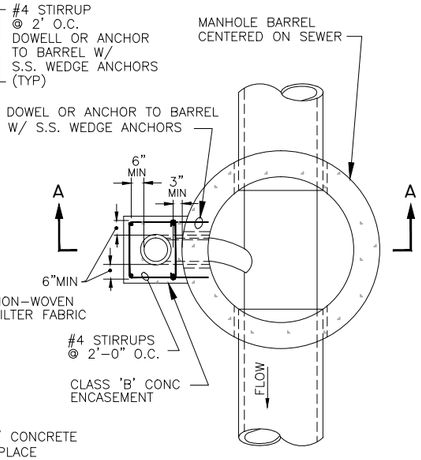
PLAN



SECTION B-B



SECTION A-A

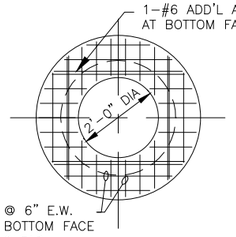


SECTIONAL PLAN

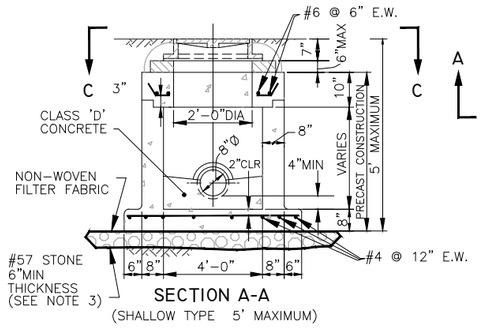
STANDARD MANHOLE – DEEP TYPE

FOR SEWERS 24" OR LESS IN DIAMETER

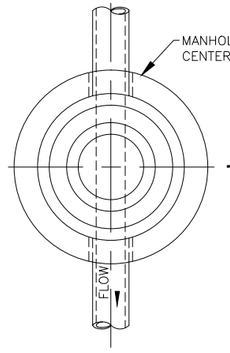
N.T.S



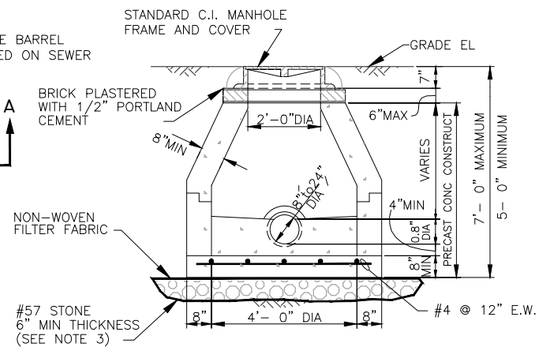
CONCRETE SLAB DETAIL
SECTION C-C



SECTION A-A
(SHALLOW TYPE 5' MAXIMUM)



PLAN



SECTION A-A
5'-0" TO 7'-0" DEEP
(SEE NOTE 4)

STANDARD MANHOLE – SHALLOW TYPE

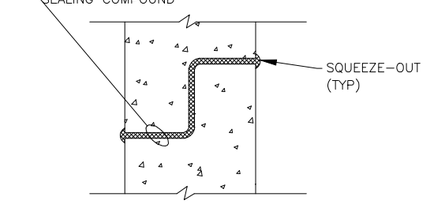
FOR SEWERS 24" OR LESS IN DIAMETER

N.T.S

STANDARD DROP MANHOLE

FOR SEWERS 24" OR LESS IN DIAMETER

N.T.S

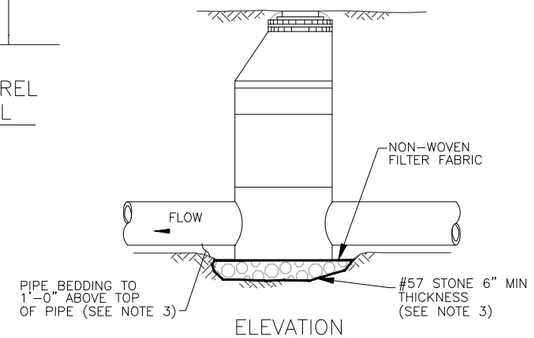


MANHOLE BARREL JOINT DETAIL

N.T.S

(SEE NOTE 5)

SCHEDULE FOR DROP MANHOLE	
INLET PIPE DIAMETER "D"	DROP PIPE DIAMETER "d"
8"	8"
10"	8"
12"	10"
15"	12"
18"	15"
21"	18"
24"	18"



ELEVATION

FOR SEWERS 24" OR LESS IN DIAMETER

N.T.S

NOTES

1. REINFORCING STEEL FOR ALL MANHOLES SHALL CONFORM TO ASTM-C478 AND PLACED AS DESCRIBED IN THE SPECIFICATIONS.
2. ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS OR OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATER TIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.
3. SEE SPECIFICATIONS FOR MATERIALS REQUIREMENTS AND PLACEMENTS AND COMPACTION OF PIPE AND STRUCTURE BEDDING.
4. STANDARD SHALLOW-TYPE MANHOLES WITH DEPTHS BETWEEN A MAXIMUM OF 7'-0" AND A MINIMUM OF 5'-0" MUST HAVE A CONCRETE CONE FOR THE TOP SECTION.
5. ALL MANHOLE JOINTS MUST BE SEALED WITH AN ACCEPTABLE JOINT SEALING COMPOUND REGARDLESS OF WHETHER AN O-RING GASKET IN A PREFORMED GROOVE IS USED.
6. FILTER FABRIC SHALL BE NON-WOVEN FABRIC PER D.O.T. SPECIFICATION SECTIONS 514 AND 985 AND SHALL BE WRAPPED ENTIRELY AROUND THE #57 STONE.

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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
STANDARD MANHOLE 8 TO 24

