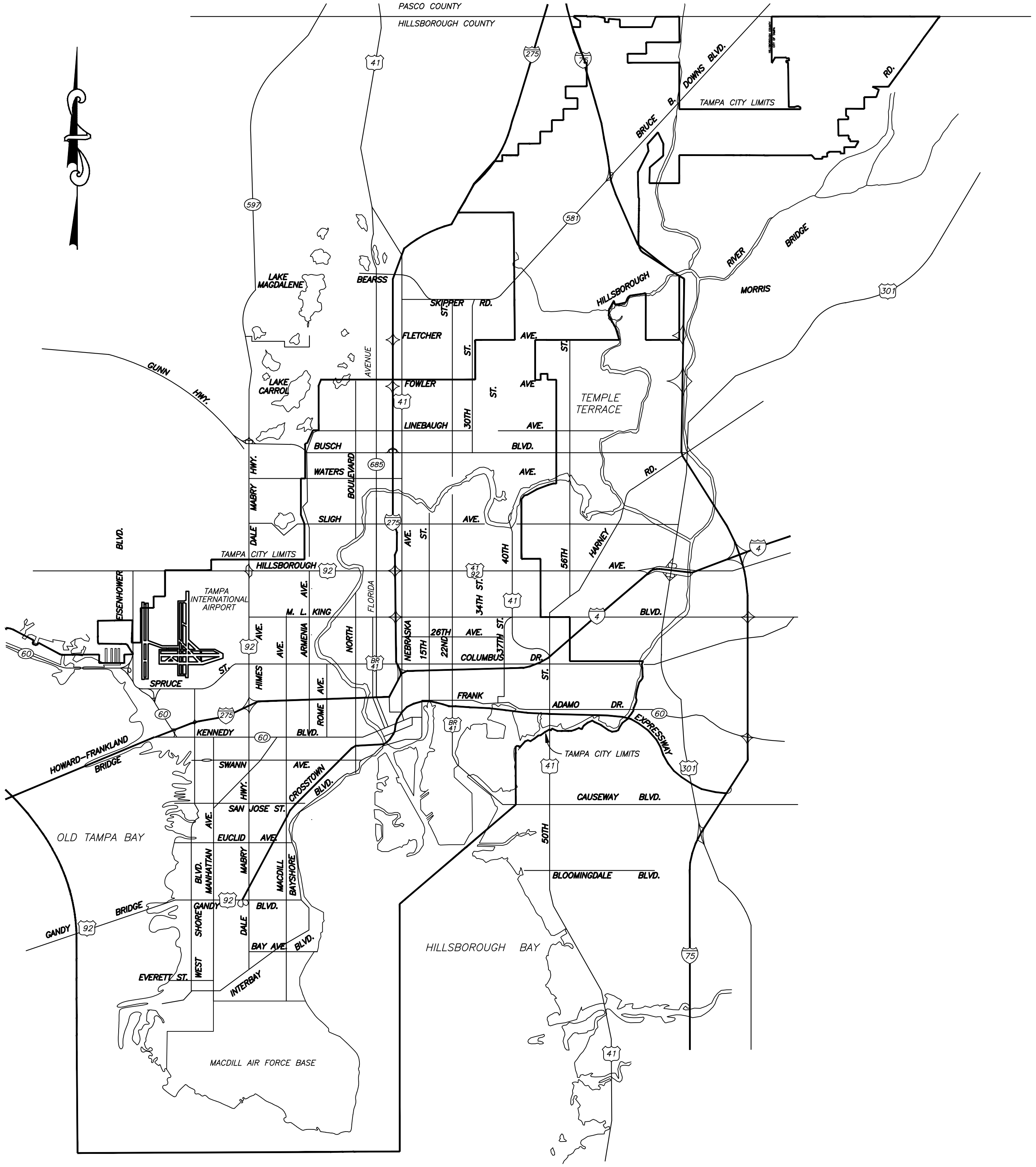
SW 2024-07



CITY of TAMPA

CITY OF TAMPA FLORIDA
MASCOTTE
ORGANIZED JULY 15 1887

MOBILITY DEPARTMENT
STORMWATER ENGINEERING DIVISION

PLANS FOR

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBIPSO ST.) - PHASE I
CONTRACT # 24-C-00039

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MATTHEW D. CAMPO, P.E. #53988 CAMPO ENGINEERING, INC. FBPR CERT. OF AUTHORIZATION NO.: 26726	DES: MDC/ASA DRN: ASA/JBA CKD: MDC DATE: 09/03/2024	No.	DATE	REVISIONS	CITY of TAMPA Mobility Department Stormwater Engineering Division	COVER SHEET	SHEET SH OF
		3					
		2					
		1					

SW 2024-07

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

EXISTING SEWER SERVICE LATERAL AND REPLACEMENT

GAS METER EXISTING ON PROPERTY

WATER METER TO BE REPLACED

REMOVE EXISTING TREE

FLOW ARROW

SLOPE ARROW 2.46%

PROPOSED SPOT ELEVATION 6.54

EXISTING SPOT ELEVATION 6.54

EX. WATER LINE UP 8" & LARGER

EX. WATER LINE UP TO 8" & SMALLER

GAS LINE

TELEPHONE CABLE

FENCE

OTHER FEATURES

PROPOSED MILLING AND RESURFACING

PROPOSED ASPHALT

PROPOSED POROUS CONCRETE

PROPOSED SILT FENCE EC EC

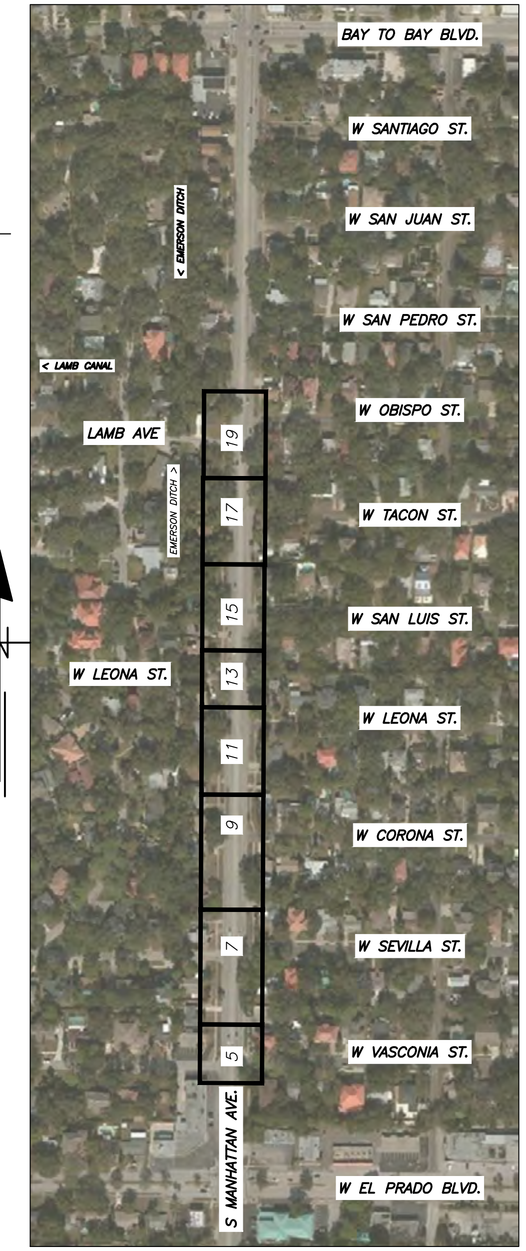
BUILDING LIMIT

SYMBOL LEGEND

BENCH	SHARED POLE
CLEANOUT (SANITARY)	SHRUB
BACK FLOW PREVENTER	SIGN (SINGLE POST)
BOLLARD	SPRINKLER HEAD
FIRE HYDRANT	STAMPED DISK
FLOOD LIGHT	TELEPHONE POLE
GAS VALVE COVER	TELEPHONE PEDISTAL
GUY ANCHOR	TREE
IRON ROD AND CAP	TREE (PALM)
JUNCTION BOX	TREE (PINE)
LIGHT POLE	TREE (OAK)
MAILBOX	TURN ARROW
MANHOLE (SANITARY)	WATER (VALVE)
MANHOLE (STORM)	WATER VALVE COVER
PEDESTRIAN SIGN, SIGNAL	WATER (METER)
PILING, POST	WELL
POWER POLE	WIRE PULL BOX
SANITARY VALVE COVER	

SHEET INDEX

SHT. NO.	DESCRIPTION
0	COVER SHEET
1	INDEX. LEGEND & KEY MAP
2–3	GENERAL NOTES
4	STORM OVERALL LAYOUT
5–20	S. MANHATTAN AVE. – STORMWATER PLAN AND PROFILES
21	STORMWATER DETAILS
22–30	DETAILED GRADING PLANS
31	TYPICAL SECTIONS
32–36	S. MANHATTAN AVE. – CROSS SECTIONS
37–38	S. MANHATTAN AVE. – INLET CROSS SECTIONS
39–47	TREE REMOVAL SHEETS
48–60	PAVEMENT RESTORATION/STRIPING AND SIGNAGE PLANS
58–61	MAINTENANCE OF TRAFFIC
62–74	WATER PLAN AND PROFILES
75–78	WATER DETAILS
79–93	WASTEWATER PLANS AND PROFILES
94–100	WASTEWATER DETAILS



KEY MAP

ABBREVIATIONS

ELEVATION	EL
INVERT ELEVATION	IE or INV
RIGHT of WAY	R/W
MANHOLE	MH
POLYVINYL CHLORIDE PIPE	PVC
VITRIFIED CLAY PIPE	VCP
ADVANCED DRAINAGE SYSTEM	ADS
MITERED END SECTION	M.E.S.
REINFORCED CONCRETE PIPE	RCP
EXISTING	EXIST
SQUARE FEET	SF
CONCRETE	CONC
PROPOSED	PROP
CITY OF TAMPA	COT
FLORIDA DEPARTMENT OF TRANSPORTATION	FDOT

CLASS IV	C–IV
DUCTILE IRON PIPE	DIP
REINFORCED CONCRETE PIPE	RCP
CONCRETE PIPE	CP
APPROXIMATE LOCATION	AL
FORCE MAIN	FM
SANITARY SEWER	SS
WATER MAIN	WM
STORM	ST
CORRUGATED METAL PIPE	CMP
ELLIPTICAL REINFORCED CONC PIPE	ERCP
PROPOSED	PROP
LINEAR FEET	LF
CONSTRUCT	CONST
TOP OF WALL	TOW
MATCH EXISTING GRADE	MEG
CENTER LINE	℄
CONCRETE BOX CULVERT	CBC
FIBER OBTIC CABLE	FOC
ASPHALT	ASPH
AVENUE	AVE.
BOULEVARD	BLVD.
BENCHMARK	B.M.
CURB & GUTTER	C & G
CHANI LINK FENCE	CLF
CONCRETE	CONC
DRIVEWAY	DWY
ELEVATION	EL
EDGE OF PAVEMENT	EOP
EXISTING	EXIST.
FINISH FLOOR ELEVATION	F.F.
IDENTIFICATION	ID
INVERT	INV
LICENSED BUSINESS	LB
LANELINE	LL
MAILBOX	MBX
MITERED END SECTION	MES
MANHOLE(STORM DRAINAGE)	MHD
MANHOLE (SANITARY SEWER)	MHS
MILES PER HOUR	MPH
REINFORCED CONCRETE PIPE	RCP
RIGHT OF WAY	R/W or ROW
STAMPED DISK	STMD
SIDEWALK	S/W
TOP OF BANK	TOB
TOE OF SLOPE	TOS
TRAVERSE POINT–REFERENCE POINT	TP–RP
WEST	(W)
EAST	(E)
NORTH	(N)
NORTHWEST	(NW)
SOUTH	(S)
SOUTHEAST	(SE)
WEST	(W)

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

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CITY of TAMPA
Mobility Department
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MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
INDEX. LEGEND & KEY MAP

SW 2024-07

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.
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.
11. ALL INLET GRATE SEATS SHALL BE GALVANIZED GRATE SEATS.

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. THE CONTRACTOR TO PROTECT ANY AND ALL EXISTING INFRASTRUCTURE THAT ARE TO REMAIN INCLUDING BUT NOT LIMITED TO STORMWATER, WATER, WASTEWATER, GAS, TELEPHONE, AND ELECTRICAL CONDUITS.
8. CONTRACTOR SHALL CONTACT SUNSHINE WITHIN 72 HOURS PRIOR TO ANY CONSTRUCTION.
9. 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.
10. 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.
11. 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.
12. THE CITY WILL ALLOW ONE TRENCH OPENING/CLOSING SEQUENCE FOR CONSTRUCTION OF STORMWATER, WATER, AND WASTEWATER. ADDITIONAL CLOSURES FOR RESTORATION AND OTHER UTILITY CONSTRUCTION MUST BE APPROVED BY CITY.
13. CONCRETE STRUCTURES AND JUNCTION BOXES MAY BE PRECAST OR CAST IN PLACE.
14. FOR BRICK/PAVER DRIVEWAYS THE INTENT IS TO STACK AND STORE ANY DISTURBED PAVERS, AND TO RESTORE ANY DAMAGED PAVERS AS CLOSE AS POSSIBLE.

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

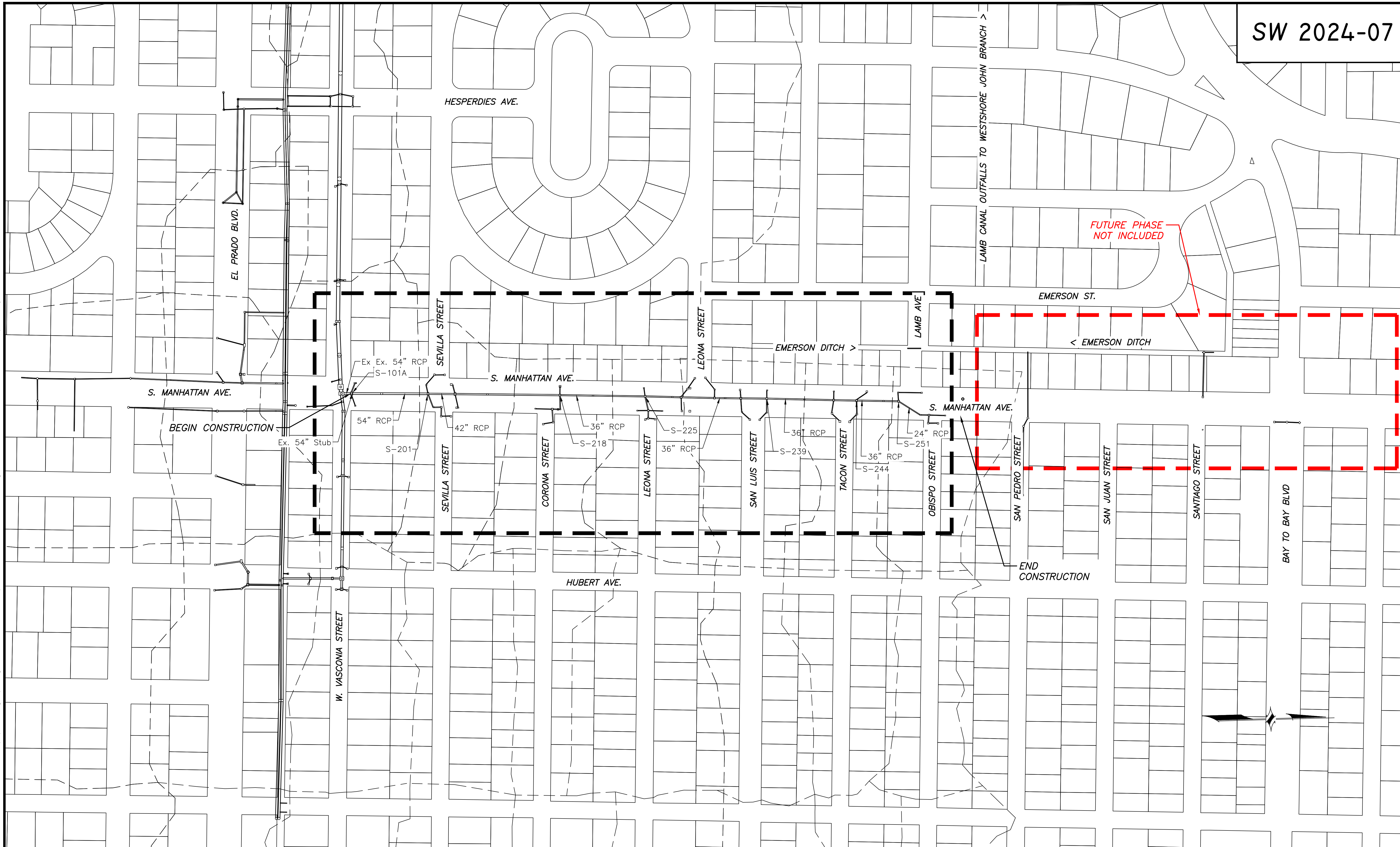
1. CONTRACTOR SHALL BE RESPONSIBLE FOR THE PREPARATION OF THE EROSION AND SEDIMENTATION CONTROL PLAN TO BE SUBMITTED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROECTION. THE PLAN SHALL INCLUDE THE FOLLOWING:
   A. NARRATIVE: A BRIEF DESCRIPTION OF THE OVERALL STRATEGY FOR EROSION AND SEDIMENT CONTROL.
   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.

PROPOSAL NOTES

1. THE DEMOLITION OF EXISTING INFRASTRUCTURE WITHIN THE LIMITS OF THE EXCAVATION TRENCHED AREAS ARE TO BE INCLUDED IN THE UNIT COST OF THE ASSOCIATED PROPOSED CONSTRUCTION OF STORM, WATER, AND SEWER PIPING AND STRUCTURES. THE DEMOLITION OF EXISTING INFRASTRUCTURE LOCATED OUTSIDE OF THE TRENCHED LIMITS AS SHOWN ON THE PLANS SHALL BE INCLUDED IN THE SEPARATE DEMOLITION CONTRACT ITEMS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PULLING RIGHT-OF-WAY USE PERMITS FOR CITY OF TAMPA AND HILLSBOROUGH COUNTY.
3. 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.
4. CONTRACTOR RESPONSIBLE FOR SUPPLYING ALL MOT PLANS.
5. 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. CONTRACTOR SHALL PERFORM RESTORATION OF ANY FEATURES REMOVED.
6. 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.
7. 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.



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

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
STORM OVERALL LAYOUT

SHEET 4 OF 100

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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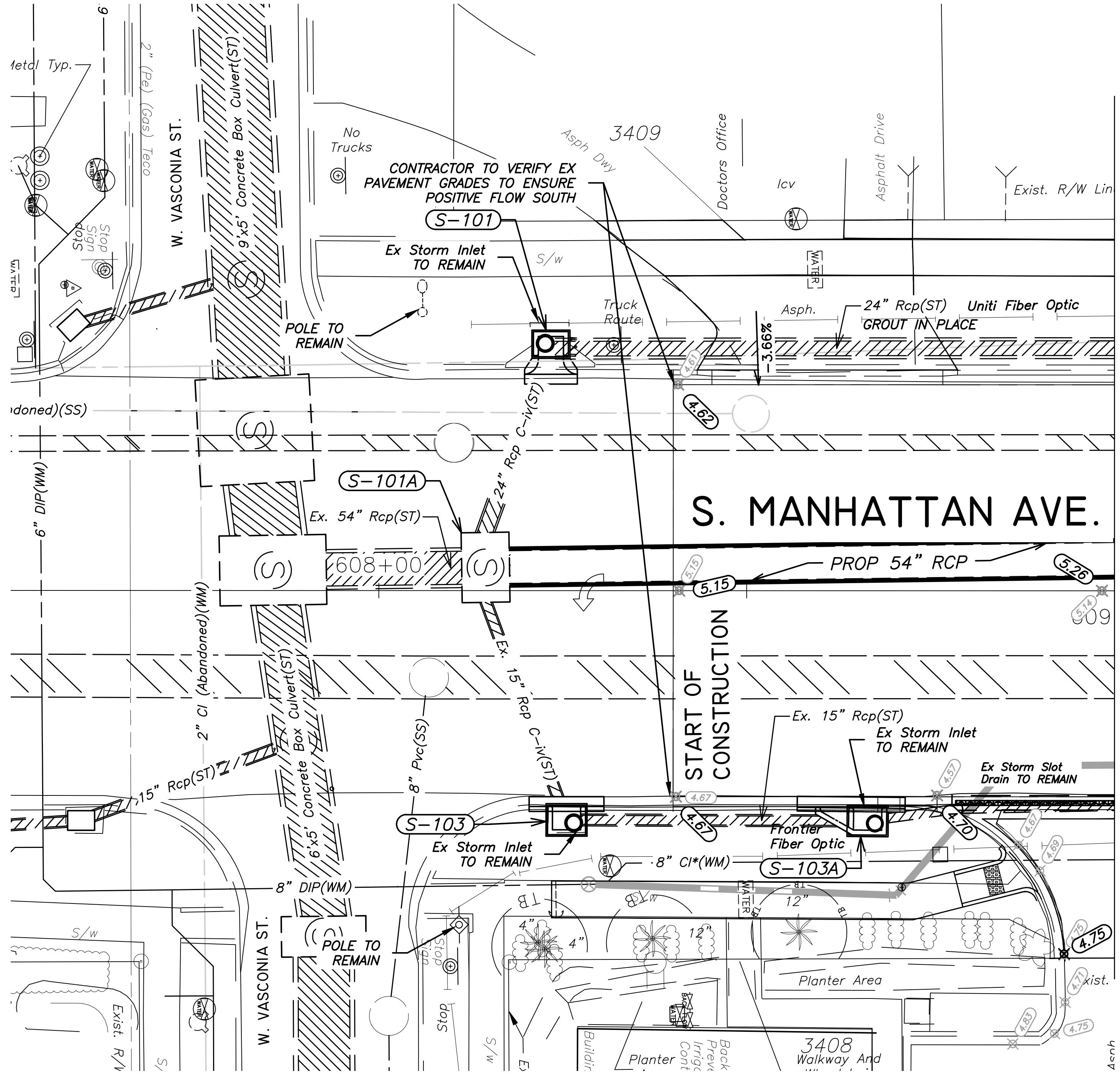

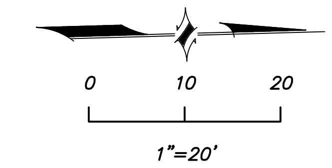

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

S-101A
STA. 608+14.51, -3.15' L
S. MANHATTAN AVE.
8'X5' EX. FDOT J-BOX W/MH RISER PER INDEX 200
TOP SLAB EL: 3.74
INV IN: PROP 54" RCP (N) = -2.93
INV IN: 24" RCP C-IV (W) = 0.99
INV IN: EX. 15" RCP C-IV (E) = 1.36
INV OUT: EX. 54" RCP (S) = -2.93

S-101
STA. 608+23.59, -33.29' L
S. MANHATTAN AVE.
EX. COT TYPE 1 CURB INLET MODIFIED
TOP SLAB EL: 5.16
INV IN: 24" RCP (N) = 1.58
INV OUT: 24" RCP C-IV (E) = 1.38

S-103
STA. 608+25.53, 31.26' R
S. MANHATTAN AVE.
EX. COT TYPE 1 CURB INLET
TOP SLAB EL: 5.11
INV OUT: EX. 15" RCP C-IV (W) = 1.73

S-103A
STA. 608+66.45, 31.29' R
S. MANHATTAN AVE.
EX. COT TYPE 2 CURB INLET
TOP SLAB EL: 5.03
INV IN: EX. 15" RCP (S) = 1.90
INV IN: EX. 15" CMP (N) = 1.90

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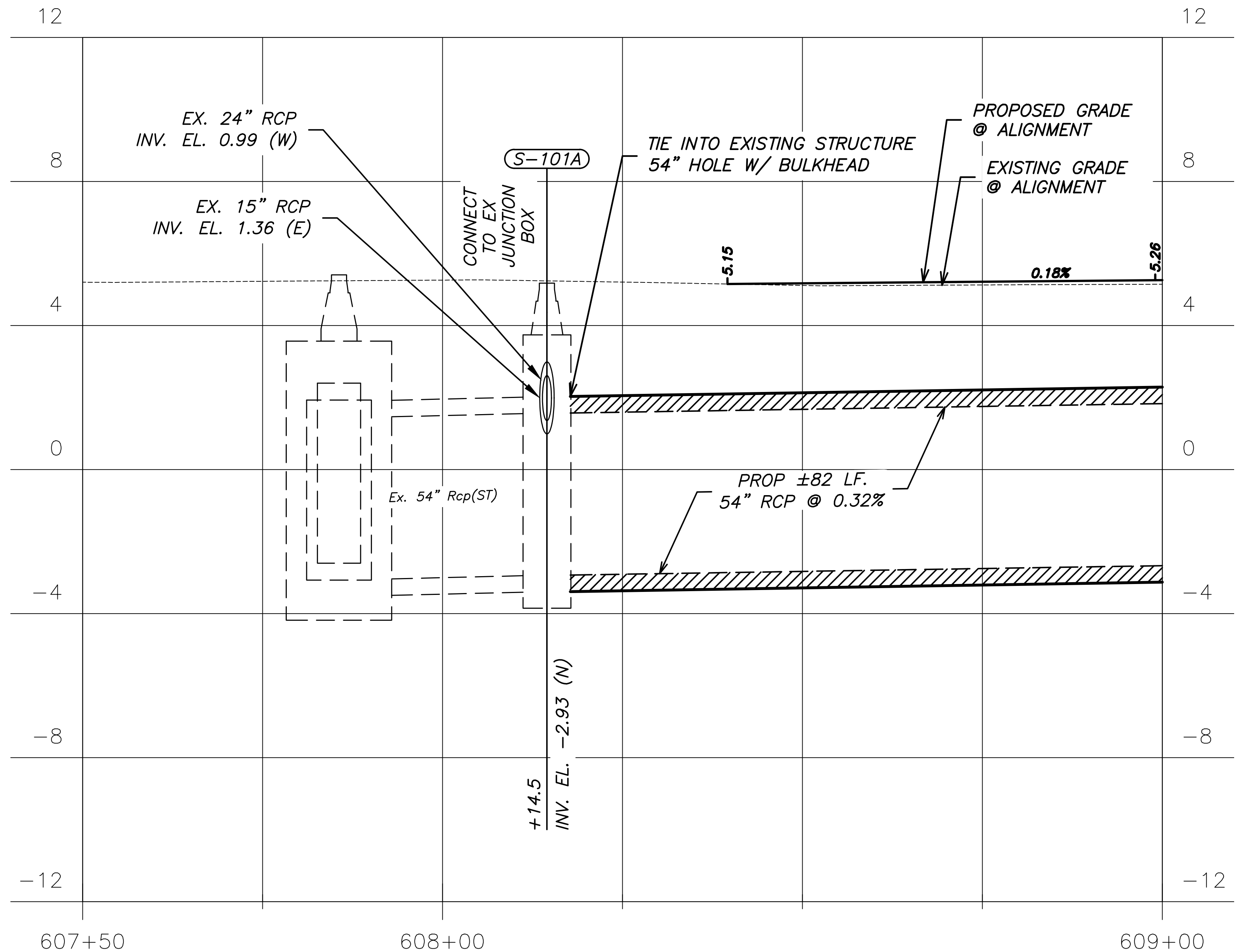
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN



S. MANHATTAN AVE. PROFILE

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

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PROFILE

ROADWAY CONSTRUCTION NOTE:

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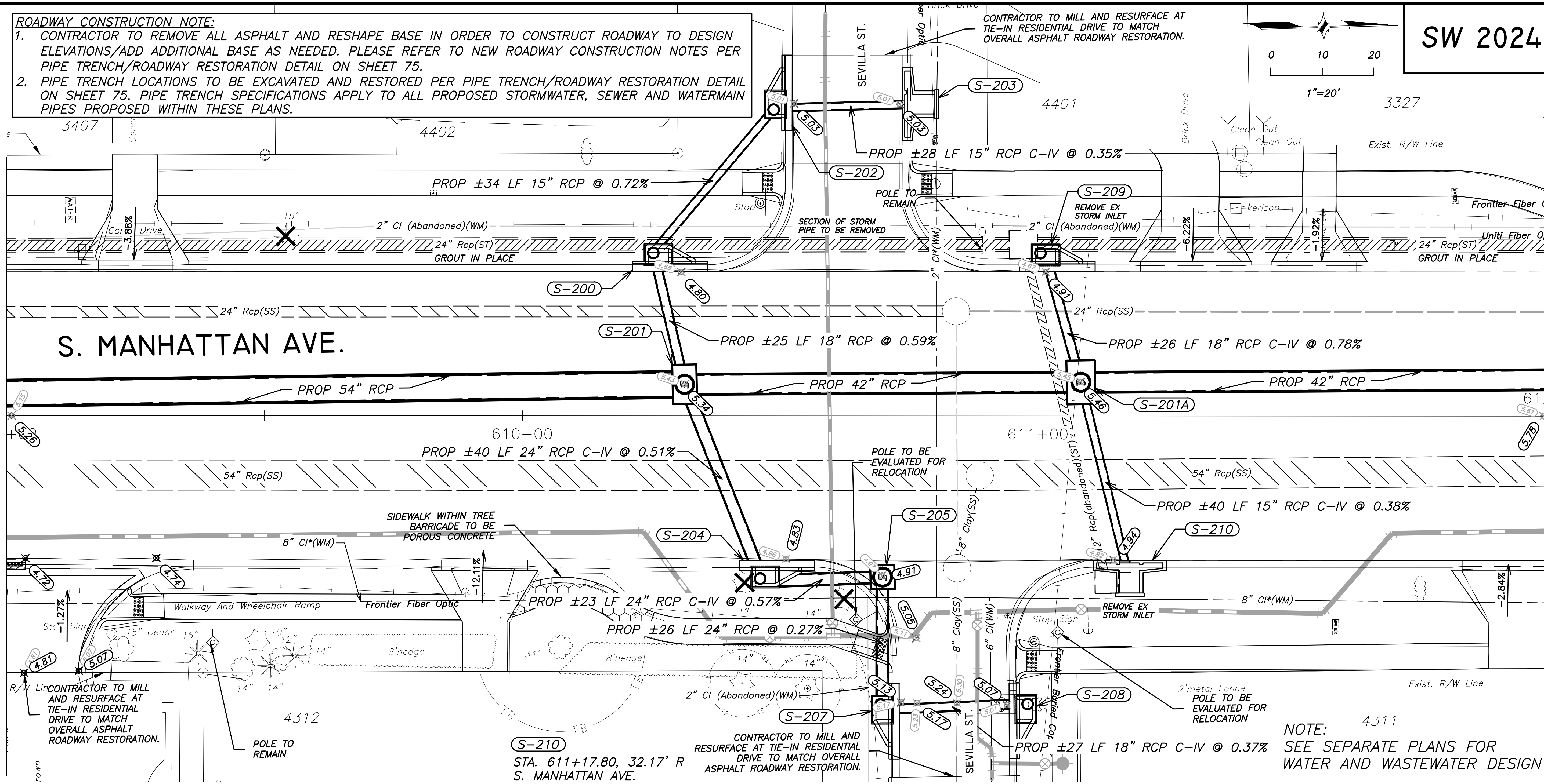

S-200
STA. 610+26.39, -31.25' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.32
INV IN: 15" RCP (NW) = 1.40
INV OUT: 18" RCP (E) = 0.65

S-202
STA. 610+49.05, -60.42' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.42
INV IN: 15" RCP C-IV (N) = 1.65
INV OUT: 15" RCP (SE) = 1.65

S-201
STA. 610+31.47, -6.11' L
S. MANHATTAN AVE.
PROP 4'X7' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.39
INV IN: 18" RCP (W) = 0.50
INV IN: 24" RCP C-IV (E) = 0.30
INV IN: 42" RCP (N) = -2.25
INV OUT: 54" RCP (S) = -2.25

S-210
STA. 611+17.80, 32.17' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 5.43
INV OUT: 15" RCP C-IV (W) = 1.75

S-201A
STA. 611+08.31, -6.54' L
S. MANHATTAN AVE.
PROP 7'X4' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.61
INV IN: 42" RCP (N) = -2.01
INV IN: 18" RCP C-IV (W) = 1.40
INV IN: 15" RCP C-IV (E) = 1.60
INV OUT: 42" RCP (S) = -2.01

S-203
STA. 610+77.81, -60.51' L
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 5.46
INV OUT: 15" RCP C-IV (S) = 1.75

S-204
STA. 610+47.13, 31.25' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.38
INV IN: 24" RCP C-IV (N) = 0.50
INV OUT: 24" RCP C-IV (W) = 0.50

S-205
STA. 610+69.86, 31.26' R
S. MANHATTAN AVE.
PROP 4'X4' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.38
INV IN: 24" RCP (E) = 0.63
INV OUT: 24" RCP C-IV (S) = 0.63

S-208
STA. 610+97.68, 56.89' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.44
INV OUT: 18" RCP C-IV (S) = 1.60

S-207
STA. 610+69.84, 56.99' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.54
INV IN: 18" RCP C-IV (N) = 1.50
INV OUT: 24" RCP (W) = 0.70

S-209
STA. 611+01.47, -31.25' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.37
INV OUT: 18" RCP C-IV (E) = 1.60

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Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN

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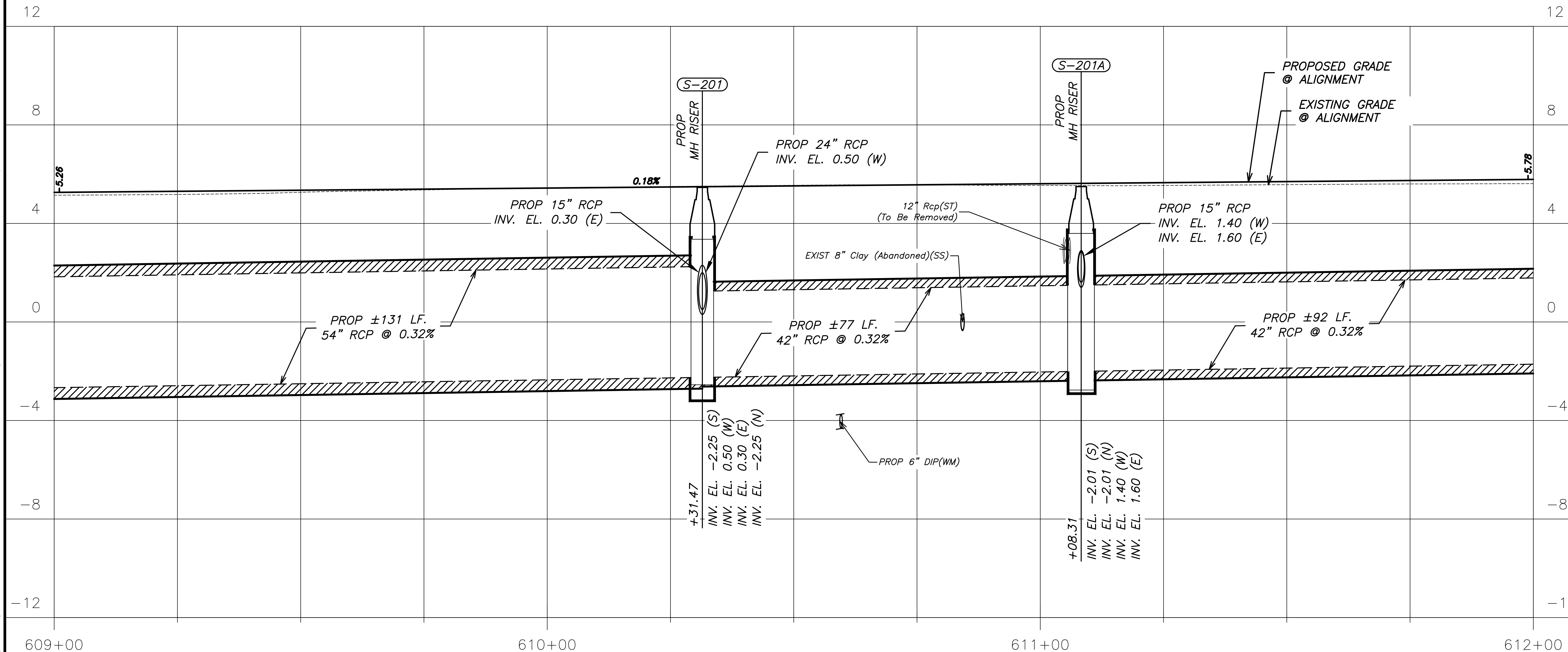

S. MANHATTAN AVE. PROFILE

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

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MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PROFILE

SHEET 8 OF 100

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(S-218)
STA. 614+05.91, -8.22' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.34
INV IN: 15" RCP (W) = 1.40
INV IN: 36" RCP (N) = -1.06
INV OUT: 24" RCP (E) = 0.45
INV OUT: 42" RCP (S) = -1.06

ROADWAY CONSTRUCTION NOTE:

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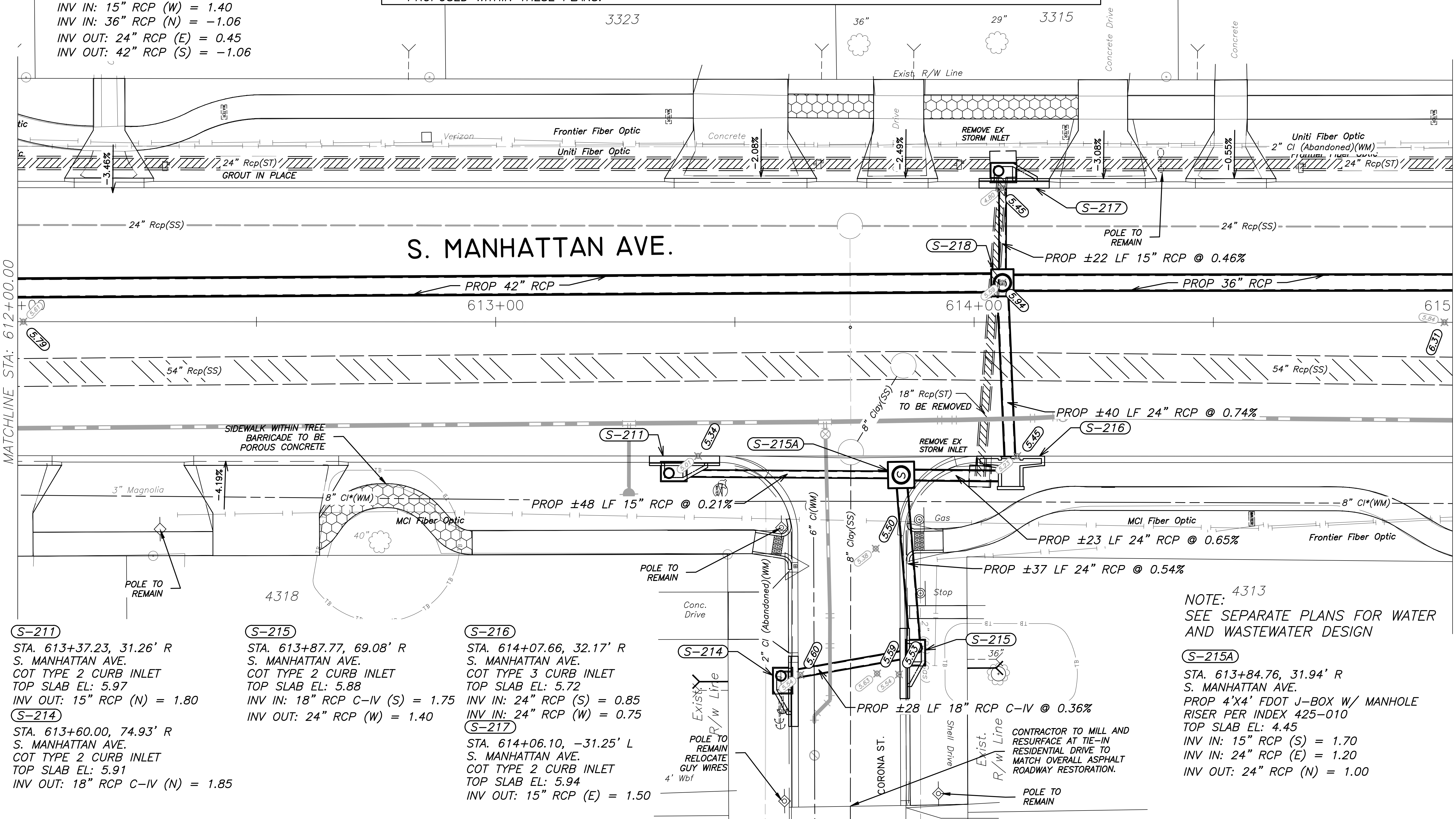

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

(S-211)
STA. 613+37.23, 31.26' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.97
INV OUT: 15" RCP (N) = 1.80

(S-214)
STA. 613+60.00, 74.93' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.91
INV OUT: 18" RCP C-IV (N) = 1.85

(S-215)
STA. 613+87.77, 69.08' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.88
INV IN: 18" RCP C-IV (S) = 1.75
INV OUT: 24" RCP (W) = 1.40

(S-216)
STA. 614+07.66, 32.17' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 5.72
INV IN: 24" RCP (S) = 0.85
INV IN: 24" RCP (W) = 0.75

(S-217)
STA. 614+06.10, -31.25' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.94
INV OUT: 15" RCP (E) = 1.50