SHEET WW-121 OF WW-129

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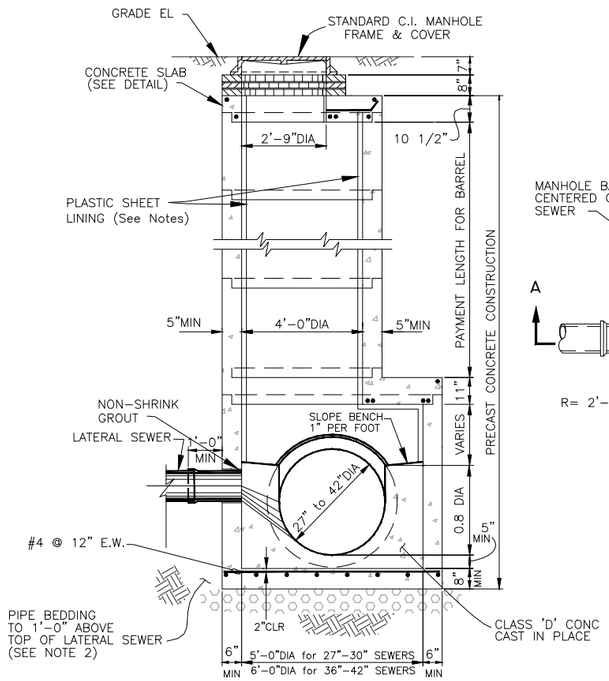
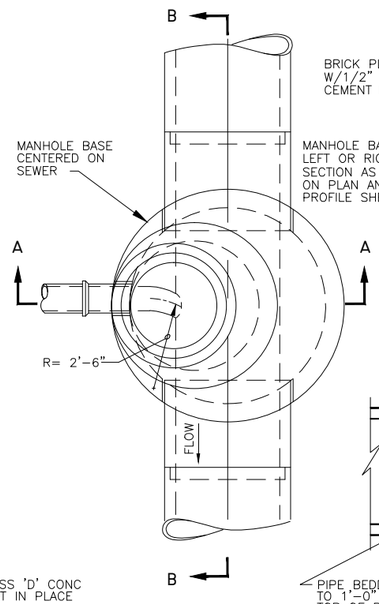
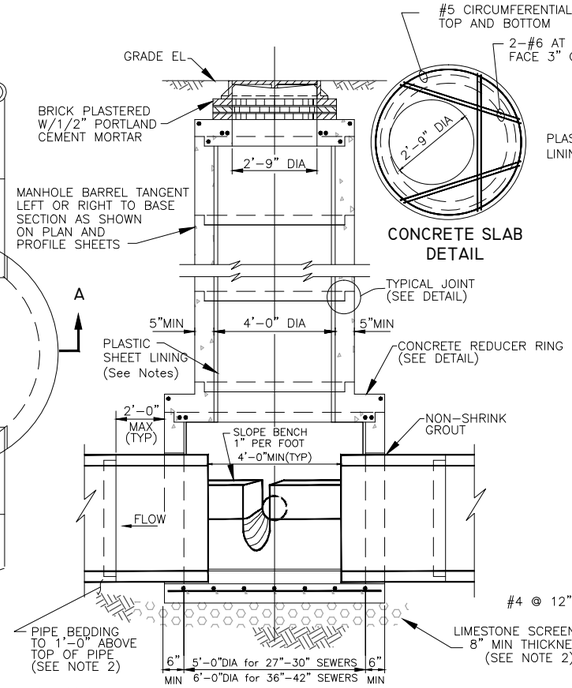
SW



SECTION A-A

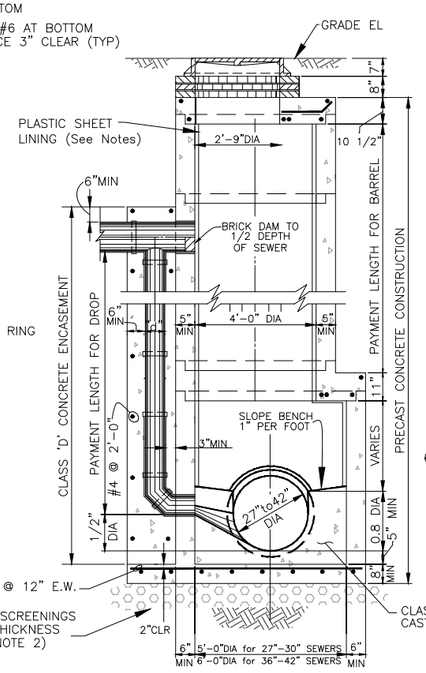


PLAN



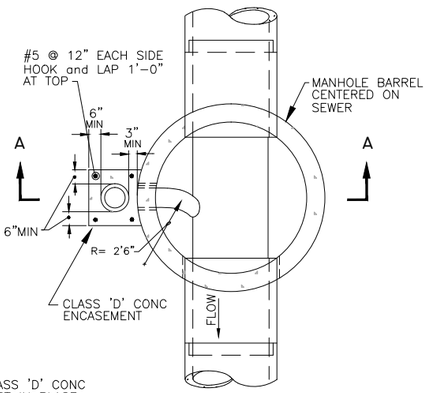
CONCRETE SLAB DETAIL

SECTION B-B



SECTION A-A

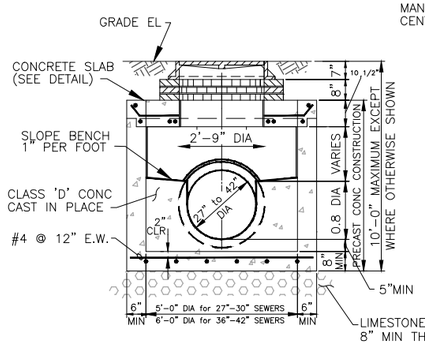
SCHEDULE FOR DROP MANHOLE	
INLET PIPE DIAMETER "D"	DROP PIPE DIAMETER "d"
8"	8"
10"	8"
12"	10"
15"	12"
18"	15"
21"	18"
24"	18"



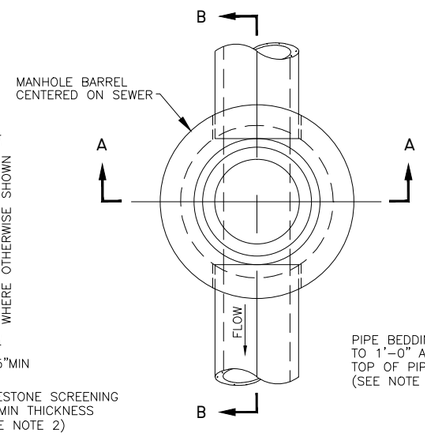
SECTIONAL PLAN

STANDARD MANHOLE – DEEP TYPE
FOR SEWERS 27" THROUGH 42" IN DIAMETER
N.T.S

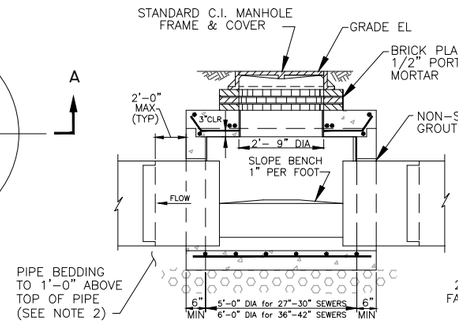
STANDARD DROP MANHOLE
FOR SEWERS 27" THROUGH 42" IN DIAMETER
N.T.S



SECTION A-A

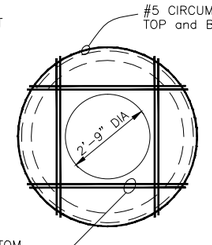


PLAN

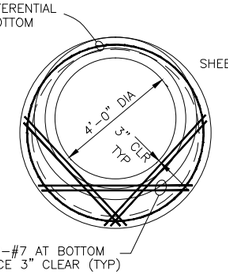


SECTION B-B

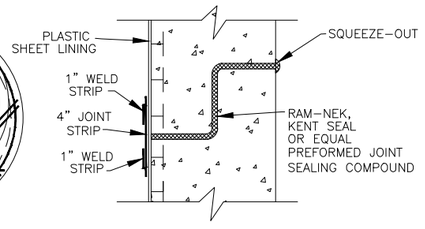
STANDARD MANHOLE – SHALLOW TYPE
FOR SEWERS 27" THROUGH 42" IN DIAMETER
N.T.S



CONCRETE SLAB DETAIL
(SHALLOW TYPE MANHOLE)



REDUCER RING DETAIL



MANHOLE BARREL JOINT DETAIL

NOTES:

1. ALL PIPE STUBS FROM MANHOLES FOR FUTURE CONNECTIONS TO OTHER CONTRACT DIVISIONS SHALL BE PROVIDED WITH WATER TIGHT PLUGS PLACED FROM WITHIN THE MANHOLE.
2. SEE SPECIFICATIONS FOR MATERIALS REQUIREMENTS AND PLACEMENT AND COMPACTION OF PIPE BEDDING AND LIMESTONE SCREENINGS.
3. PLASTIC SHEET LINER SHALL BE "T-LOCK" BY AMERON INTERNATIONAL OR APPROVED EQUAL.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
STANDARD MANHOLE 27 TO 42