(S-215A)
STA. 613+84.76, 31.94' R
S. MANHATTAN AVE.
PROP 4'X4' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 4.45
INV IN: 15" RCP (S) = 1.70
INV IN: 24" RCP (E) = 1.20
INV OUT: 24" RCP (N) = 1.00

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2			5		
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN

SHEET 9 OF 100

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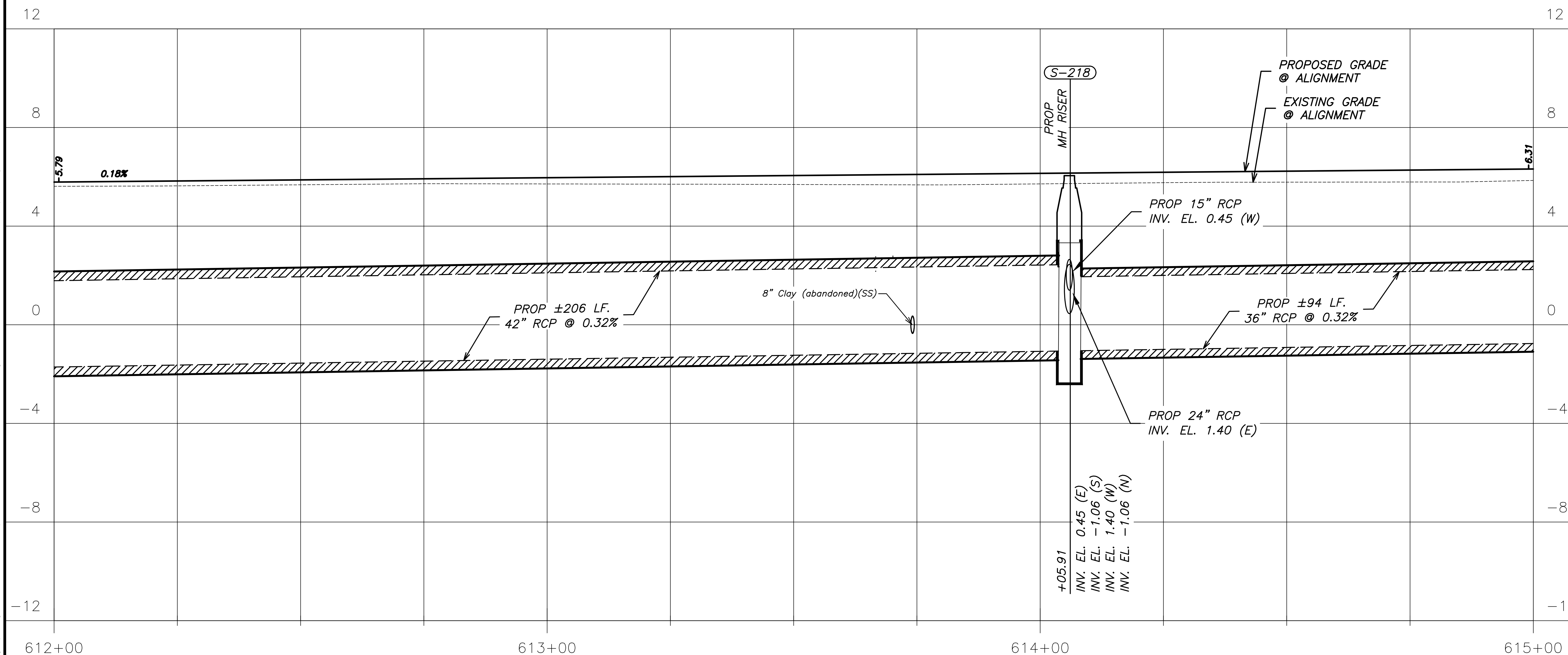

S. MANHATTAN AVE. PROFILE

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

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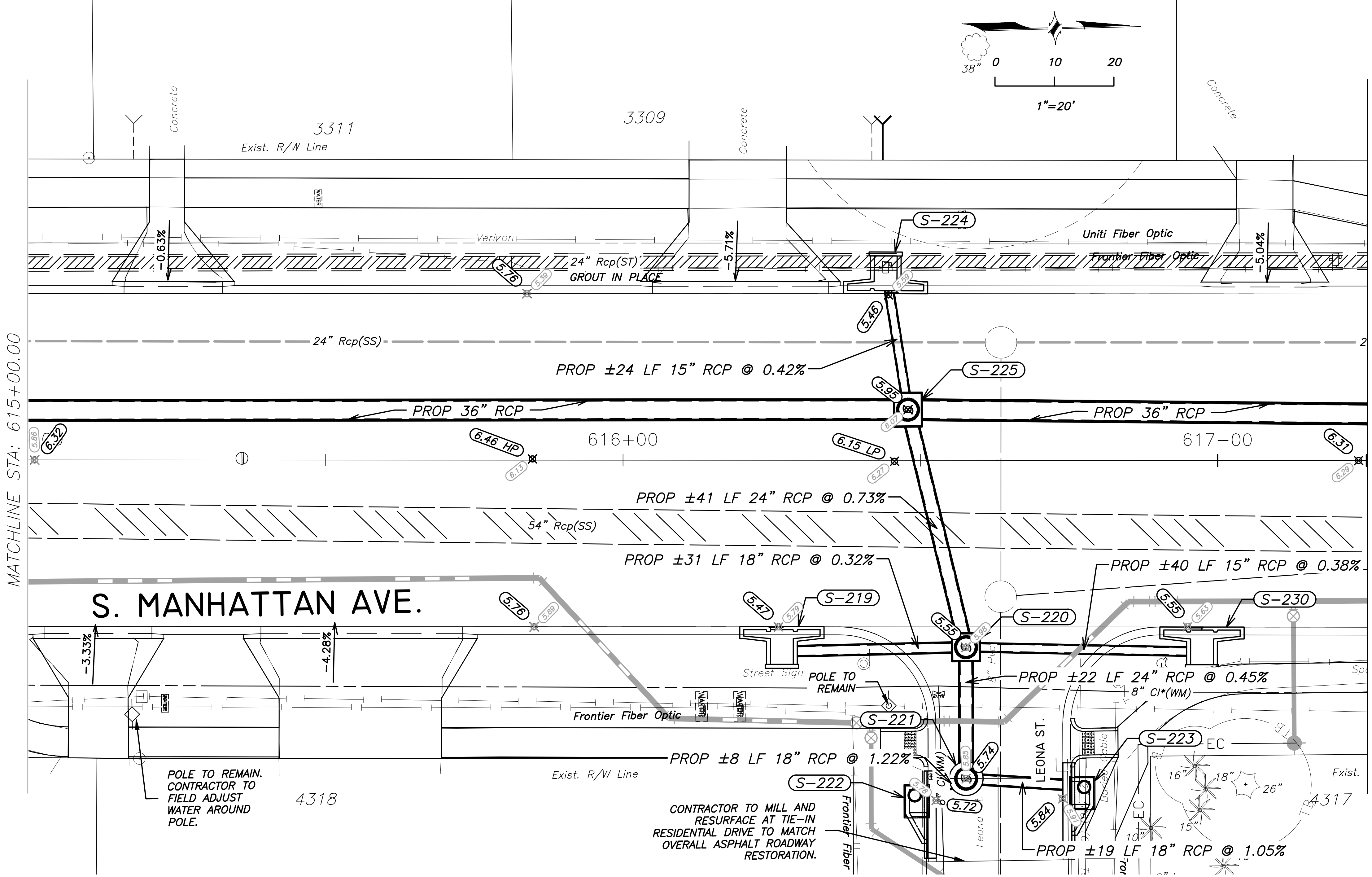
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER
PROFILE

SHEET 10 OF 100

SW 2024-07



ROADWAY CONSTRUCTION NOTE:
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NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

S-219
STA. 616+26.73, 32.15' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.51
INV OUT: 18" RCP (N) = 1.60

S-220
STA. 616+57.69, 31.41' R
S. MANHATTAN AVE.
PROP 4'X4' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.71
INV IN: 15" RCP (N) = 1.50
INV IN: 24" RCP (E) = 0.70
INV IN: 18" RCP (S) = 1.50
INV OUT: 24" RCP (W) = 0.70

S-221
STA. 616+57.74, 53.51' R
S. MANHATTAN AVE.
PROP 5' DIA FDOT P-ROUND STRUC. W/ MANHOLE PER INDEX 425-010
TOP SLAB EL: 4.05
INV IN: 18" RCP (S) = 1.30
INV IN: 18" RCP (N) = 1.30
INV OUT: 24" RCP (W) = 0.80

S-222
STA. 616+49.43, 57.31' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.15
INV OUT: 18" RCP (N) = 1.40

S-223
STA. 616+77.26, 55.92' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.25
INV OUT: 18" RCP (S) = 1.50

S-224
STA. 616+44.16, -32.19' L
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.38
INV OUT: 15" RCP (E) = 1.60

S-230
STA. 616+97.39, 32.17' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.34
INV OUT: 15" RCP (S) = 1.65

S-225
STA. 616+47.93, -8.51' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.54
INV IN: 24" RCP (E) = 0.40
INV IN: 15" RCP (W) = 1.50
INV IN: 36" RCP (N) = -0.29
INV OUT: 36" RCP (S) = -0.29

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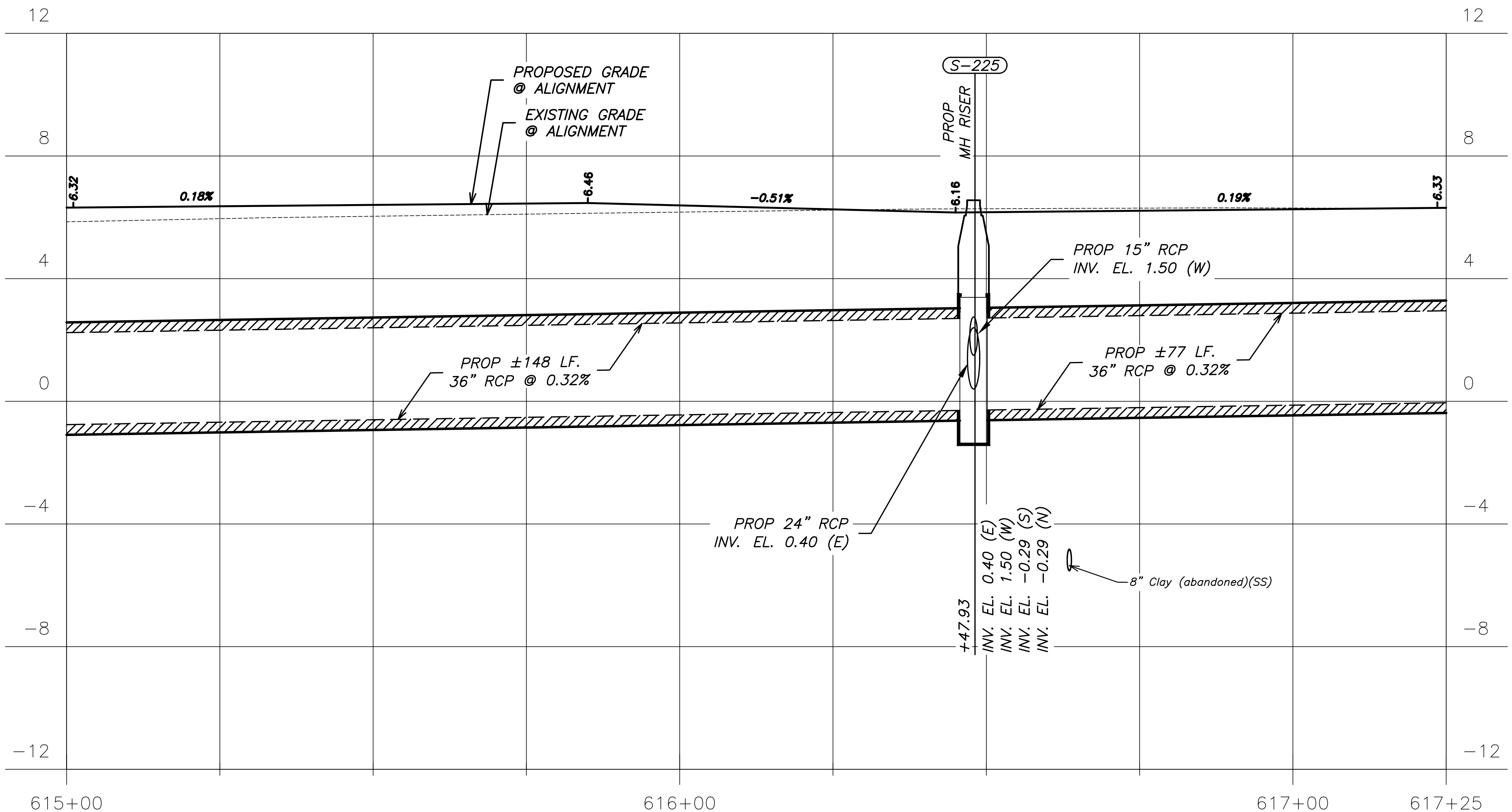
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN

SHEET 11 OF 100

SW 2024-07



S. MANHATTAN AVE. PROFILE

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

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MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER
PROFILE

SHEET 12 OF 100

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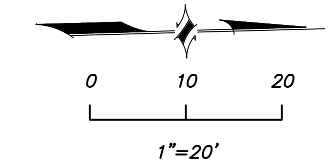

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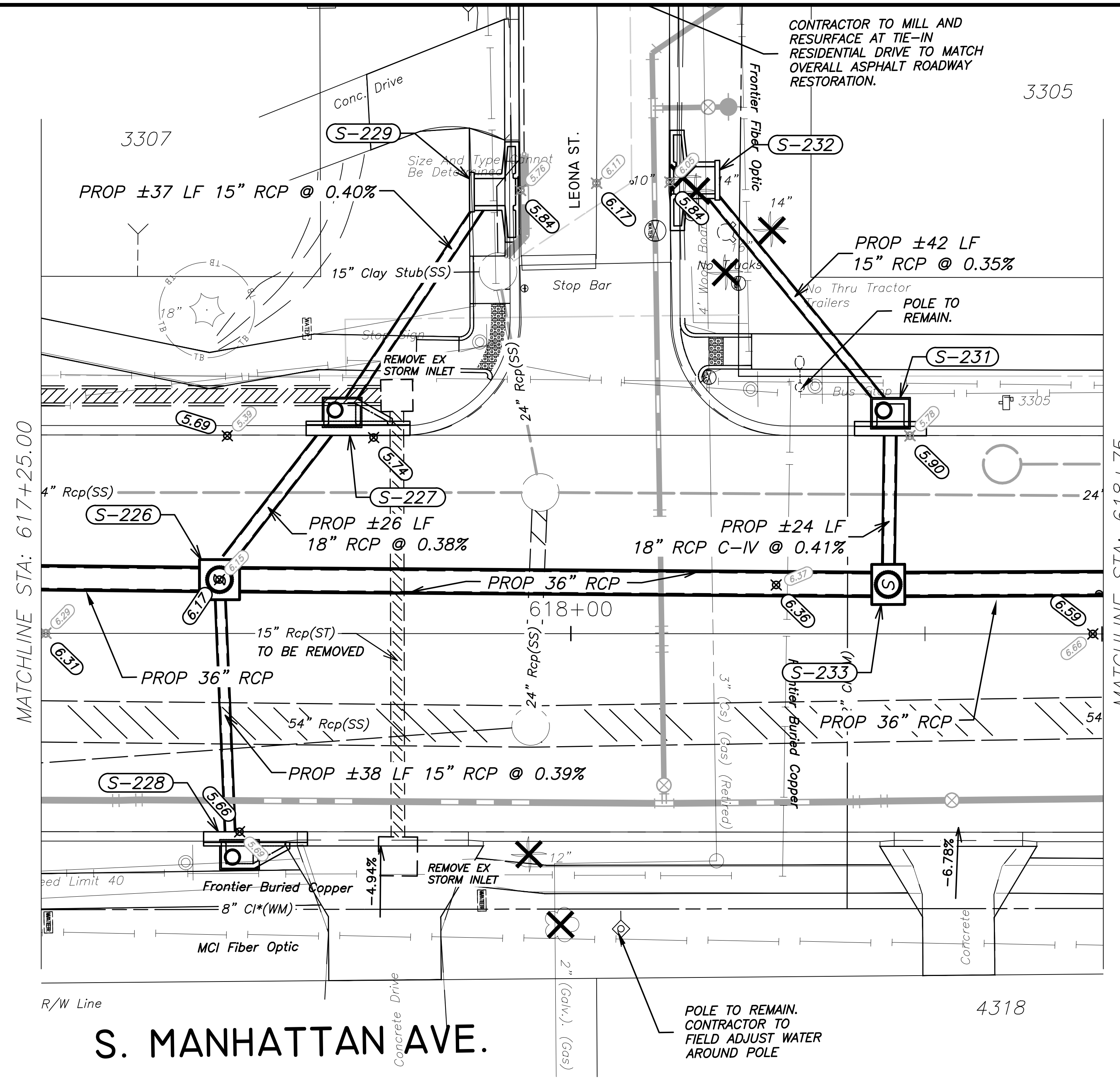

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

S-226
STA. 617+50.38, -7.59' L
S. MANHATTAN AVE.
PROP 5'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 3.87
INV IN: 36" RCP (S) = 0.03
INV IN: 36" RCP (N) = 0.03
INV IN: 18" RCP (NW) = 1.60
INV IN: 15" RCP (E) = 1.85

S-227
STA. 617+67.68, -31.21' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 5.93
INV IN: 15" RCP (NW) = 1.70
INV OUT: 18" RCP (SE) = 1.70

S-228
STA. 617+53.23, 31.25' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.15
INV OUT: 15" RCP (W) = 2.00

S-229
STA. 617+88.48, -62.33' L
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.21
INV OUT: 15" RCP (SE) = 1.85

S-231
STA. 618+45.11, -31.22' L
S. MANHATTAN AVE.
COT TYPE 1 CURB INLET
TOP SLAB EL: 6.19
INV IN: 15" RCP (SW) = 2.25
INV OUT: 18" RCP C-IV (E) = 2.25

S-232
STA. 618+18.14, -64.01' L
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.34
INV OUT: 15" RCP (NE) = 2.40

S-233
STA. 618+44.81, -6.97' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 4.36
INV IN: 18" RCP C-IV (W) = 2.15
INV IN: 36" RCP (N) = 0.33
INV OUT: 36" RCP (S) = 0.33

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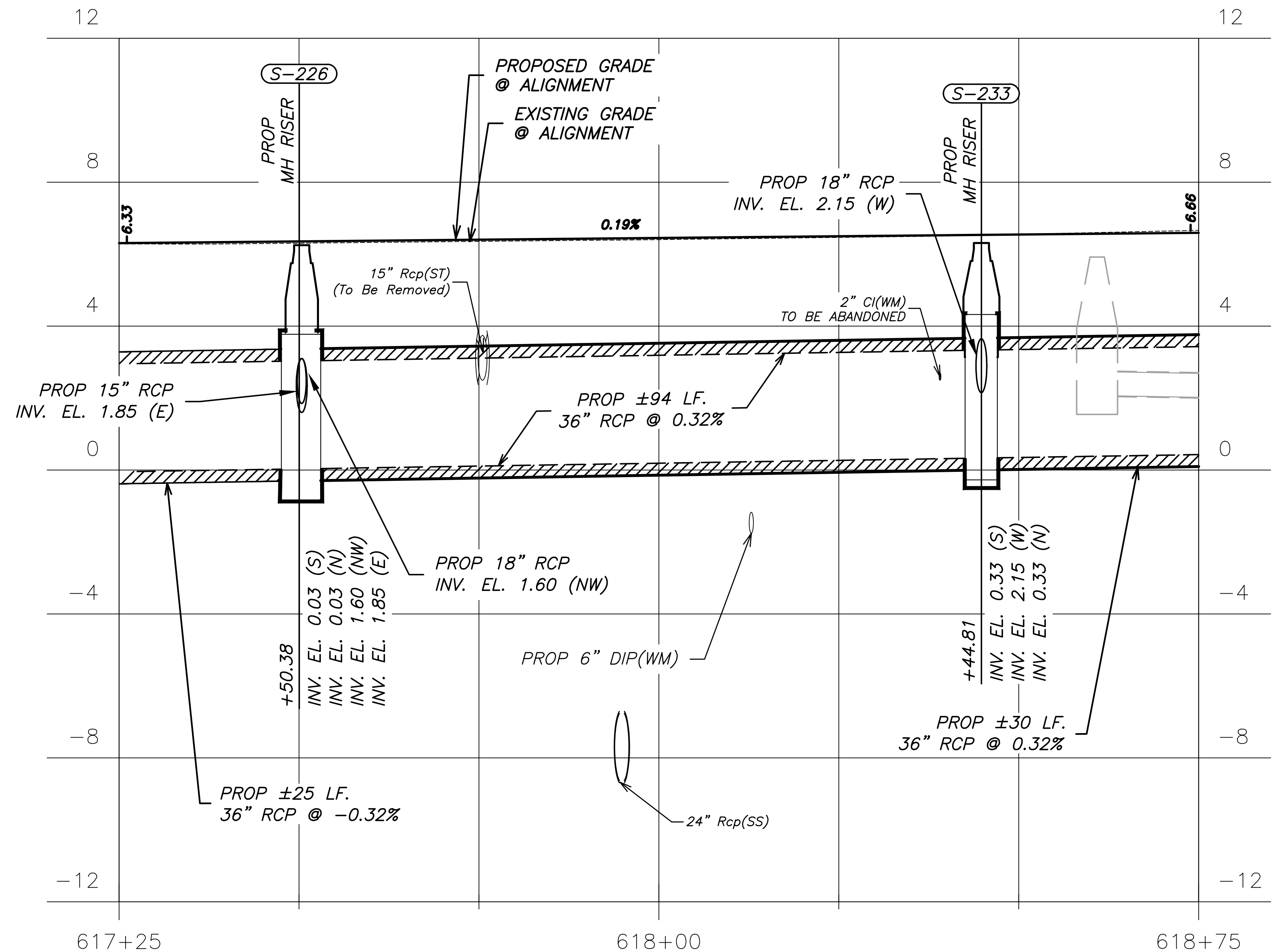
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN

SW 2024-07



S. MANHATTAN AVE. PROFILE

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

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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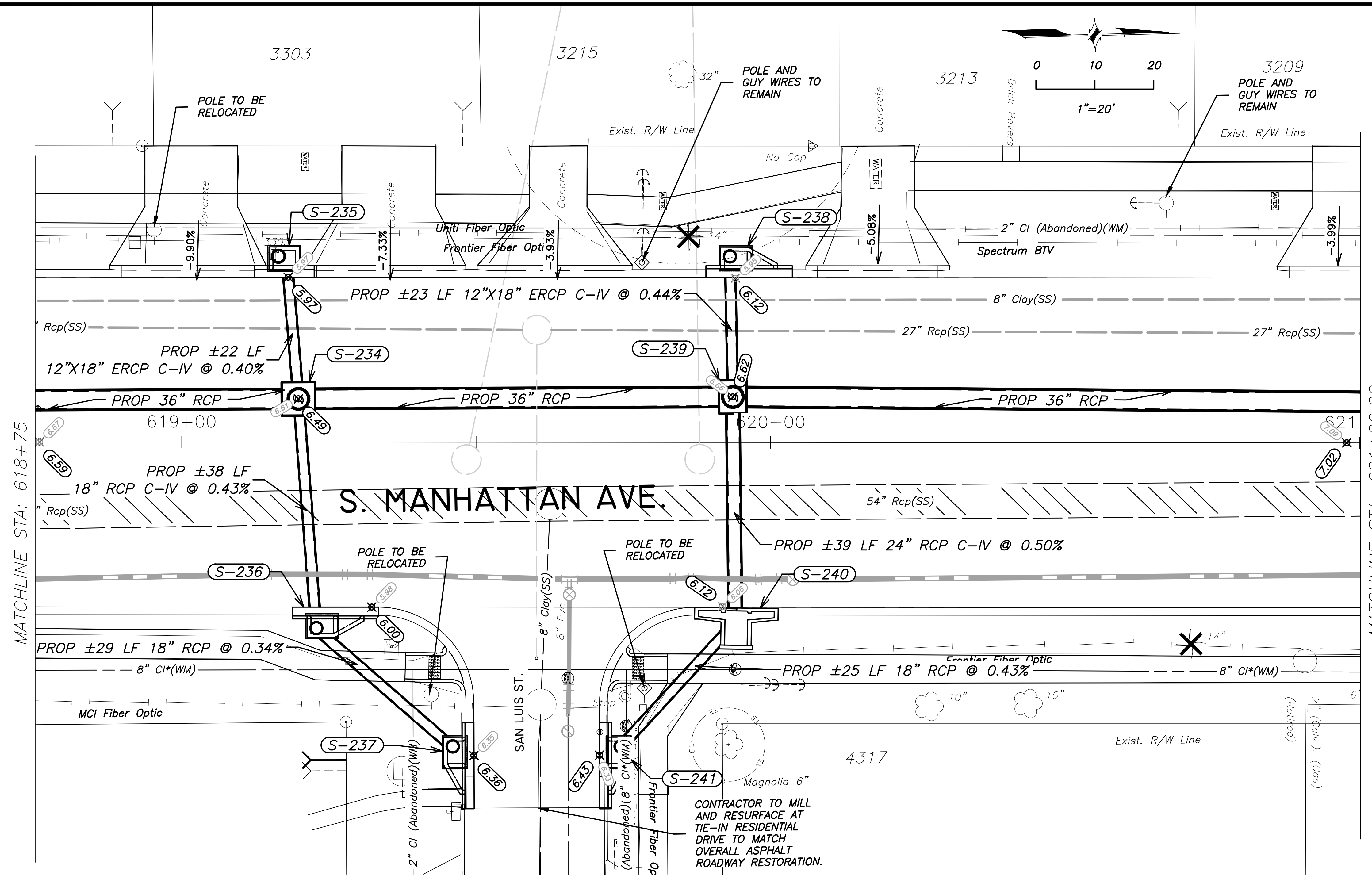
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER
PROFILE

SHEET 14 OF 100

SW 2024-07



ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75. PIPE TRENCH SPECIFICATIONS APPLY TO ALL PROPOSED STORMWATER, SEWER AND WATERMAIN PIPES PROPOSED WITHIN THESE PLANS.

NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

S-234
STA. 619+19.81, -7.35' L
S. MANHATTAN AVE.
PROP 5'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 5.49
INV IN: 36" RCP (N) = 0.57
INV IN: 18" RCP C-IV (E) = 2.38
INV IN: 12"X18" ERCP C-IV (W) = 3.78
INV OUT: 36" RCP (S) = 0.57

S-235
STA. 619+17.39, -31.26' L
S. MANHATTAN AVE.
COT TYPE 1 CURB INLET
TOP SLAB EL: 6.23
INV OUT: 12"X18" ERCP C-IV (E) = 3.87

S-236
STA. 619+23.89, 31.26' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.38
INV IN: 18" RCP (NE) = 2.55
INV OUT: 18" RCP C-IV (W) = 2.55

S-237
STA. 619+46.41, 52.67' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.74
INV OUT: 18" RCP (SW) = 2.65

S-238
STA. 619+94.10, -31.25' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.34
INV OUT: 12"X18" ERCP C-IV (E) = 4.00

S-239
STA. 619+93.60, -7.72' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 5.61
INV IN: 24" RCP C-IV (E) = 1.95
INV IN: 12"X18" ERCP C-IV (W) = 3.90
INV IN: 36" RCP (N) = 0.81
INV OUT: 36" RCP (S) = 0.81

S-240
STA. 619+94.17, 32.28' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.57
INV IN: 18" RCP (SE) = 2.14
INV OUT: 24" RCP C-IV (W) = 2.14

S-241
STA. 619+74.24, 52.65' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.85
INV OUT: 18" RCP (NW) = 2.25

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN

SHEET 15 OF 100

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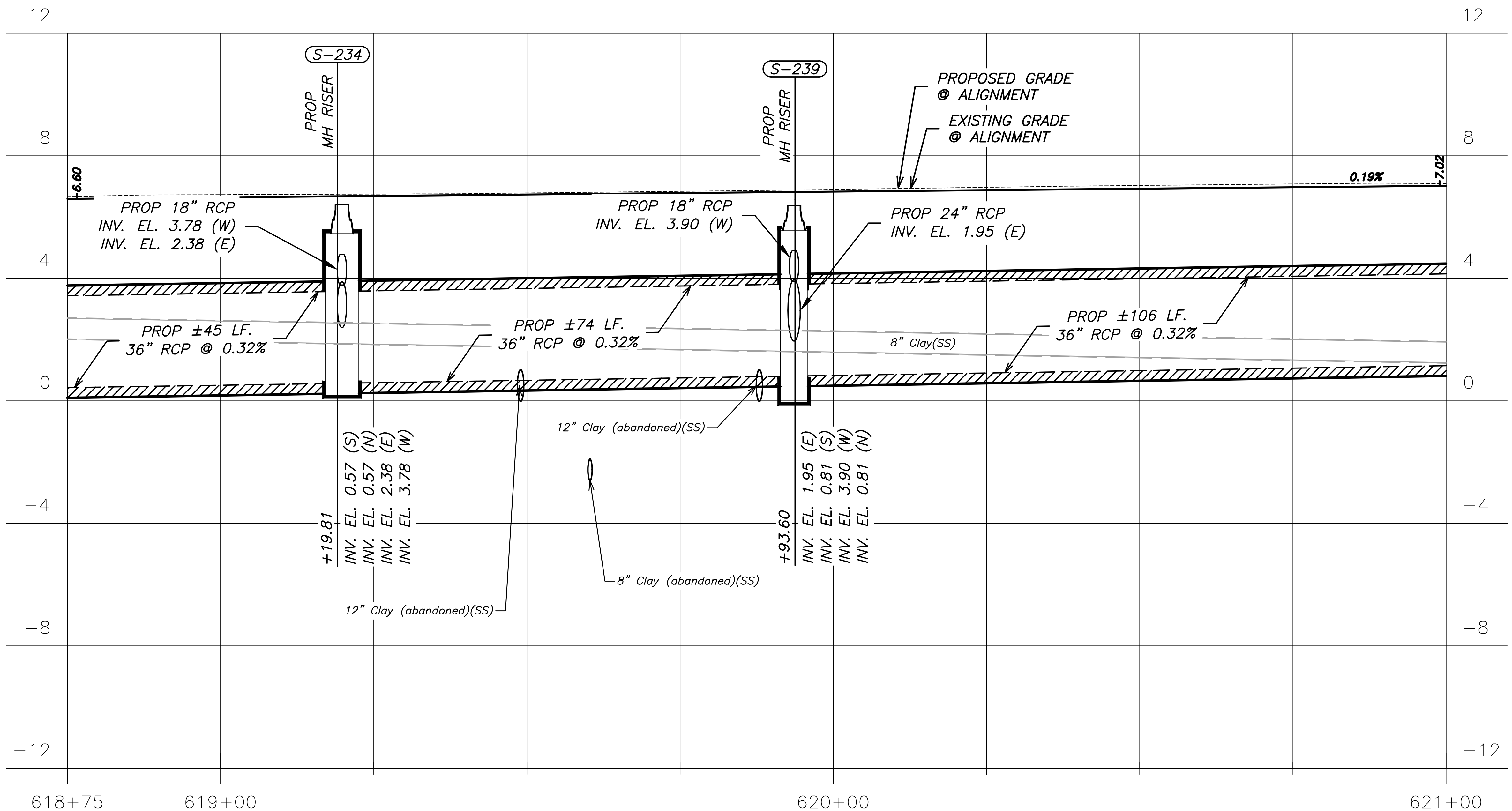

S. MANHATTAN AVE. PROFILE

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

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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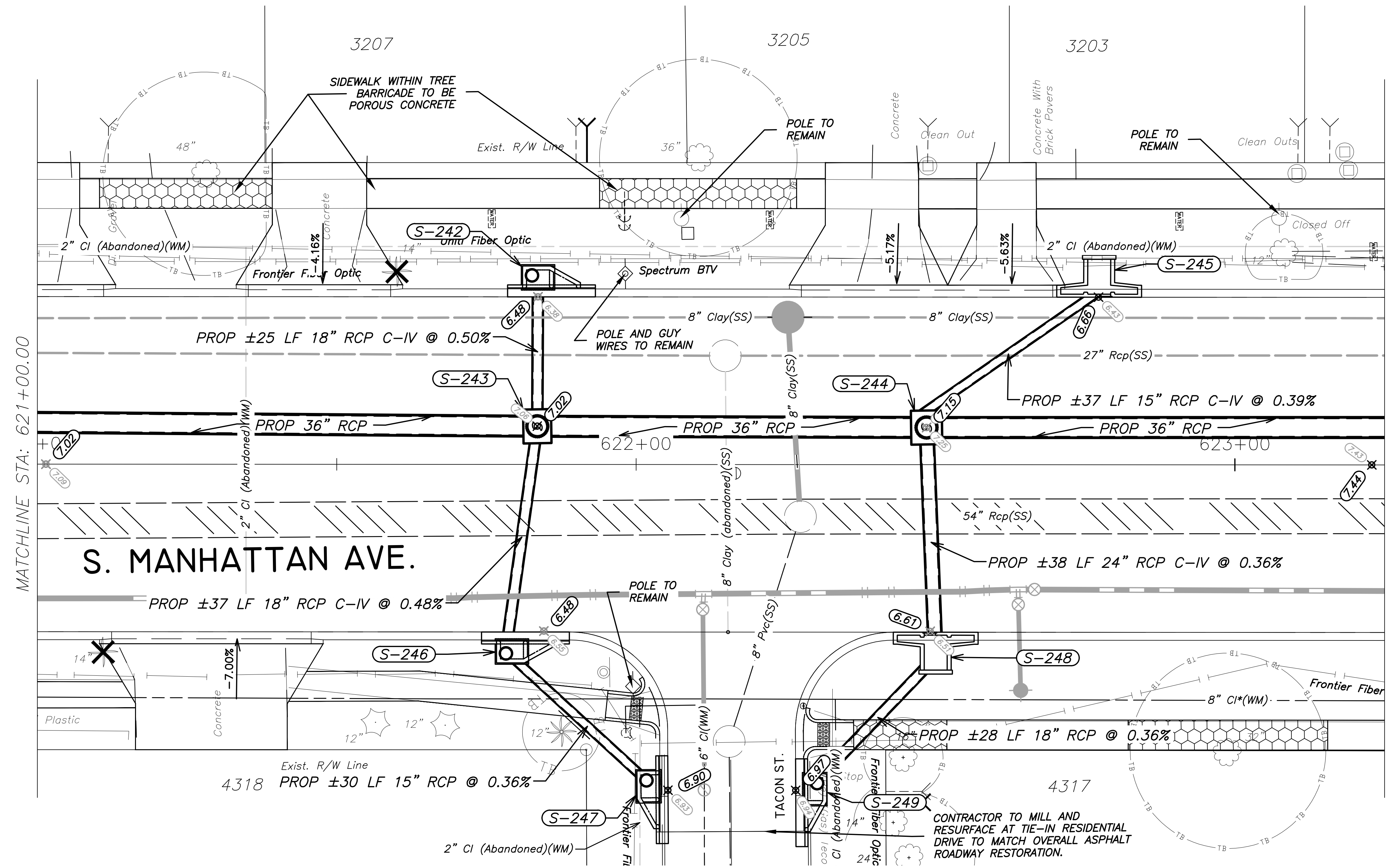
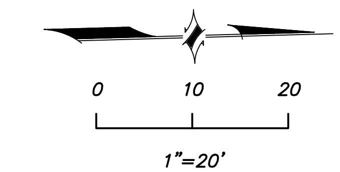
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PROFILE

SHEET 16 OF 100

SW 2024-07





ROADWAY CONSTRUCTION NOTE:

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NOTE:
SEE SEPARATE PLANS FOR WATER AND WASTEWATER DESIGN

S-242
STA. 621+83.60, -31.25' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.76
INV OUT: 18" RCP C-IV (E) = 3.28

S-243
STA. 621+83.49, -6.37' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 5.36
INV IN: 18" RCP C-IV (W) = 3.15
INV IN: 18" RCP C-IV (E) = 2.86
INV IN: 36" RCP (N) = 1.41
INV OUT: 36" RCP (S) = 1.41

S-244
STA. 622+48.50, -6.21' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 5.71
INV IN: 15" RCP C-IV (NW) = 3.29
INV IN: 24" RCP C-IV (E) = 2.96
INV IN: 36" RCP (N) = 1.62
INV OUT: 36" RCP (S) = 1.62

S-245
STA. 622+77.32, -32.17' L
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.99
INV OUT: 15" RCP C-IV (SE) = 3.43

S-246
STA. 621+79.28, 31.26' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 6.80
INV IN: 15" RCP (NE) = 3.04
INV OUT: 18" RCP C-IV (W) = 3.04

S-247
STA. 622+02.10, 53.78' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.26
INV OUT: 15" RCP (SW) = 3.15

S-248
STA. 622+50.05, 32.17' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 6.88
INV IN: 18" RCP (SE) = 3.10
INV OUT: 24" RCP C-IV (W) = 3.10

S-249
STA. 622+29.94, 54.24' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.36
INV OUT: 18" RCP (NW) = 3.20

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN

SHEET 17 OF 100

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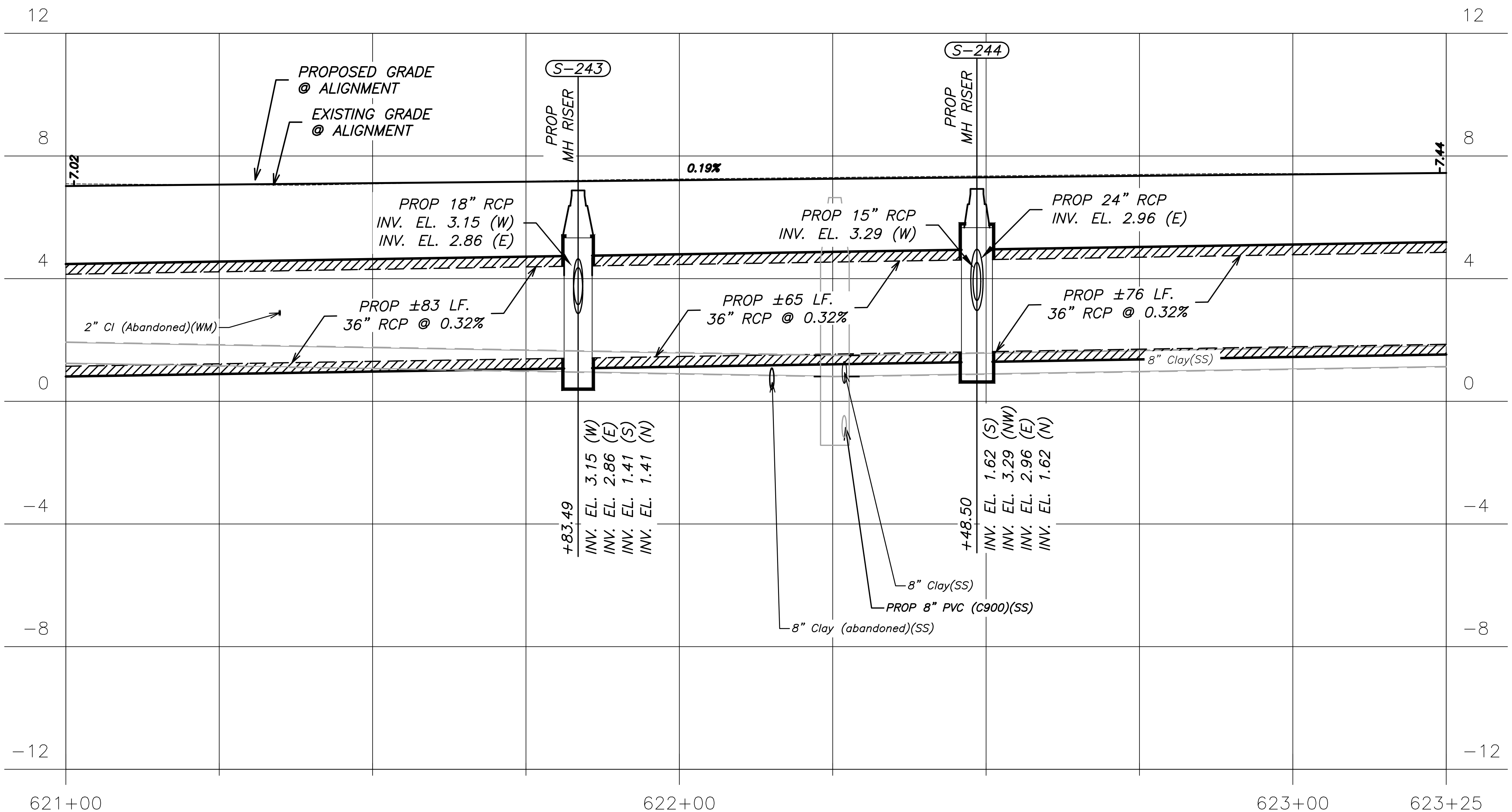

S. MANHATTAN AVE. PROFILE

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

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PROFILE

SHEET 18 OF 100

SW 2024-07

ROADWAY CONSTRUCTION NOTE:

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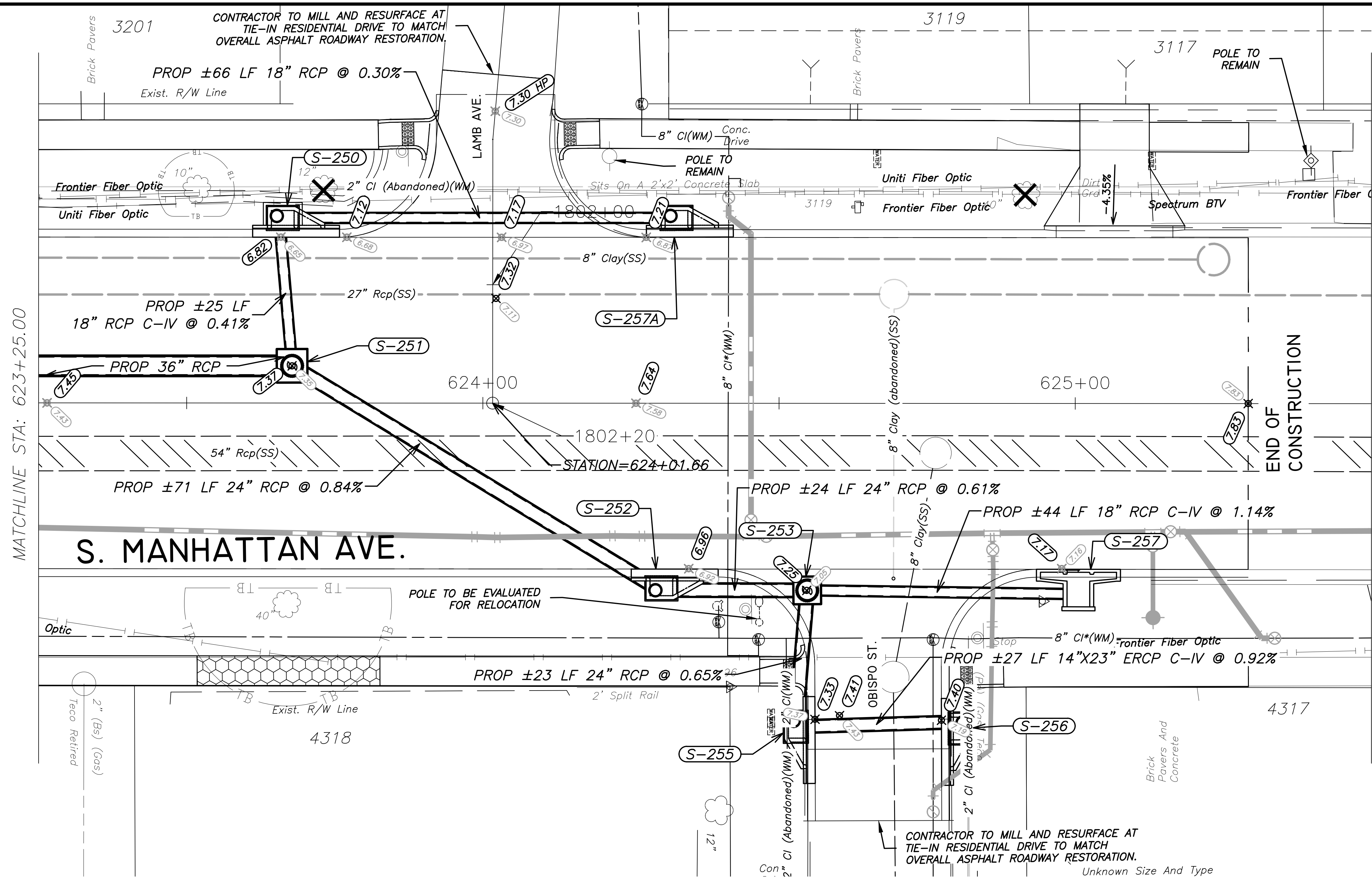

NOTE:
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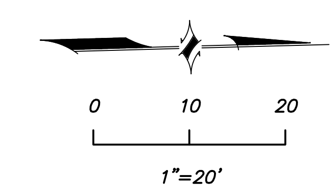

S-250
STA. 623+66.21, -31.25' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.30
INV IN: 18" RCP (N) = 3.40
INV OUT: 18" RCP C-IV (E) = 3.40

S-251
STA. 623+67.79, -6.28' L
S. MANHATTAN AVE.
PROP 4'X5' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 5.83
INV IN: 24" RCP (NE) = 2.00
INV IN: 18" RCP C-IV (W) = 3.30
INV OUT: 36" RCP (S) = 2.00

S-252
STA. 624+30.15, 31.26' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.47
INV IN: 24" RCP (N) = 2.60
INV OUT: 24" RCP (SW) = 2.60

S-253
STA. 624+54.77, 31.59' R
S. MANHATTAN AVE.
PROP 4'X4' FDOT J-BOX W/ MANHOLE RISER PER INDEX 425-010
TOP SLAB EL: 6.27
INV IN: 18" RCP C-IV (N) = 3.90
INV IN: 24" RCP (E) = 2.75
INV OUT: 24" RCP (S) = 2.75

S-255
STA. 624+52.86, 54.62' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.71
INV IN: 14"X23" ERCP C-IV (N) = 4.62
INV OUT: 24" RCP (W) = 2.90

S-256
STA. 624+80.70, 54.90' R
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.81
INV OUT: 14"X23" ERCP C-IV (S) = 4.87

S-257
STA. 625+00.56, 32.17' R
S. MANHATTAN AVE.
COT TYPE 3 CURB INLET
TOP SLAB EL: 7.56
INV OUT: 18" RCP C-IV (S) = 4.40

S-257A
STA. 624+32.67, -31.29' L
S. MANHATTAN AVE.
COT TYPE 2 CURB INLET
TOP SLAB EL: 7.43
INV OUT: 18" RCP (S) = 3.60

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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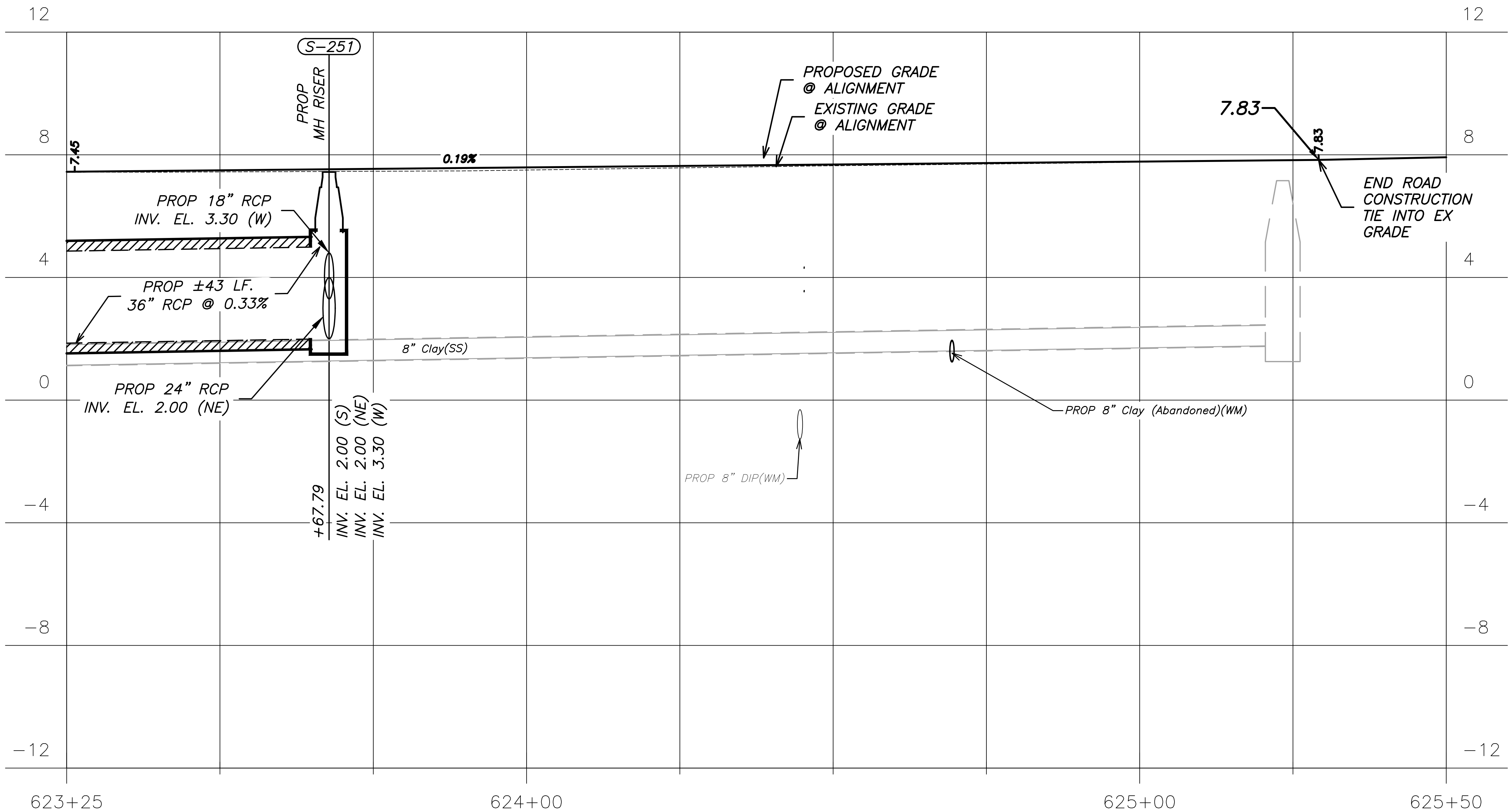
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PLAN



S. MANHATTAN AVE. PROFILE

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

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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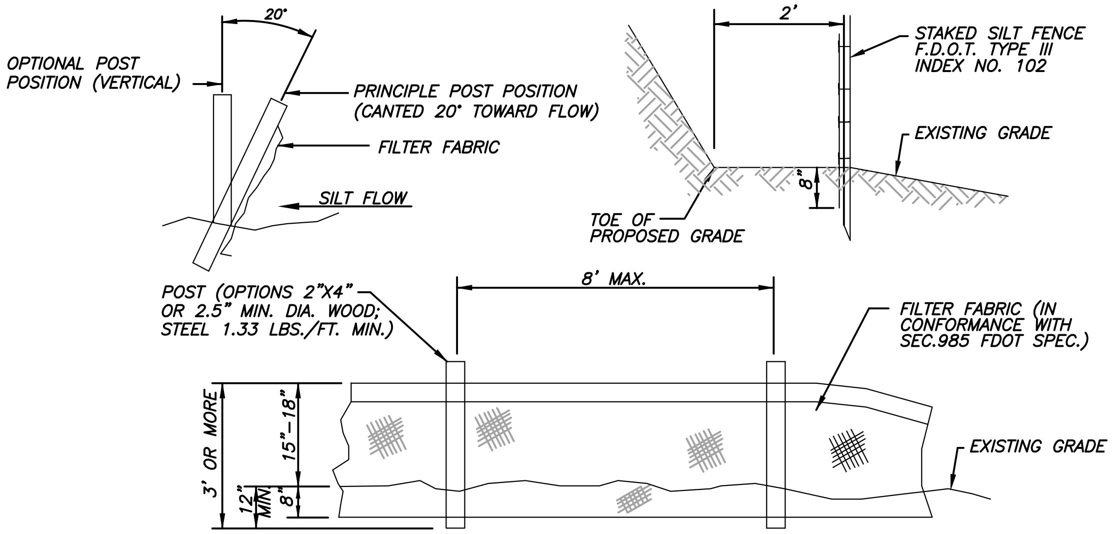
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - STORMWATER PROFILE



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
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TURBIDITY BARRIER DETAILS

SW 2024-07

ROADWAY CONSTRUCTION NOTE:

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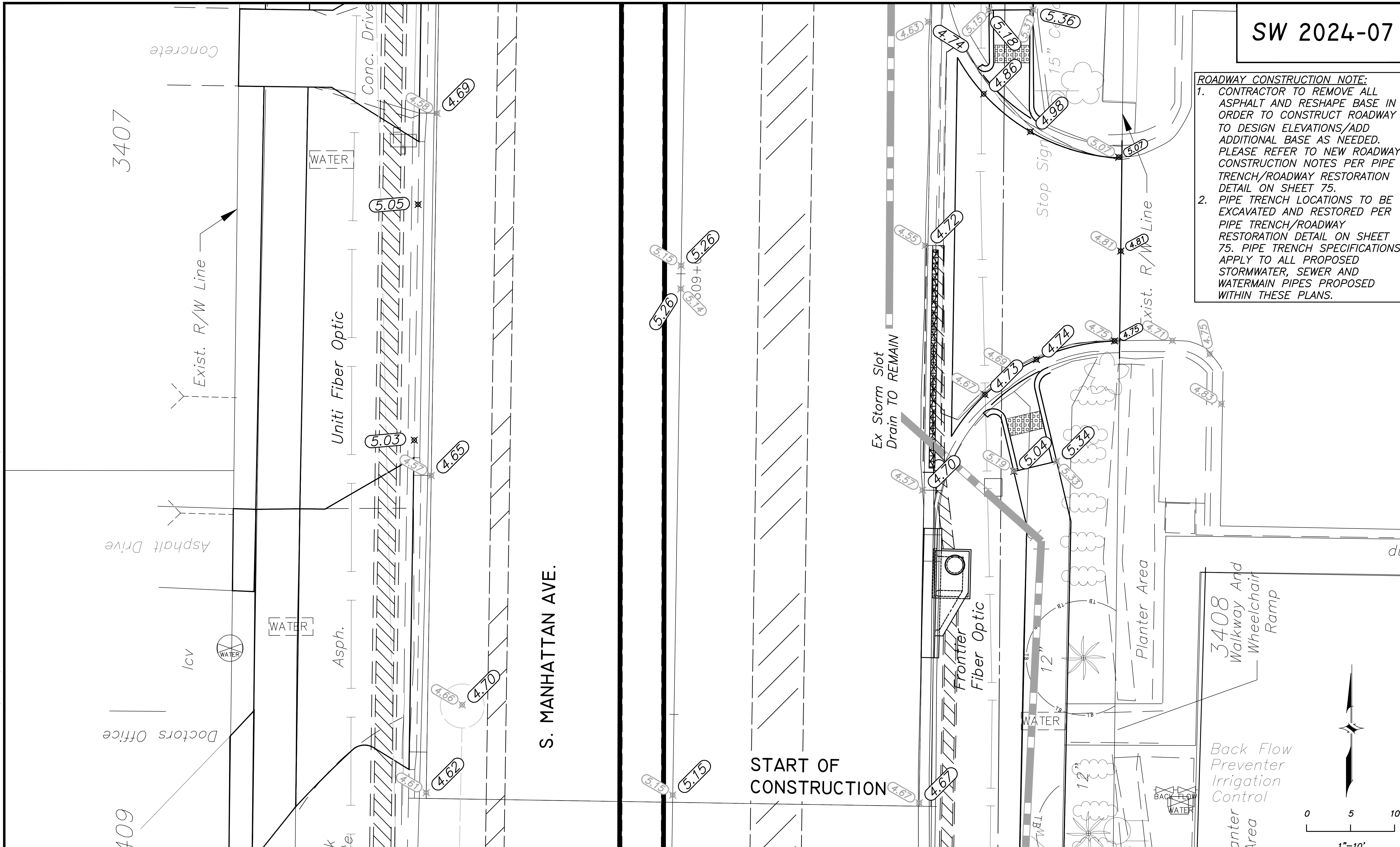

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN VASCONIA

SHEET 22 OF 100

SW 2024-07

ROADWAY CONSTRUCTION NOTE:

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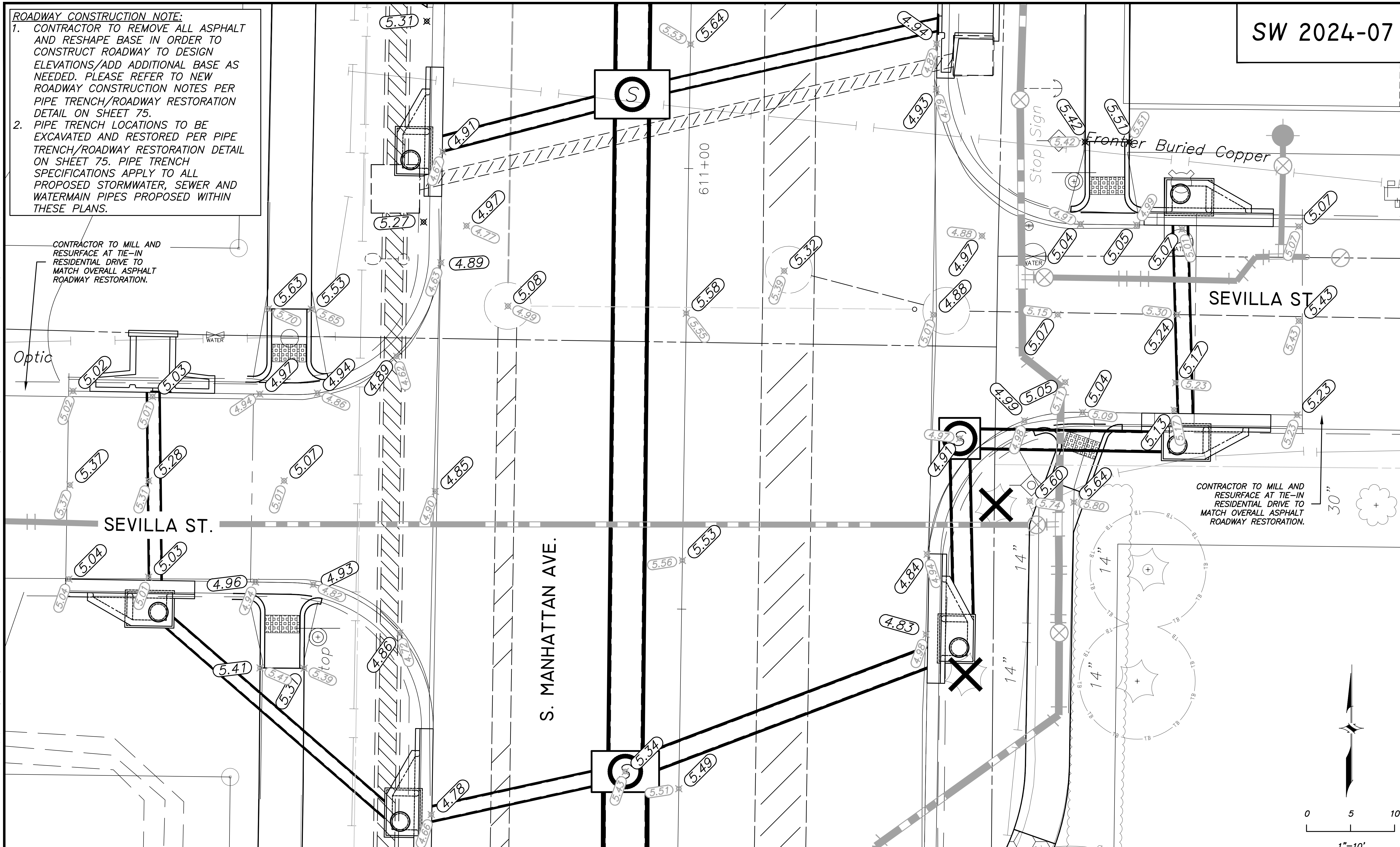

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN SEVILLA

SHEET 23 OF 100

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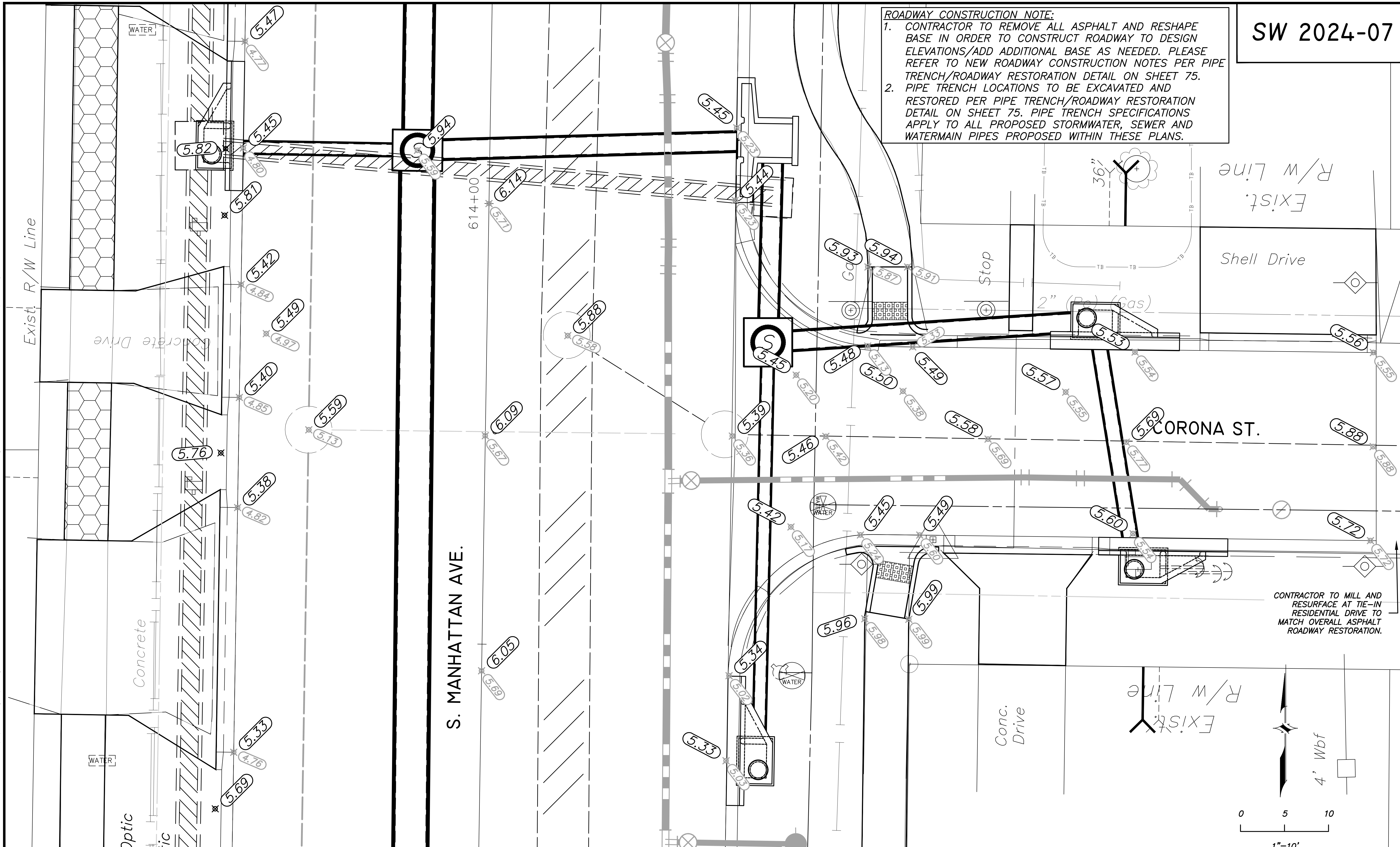
SW 2024-07

ROADWAY CONSTRUCTION NOTE:
1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75. PIPE TRENCH SPECIFICATIONS APPLY TO ALL PROPOSED STORMWATER, SEWER AND WATERMAIN PIPES PROPOSED WITHIN THESE PLANS.



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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN CORONA

SHEET 24 OF 100

SW 2024-07

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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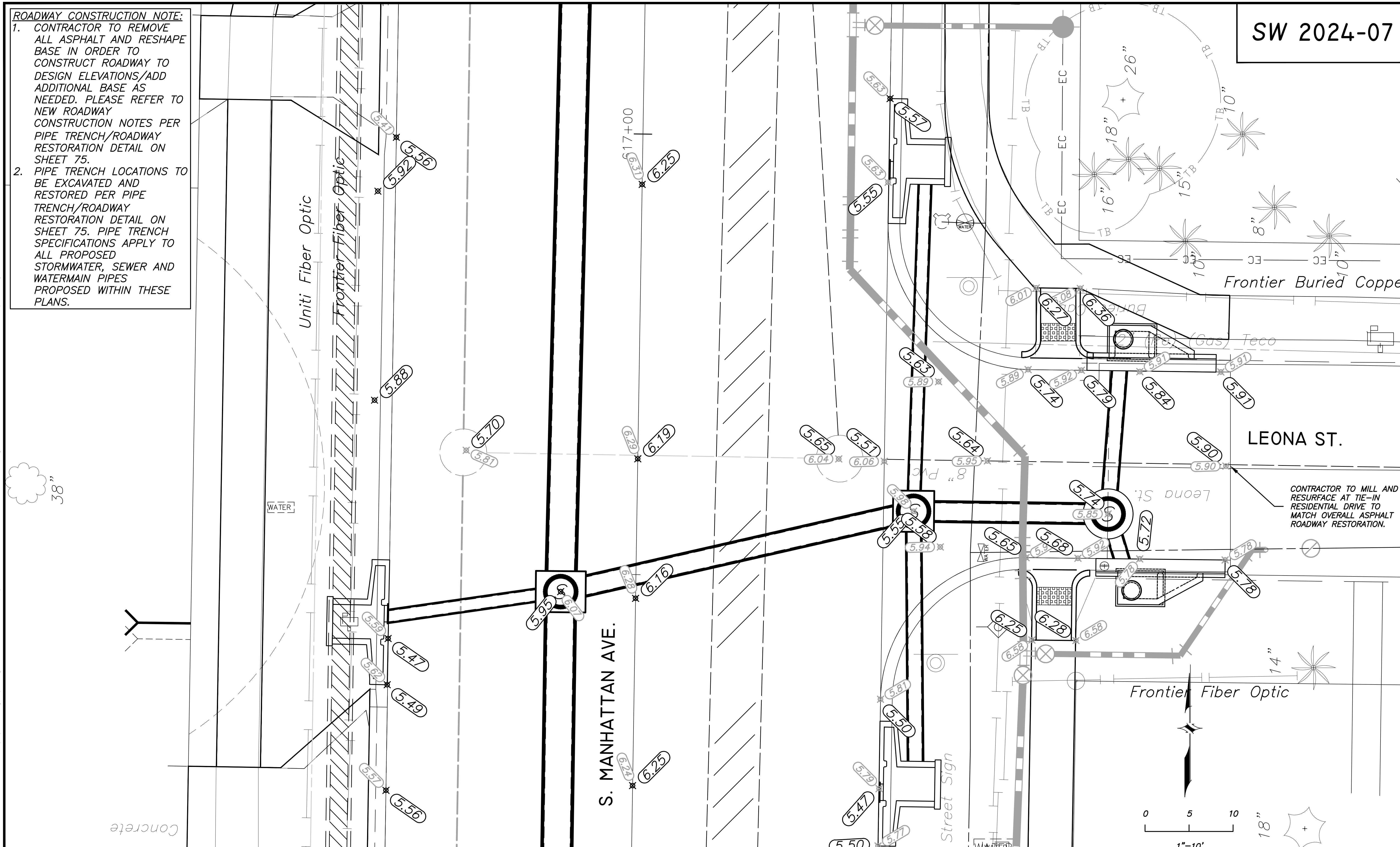

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN LEONA

SHEET 25 OF 100

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ROADWAY CONSTRUCTION NOTE:

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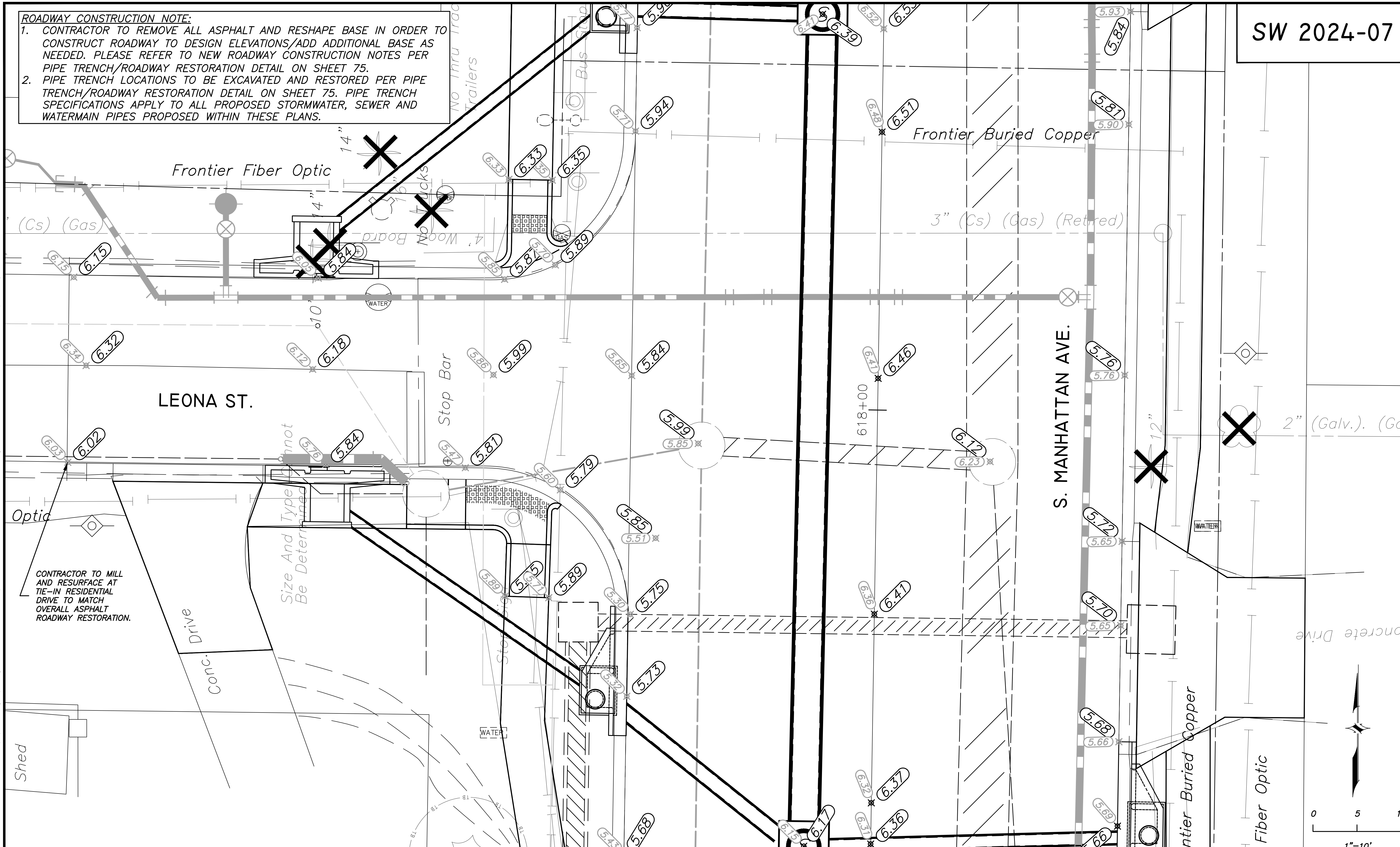

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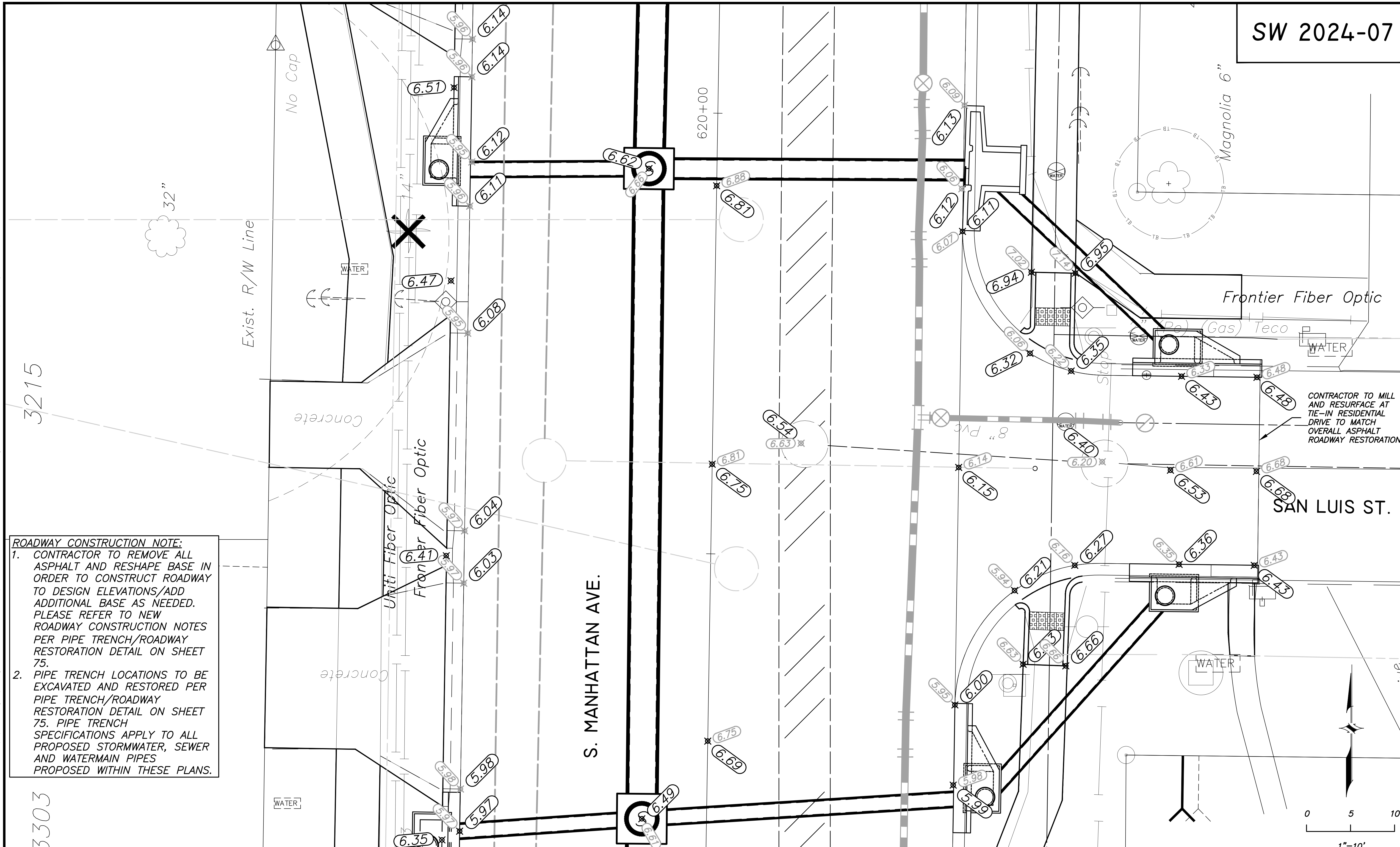
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN LEONA

SW 2024-07



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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN SAN LUIS

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ROADWAY CONSTRUCTION NOTE:
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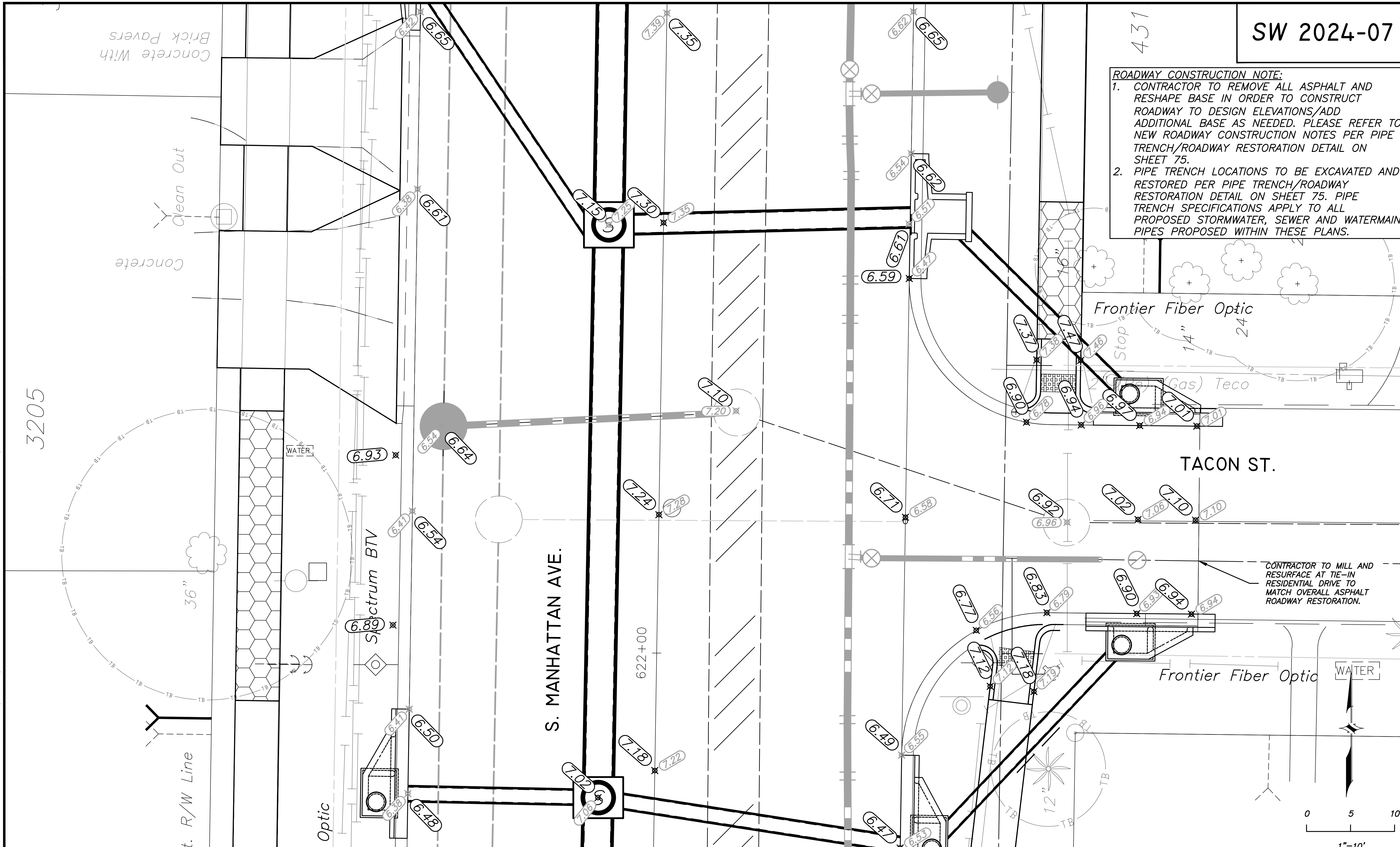

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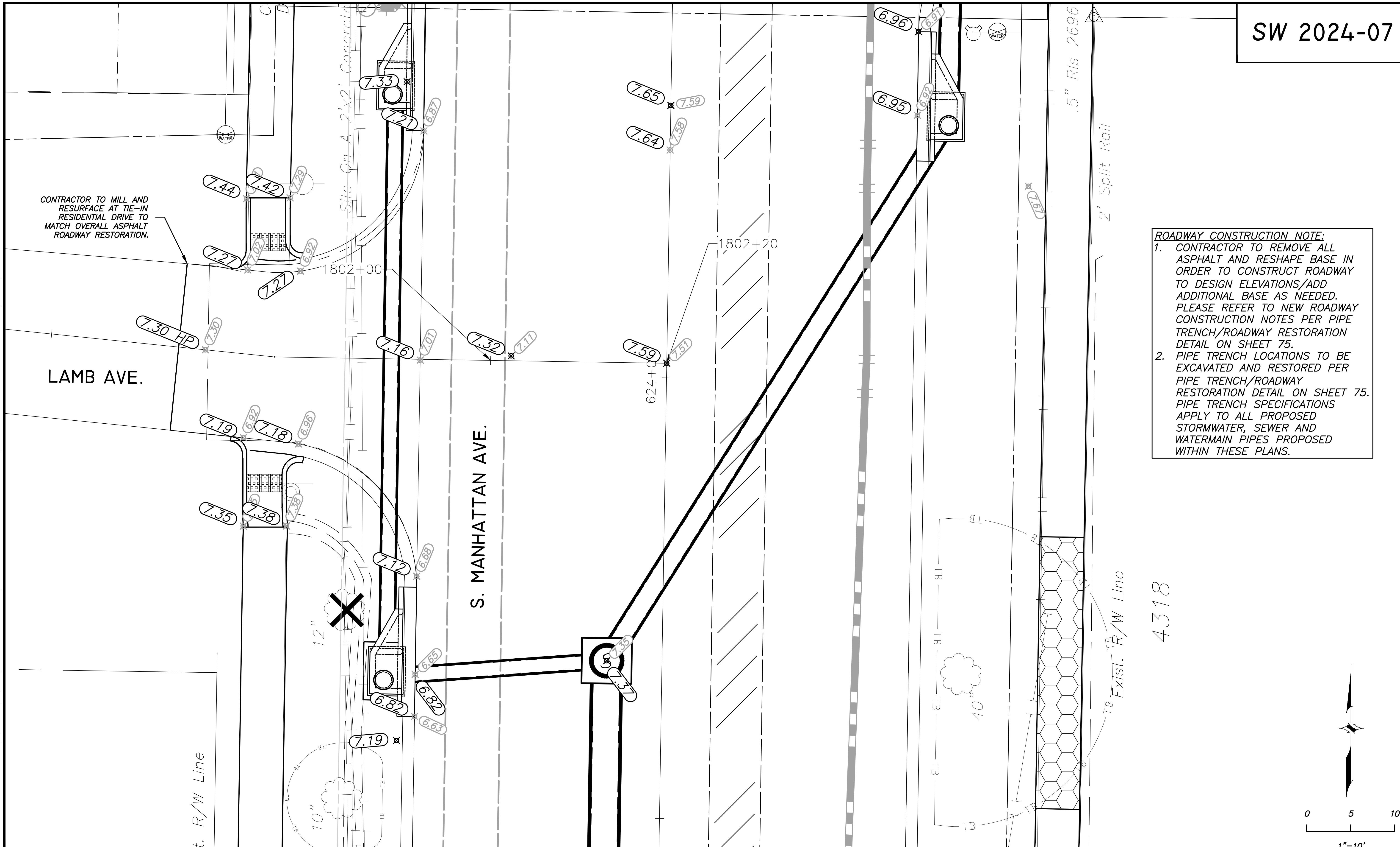
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN TACON

SHEET 28 OF 100

SW 2024-07



ROADWAY CONSTRUCTION NOTE:

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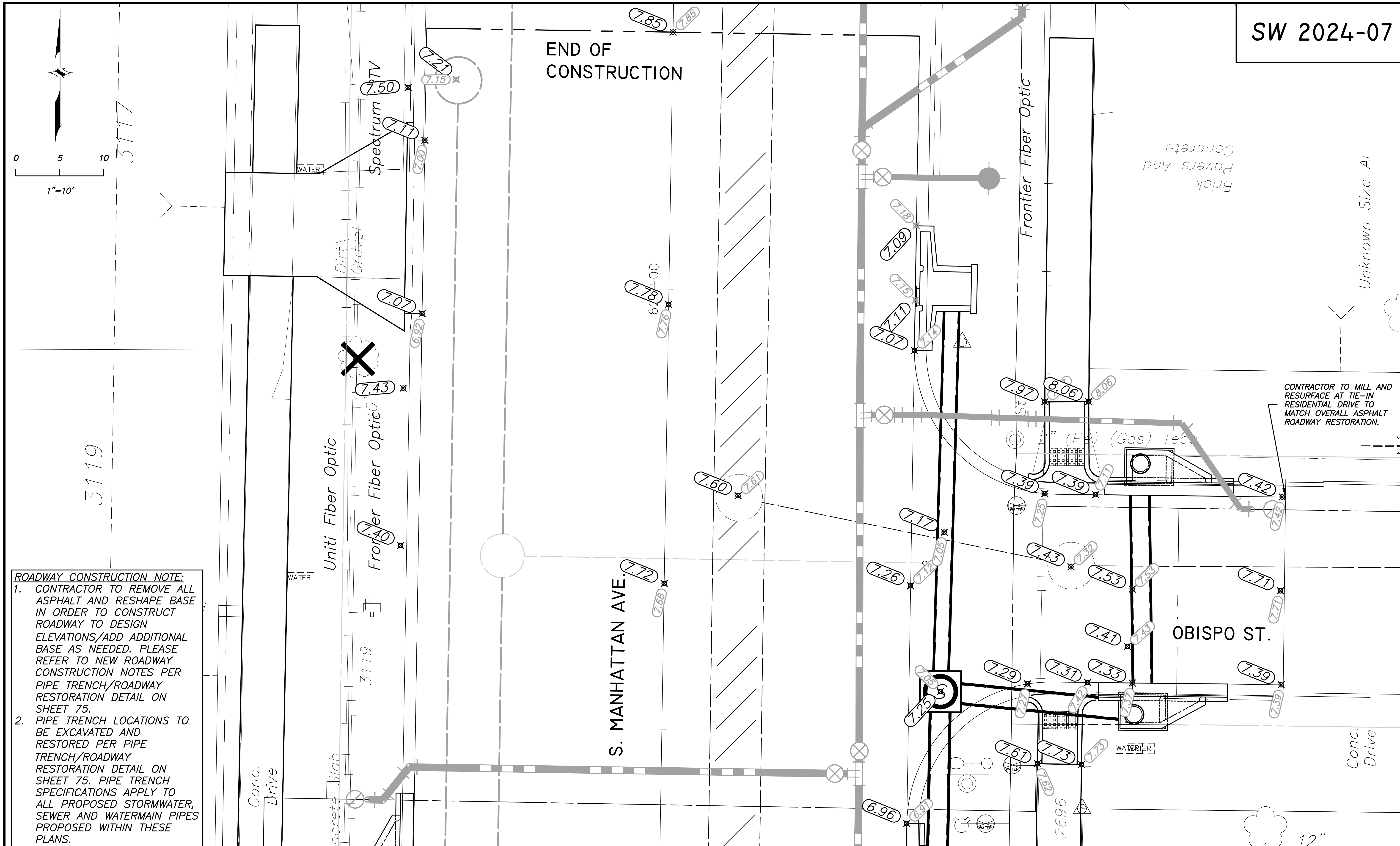
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN LAMB

SHEET 29 OF 100

SW 2024-07



CONTRACTOR TO MILL AND RESURFACE AT TIE-IN RESIDENTIAL DRIVE TO MATCH OVERALL ASPHALT ROADWAY RESTORATION.