SHEET WW-122
OF WW-129

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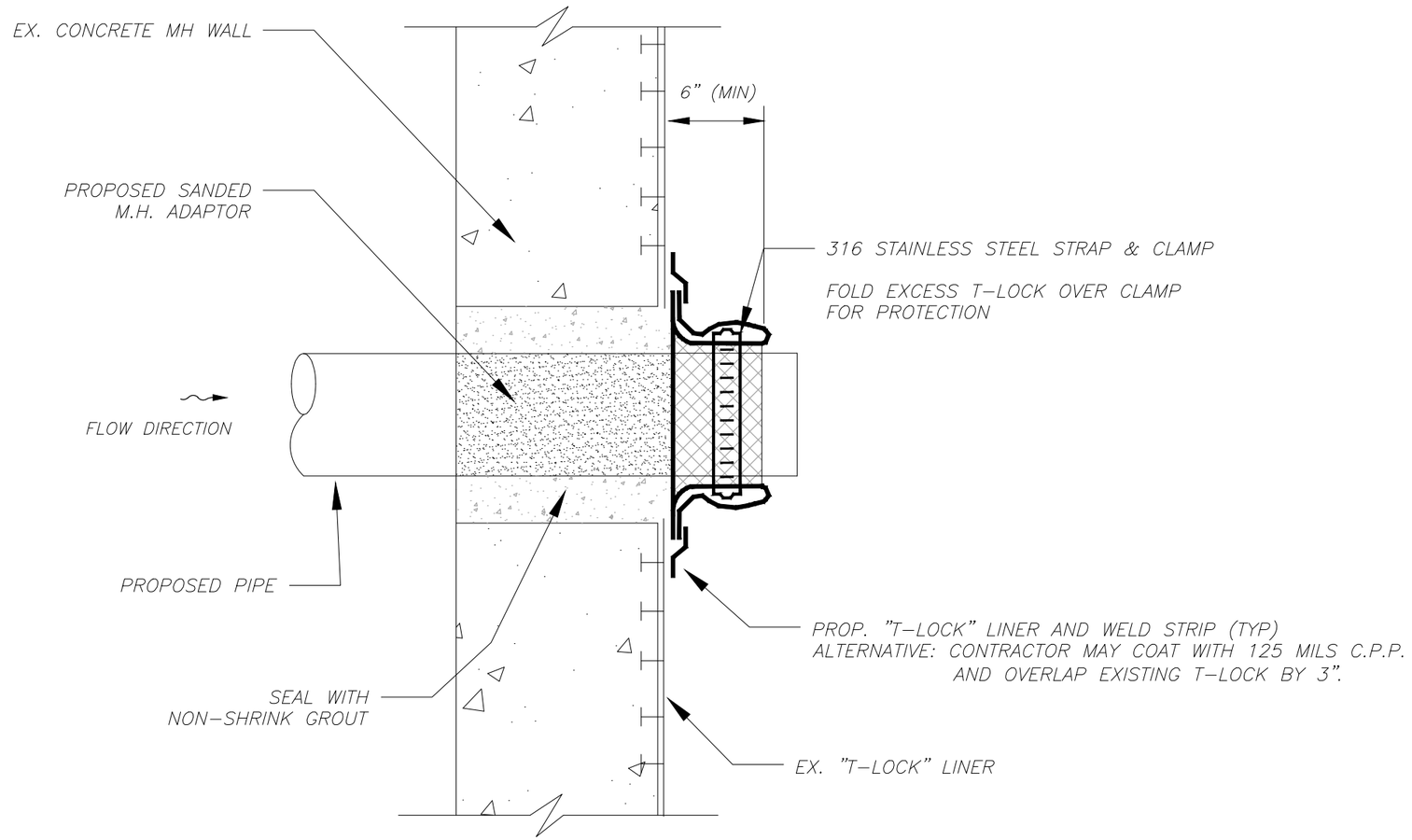

PIPE TO LINED STRUCTURE
N.T.S.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CONNECT EX. T-LOCK MH

SHEET
WW-123
OF
WW-129

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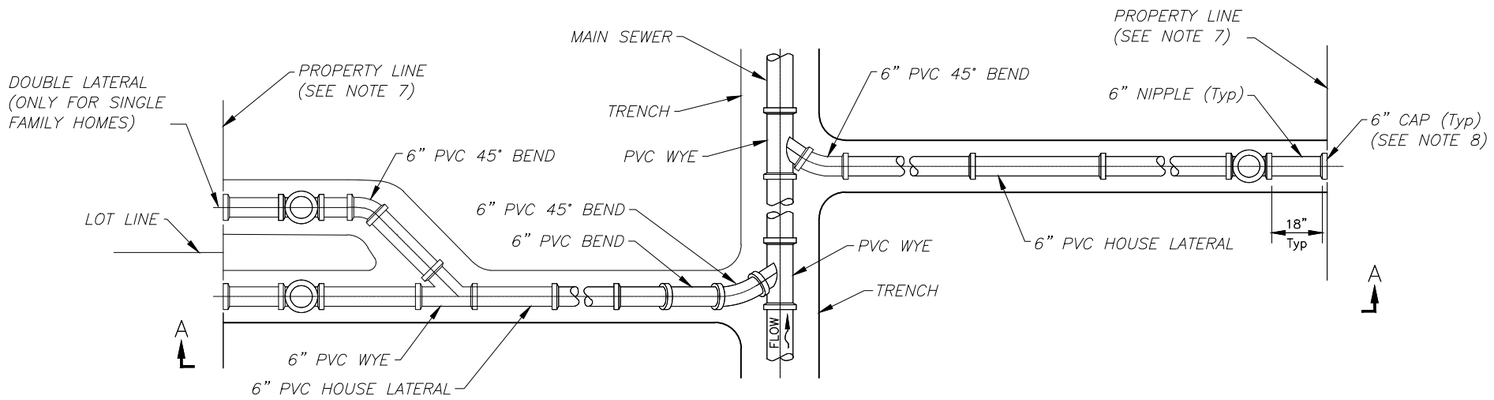
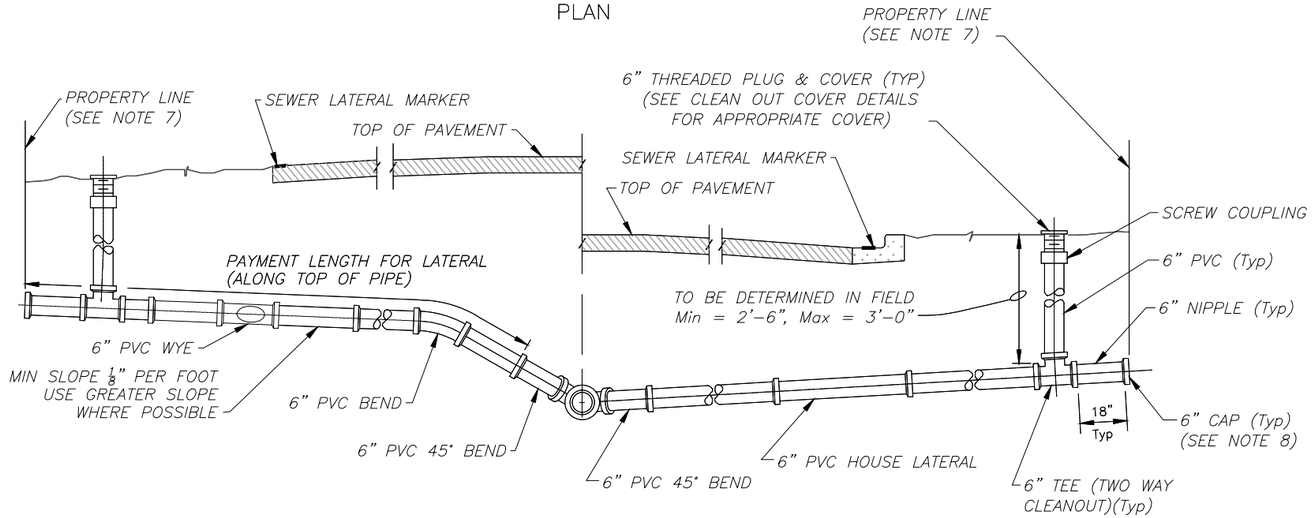