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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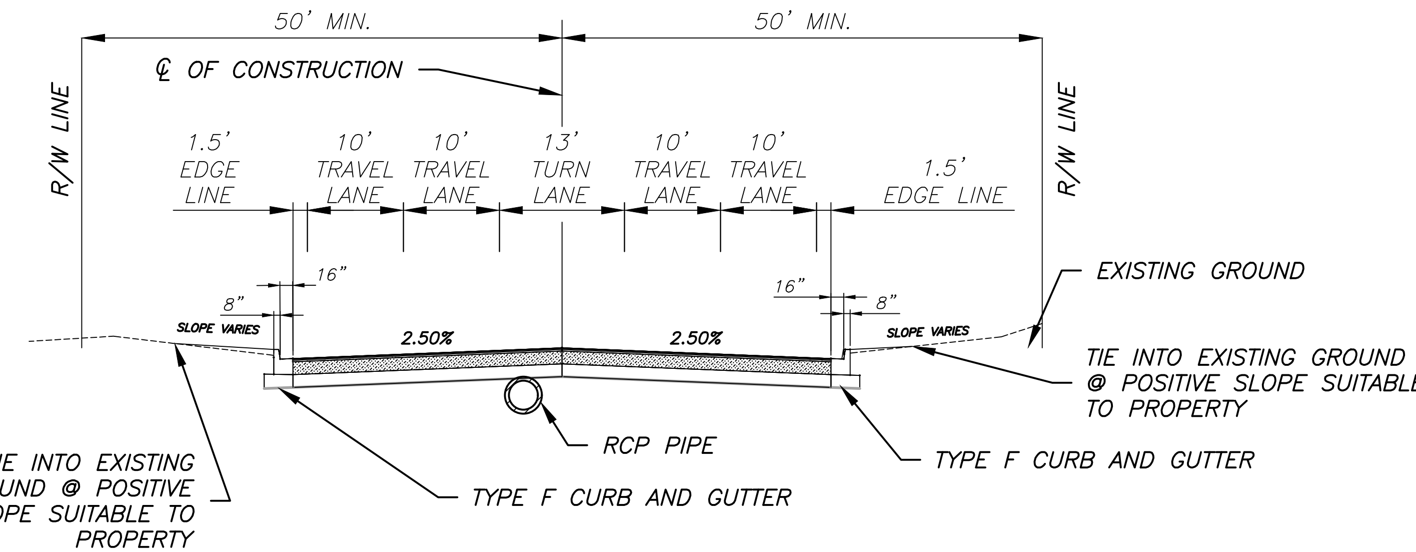
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DETAILED GRADING PLAN OBISPO

SHEET 30 OF 100

SW 2024-07



TYPICAL SECTION
MANHATTAN AVENUE
STA 608+40.00 – STA 625+29.20

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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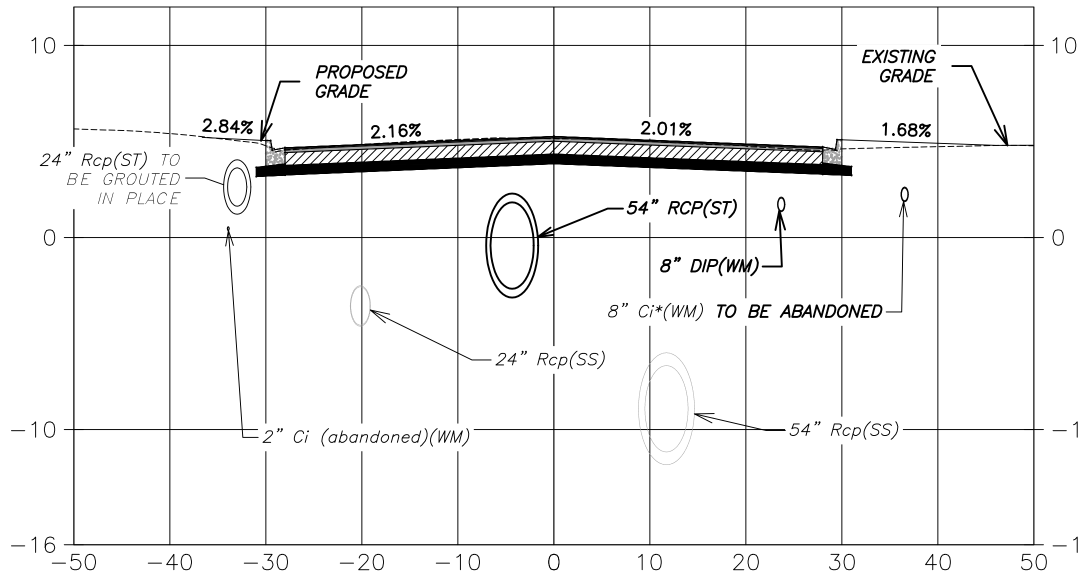
DES:	MDC/ASA
DRN:	ASA/JBA
CKD:	MDC
DATE:	09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TYPICAL SECTIONS

SHEET 31 OF 100

SW 2024-07



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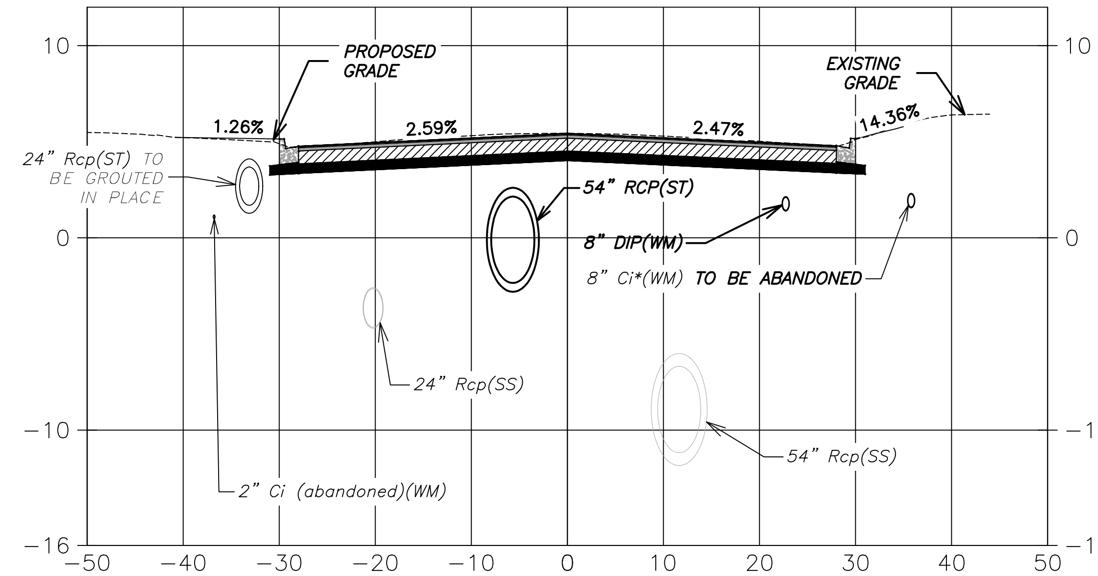

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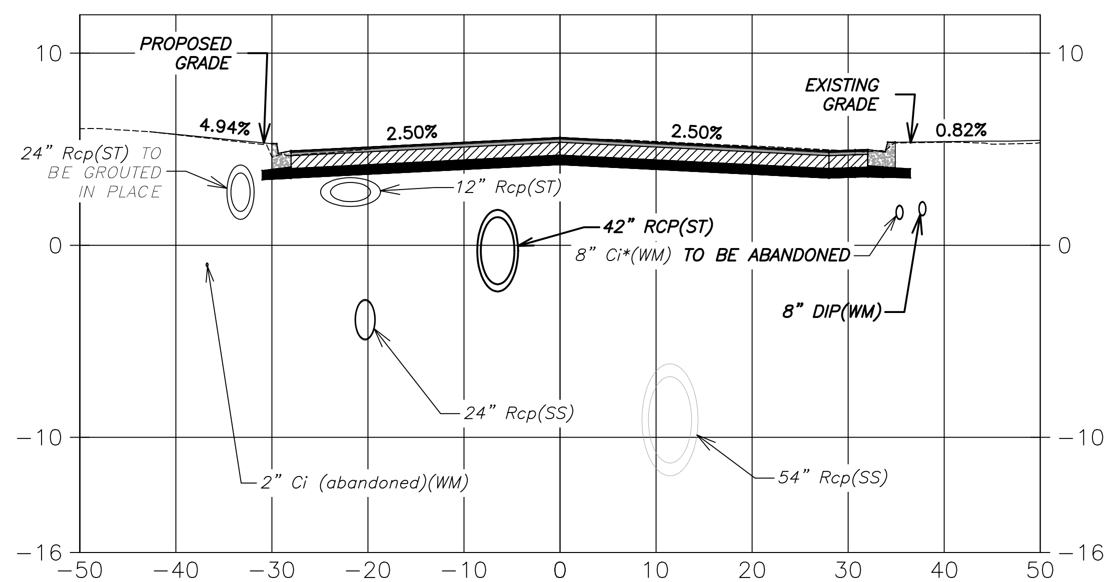

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
DRN: ASA/JBA
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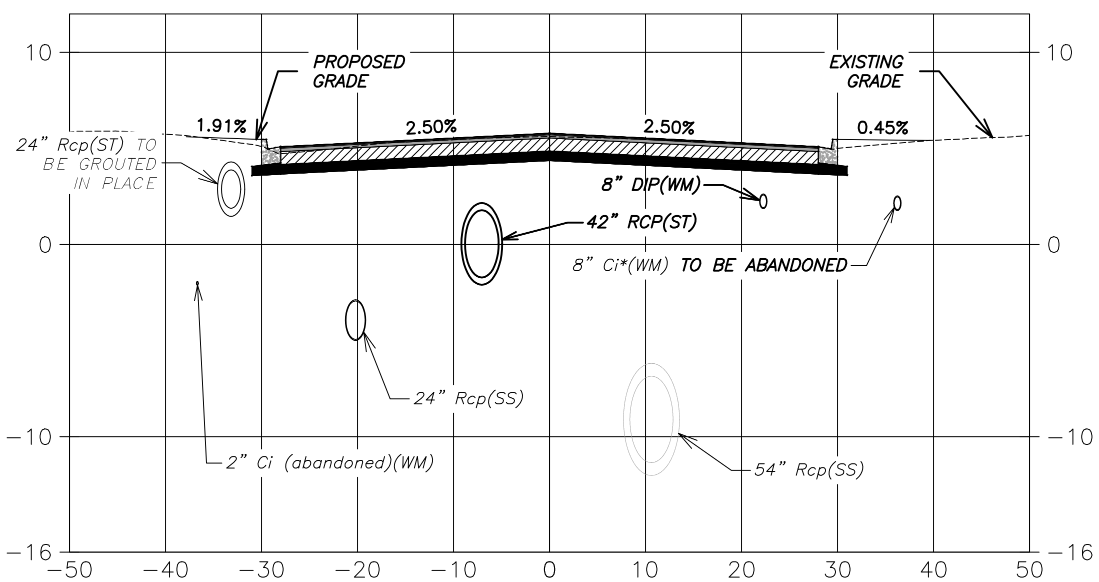
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - CROSS SECTIONS

SHEET 32 OF 100

SW 2024-07



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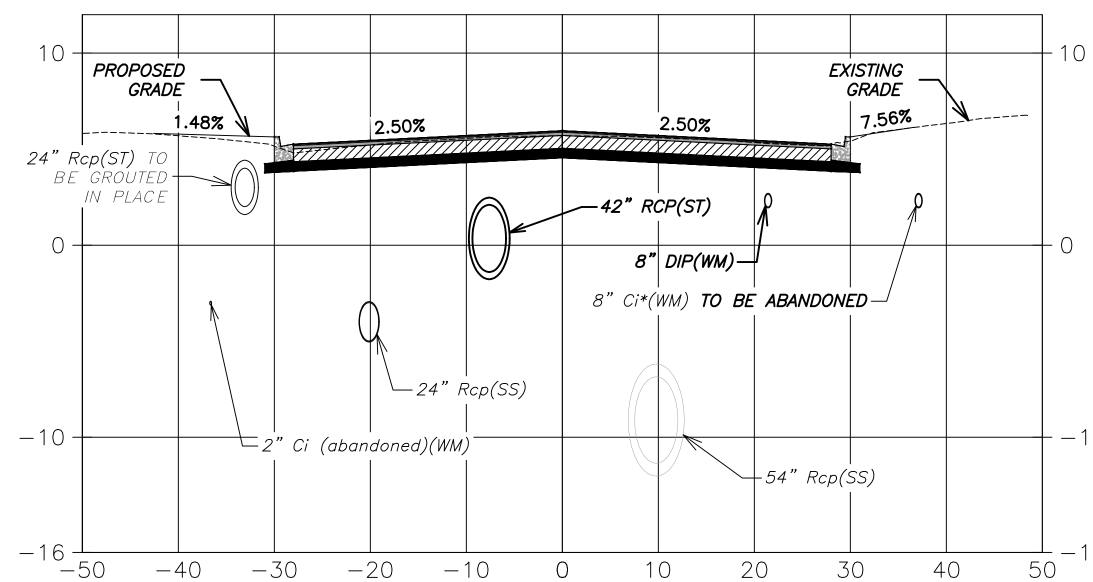

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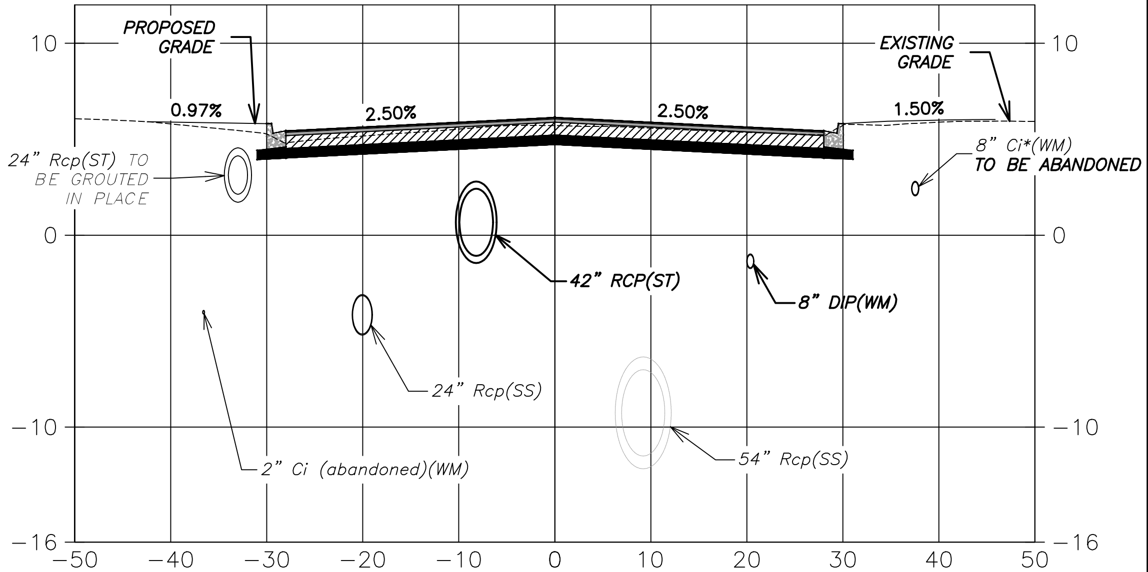

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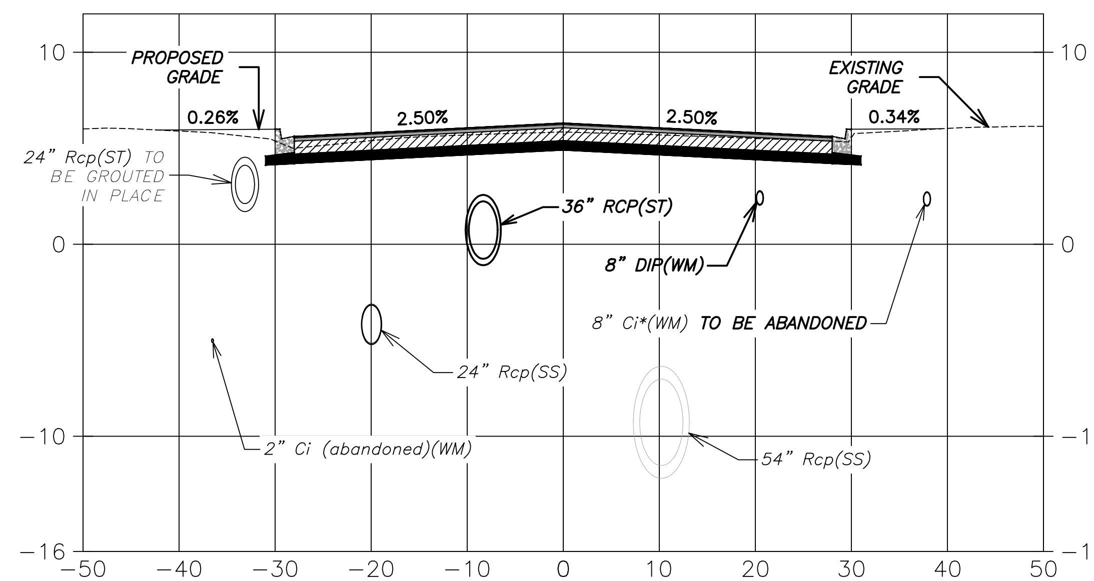

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
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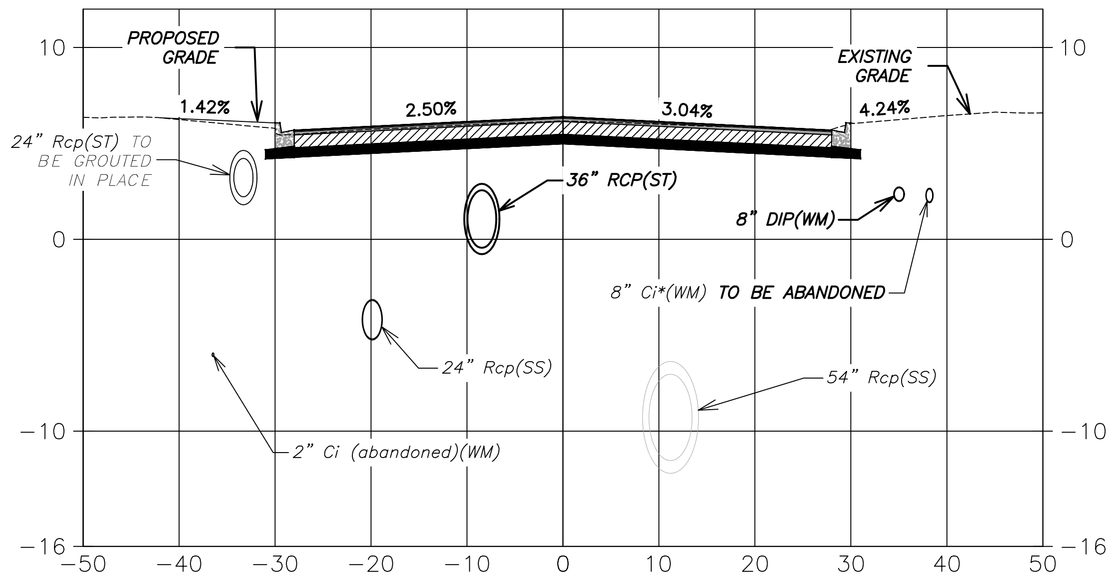
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - CROSS SECTIONS

SHEET 33 OF 100

SW 2024-07



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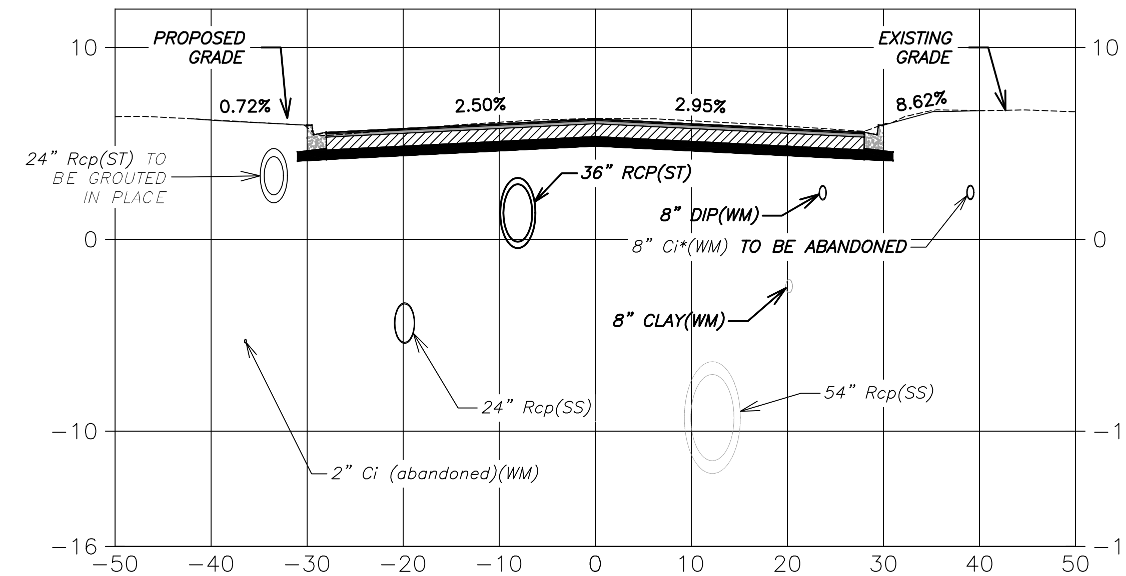

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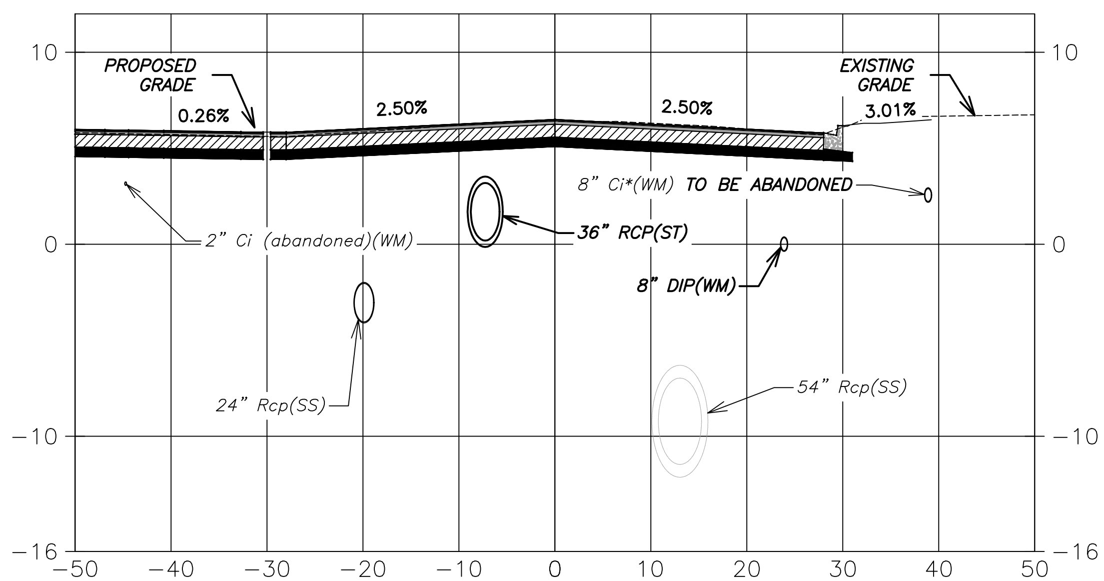

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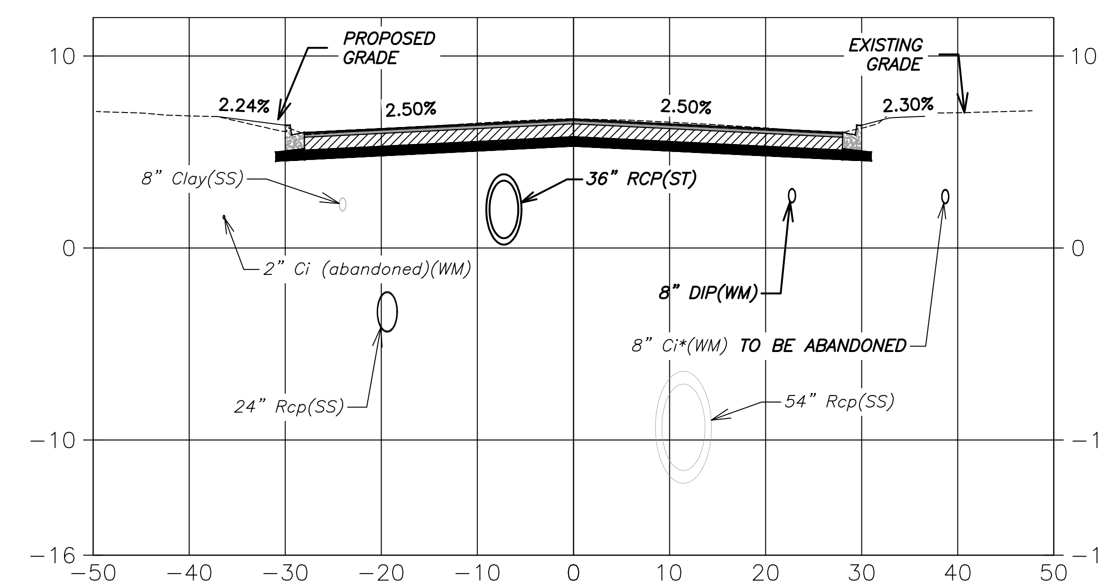

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
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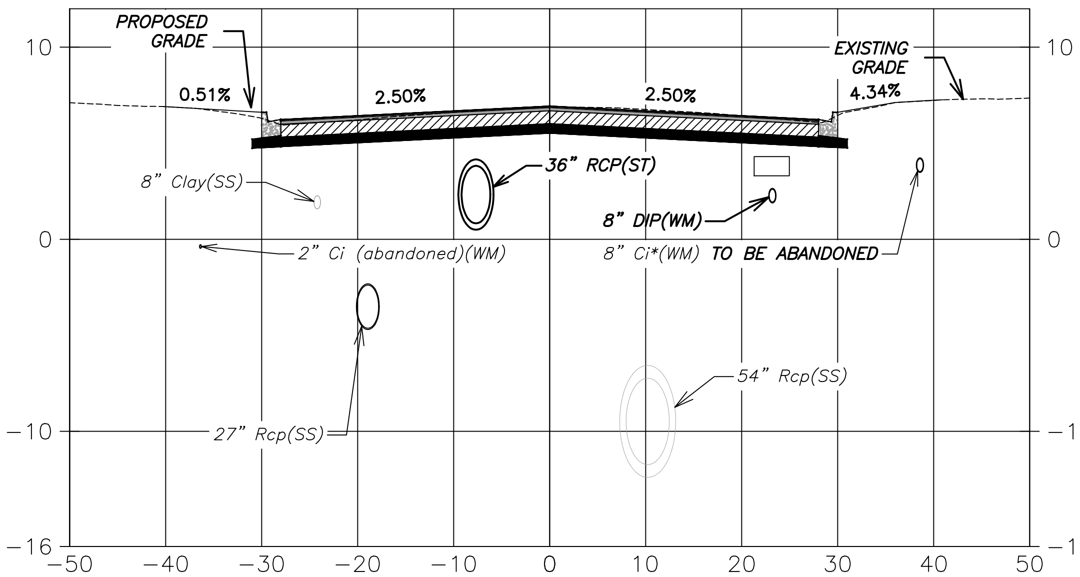
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - CROSS SECTIONS

SHEET 34 OF 100

SW 2024-07



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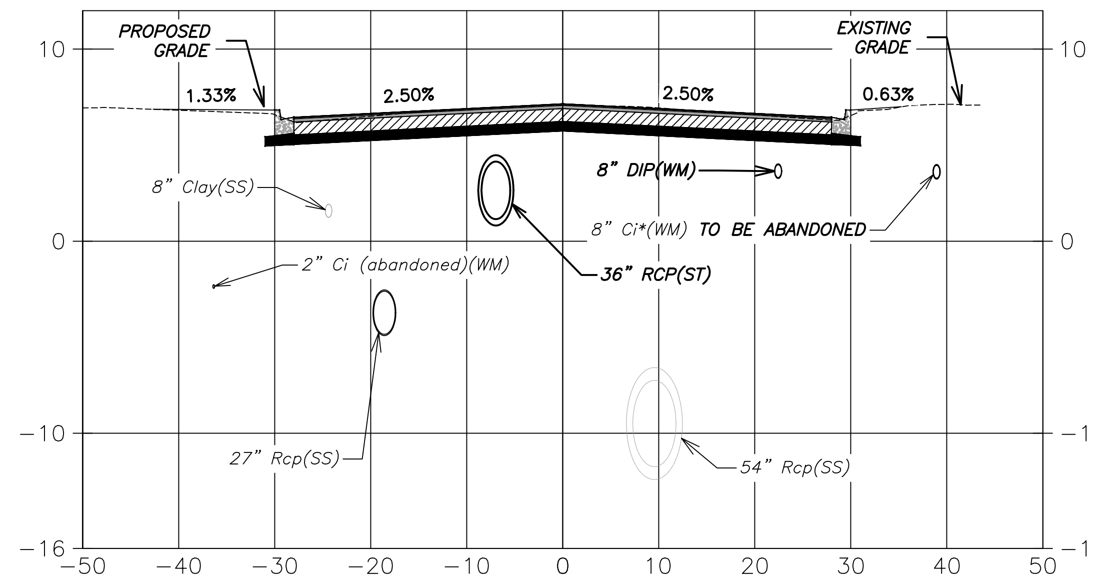

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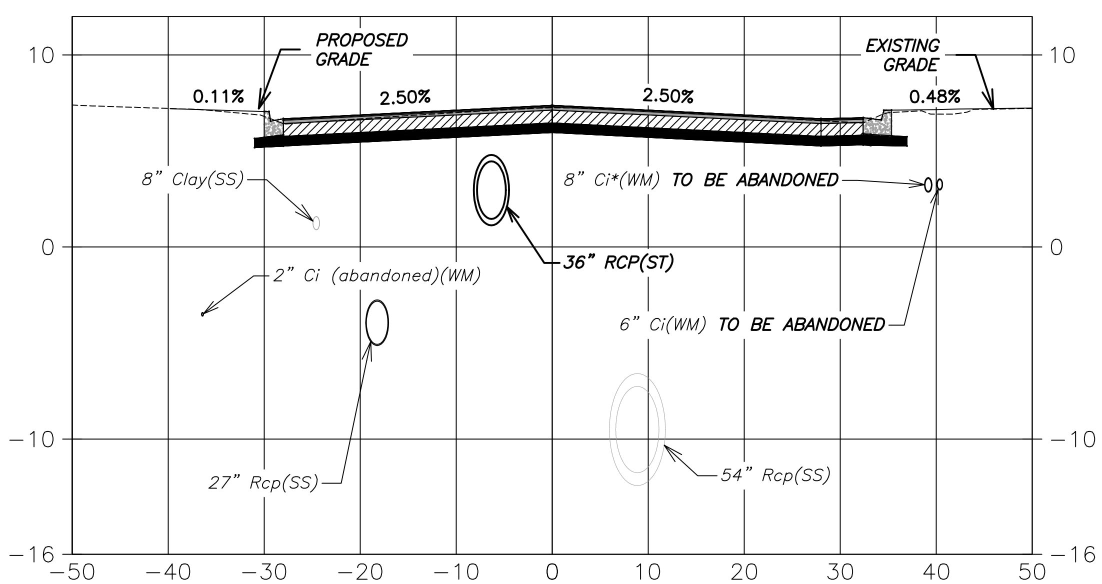

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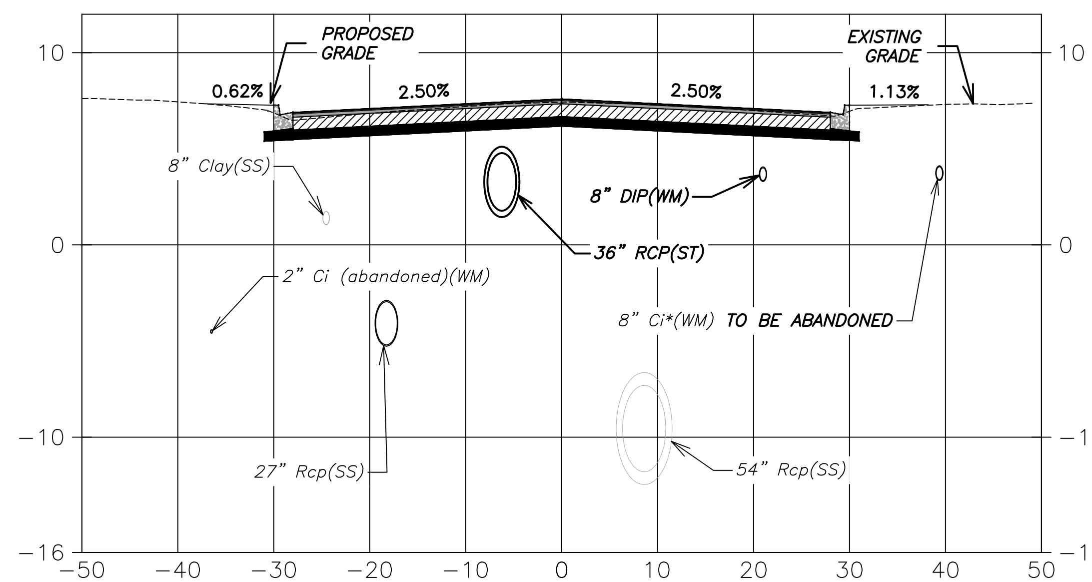

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DES: MDC/ASA
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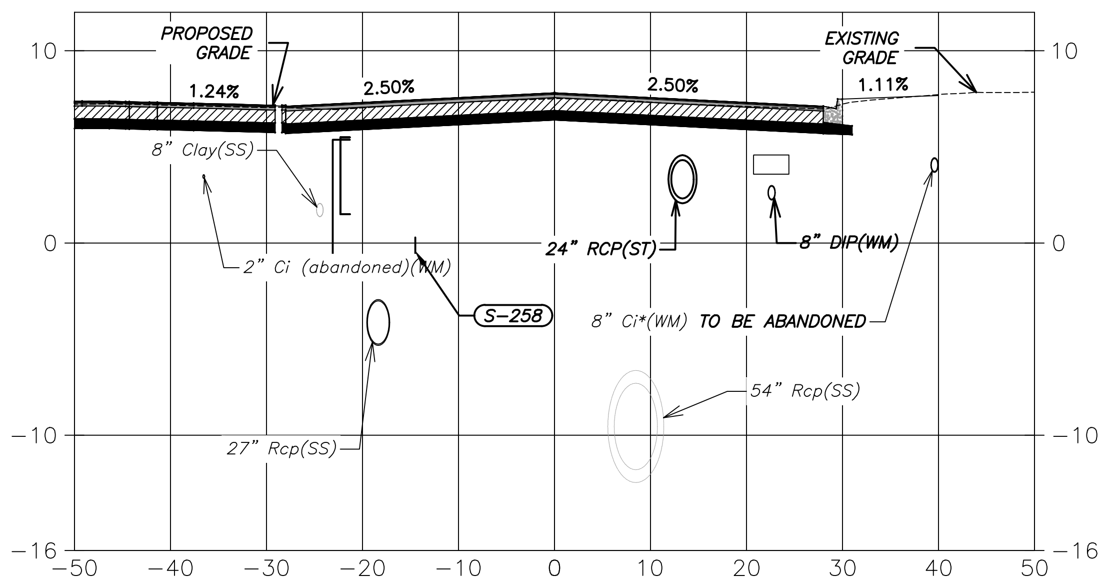
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - CROSS SECTIONS

SHEET 35 OF 100

SW 2024-07



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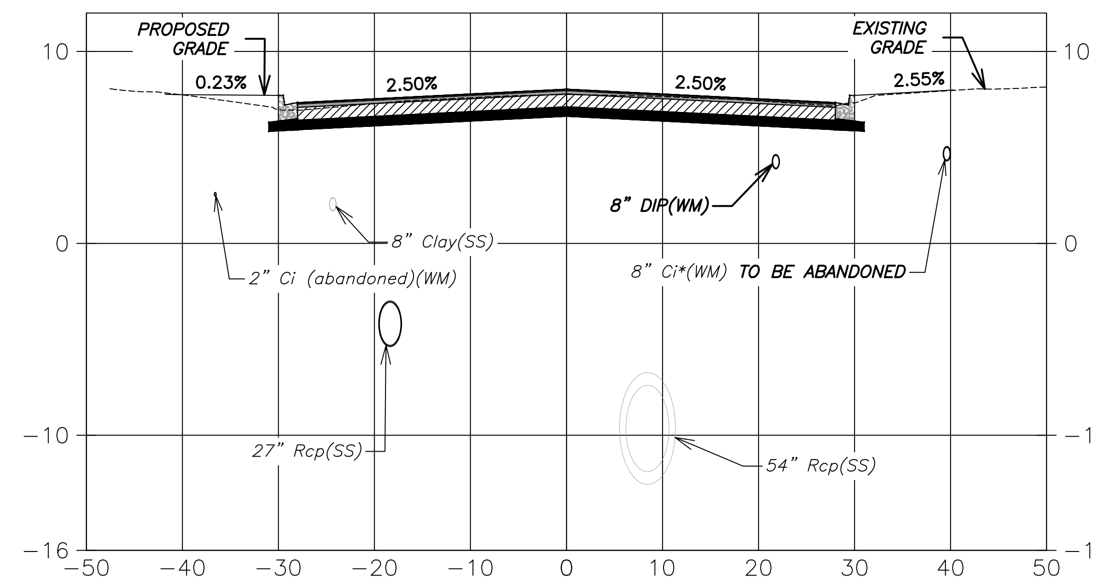

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
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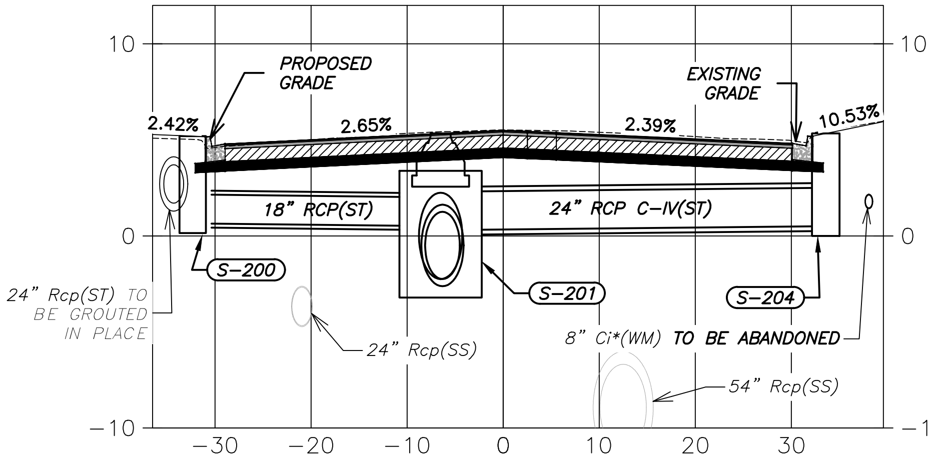
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - CROSS SECTIONS

SHEET 36 OF 100

SW 2024-07



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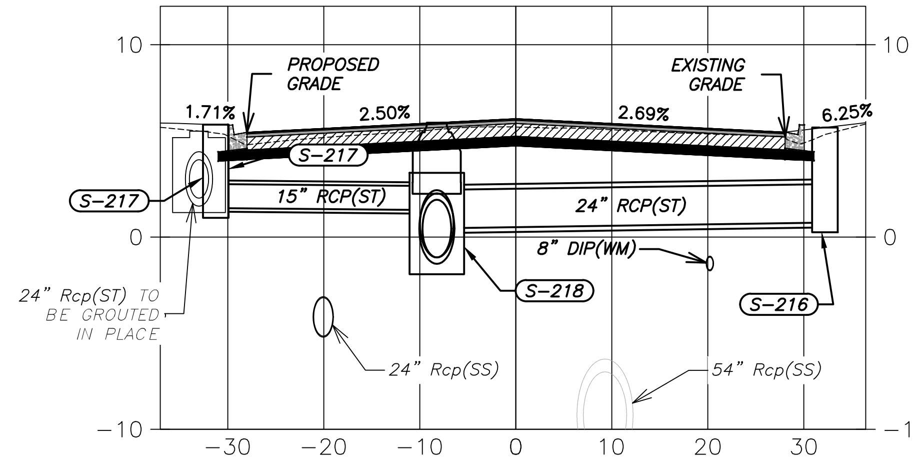

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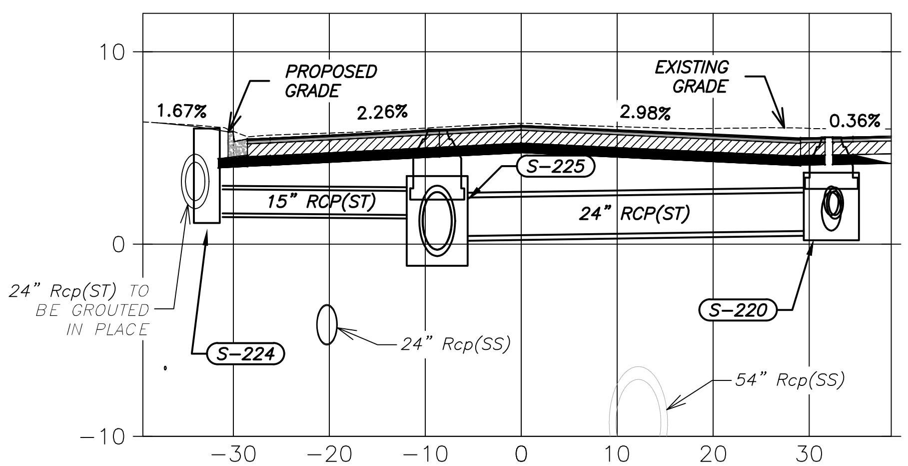

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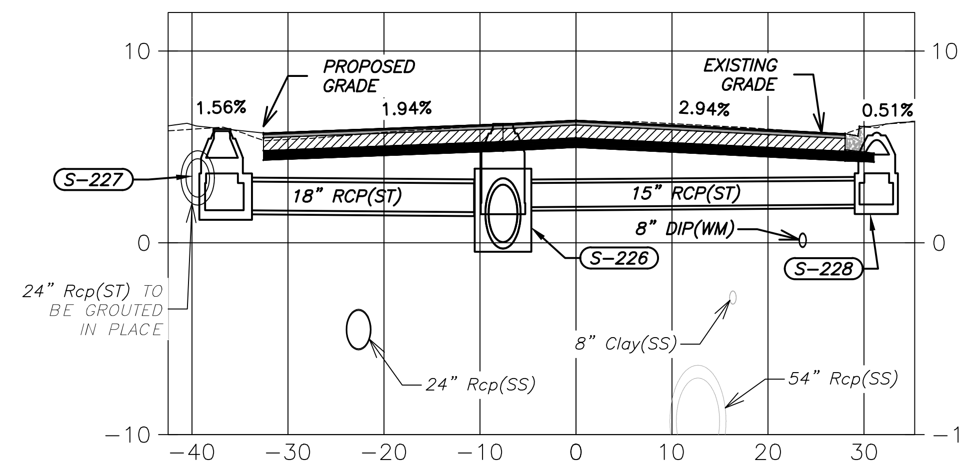

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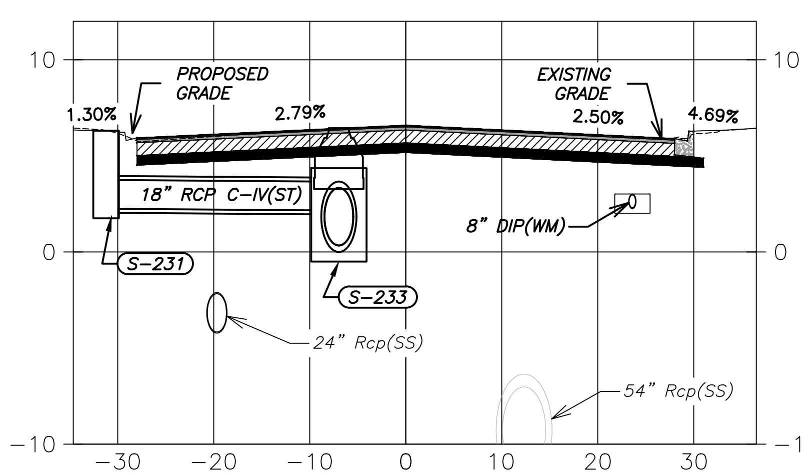

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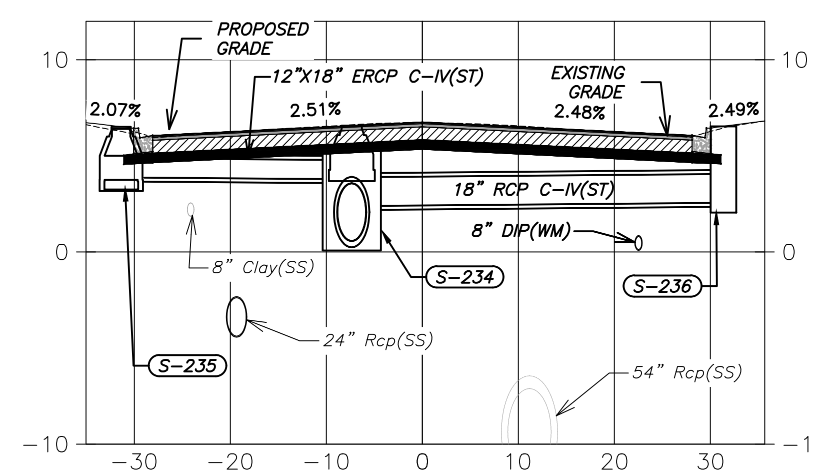

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. -
INLET CROSS SECTIONS

SHEET 37 OF 100

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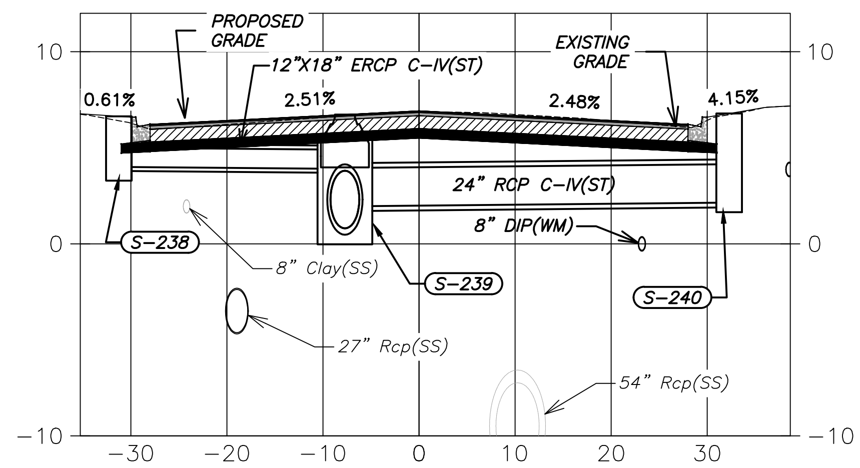
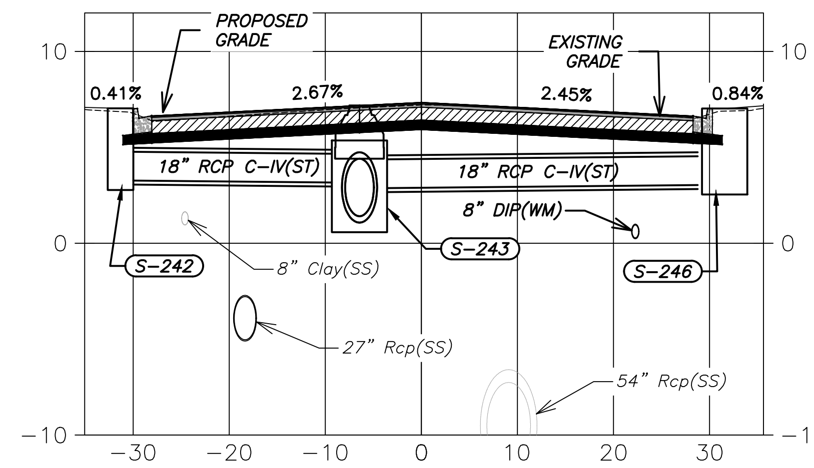
SW 2024-07



619+93.46
SCALE: HORZ. 1"=20';VERT. 1"=10'



621+82.58
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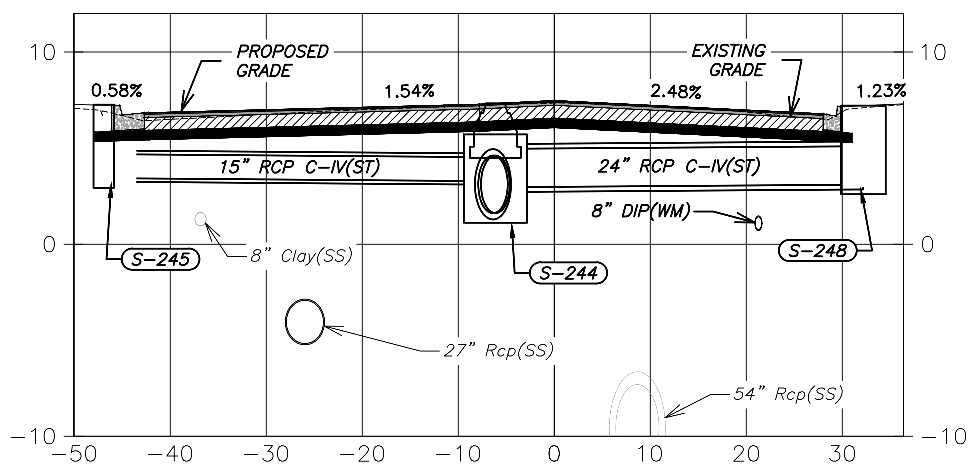
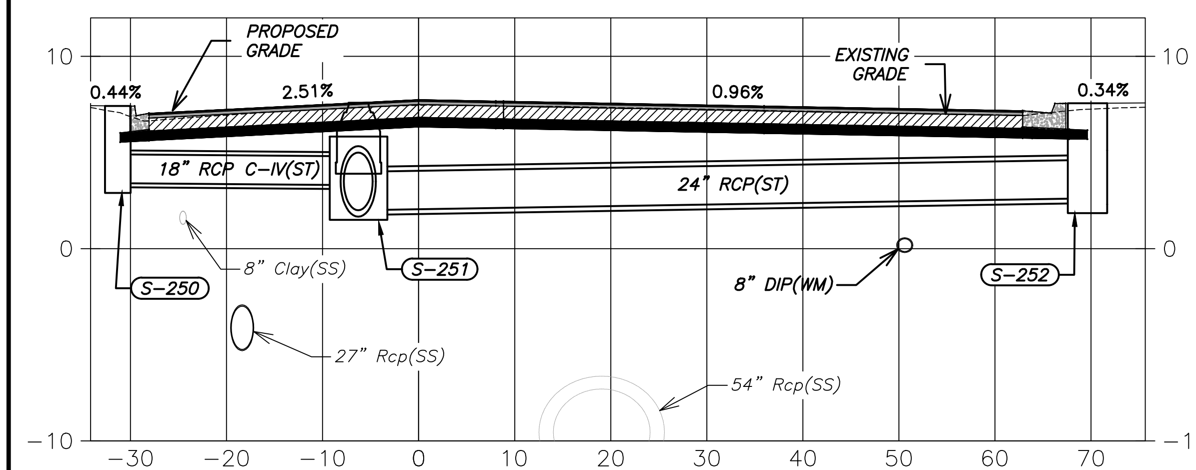


622+48.77
SCALE: HORZ. 1"=20';VERT. 1"=10'



623+67.79
SCALE: HORZ. 1"=20';VERT. 1"=10'

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

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. -
INLET CROSS SECTIONS

SHEET 38 OF 100

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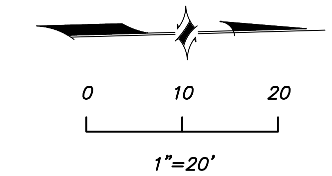

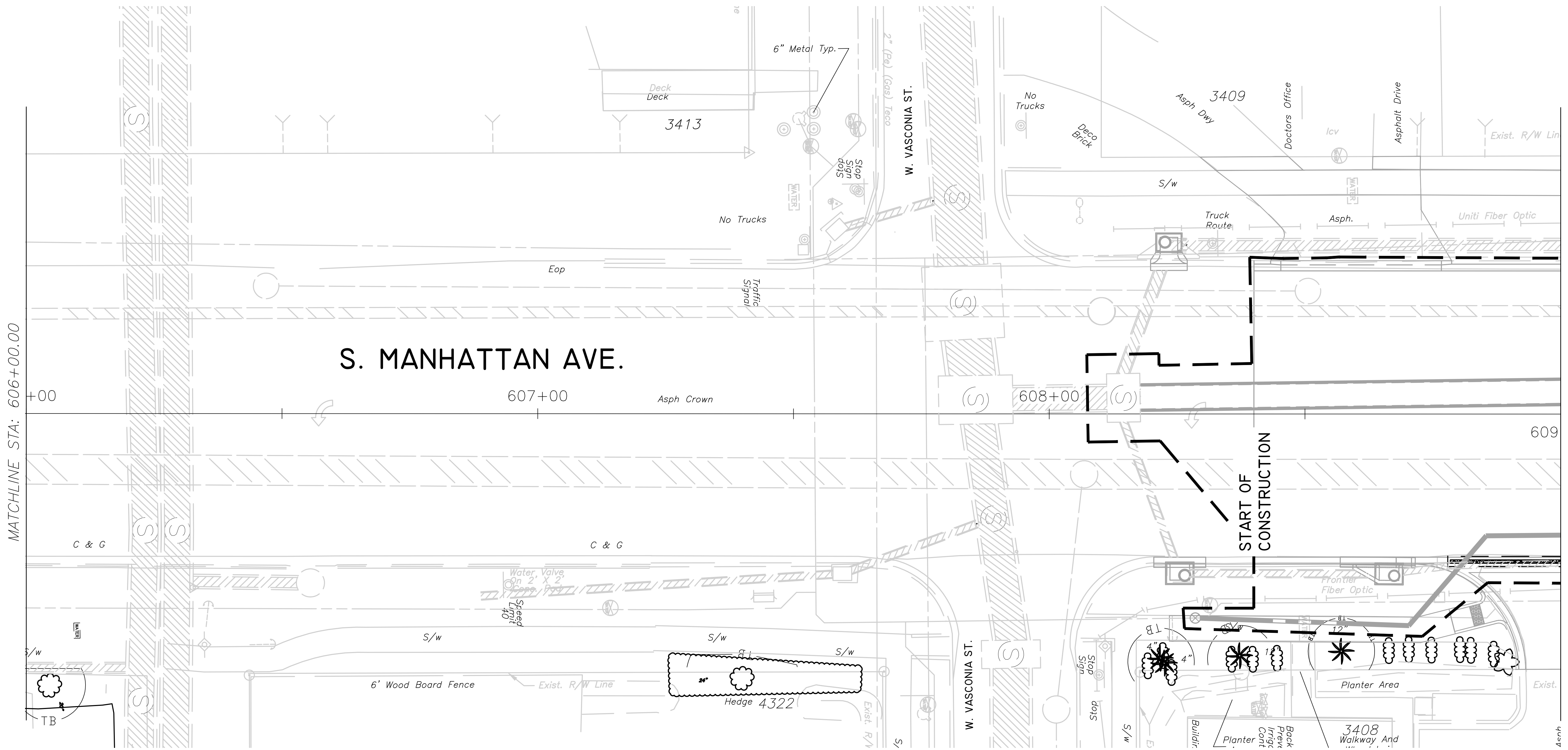

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 39 OF 100

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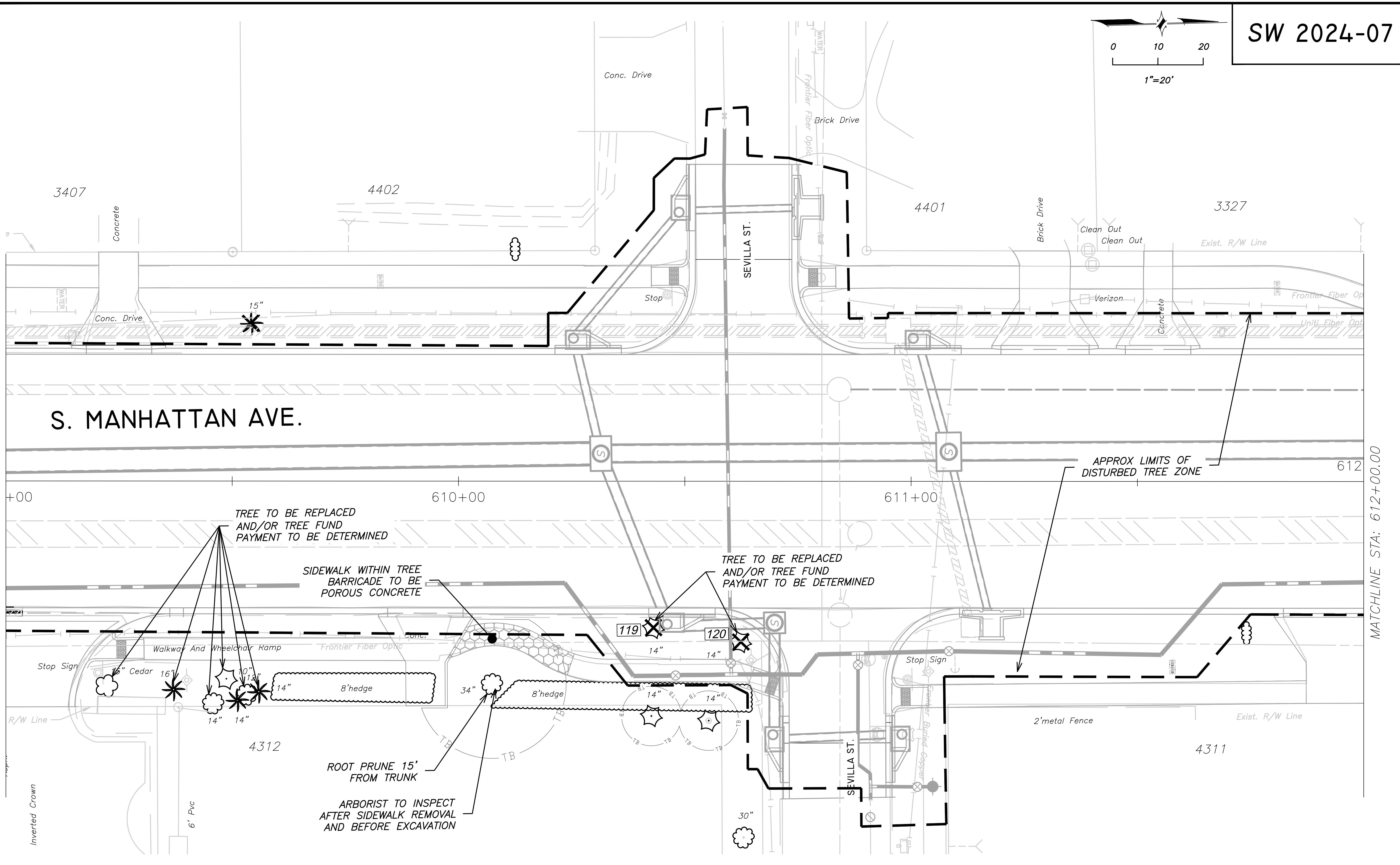

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 40 OF 100

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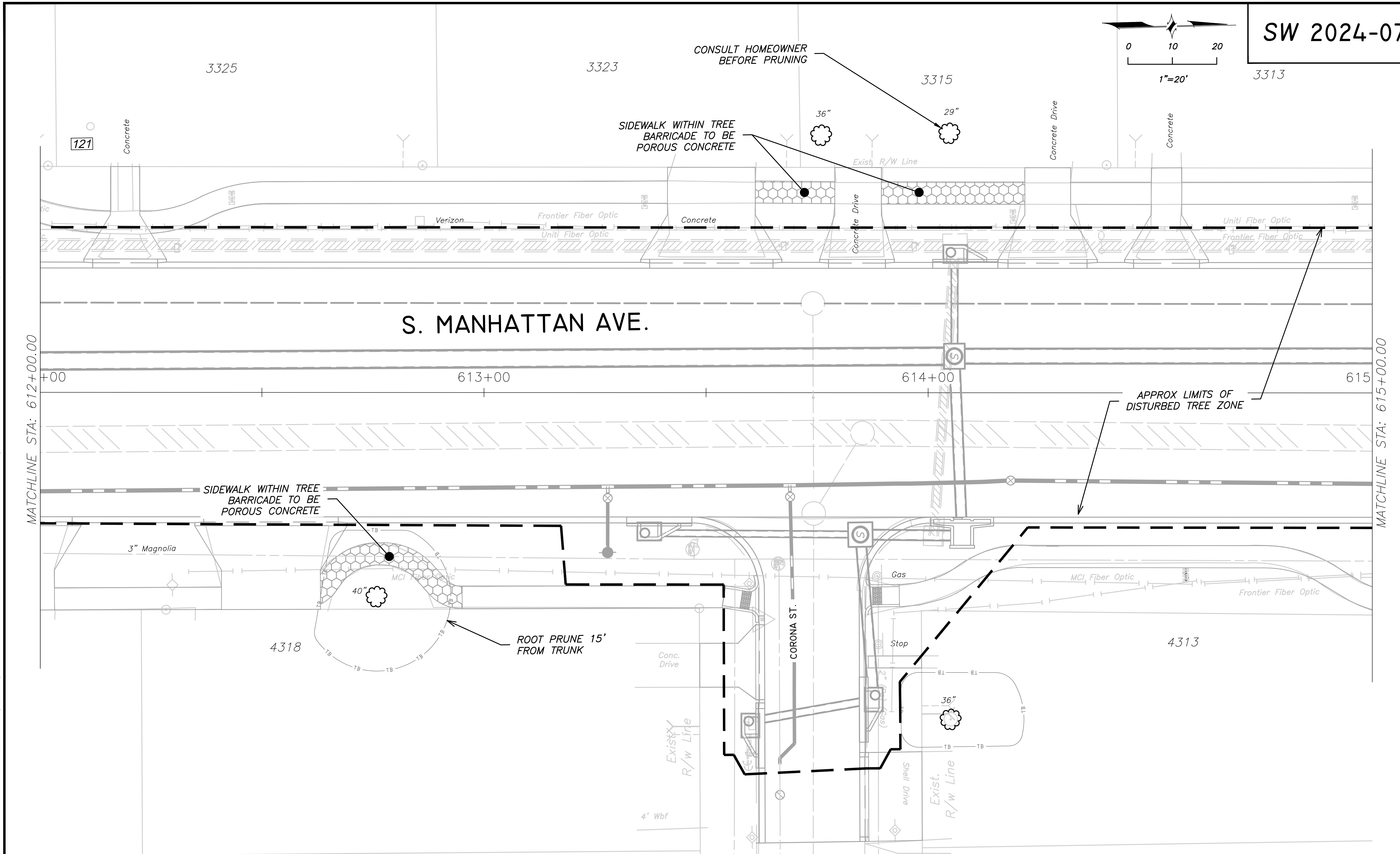

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 41 OF 100

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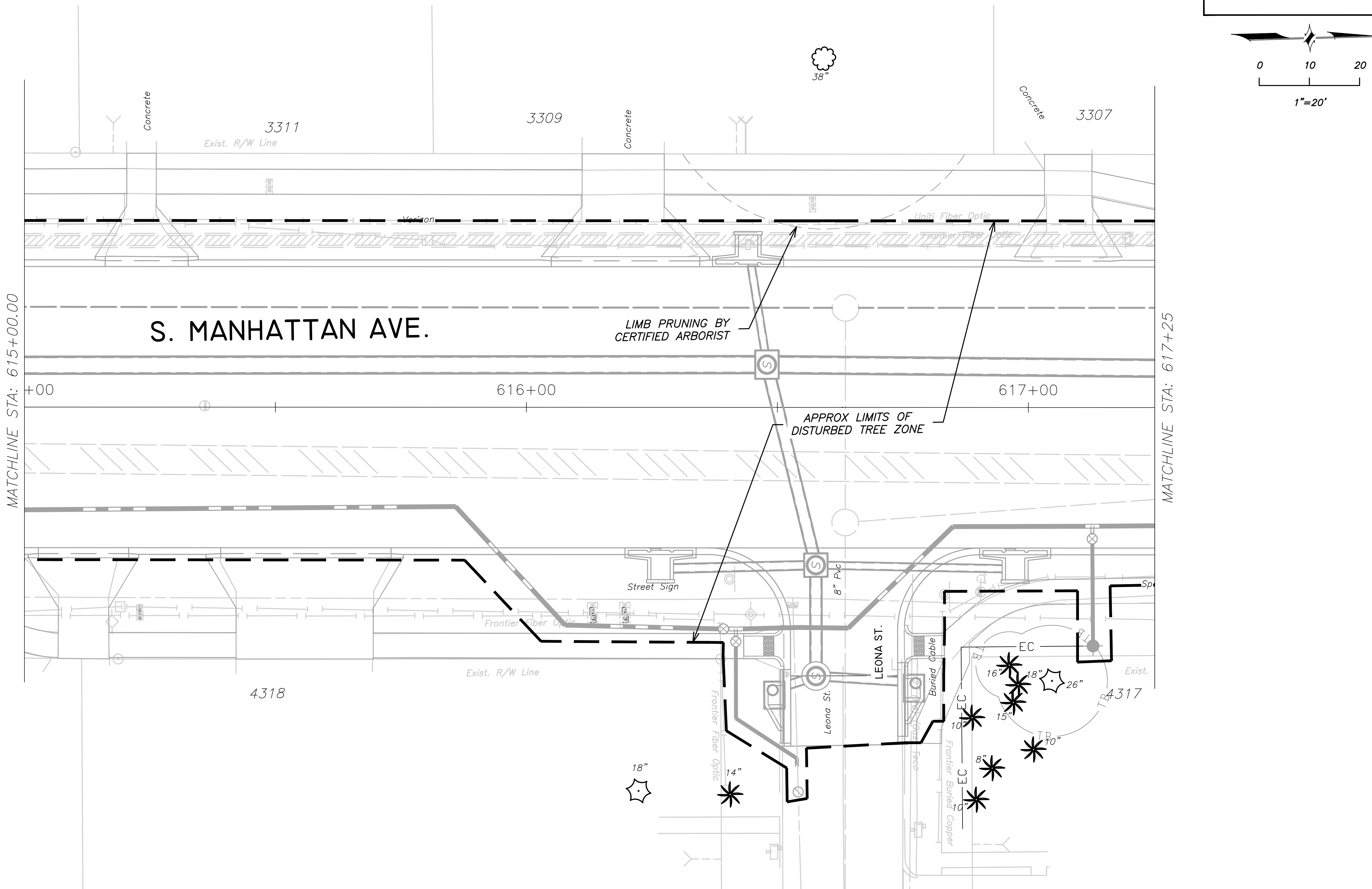

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 42 OF 100

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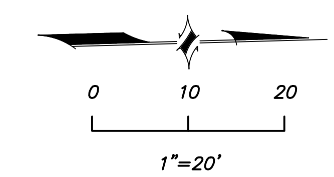

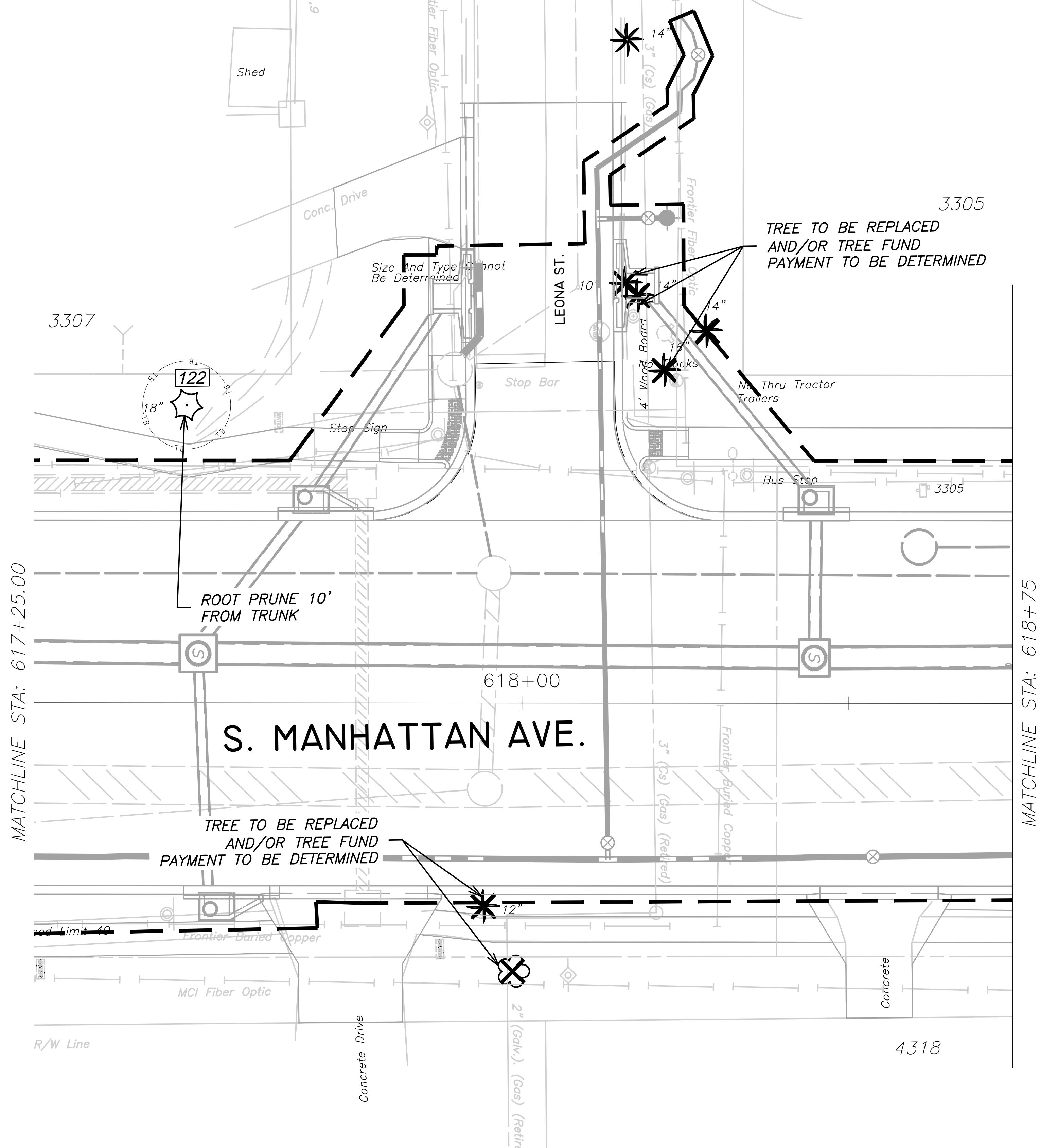

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DES: MDC/ASA
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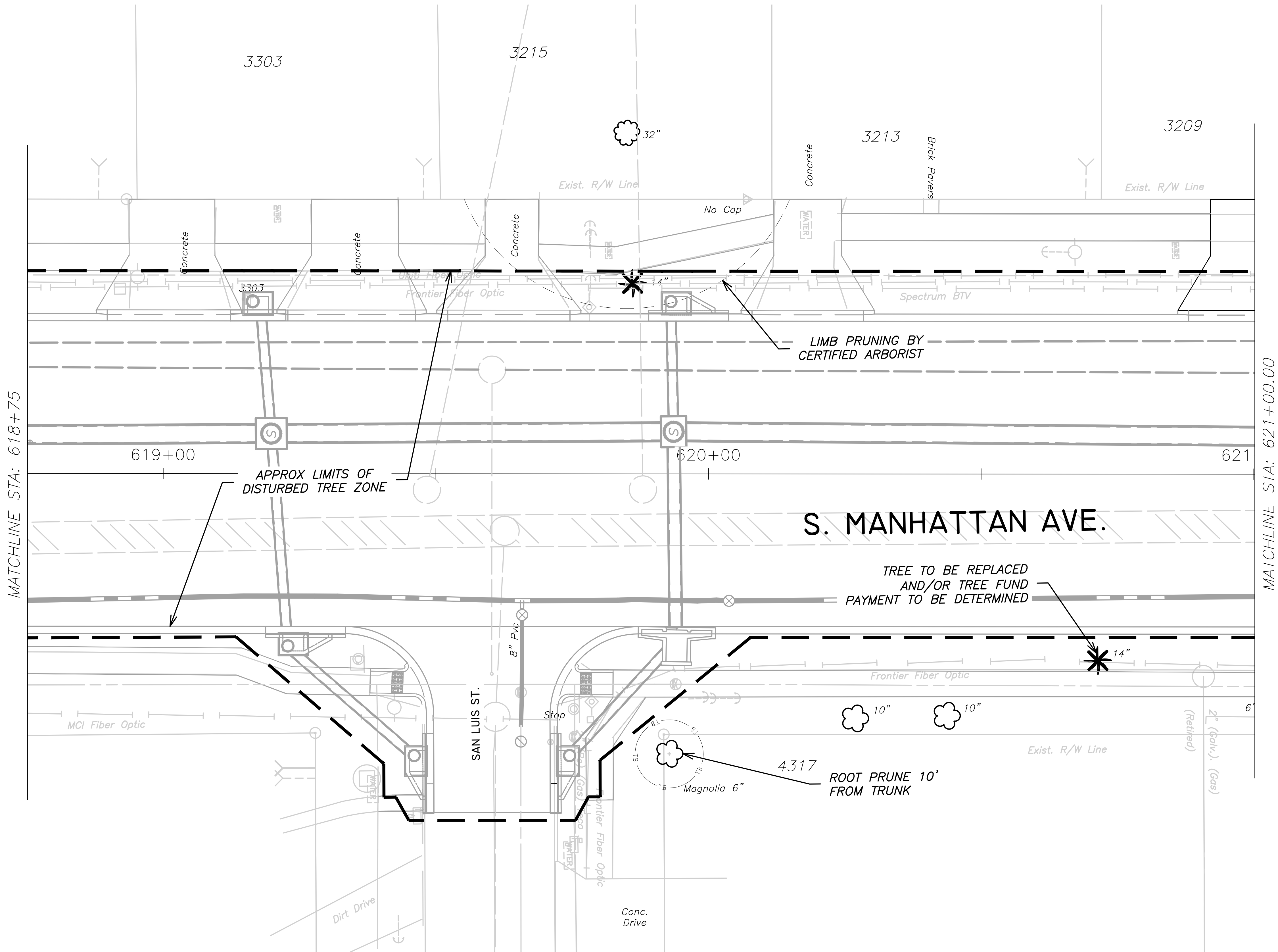
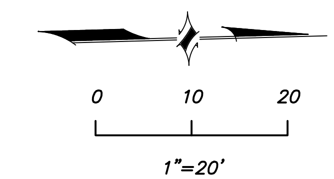
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 43 OF 100

SW 2024-07





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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 44 OF 100

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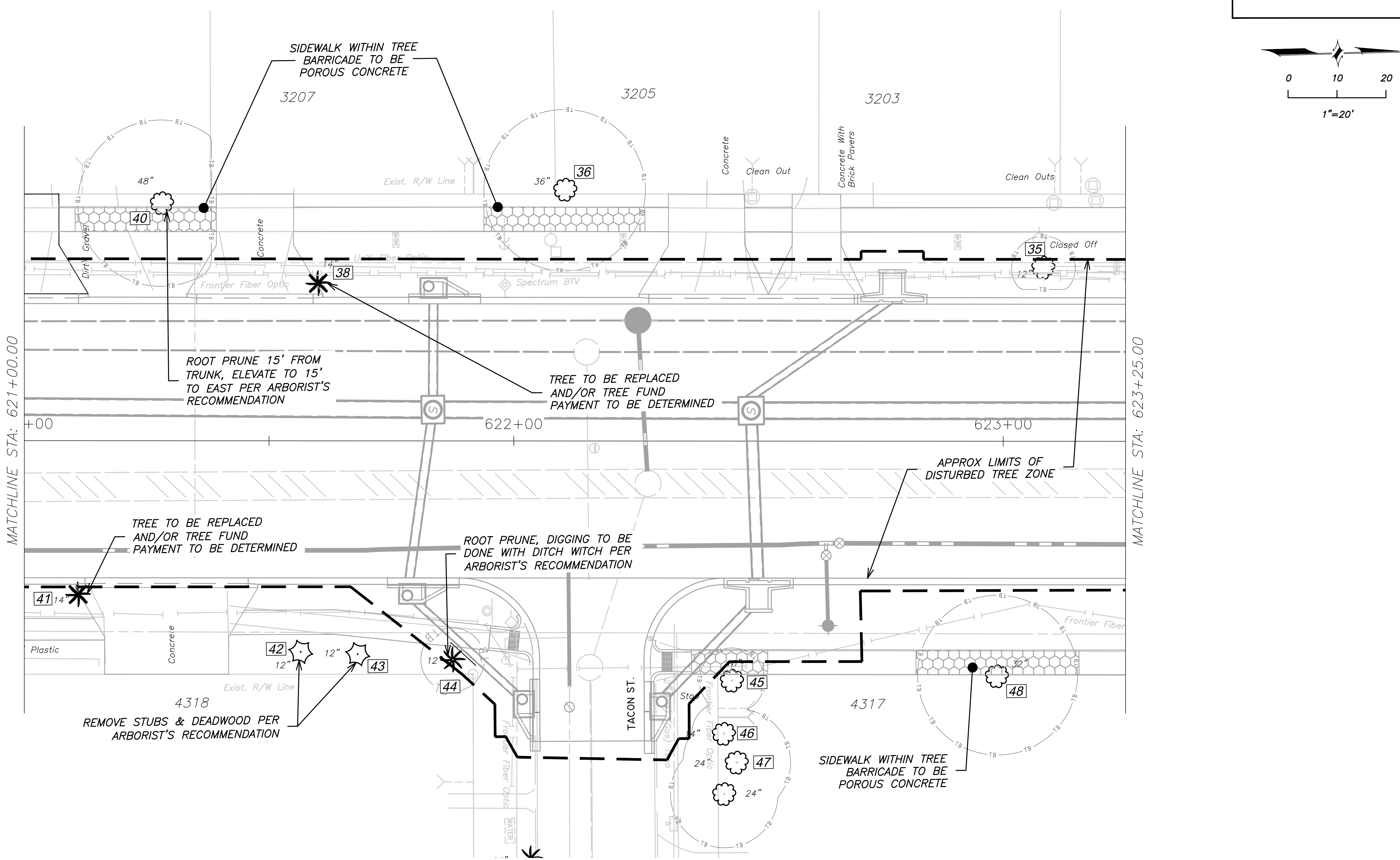