PLAN



SECTION A–A

TYPE A HOUSE LATERAL DETAIL
Not to Scale

NOTES:

1. The locations of house laterals by symbols on plans are approximate only and the actual location and slopes will be determined in the field by the contractor with the approval of the engineer.
2. The minimum diameter of all house laterals shall be 6 inches.
3. The vertical alignment of the service lateral shall be designed so that no more than two (2) vertical bends are required between the connection to the gravity main and the property line.
4. House laterals which pass under drainage ditches with less than 18" of cover or which have less than 30" of cover under pavement shall be Pressure Class 350 with 40 mils (MDFT) of Protecto 401 interior coating per specifications.
5. A minimum vertical clearance of 12–inches shall be provided when crossing above a water main. However, a vertical clearance less than 12–inches but greater than 6–inches will be allowed if the lateral is installed using one the following criteria:
   - The lateral is constructed of ductile iron pipe with a minimum pressure class of 350 with 40 mils (MDFT) of Protecto 401 interior coating.
   - The lateral is encased in at least 4–inches of concrete.
   - The lateral is installed in a casing pipe with an impact strength equal to the impact strength of pressure class 350 ductile iron.

   A minimum of 6–inches of vertical clearance shall be provided when crossing below water mains with a diameter 6–inches or less. A minimum of 12–inches of clearance shall be provided when crossing below a water main with a diameter greater than 6–inches up to a diameter of 18–inches. A minimum of 18–inches of vertical clearance will be required when crossing under a water main with diameters greater than 18–inches.

   At all water main crossings, joints of the lateral pipe at the crossing shall be arranged so that no joint is within 6–ft of a joint along the water main. If the joint spacing can not be achieved, then the gravity sewer at the crossing shall be constructed of C–900 PVC.

   A minimum vertical clearance of 6–inches shall be provided when crossing above all utilities other than a water main. A minimum of 6–inches of vertical clearance shall be provided when crossing below a utility with a diameter 6–inches or less. A minimum of 12–inches of clearance shall be provided when crossing below a utility with a diameter greater than 6–inches up to a diameter of 18–inches. A minimum of 18–inches of vertical clearance will be required when crossing under utilities with diameters greater than 18–inches.
6. Transitions from SDR 35 PVC to either C900 or ductile iron pipes shall be made with PVC rigid adaptors. Transitions from SDR 35 PVC to either existing clay or concrete pipes shall be made with a Fernco 1000 series flexible coupling with stainless steel shear ring or approved equal.
7. In sub–divisions where the Developer has provided a recorded utility easement (typically 10') beyond the property line, the clean out shall be installed within the easement away from the sidewalk.
8. At the direction of the City's inspector, the contractor shall temporarily stake the cap of all laterals at the property line with a 2"x4" treated wood stake.
9. Double laterals are only allowed for single family homes on single lots.

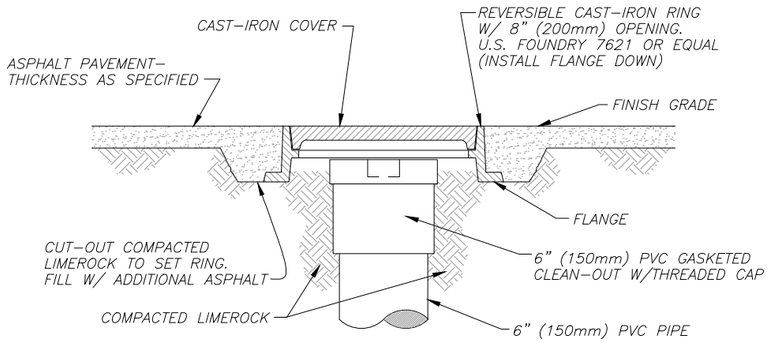
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

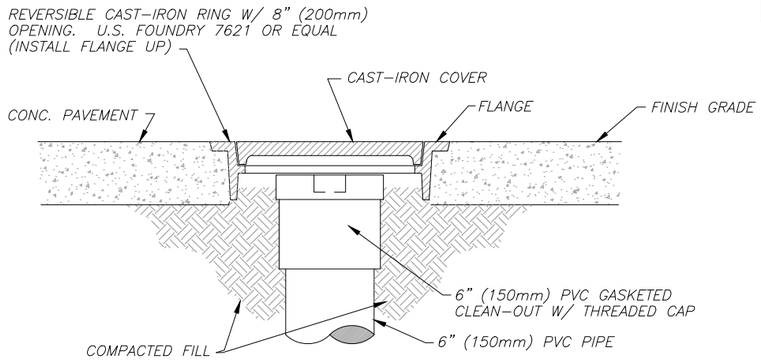
UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
NEW LATERAL CONNECTIONS

SHEET WW-124
OF WW-129



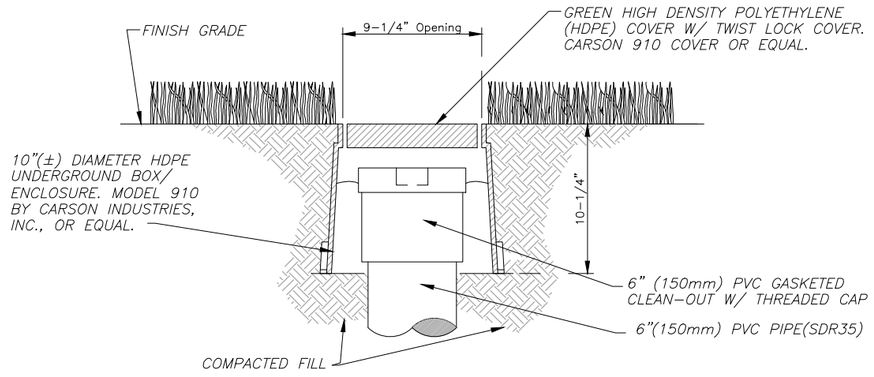
CLEAN–OUT W/ COVER FOR ASPHALT PAVED AREAS

Not to Scale



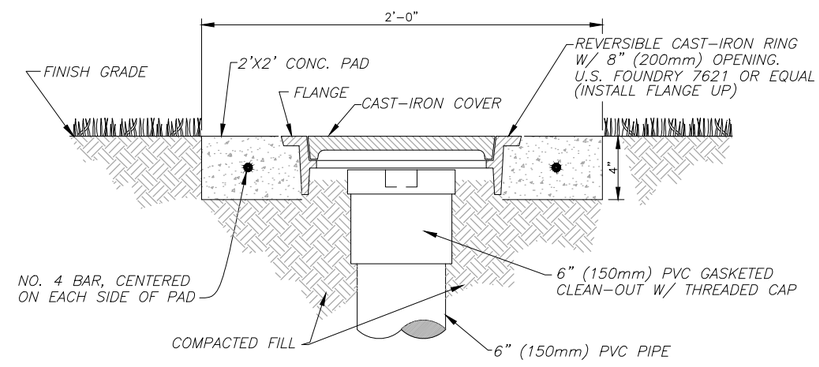
CLEAN–OUT W/ COVER FOR CONCRETE PAVED AREAS

Not to Scale



CLEAN–OUT W/ COVER FOR GRASS (NON–VEHICULAR TRAFFIC) AREAS

Not to Scale



CLEAN–OUT W/COVER FOR GRASSED AREAS W/VEHICULAR TRAFFIC

Not to Scale

NOTES:

1. *Contractor shall adjust the clean–out and cast iron ring and cover or HDPE box and cover so that the cover is seated securely and the top of the cover is flush with the finish grade. The PVC cap of the clean–out shall be no more than 4 inches deeper than the finish grade.*
2. *PVC cap may be provided with recessed nut.*
3. *Cast iron cover shall be provided with an embossed letter "S" for identification, HDPE cover shall be marked "SEWER" for identification.*
4. *Cast iron ring and cover, or HDPE box and cover, as well as the four (4 sf) square feet of material (concrete or asphalt around the clean–out), are part of the clean out installation and cost shall be included within the unit price for clean–out with no additional payment.*
5. *All clean–outs on this project shall be one of the four types shown on this sheet. Field conditions will determine which type.*

CLEANOUT COVER DETAILS

Not to Scale

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
CLEANOUT COVER DETAILS

SHEET
WW-125
OF
WW-129

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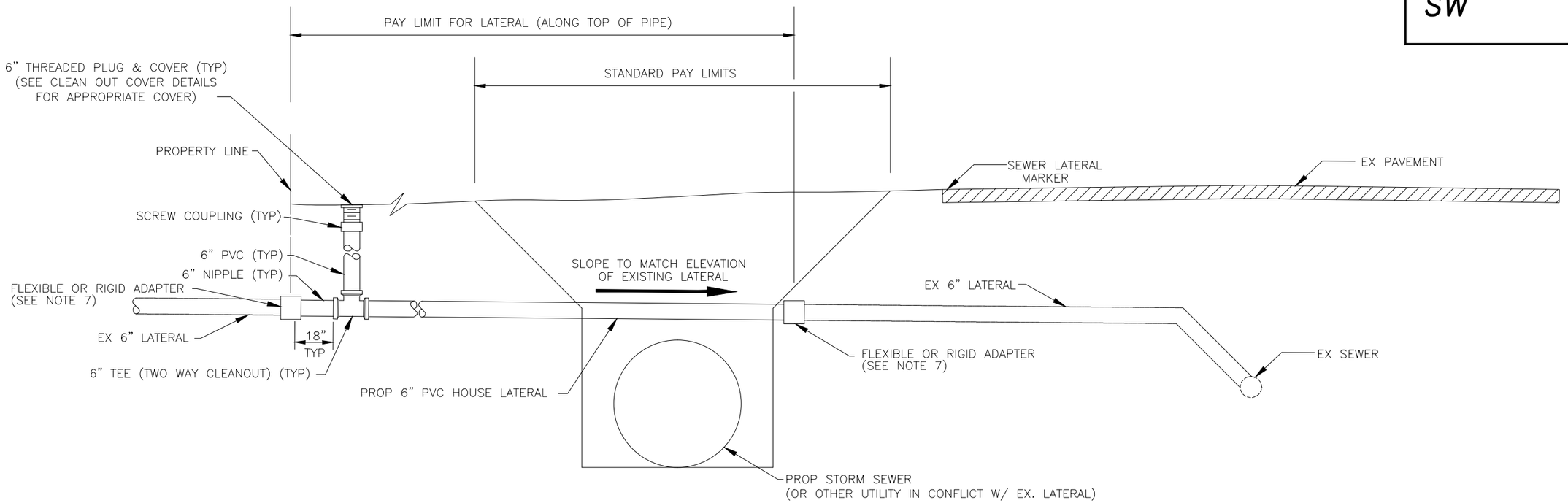

NOTES

1. CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING LATERALS WITHIN THE PAY LIMITS AND FROM THE PAY LIMITS TO THE PROPERTY LINE. THE NEW 6" PVC LATERAL SHALL BE CONNECTED TO THE EXISTING LATERAL PIPE USING FLEXIBLE ADAPTERS. A NEW CLEAN–OUT AND CLEAN–OUT COVER SHALL BE INSTALLED ON THE R/W SIDE OF THE PROPERTY LINE AND WILL BE PAID FOR UNDER SEPARATE PAY ITEM.

2. SEWER SERVICE MUST BE MAINTAINED DURING CONSTRUCTION.

3. THE LOCATIONS OF HOUSE LATERALS BY SYMBOLS ON PLANS ARE APPROXIMATE ONLY AND THE ACTUAL LOCATION AND SLOPES WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.

4. THE MINIMUM DIAMETER OF ALL HOUSE LATERALS SHALL BE 6".

5. HOUSE LATERALS WHICH PASS UNDER DRAINAGE DITCHES WITH LESS THAN 18" OF COVER OR WHICH HAVE LESS THAN 30" OF COVER UNDER PAVEMENT SHALL BE PRESSURE CLASS 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.

6. A MINIMUM VERTICAL CLEARANCE OF 12–INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE A WATER MAIN. HOWEVER, A VERTICAL CLEARANCE LESS THAN 12–INCHES BUT GREATER THAN 6–INCHES WILL BE ALLOWED IF THE LATERAL IS INSTALLED USING ONE THE FOLLOWING CRITERIA:

   - THE LATERAL IS CONSTRUCTED OF DUCTILE IRON PIPE WITH A MINIMUM PRESSURE CLASS OF 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.
   - THE LATERAL IS ENCASED IN AT LEAST 4–INCHES OF CONCRETE.
   - THE LATERAL IS INSTALLED IN A CASING PIPE WITH AN IMPACT STRENGTH EQUAL TO THE IMPACT STRENGTH OF PRESSURE CLASS 350 DUCTILE IRON.

   A MINIMUM OF 6–INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW WATER MAINS WITH A DIAMETER 6–INCHES OR LESS. A MINIMUM OF 12–INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A WATER MAIN WITH A DIAMETER GREATER THAN 6–INCHES UP TO A DIAMETER OF 18–INCHES. A MINIMUM OF 18–INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER A WATER MAIN WITH DIAMETERS GREATER THAN 18–INCHES.

   AT ALL WATER MAIN CROSSINGS, JOINTS OF THE LATERAL PIPE AT THE CROSSING SHALL BE ARRANGED SO THAT NO JOINT IS WITHIN 6–FT OF A JOINT ALONG THE WATER MAIN. IF THE JOINT SPACING CAN NOT BE ACHIEVED, THEN THE GRAVITY SEWER AT THE CROSSING SHALL BE CONSTRUCTED OF C–900 PVC.