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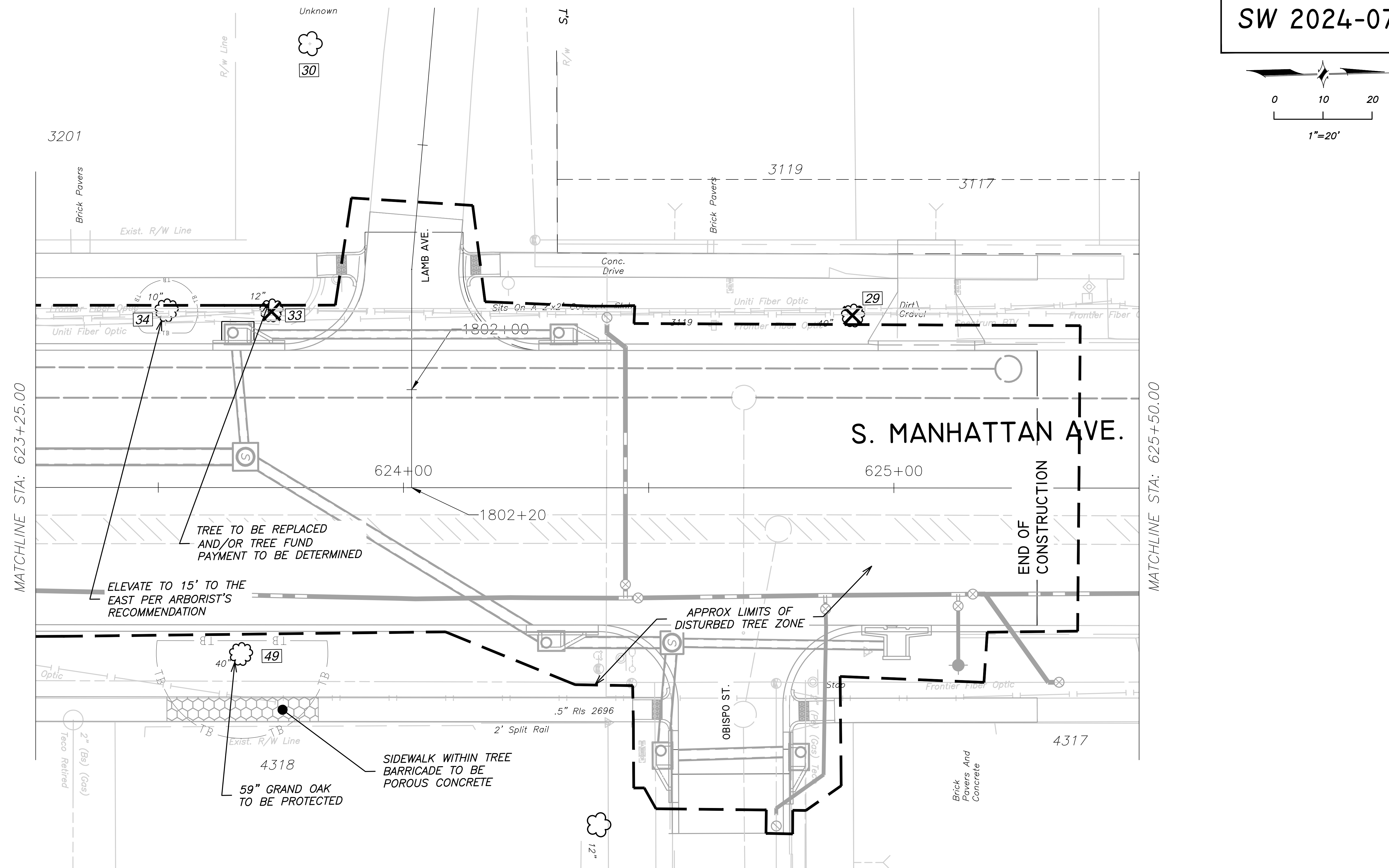
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 45 OF 100

SW 2024-07



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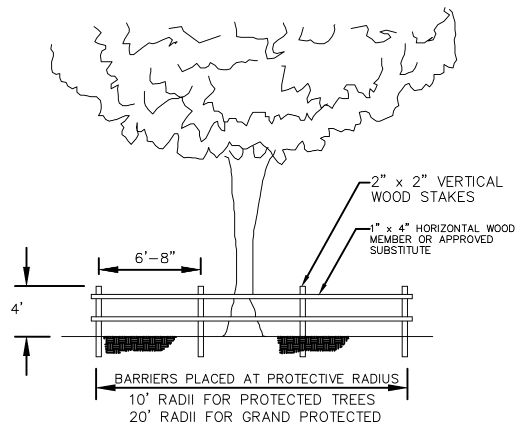
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL PLAN

SHEET 46 OF 100

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 – 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.

TYPE 1: TALL & WIDE (OAK)

TREES RETAINED

Diameter in Inches	# OF TREES	RETENTION MULTIPLIER	Credit
5" TO 10"	1	-1	-1
11" TO 20"	7	-2	-14
21" TO 25"	0	-4	0
26" TO <32"	0	-12	0
Total	8	~	-15

TREES REMOVED

Diameter in Inches	# OF TREES	REPLACEMENT MUILTIPLIER	DEBITS
5" TO 10"	1	1	1
11" TO 20"	1	2	2
21" TO 25"	0	3	0
26" TO <32"	0	4	0
Total	2	~	3

TYPE 2: TALL & NARROW (PINE)

TREES RETAINED

Diameter in Inches	# OF TREES	RETENTION MULTIPLIER	Credit
5" TO 17"	7	-1	-7
18" TO 29"	0	-2	0
30" TO <32"	0	-3	0
Total	7	~	-7

TREES REMOVED

Diameter in Inches	# OF TREES	REPLACEMENT MUILTIPLIER	DEBITS
5" TO 17"	2	1	2
18" TO 29"	0	2	0
30" TO <32"	0	3	0
Total	2	~	2

TYPE 1: GRAND TREES

TREES RETAINED

GRAND TREES RETAINED	# OF TREES	EQUIVALENT # OF 2.5" CAL	Credit
GRAND TREE(S)	6	-46.8	-46.8
Total	6	~	-46.8

TREES REMOVED

GRAND TREES REMOVED	# OF TREES	EQUIVALENT # OF 2.5" CAL	DEBITS
GRAND TREE(S)	1	16	16
Total	1	~	16

PALM TREES

TREES RETAINED

TREES RETAINED	# OF TREES	RETENTION MULTIPLIER	Credit
PALMS w/ 6' CLEAR	9	-1	-9
Total	9	~	-9

TREES REMOVED

TREES REMOVED	# OF TREES	REPLACEMENT MUILTIPLIER	DEBITS
PALMS w/ 6' CLEAR	9	1	9
Total	9	~	9

TOTAL REMOVED TREE DEBIT = 30
MITIGATION = 15 - 2" TREES
(ASSUMES NO CREDIT)

TREE LEGEND

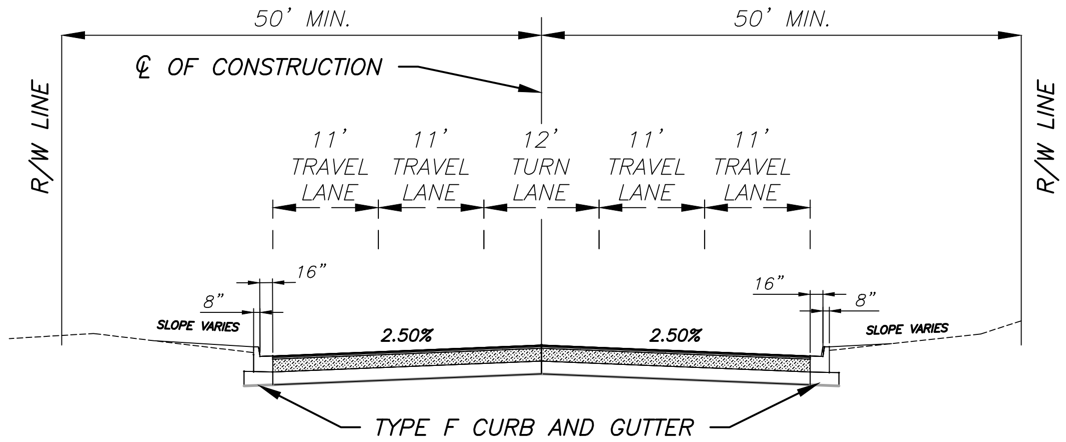
TREE
TREE (PALM)
TREE (PINE)
TREE (OAK)
TREE NUMBER IN ARBORIST REPORT

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

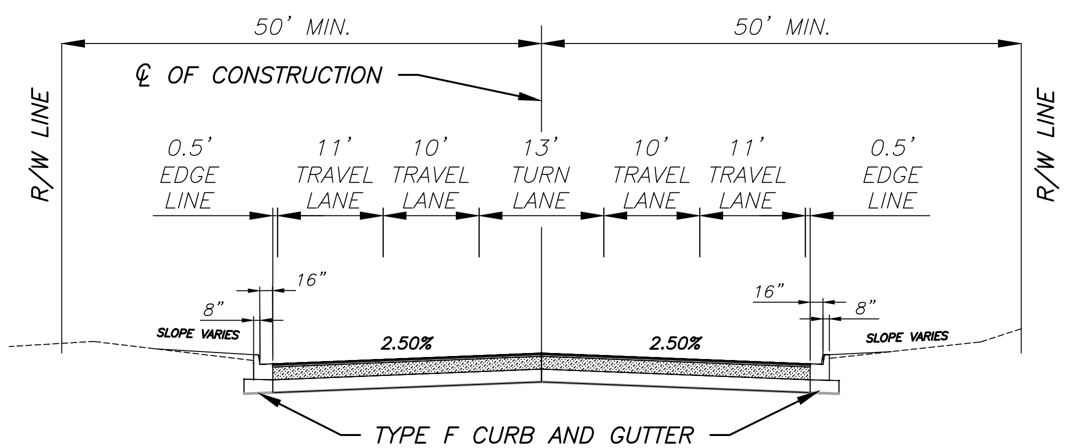
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

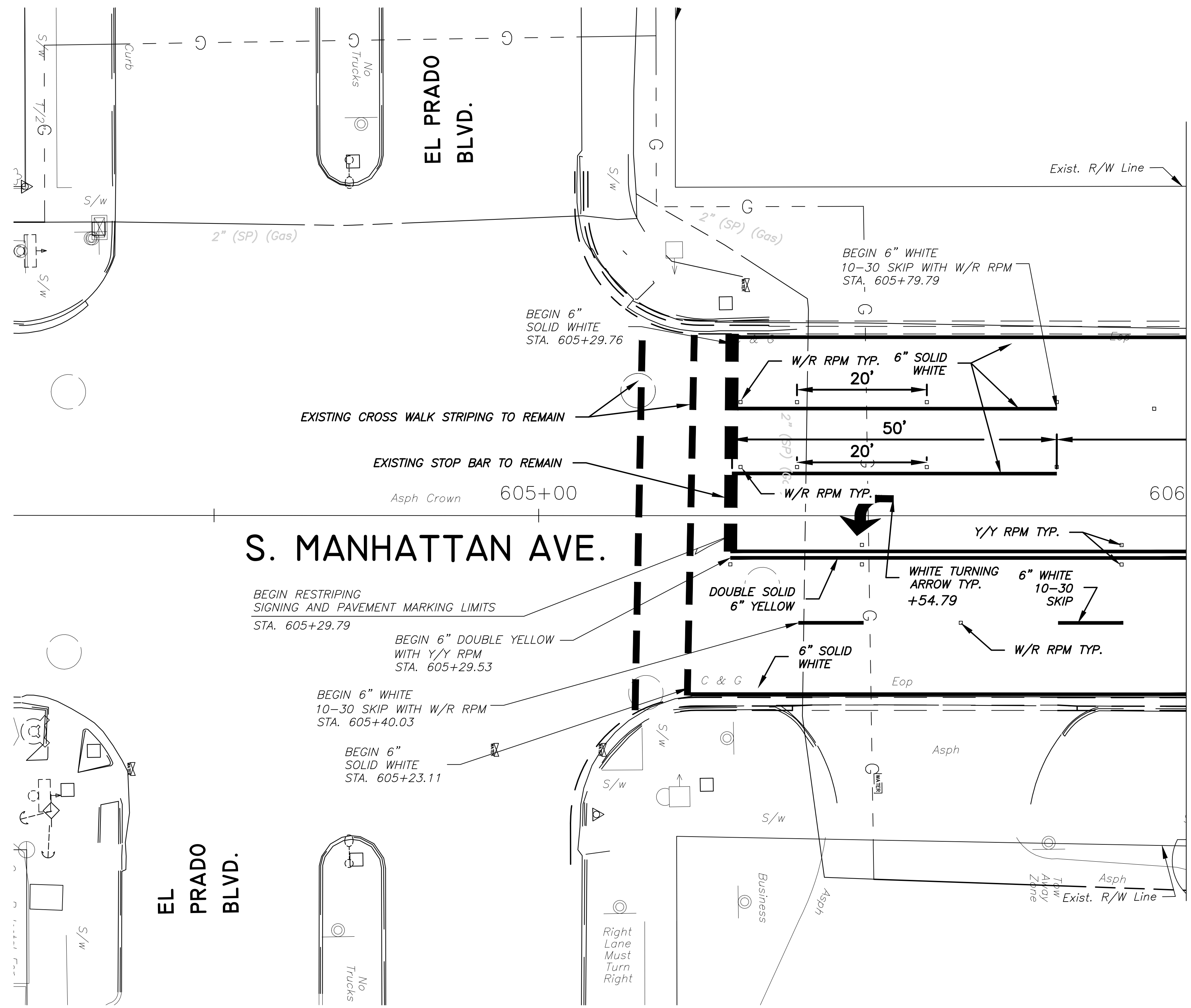
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TREE REMOVAL DETAILS



Existing LANE WIDTHS
TYPICAL SECTION
MANHATTAN AVENUE

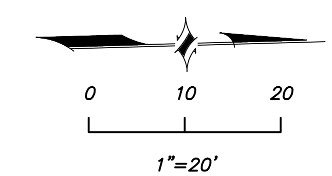


PROPOSED LANE WIDTHS
TYPICAL SECTION
MANHATTAN AVENUE



EXISTING PAVEMENT MARKING RESTRIPING/REPLACEMENT NOTE:

CONTRACTOR TO REMOVE EXISTING PAVEMENT MARKINGS WITHOUT DAMAGING EXISTING PAVEMENT UTILIZING CITY APPROVED METHOD FOR PAVEMENT MARKING REMOVAL



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DES: MDC/ASA
DRN: ASA/JBA
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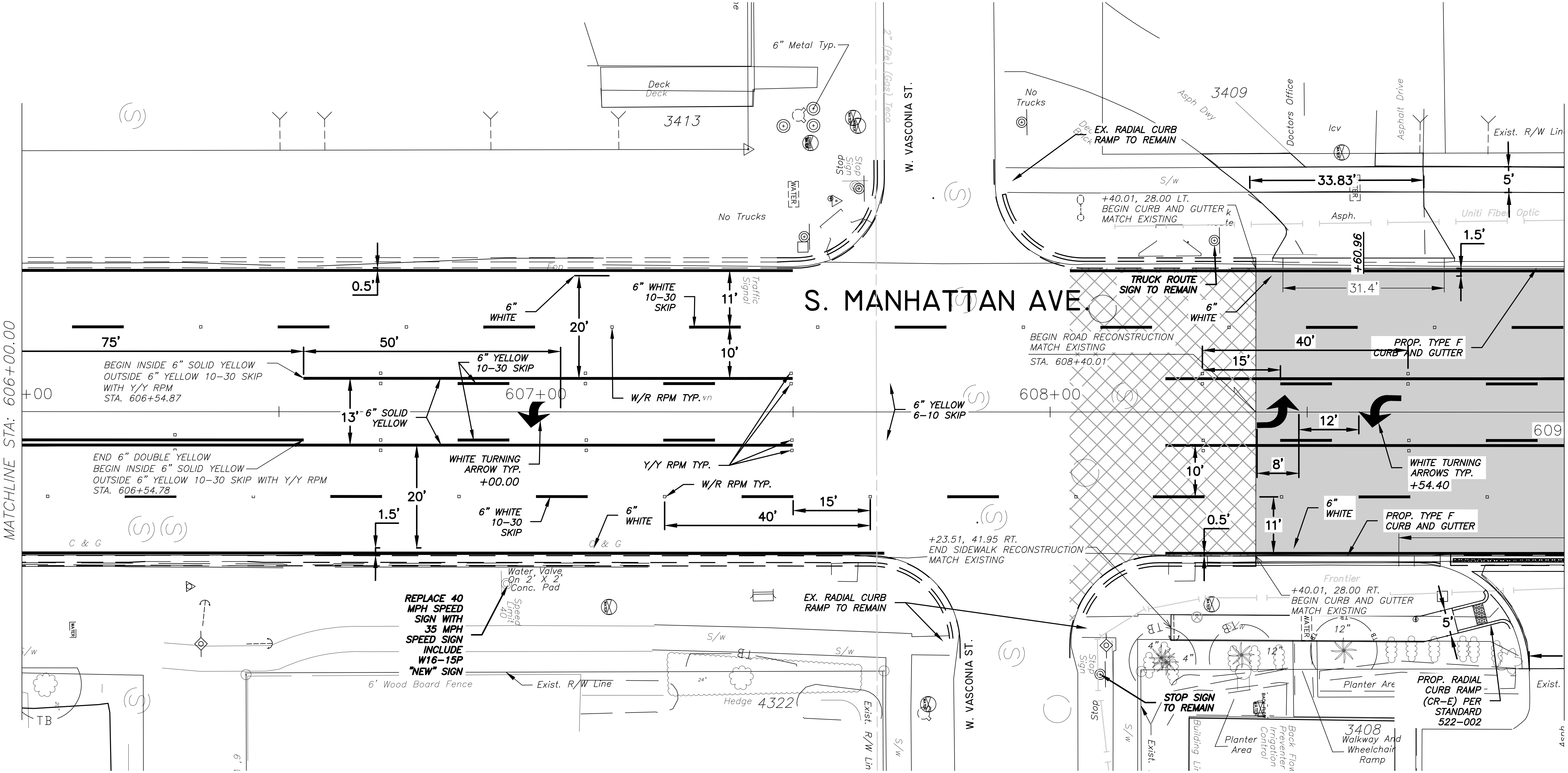
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT STRIPING & SIGNING PLANS



EXISTING PAVEMENT MARKING RESTRIPING/REPLACEMENT NOTE:

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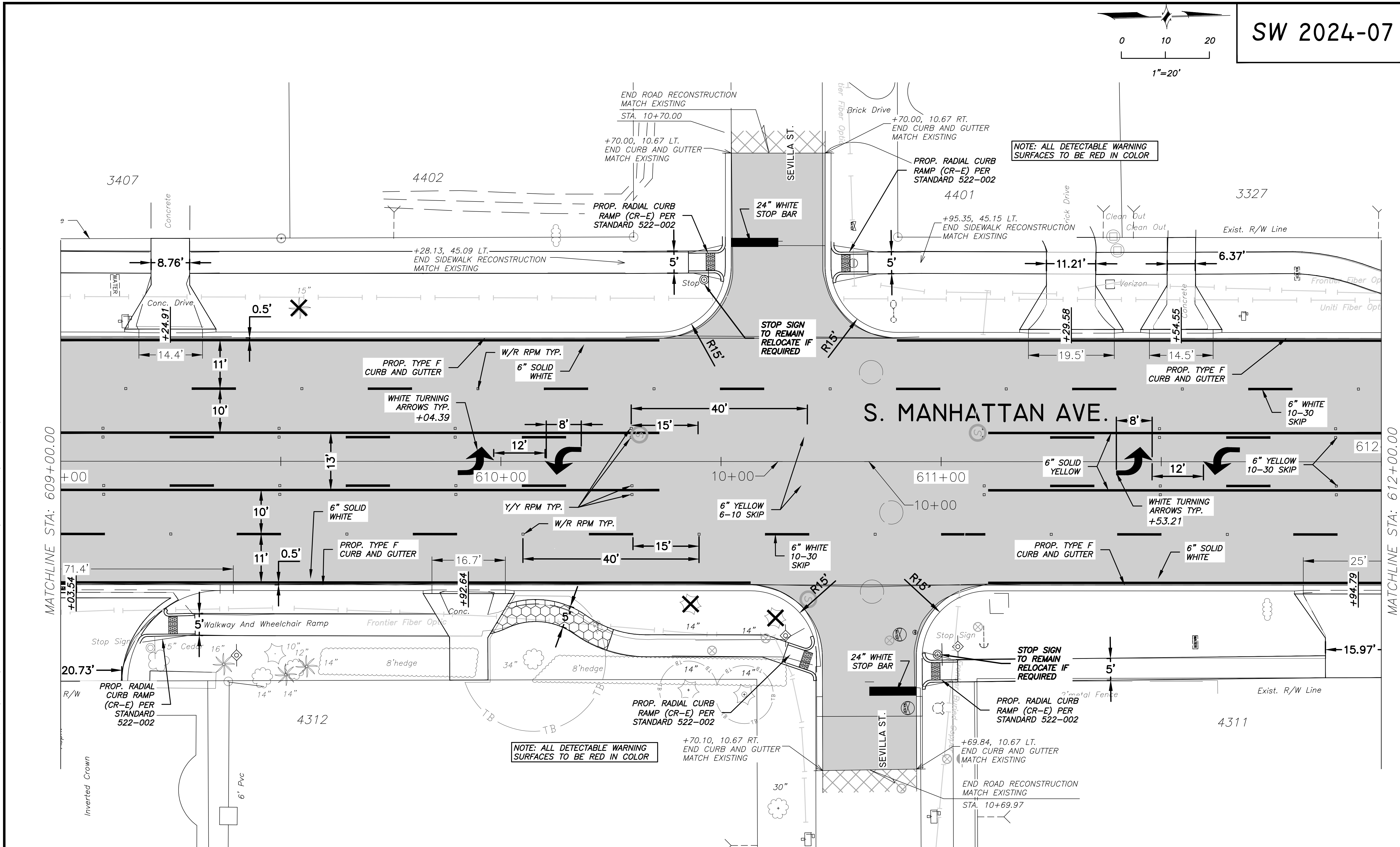
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND
STRIPING & SIGNING PLAN



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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND
STRIPING & SIGNING PLAN

SHEET 50 OF 100

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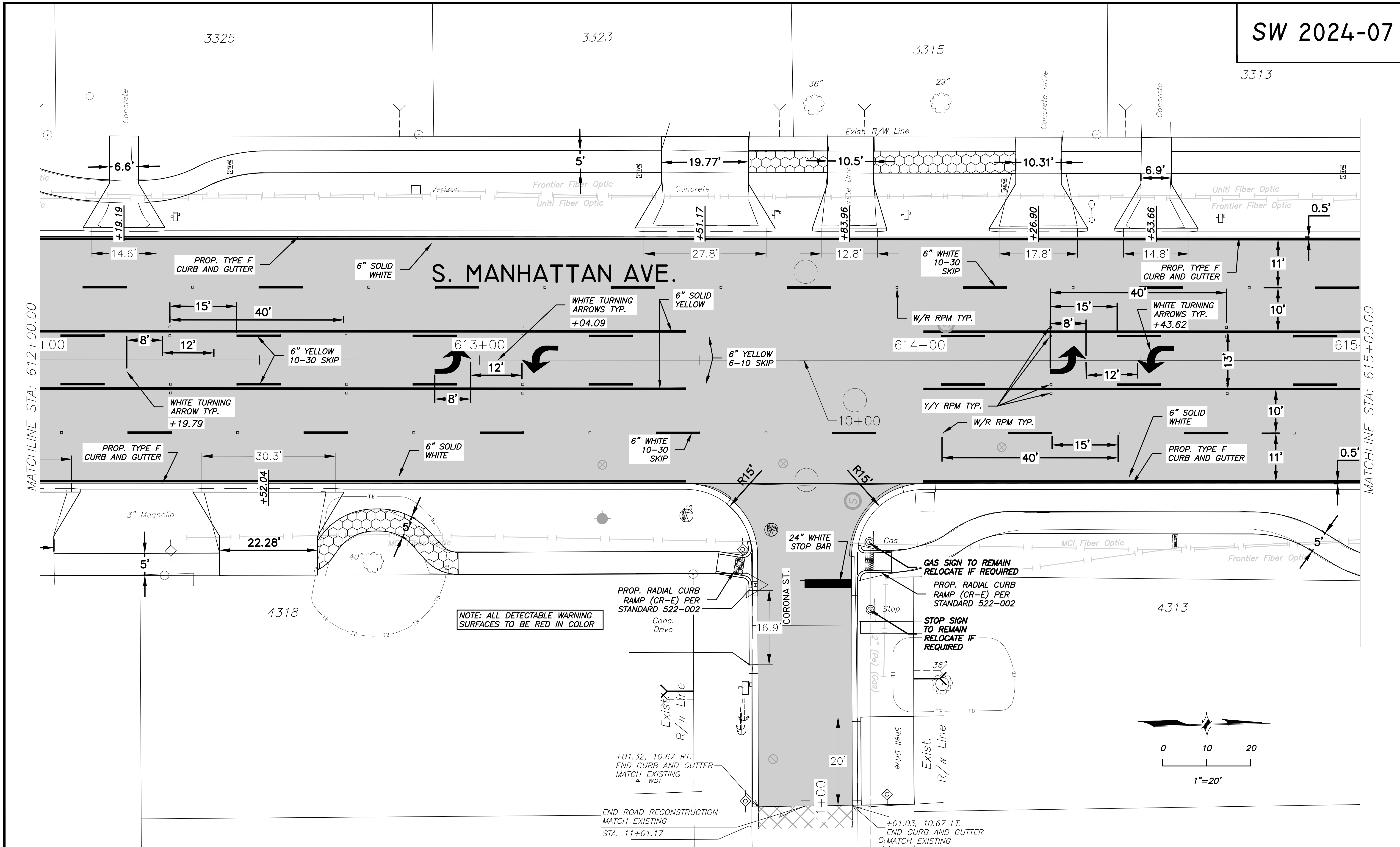

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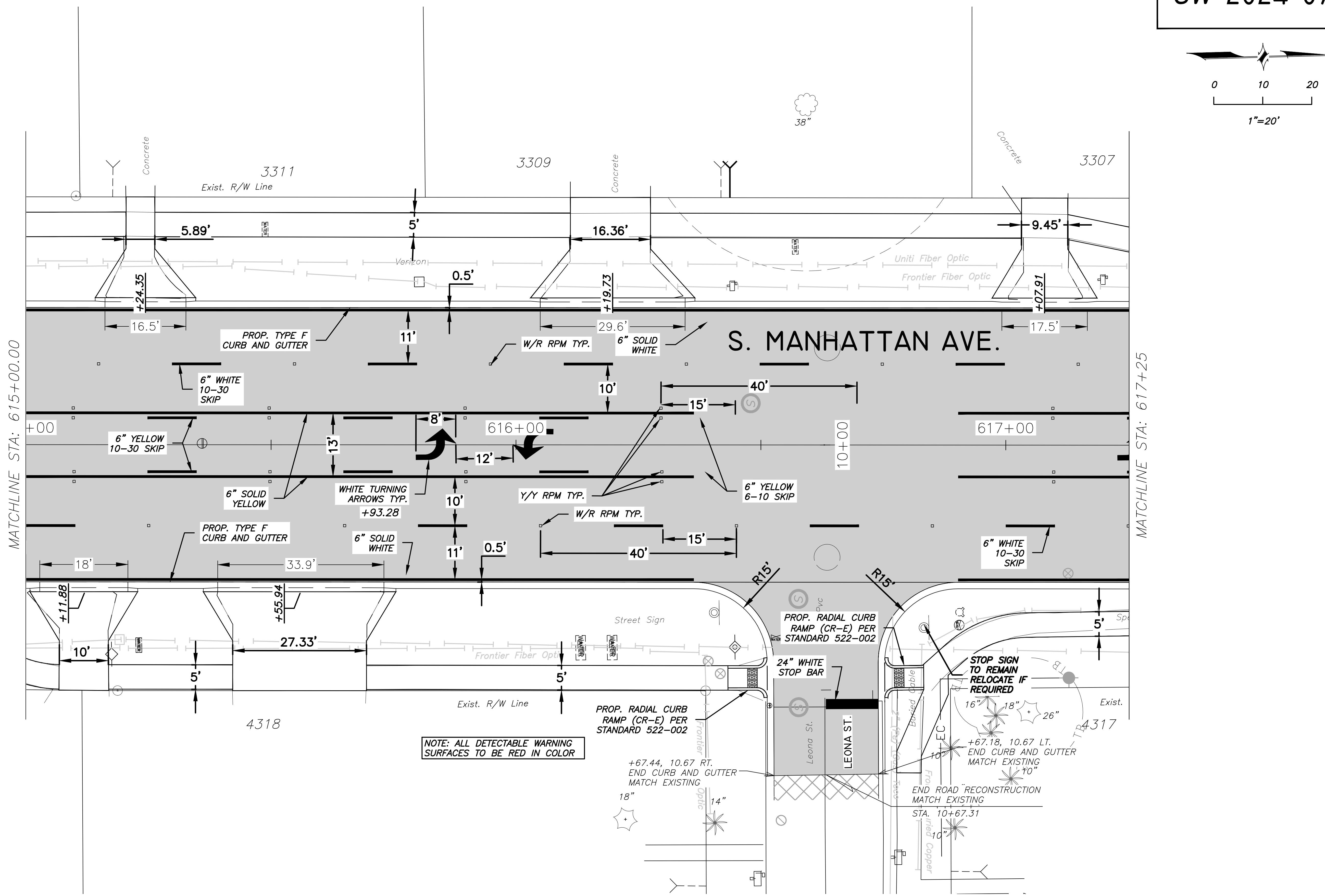
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I PAVEMENT RECONSTRUCTION AND STRIPING & SIGNING PLAN

SHEET 51 OF 100



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DES: MDC/ASA
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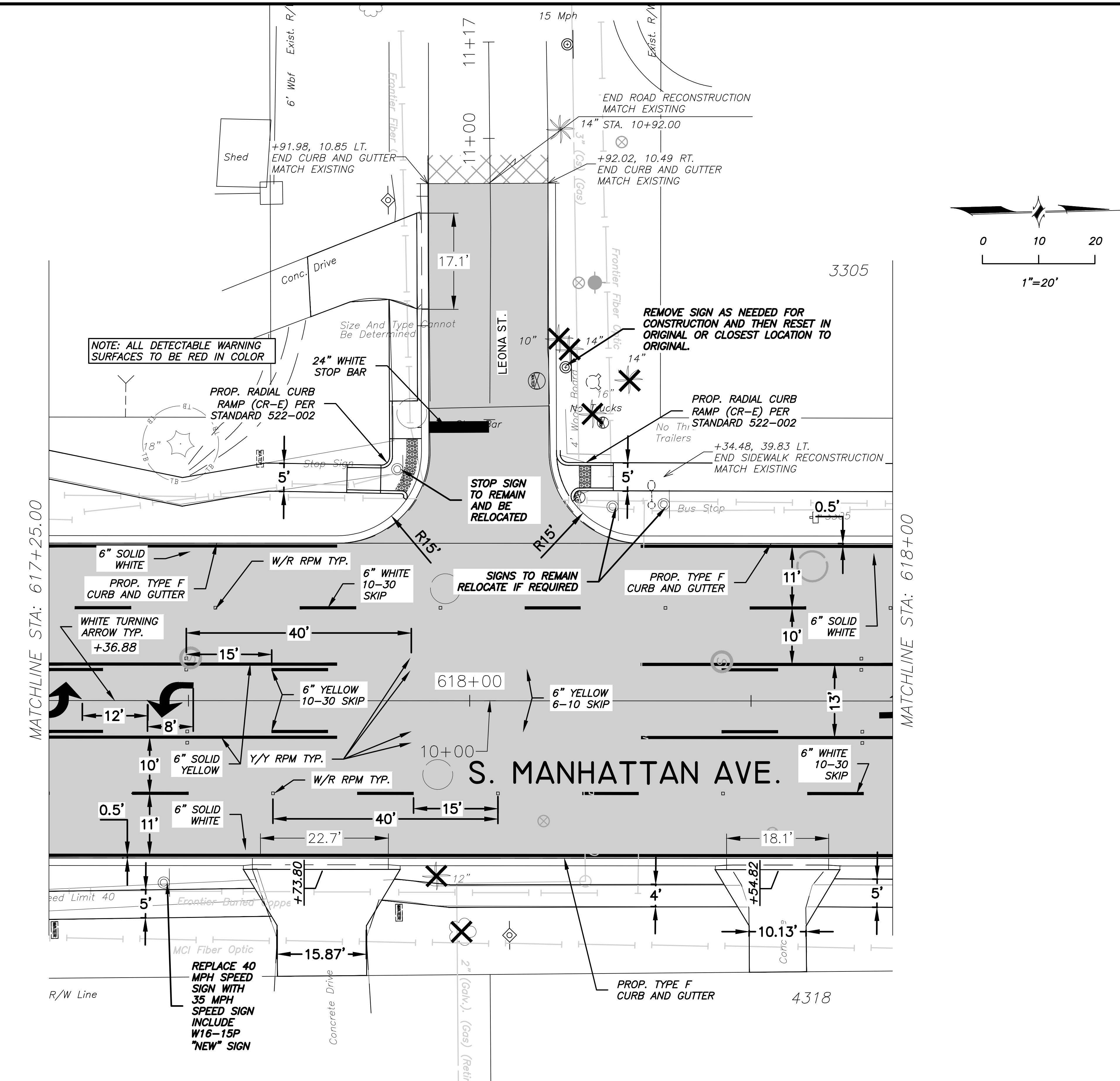
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND
STRIPING & SIGNING PLAN

SW 2024-07



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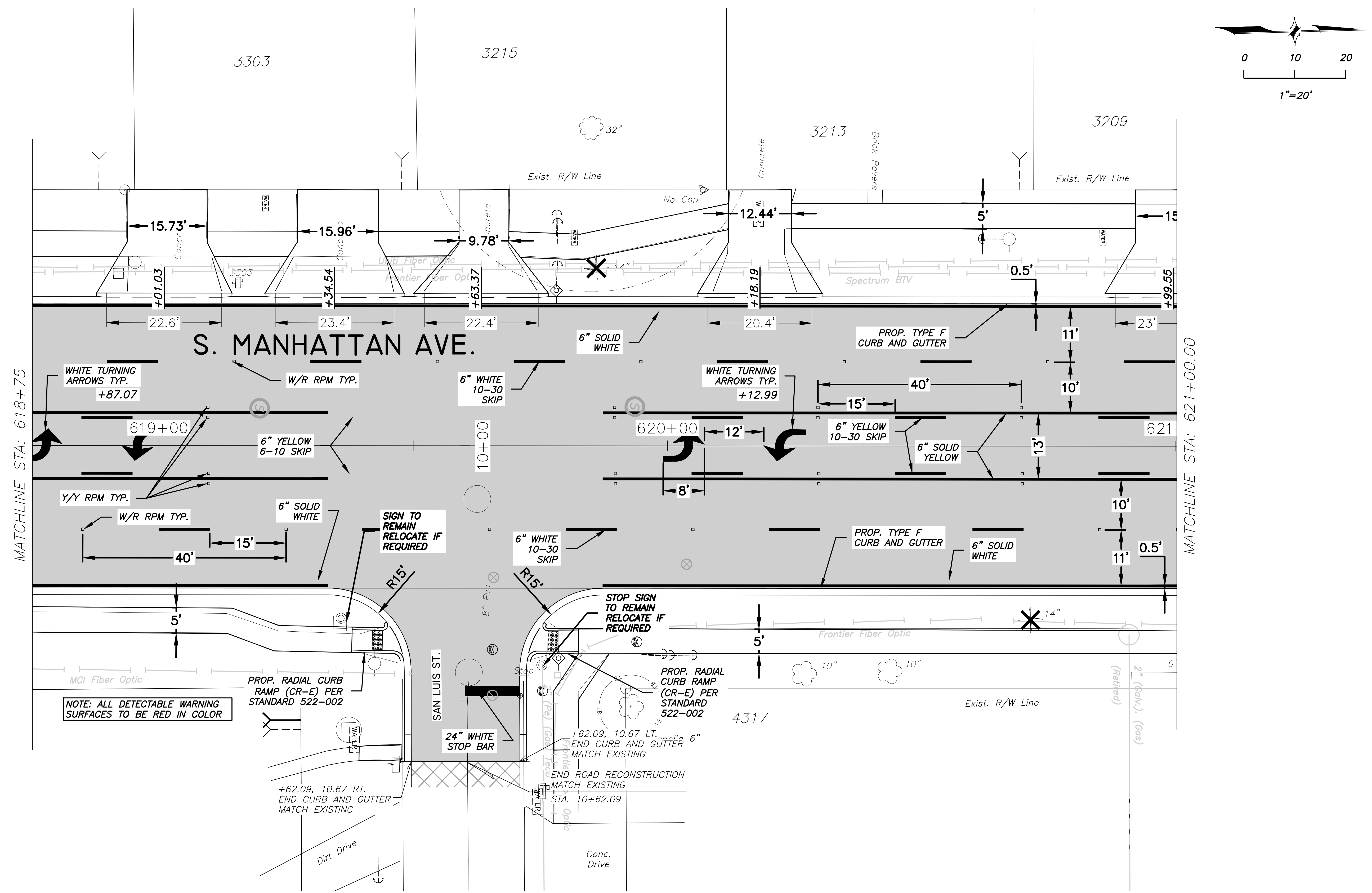
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND
STRIPING & SIGNING PLAN

SHEET 53 OF 100



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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
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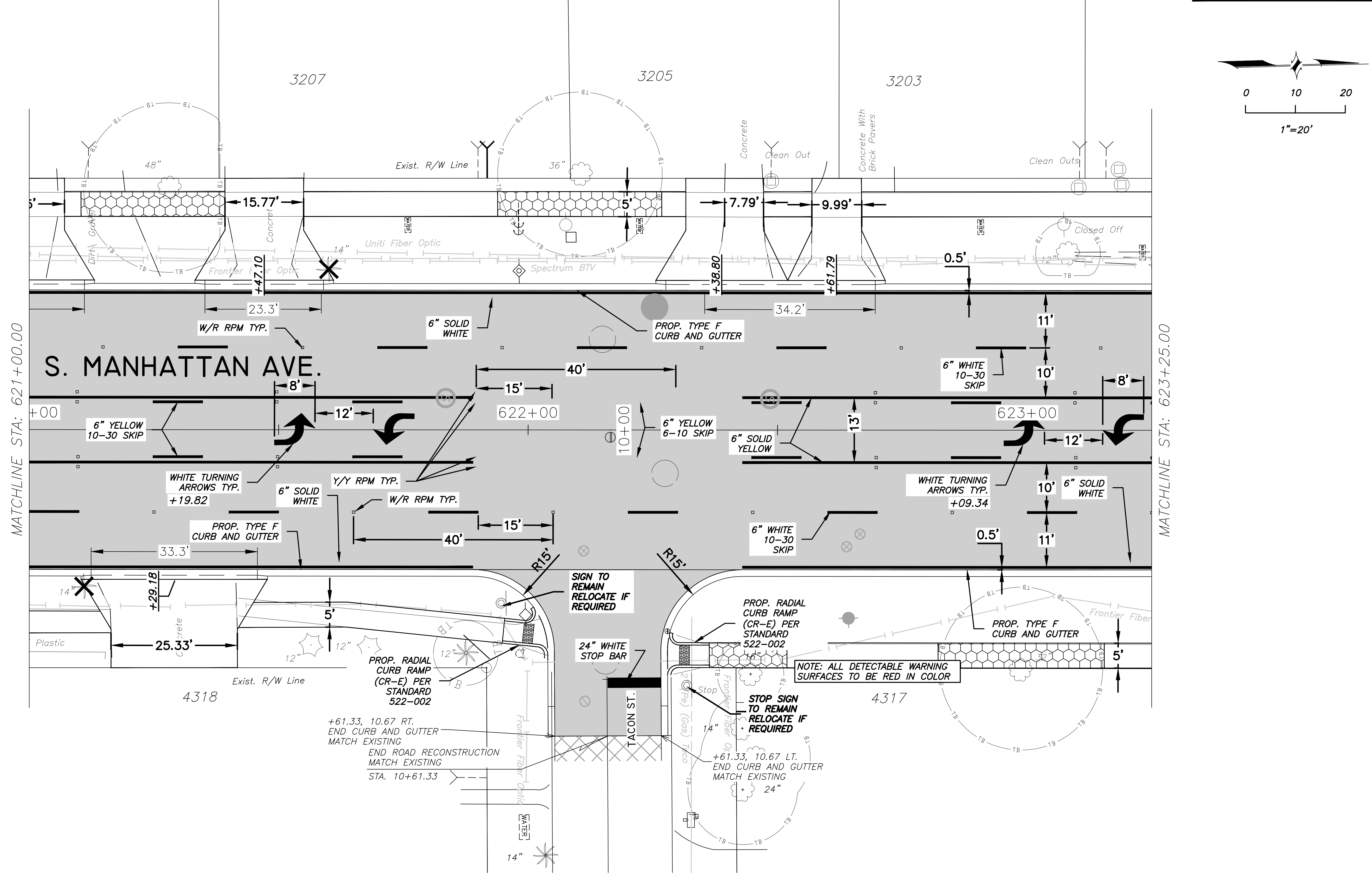
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND
STRIPING & SIGNING PLAN