   A MINIMUM VERTICAL CLEARANCE OF 6–INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE ALL UTILITIES OTHER THAN A WATER MAIN. A MINIMUM OF 6–INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER 6–INCHES OR LESS. A MINIMUM OF 12–INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER GREATER THAN 6–INCHES UP TO A DIAMETER OF 18–INCHES. A MINIMUM OF 18–INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER UTILITIES WITH DIAMETERS GREATER THAN 18–INCHES.

7. TRANSITIONS FROM SDR 35 PVC TO EITHER C900 OR DUCTILE IRON PIPES SHALL BE MADE WITH PVC RIGID ADAPTORS. TRANSITIONS FROM SDR 35 PVC TO EITHER EXISTING CLAY OR CONCRETE PIPES SHALL BE MADE WITH FERNCO 1000 SERIES FLEXIBLE COUPLING WITH STAINLESS STEEL SHEAR RING OR APPROVED EQUAL.

HOUSE LATERAL REPLACEMENT DETAIL

Not to Scale

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
STANDARD HOUSE LATERAL
REPLACEMENT DETAIL

SHEET
WW-126
OF
WW-129

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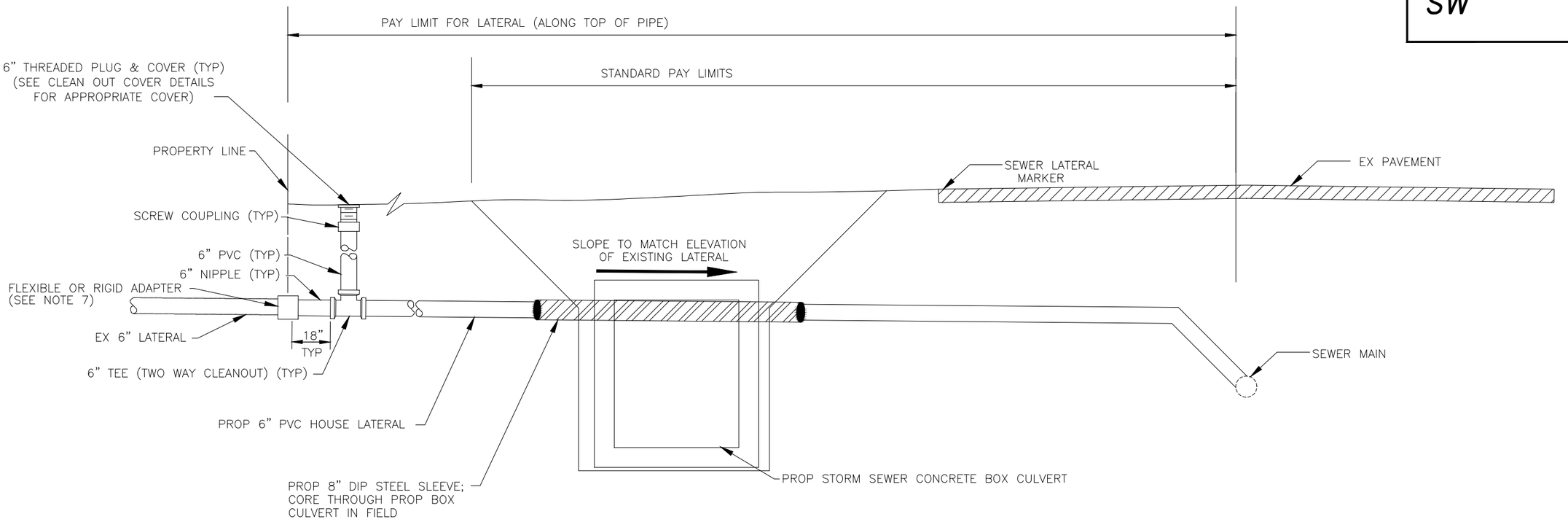

NOTES

1. CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING LATERALS WITHIN THE PAY LIMITS AND FROM THE PAY LIMITS TO THE PROPERTY LINE. THE NEW 6" PVC LATERAL SHALL BE CONNECTED TO THE EXISTING LATERAL PIPE USING FLEXIBLE ADAPTERS. A NEW CLEAN-OUT AND CLEAN-OUT COVER SHALL BE INSTALLED ON THE R/W SIDE OF THE PROPERTY LINE AND WILL BE PAID FOR UNDER SEPARATE PAY ITEM.

2. SEWER SERVICE MUST BE MAINTAINED DURING CONSTRUCTION.

3. THE LOCATIONS OF HOUSE LATERALS BY SYMBOLS ON PLANS ARE APPROXIMATE ONLY AND THE ACTUAL LOCATION AND SLOPES WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.

4. THE MINIMUM DIAMETER OF ALL HOUSE LATERALS SHALL BE 6".

5. HOUSE LATERALS WHICH PASS UNDER DRAINAGE DITCHES WITH LESS THAN 18" OF COVER OR WHICH HAVE LESS THAN 30" OF COVER UNDER PAVEMENT SHALL BE PRESSURE CLASS 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.

6. A MINIMUM VERTICAL CLEARANCE OF 12-INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE A WATER MAIN. HOWEVER, A VERTICAL CLEARANCE LESS THAN 12-INCHES BUT GREATER THAN 6-INCHES WILL BE ALLOWED IF THE LATERAL IS INSTALLED USING ONE THE FOLLOWING CRITERIA:

   - THE LATERAL IS CONSTRUCTED OF DUCTILE IRON PIPE WITH A MINIMUM PRESSURE CLASS OF 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.
   - THE LATERAL IS ENCASED IN AT LEAST 4-INCHES OF CONCRETE.
   - THE LATERAL IS INSTALLED IN A CASING PIPE WITH AN IMPACT STRENGTH EQUAL TO THE IMPACT STRENGTH OF PRESSURE CLASS 350 DUCTILE IRON.

   A MINIMUM OF 6-INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW WATER MAINS WITH A DIAMETER 6-INCHES OR LESS. A MINIMUM OF 12-INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A WATER MAIN WITH A DIAMETER GREATER THAN 6-INCHES UP TO A DIAMETER OF 18-INCHES. A MINIMUM OF 18-INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER A WATER MAIN WITH DIAMETERS GREATER THAN 18-INCHES.

   AT ALL WATER MAIN CROSSINGS, JOINTS OF THE LATERAL PIPE AT THE CROSSING SHALL BE ARRANGED SO THAT NO JOINT IS WITHIN 6-FT OF A JOINT ALONG THE WATER MAIN. IF THE JOINT SPACING CAN NOT BE ACHIEVED, THEN THE GRAVITY SEWER AT THE CROSSING SHALL BE CONSTRUCTED OF C-900 PVC.

   A MINIMUM VERTICAL CLEARANCE OF 6-INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE ALL UTILITIES OTHER THAN A WATER MAIN. A MINIMUM OF 6-INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER 6-INCHES OR LESS. A MINIMUM OF 12-INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER GREATER THAN 6-INCHES UP TO A DIAMETER OF 18-INCHES. A MINIMUM OF 18-INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER UTILITIES WITH DIAMETERS GREATER THAN 18-INCHES.

7. TRANSITIONS FROM SDR 35 PVC TO EITHER C900 OR DUCTILE IRON PIPES SHALL BE MADE WITH PVC RIGID ADAPTORS. TRANSITIONS FROM SDR 35 PVC TO EITHER EXISTING CLAY OR CONCRETE PIPES SHALL BE MADE WITH FERNCO 1000 SERIES FLEXIBLE COUPLING WITH STAINLESS STEEL SHEAR RING OR APPROVED EQUAL.

HOUSE LATERAL REPLACEMENT DETAIL – MODIFIED THROUGH BOX CULVERT

Not to Scale

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HOUSE LATERAL REPLACEMENT
DETAIL-THROUGH CULVERT

SHEET
WW-127
OF
WW-129

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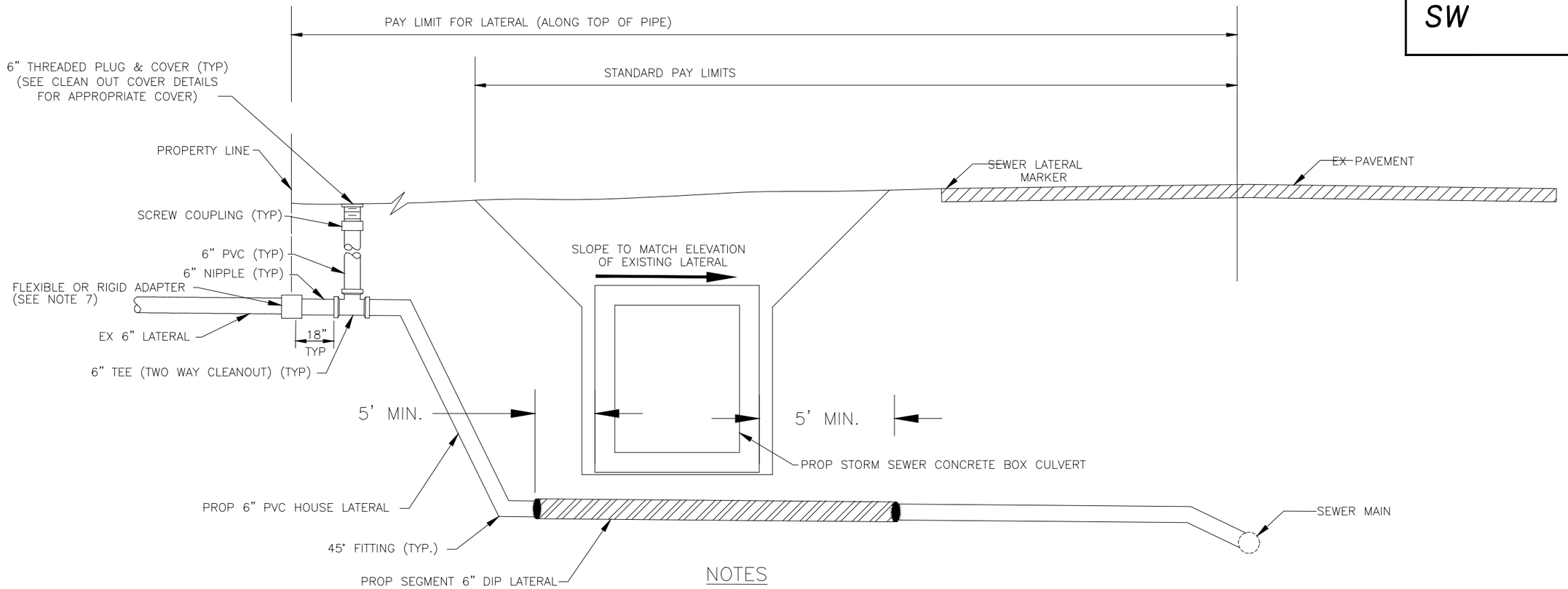
SW



NOTES

1. CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING LATERALS WITHIN THE PAY LIMITS AND FROM THE PAY LIMITS TO THE PROPERTY LINE. THE NEW 6" PVC LATERAL SHALL BE CONNECTED TO THE EXISTING LATERAL PIPE USING FLEXIBLE ADAPTERS. A NEW CLEAN–OUT AND CLEAN–OUT COVER SHALL BE INSTALLED ON THE R/W SIDE OF THE PROPERTY LINE AND WILL BE PAID FOR UNDER SEPARATE PAY ITEM.

2. SEWER SERVICE MUST BE MAINTAINED DURING CONSTRUCTION.

3. THE LOCATIONS OF HOUSE LATERALS BY SYMBOLS ON PLANS ARE APPROXIMATE ONLY AND THE ACTUAL LOCATION AND SLOPES WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER.

4. THE MINIMUM DIAMETER OF ALL HOUSE LATERALS SHALL BE 6".

5. HOUSE LATERALS WHICH PASS UNDER DRAINAGE DITCHES WITH LESS THAN 18" OF COVER OR WHICH HAVE LESS THAN 30" OF COVER UNDER PAVEMENT SHALL BE PRESSURE CLASS 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.

6. A MINIMUM VERTICAL CLEARANCE OF 12–INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE A WATER MAIN. HOWEVER, A VERTICAL CLEARANCE LESS THAN 12–INCHES BUT GREATER THAN 6–INCHES WILL BE ALLOWED IF THE LATERAL IS INSTALLED USING ONE THE FOLLOWING CRITERIA:

   - THE LATERAL IS CONSTRUCTED OF DUCTILE IRON PIPE WITH A MINIMUM PRESSURE CLASS OF 350 WITH 40 MILS (MDFT) OF PROTECTO 401 INTERIOR COATING.
   - THE LATERAL IS ENCASED IN AT LEAST 4–INCHES OF CONCRETE.
   - THE LATERAL IS INSTALLED IN A CASING PIPE WITH AN IMPACT STRENGTH EQUAL TO THE IMPACT STRENGTH OF PRESSURE CLASS 350 DUCTILE IRON.

   A MINIMUM OF 6–INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW WATER MAINS WITH A DIAMETER 6–INCHES OR LESS. A MINIMUM OF 12–INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A WATER MAIN WITH A DIAMETER GREATER THAN 6–INCHES UP TO A DIAMETER OF 18–INCHES. A MINIMUM OF 18–INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER A WATER MAIN WITH DIAMETERS GREATER THAN 18–INCHES.

   AT ALL WATER MAIN CROSSINGS, JOINTS OF THE LATERAL PIPE AT THE CROSSING SHALL BE ARRANGED SO THAT NO JOINT IS WITHIN 6–FT OF A JOINT ALONG THE WATER MAIN. IF THE JOINT SPACING CAN NOT BE ACHIEVED, THEN THE GRAVITY SEWER AT THE CROSSING SHALL BE CONSTRUCTED OF C–900 PVC.

   A MINIMUM VERTICAL CLEARANCE OF 6–INCHES SHALL BE PROVIDED WHEN CROSSING ABOVE ALL UTILITIES OTHER THAN A WATER MAIN. A MINIMUM OF 6–INCHES OF VERTICAL CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER 6–INCHES OR LESS. A MINIMUM OF 12–INCHES OF CLEARANCE SHALL BE PROVIDED WHEN CROSSING BELOW A UTILITY WITH A DIAMETER GREATER THAN 6–INCHES UP TO A DIAMETER OF 18–INCHES. A MINIMUM OF 18–INCHES OF VERTICAL CLEARANCE WILL BE REQUIRED WHEN CROSSING UNDER UTILITIES WITH DIAMETERS GREATER THAN 18–INCHES.