SW 2024-07



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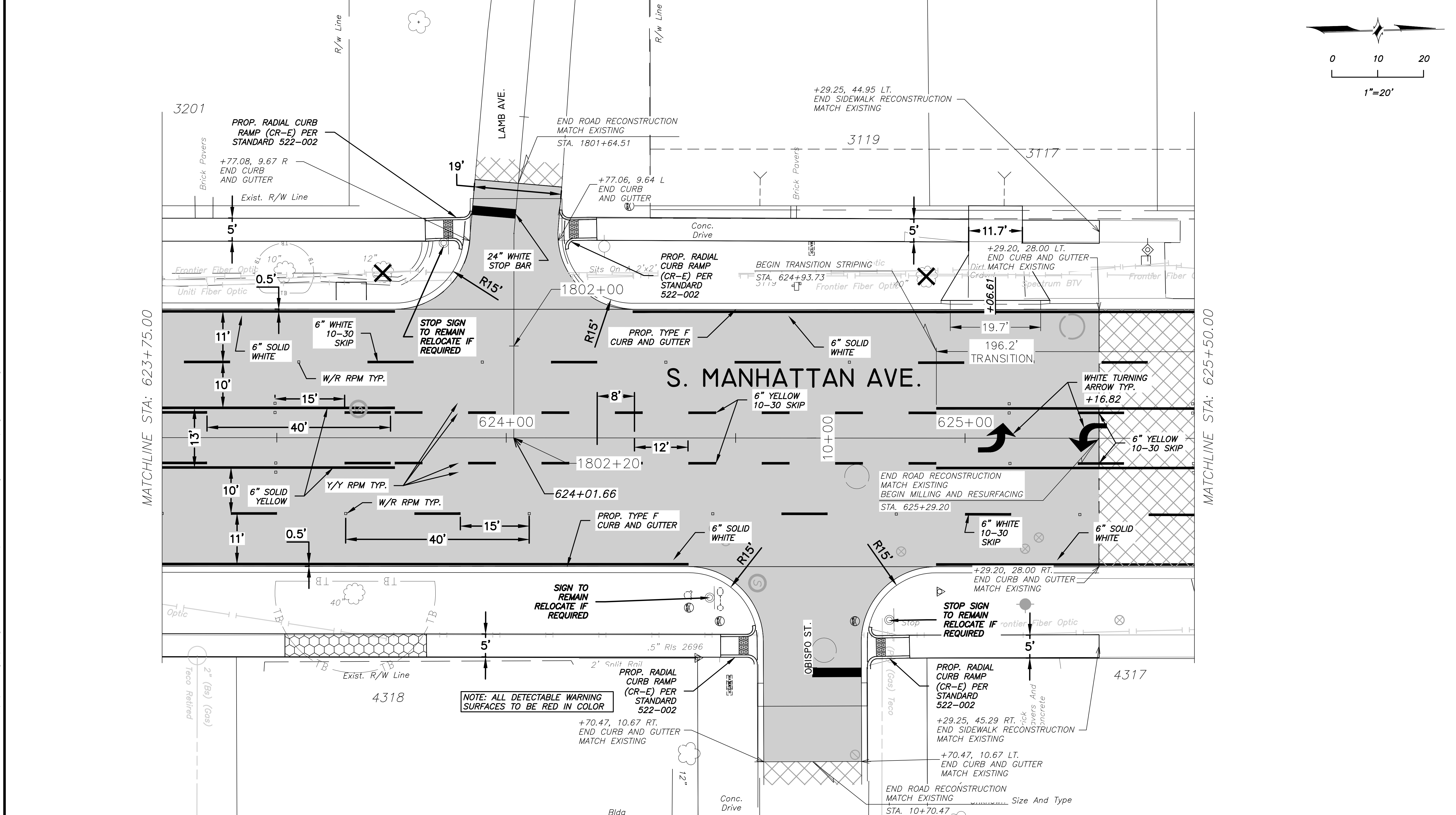
DES:	MDC/ASA
DRN:	ASA/JBA
CKD:	MDC
DATE:	09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND
STRIPING & SIGNING PLAN

SHEET 55 OF 100

SW 2024-07



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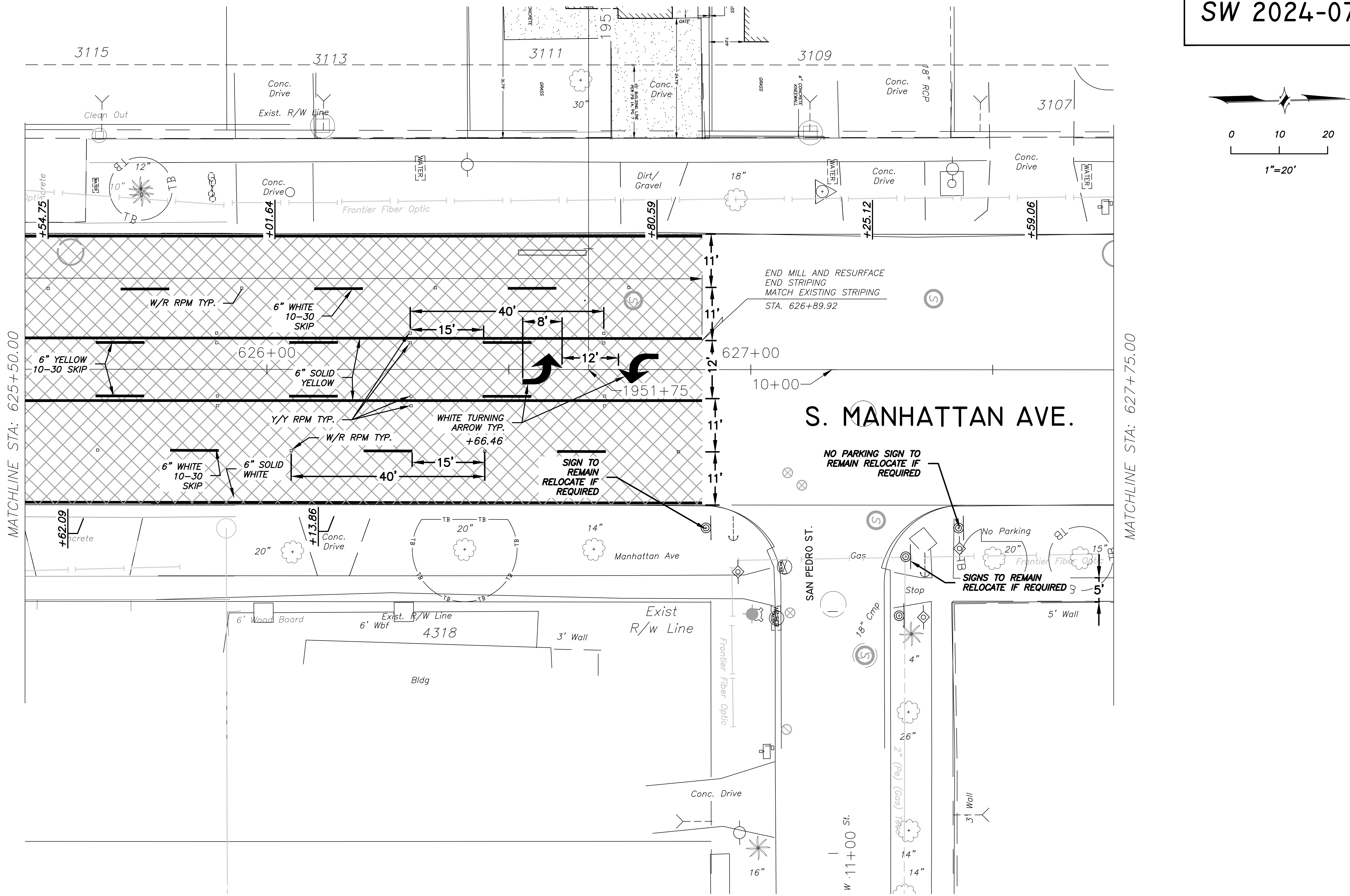
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT RECONSTRUCTION AND STRIPING & SIGNING PLAN

SHEET 56 OF 100

SW 2024-07



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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
PAVEMENT STRIPING & SIGNING PLANS

SHEET 57 OF 100

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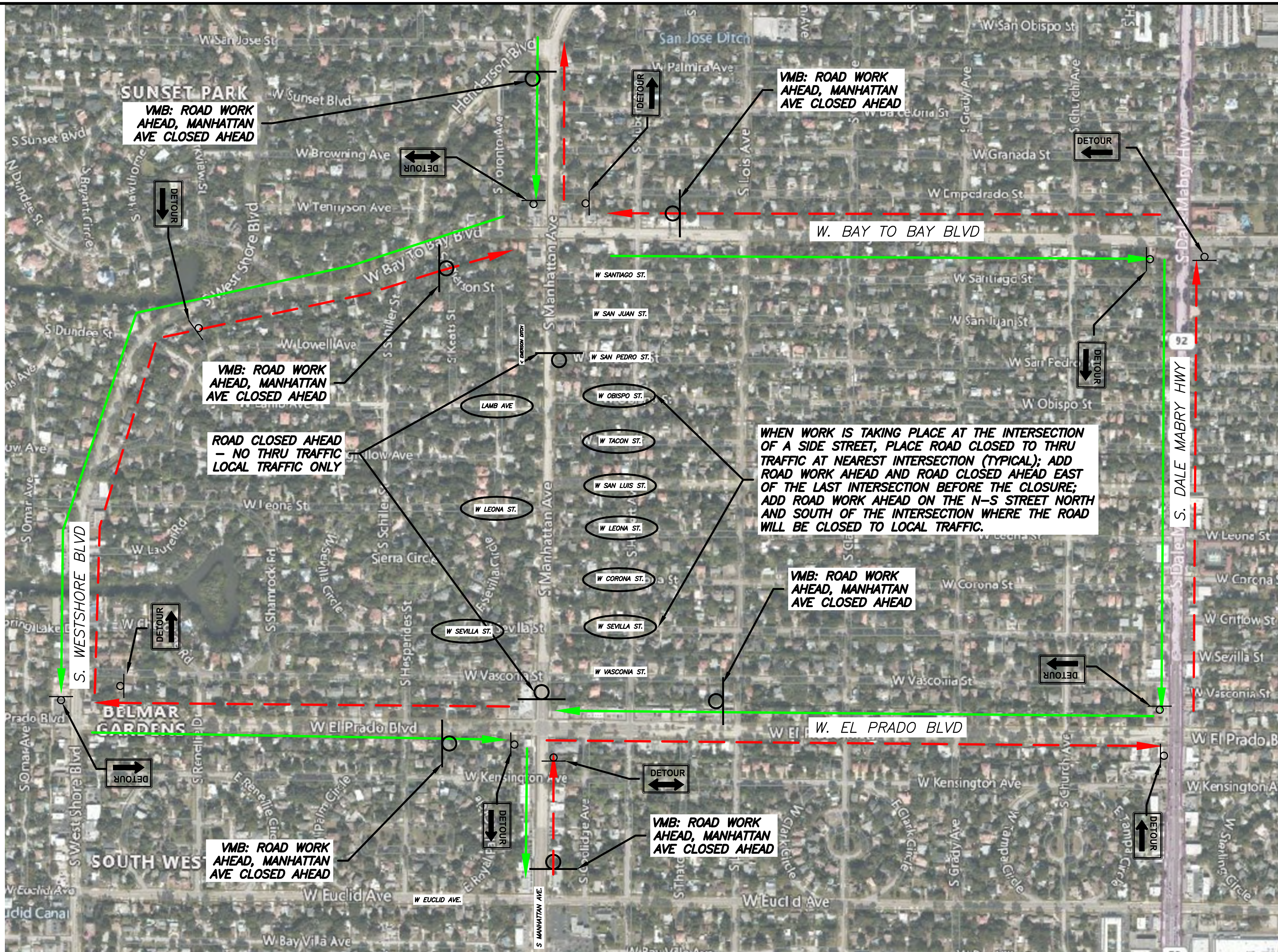
SW 2024-07



SOUTHERN ROUTE DETOUR ROUTE

NORTHERN ROUTE DETOUR ROUTE

TYPICAL ROUTE DETOUR SIGNING

NTS

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TYPICAL ROUTE DETOUR SIGNING

SHEET 58 OF 100

G:\Projects\19-010 – Manhattan Ave Imp\Drawings\Design & Construction\19-010-Typical MOT Sheets – Route.dwg – Printed Jan 31, 2025-3:58pm by: RobertR

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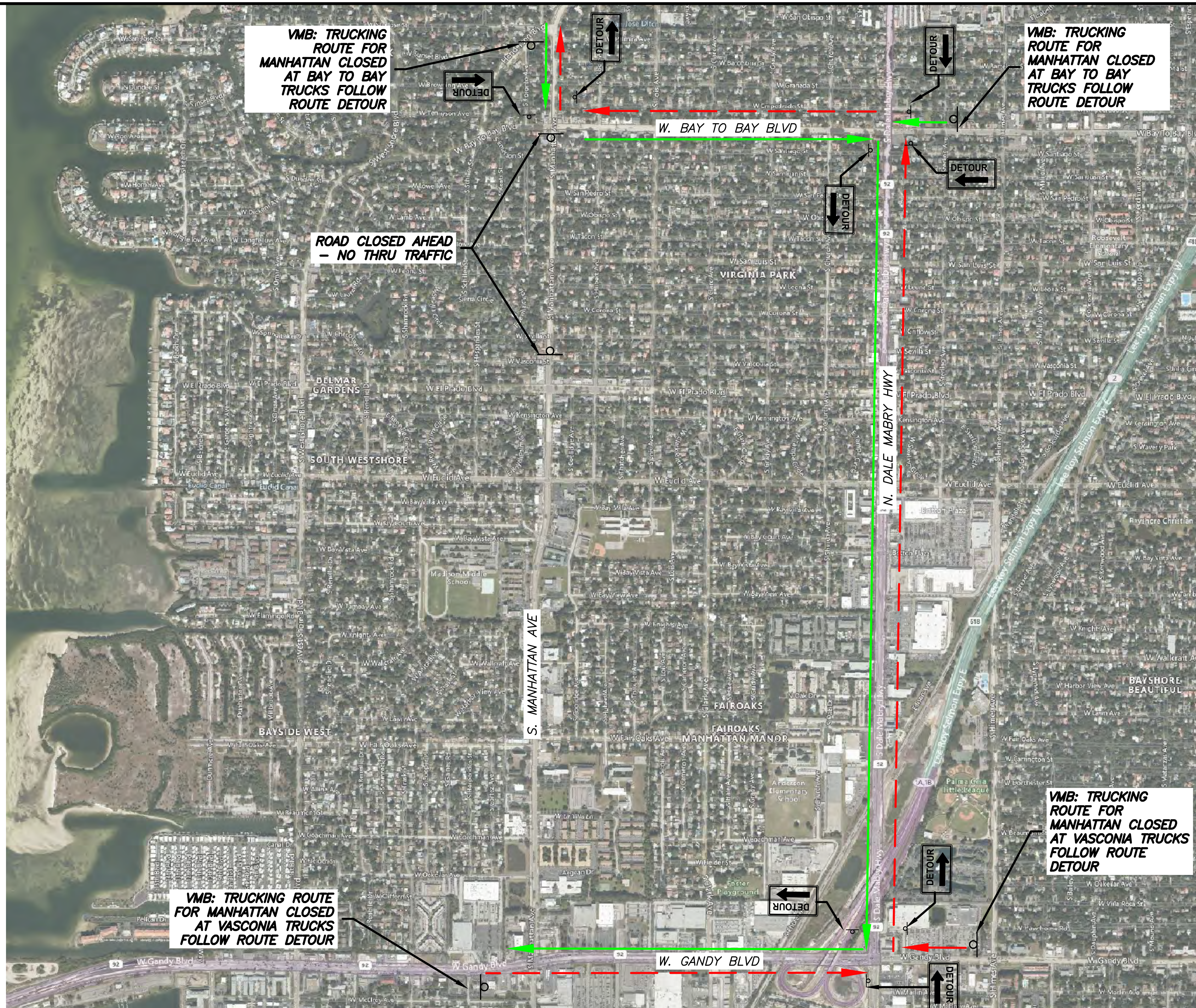
SW 2024-07



SOUTHERN TRUCK DETOUR ROUTE

NORTHERN TRUCK DETOUR ROUTE

TYPICAL TRUCK DETOUR SIGNING

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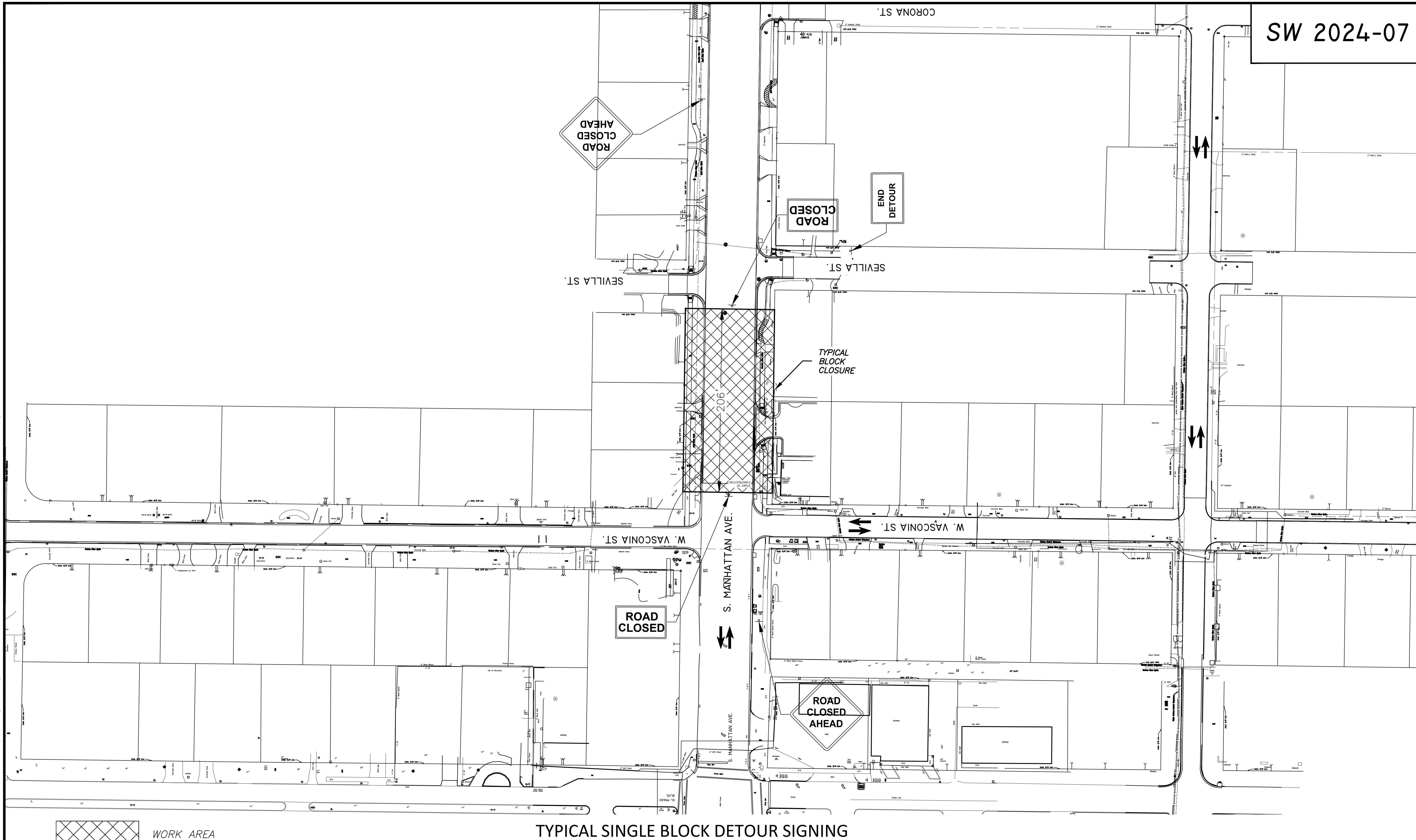
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TYPICAL TRUCK DETOUR SIGNING

SW 2024-07



TYPICAL SINGLE BLOCK DETOUR SIGNING

NTS

No.	DATE	REVISIONS	No.	DATE	REVISIONS				
3			6			DES: MDC/ASA	CITY of TAMPA	MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I	SHEET 60
2			5			DRN: ASA/JBA	Mobility Department	TYPICAL SINGLE BLOCK DETOUR SIGNING	OF 100
1			4			CKD: MDC DATE: 09/03/24	Stormwater Engineering Division		

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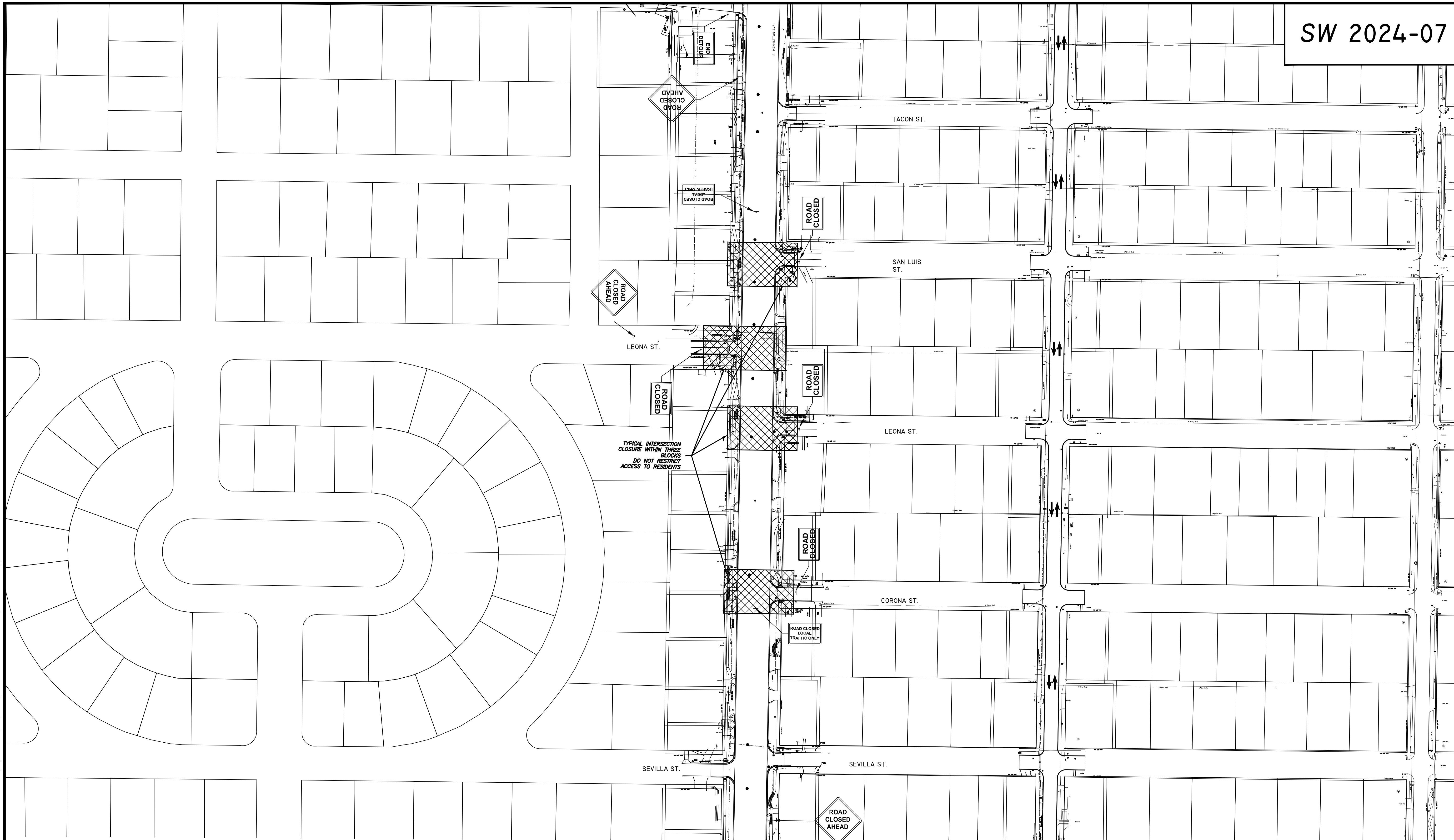
SW 2024-07



WORK AREA

TYPICAL MUTLIPLE INTERSECTION DETOUR SIGNING

NTS

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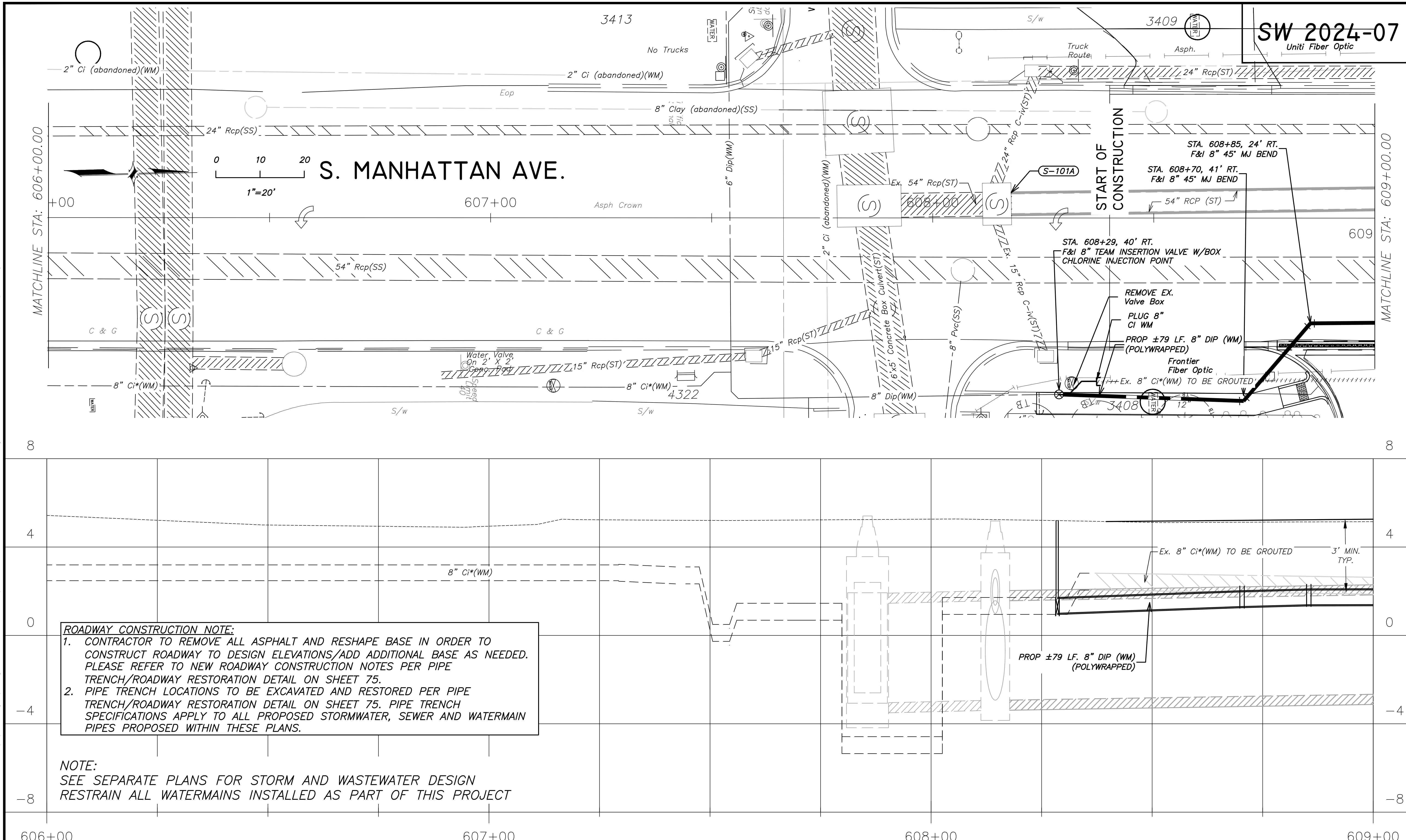
2			5		
1			4		

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
TYPICAL MULTIPLE
INTERSECTION DETOUR SIGNING

SHEET 61 OF 100



ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75. PIPE TRENCH SPECIFICATIONS APPLY TO ALL PROPOSED STORMWATER, SEWER AND WATERMAIN PIPES PROPOSED WITHIN THESE PLANS.

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN
RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SHEET 62 OF 100

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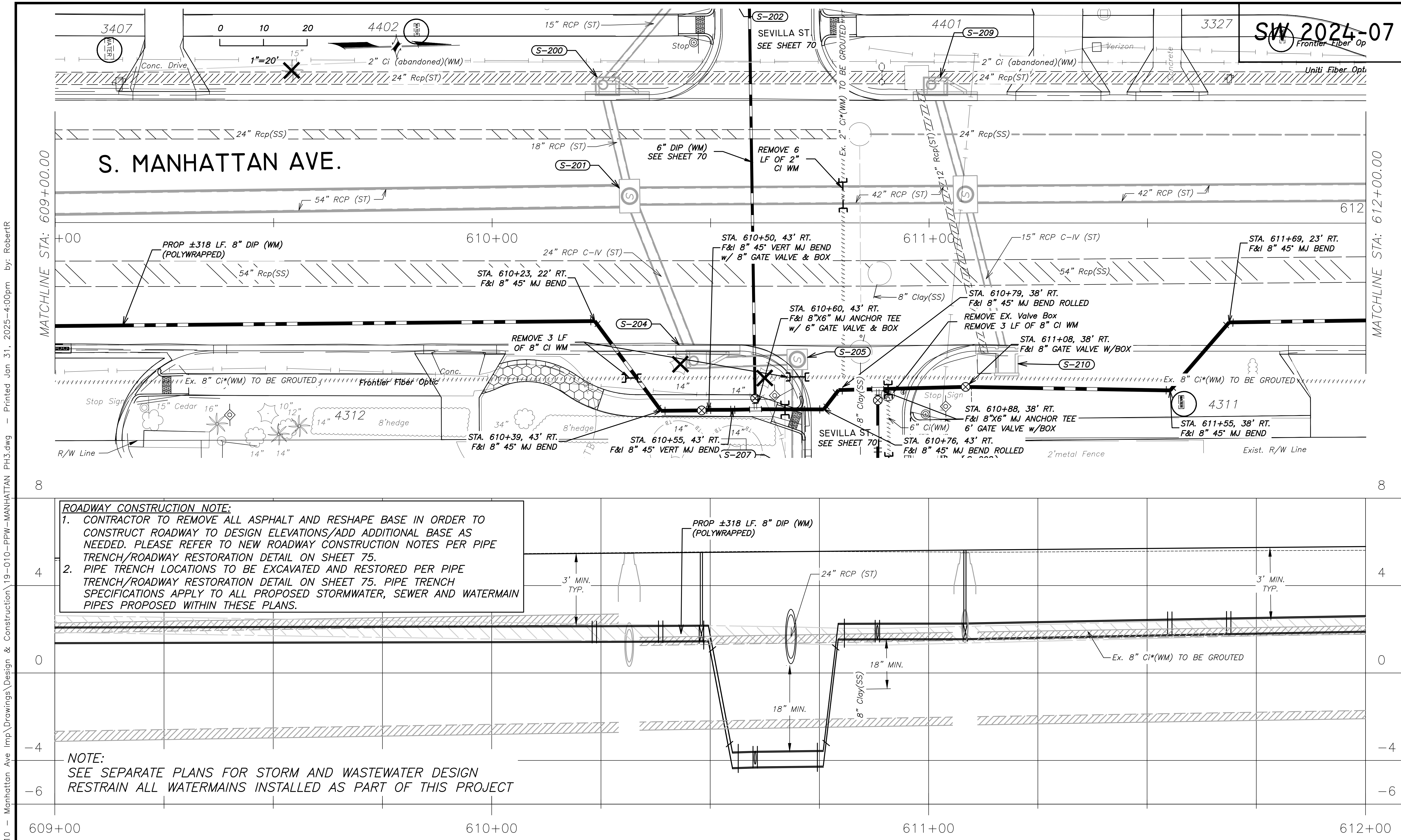

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN
RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SHEET 63 OF 100

SW 2024-07

0 10 20
1"=20'

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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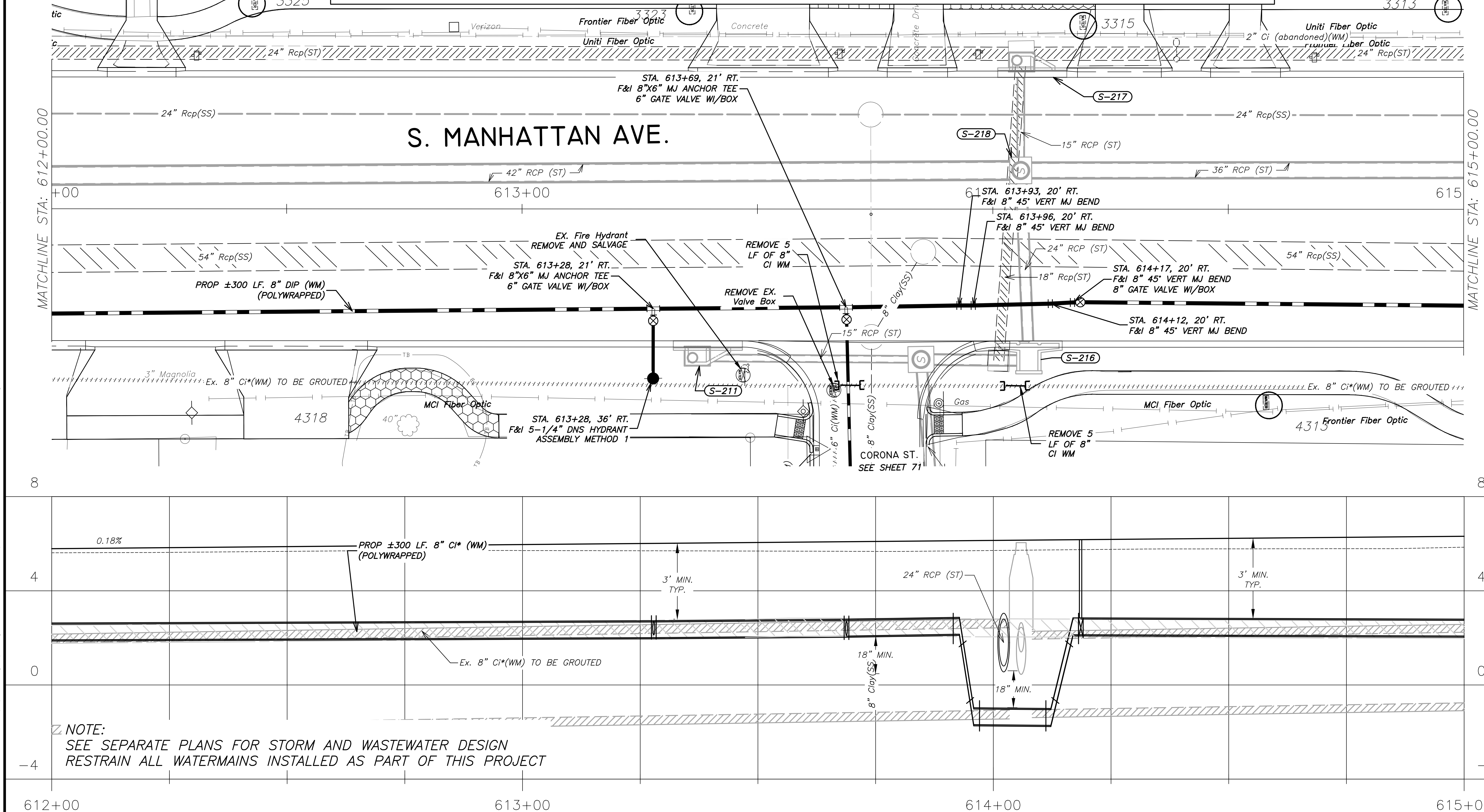

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN
RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SHEET 64 OF 100

0 10 20
1"=20'

ROADWAY CONSTRUCTION NOTE:
1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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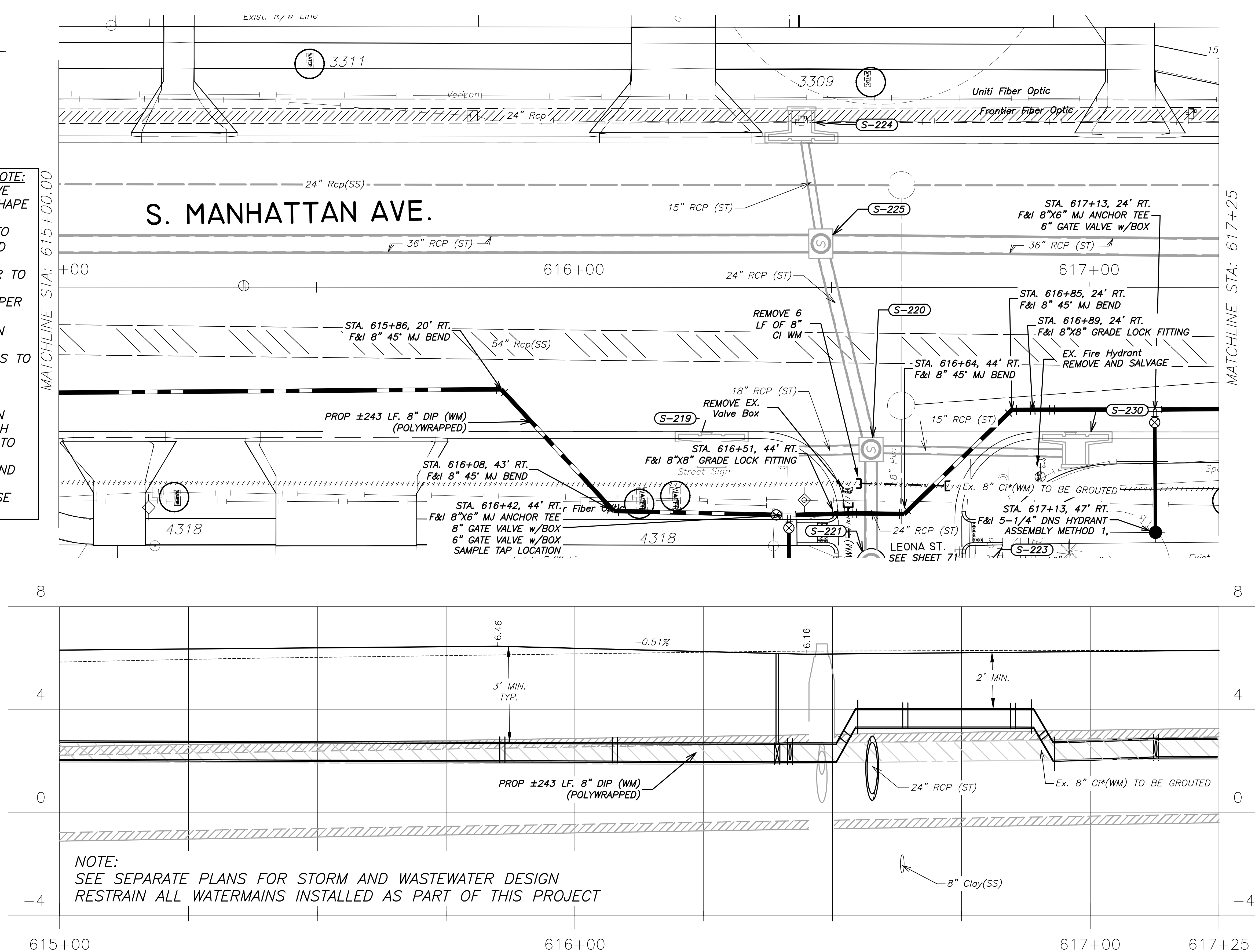