7. TRANSITIONS FROM SDR 35 PVC TO EITHER C900 OR DUCTILE IRON PIPES SHALL BE MADE WITH PVC RIGID ADAPTORS. TRANSITIONS FROM SDR 35 PVC TO EITHER EXISTING CLAY OR CONCRETE PIPES SHALL BE MADE WITH FERNCO 1000 SERIES FLEXIBLE COUPLING WITH STAINLESS STEEL SHEAR RING OR APPROVED EQUAL.

HOUSE LATERAL REPLACEMENT DETAIL – MODIFIED UNDER BOX CULVERT

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: ALC
DRN: ASA
CKD: MDC
DATE: 10/13/15

CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
HOUSE LATERAL REPLACEMENT
DETAIL UNDER CULVERT

SHEET WW-128 OF WW-129

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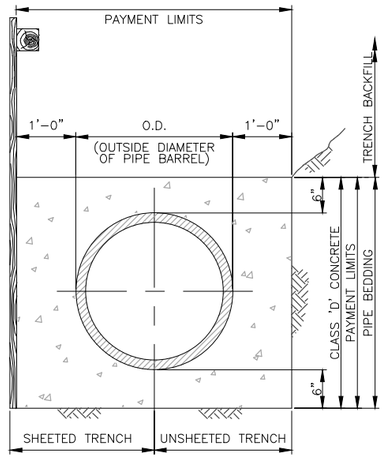
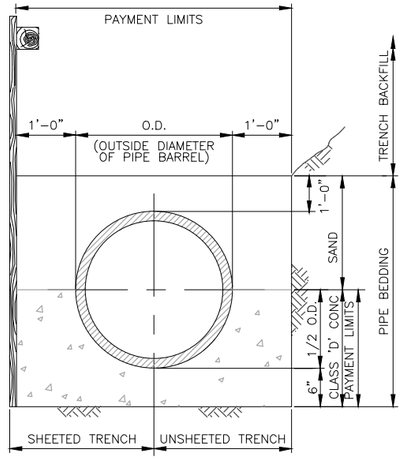


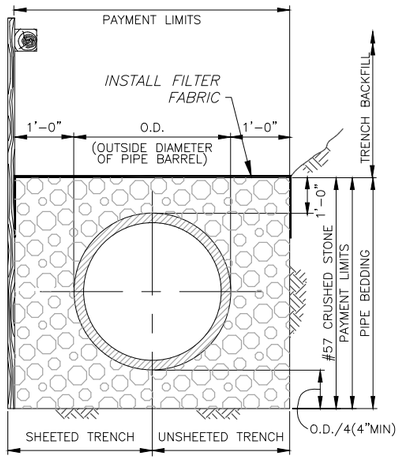
CONCRETE ENCASEMENT



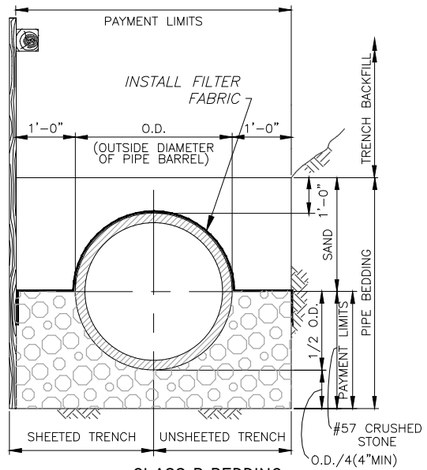
CLASS A BEDDING (CONCRETE CRADLE)

NOTES:

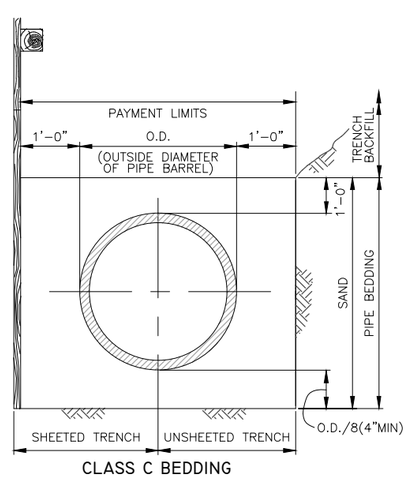
1 ALL TYPES OF PIPE BEDDING SHALL EXTEND TO UNDISTURBED EARTH AT SIDES AND BOTTOM OF THE TRENCH.
2. SAND AND CRUSHED STONE PIPE BEDDING SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.



CLASS B-I BEDDING

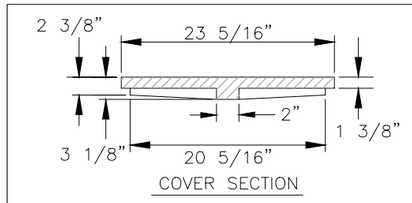


CLASS B BEDDING
(ONLY ALLOWED WITH CITY INSPECTOR APPROVAL)

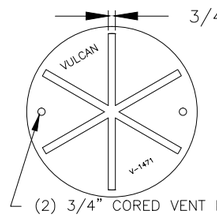


CLASS C BEDDING

PIPE BEDDING DETAILS
N.T.S.

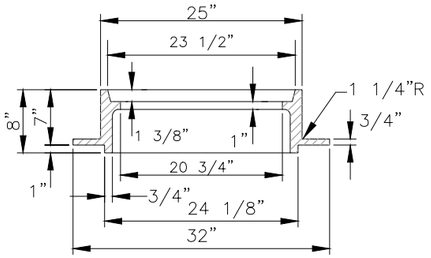


COVER SECTION



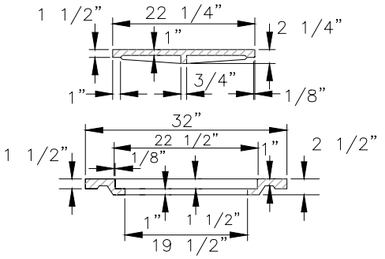
(2) 3/4" CORED VENT HOLES
COVER BACK

COVER FACE

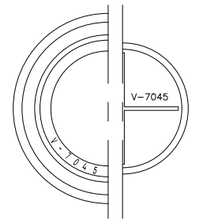


FRAME SECTION

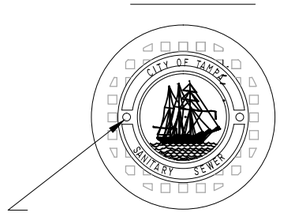
FOR MH'S OF SEWERS 24" OR LESS IN DIAMETER:
VULCAN FOUNDRY NO. V-1471,
U.S. FOUNDRY NO. 575-AT, OR EQUAL



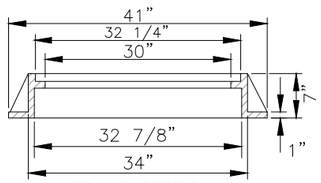
INNER & OUTER COVER SECTIONS



COVER BACKS



COVER FACES



FRAME SECTION

FOR MH'S OF SEWERS 27" OR GREATER IN DIAMETER:
VULCAN FOUNDRY NO. V-7045,
U.S. FOUNDRY NO. 230-AB-M, OR EQUAL

HEAVY DUTY CAST IRON MANHOLE FRAME & COVER DETAILS
N.T.S.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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CITY of TAMPA
Department of Transportation and Stormwater Services
Stormwater Engineering Division

UPPER PENINSULA STORMWATER IMPROVEMENTS
PHASE II (VASCONIA OUTFALL)
MISC. GRAVITY DETAILS

SHEET WW-129 OF WW-129

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