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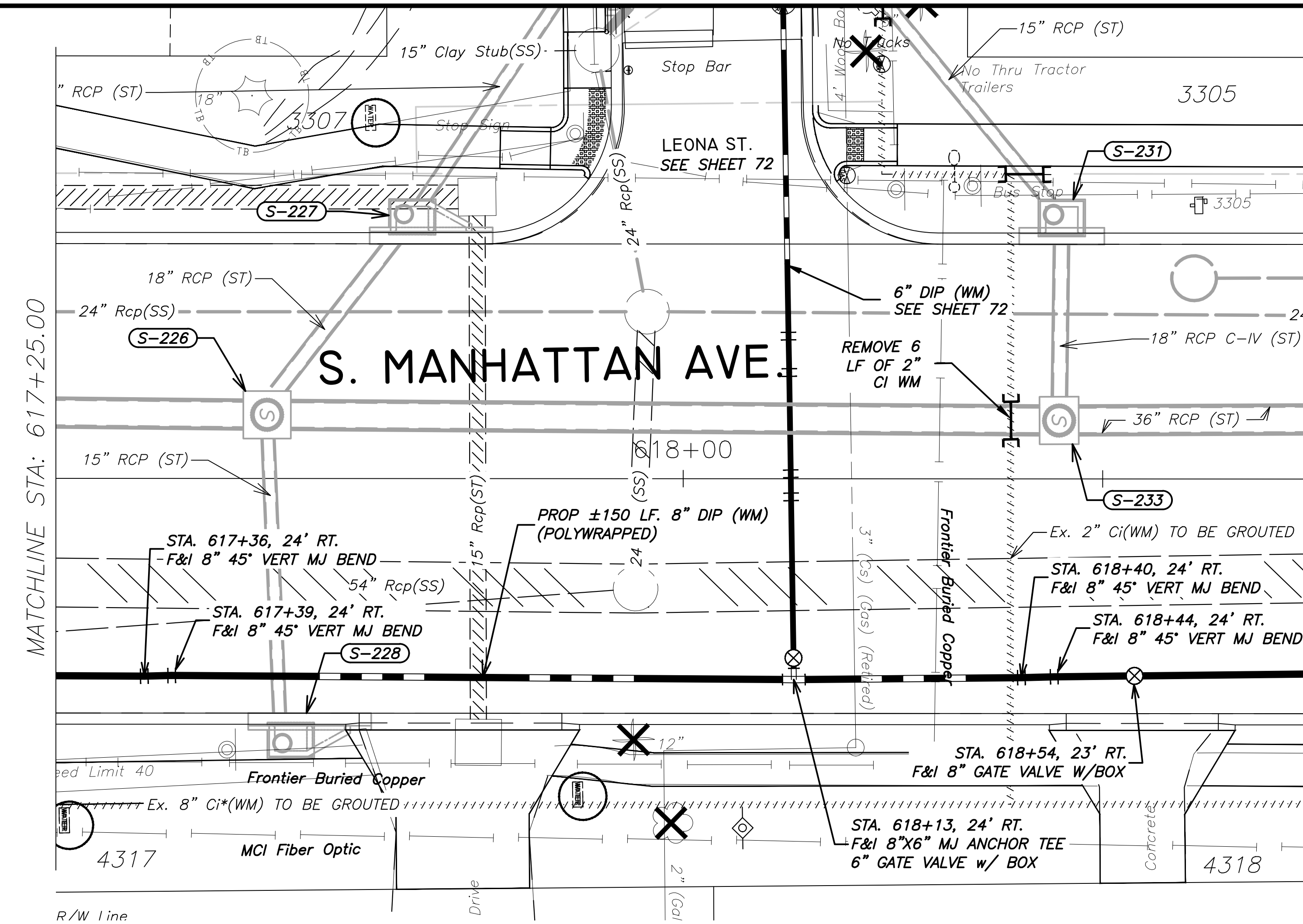
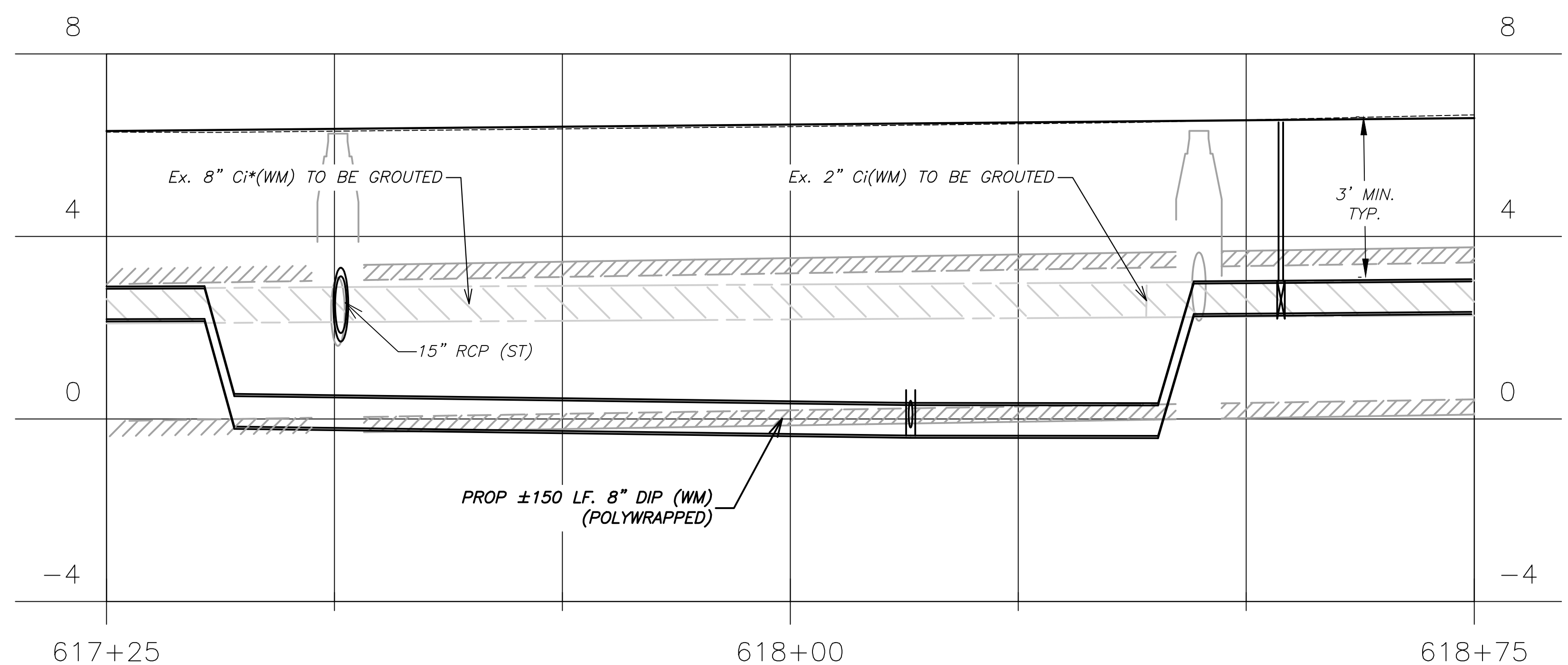
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE





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NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN

RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SW 2024-07

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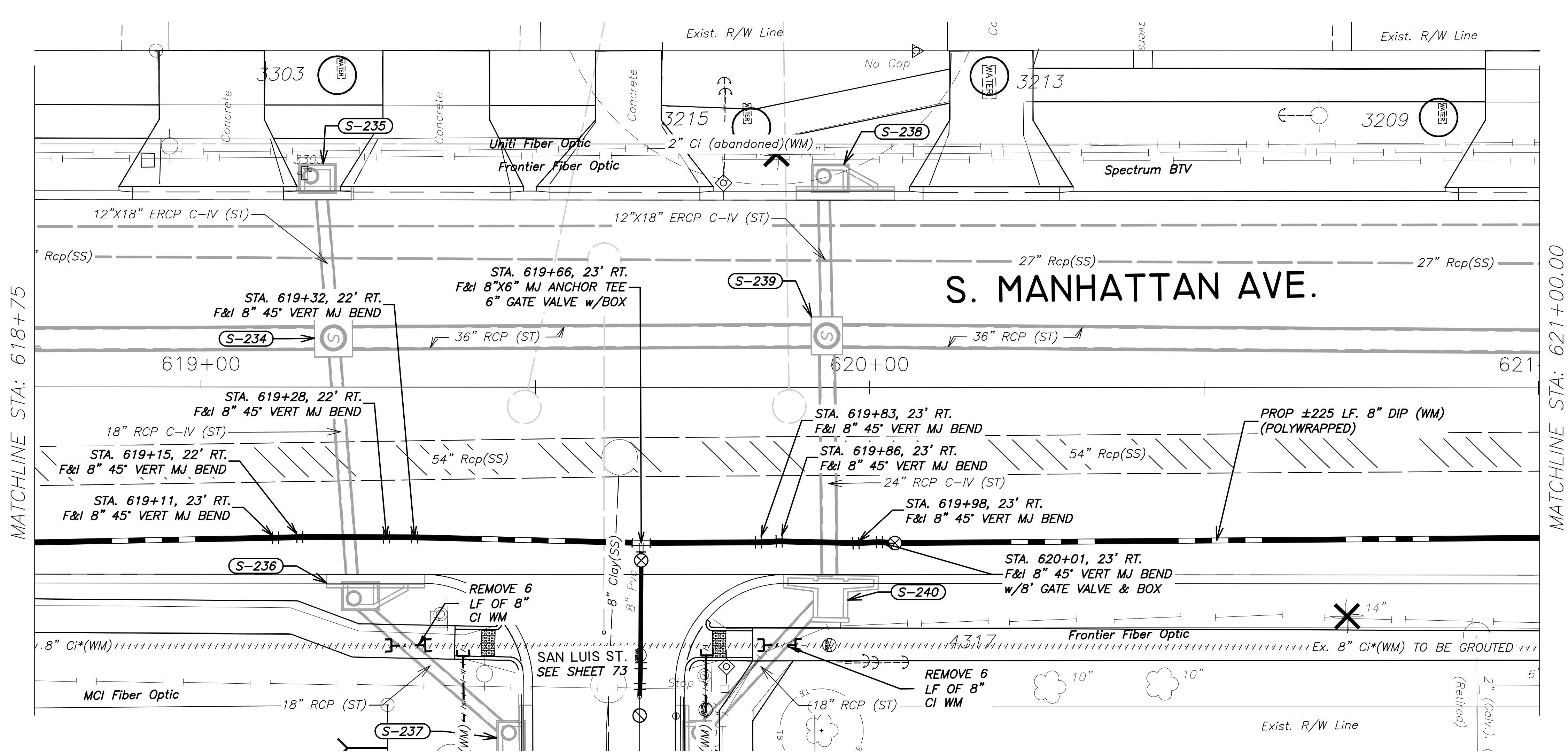
1"=20'



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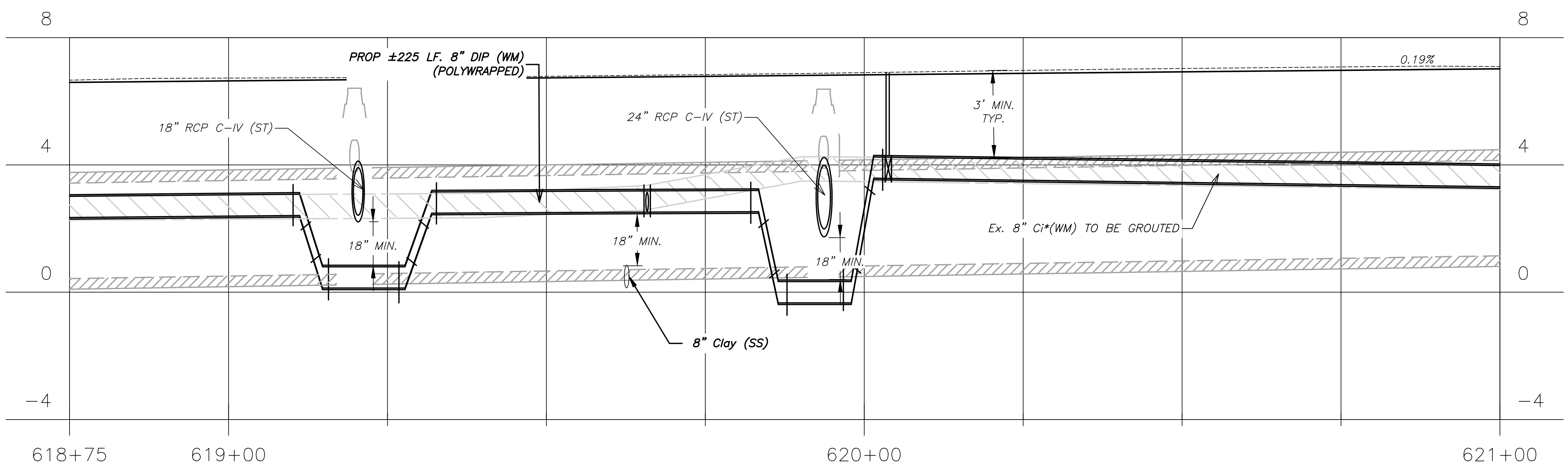

NOTE:
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RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

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DATE: 09/03/24

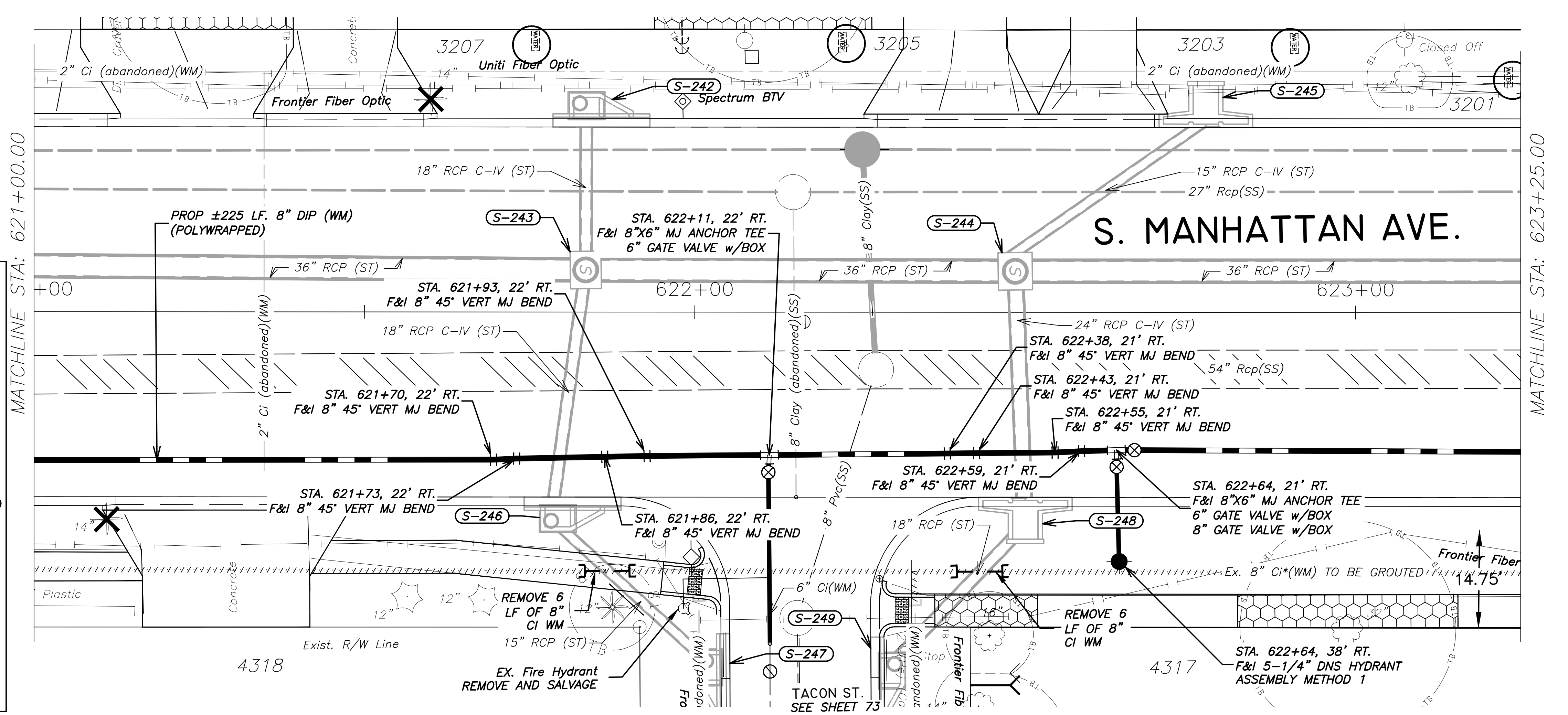
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SHEET 67 OF 100

SW 2024-07

0 10 20
1"=20'



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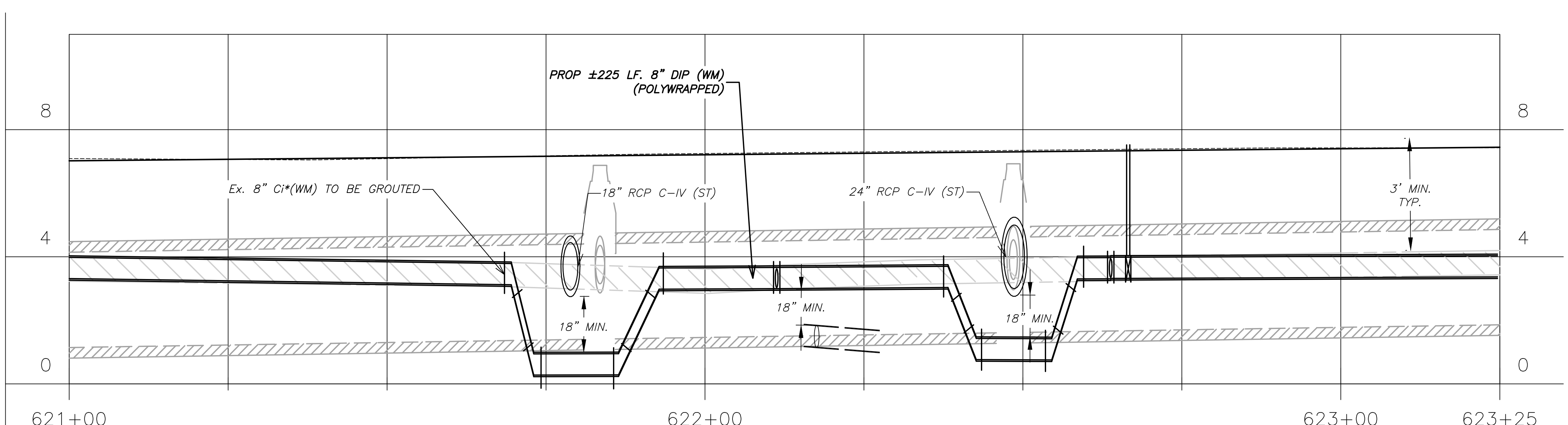

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN

RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

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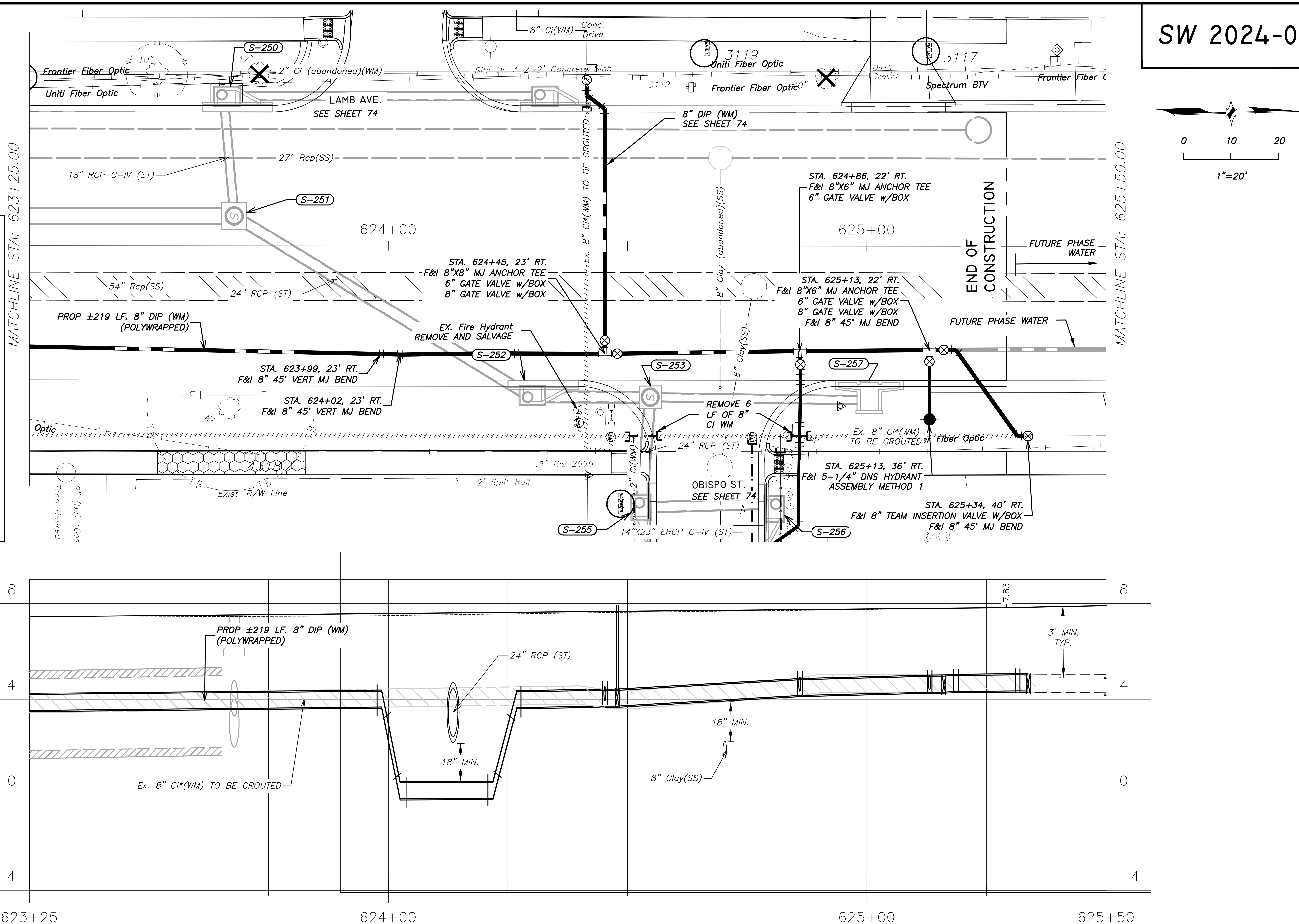
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SHEET 68 OF 100

SW 2024-07



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NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN

RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

No.	DATE	REVISIONS	No.	DATE	REVISIONS
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DES: MDC/ASA
DRN: ASA/JBA
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - WATER PLAN AND PROFILE

SHEET 69 OF 100

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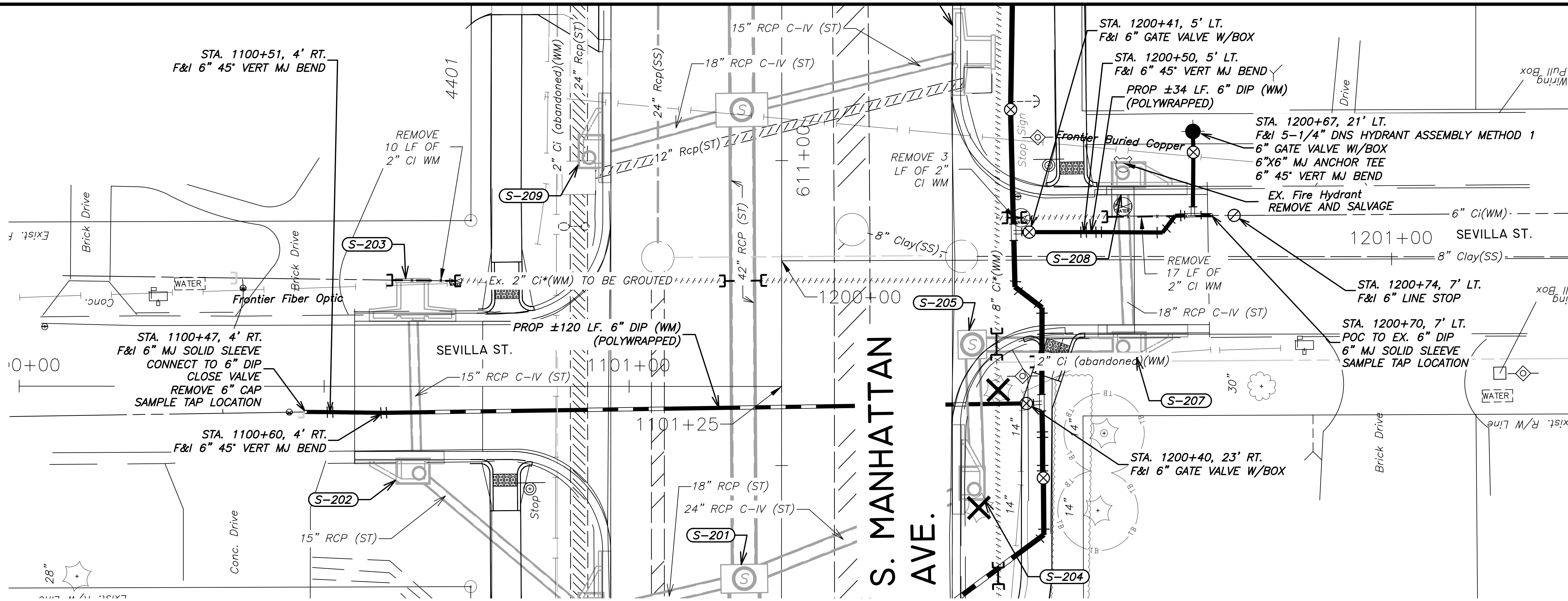

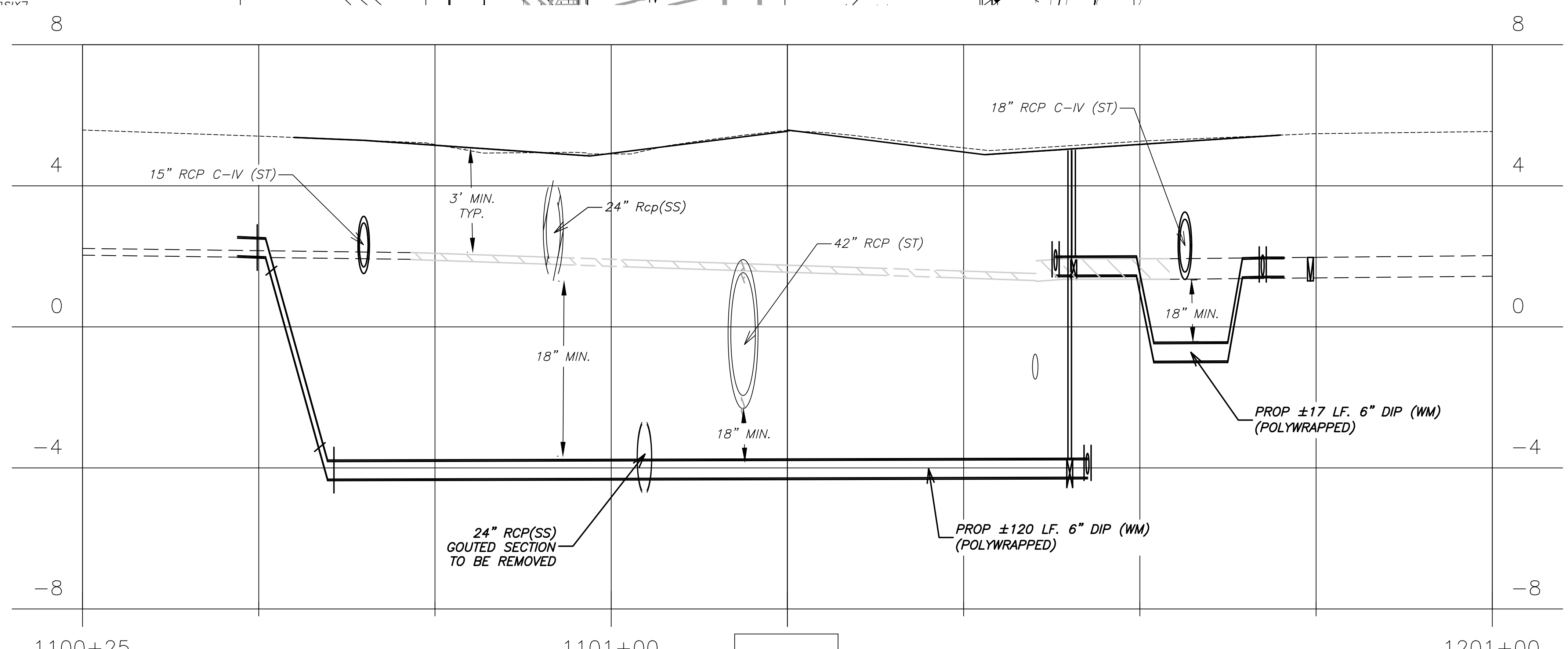

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NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN

RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

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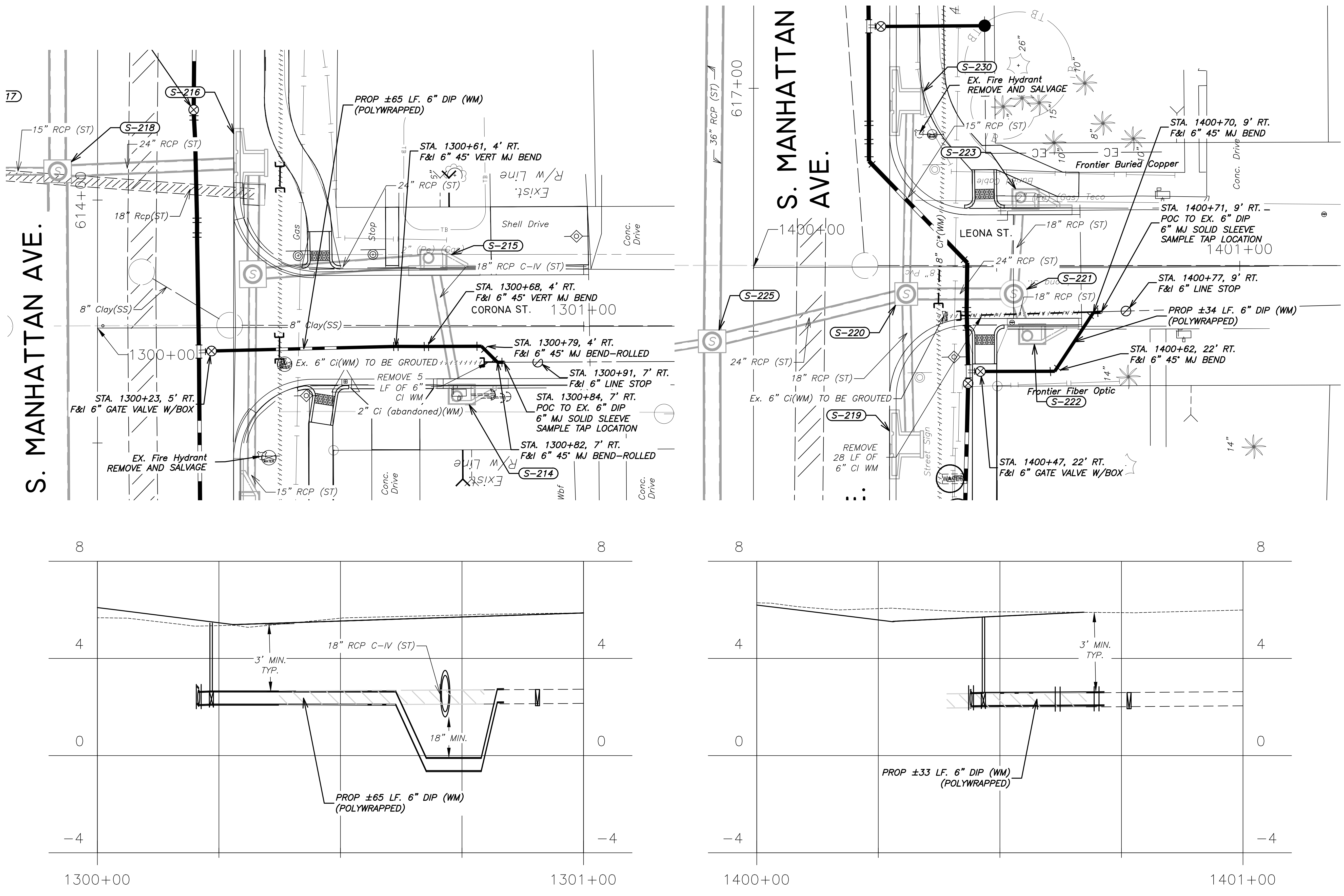
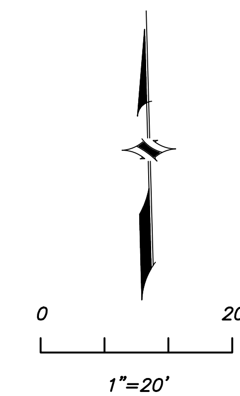
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
W. SEVILLA ST. - WATER PLAN AND PROFILE

SW 2024-07





ROADWAY CONSTRUCTION NOTE:

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NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN

RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
W. CORONA ST. AND W. LEONA ST. - WATER PLAN AND PROFILE

SHEET 71 OF 100

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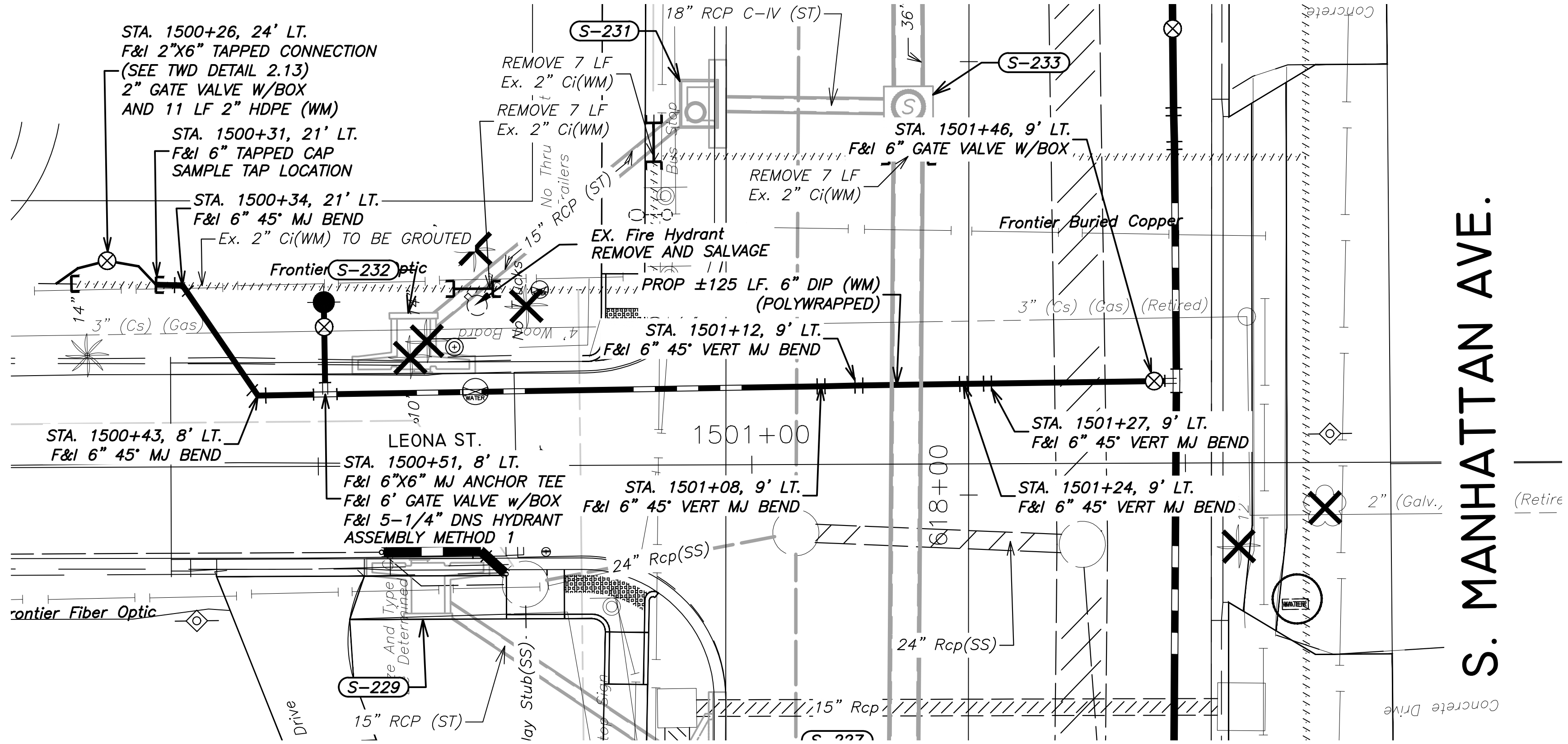

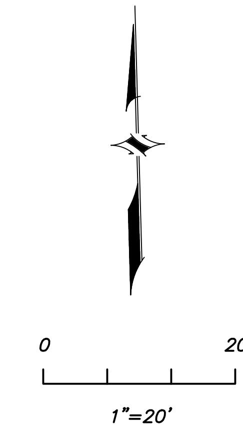

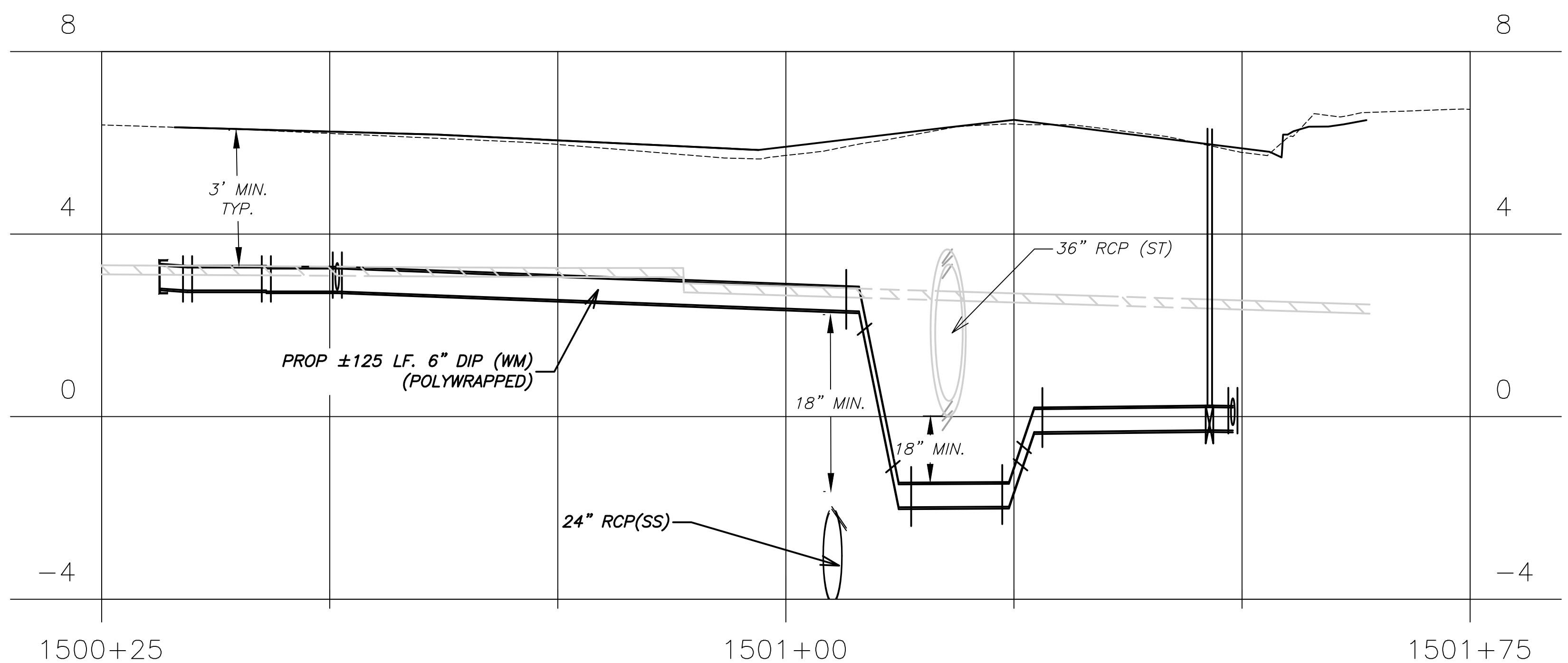

LEONA ST. 2 PROFILE

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

ROADWAY CONSTRUCTION NOTE:

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NOTE:
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RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
W. LEONA ST. - WATER PLAN AND PROFILE

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75. PIPE TRENCH SPECIFICATIONS APPLY TO ALL PROPOSED STORMWATER, SEWER AND WATERMAIN PIPES PROPOSED WITHIN THESE PLANS.

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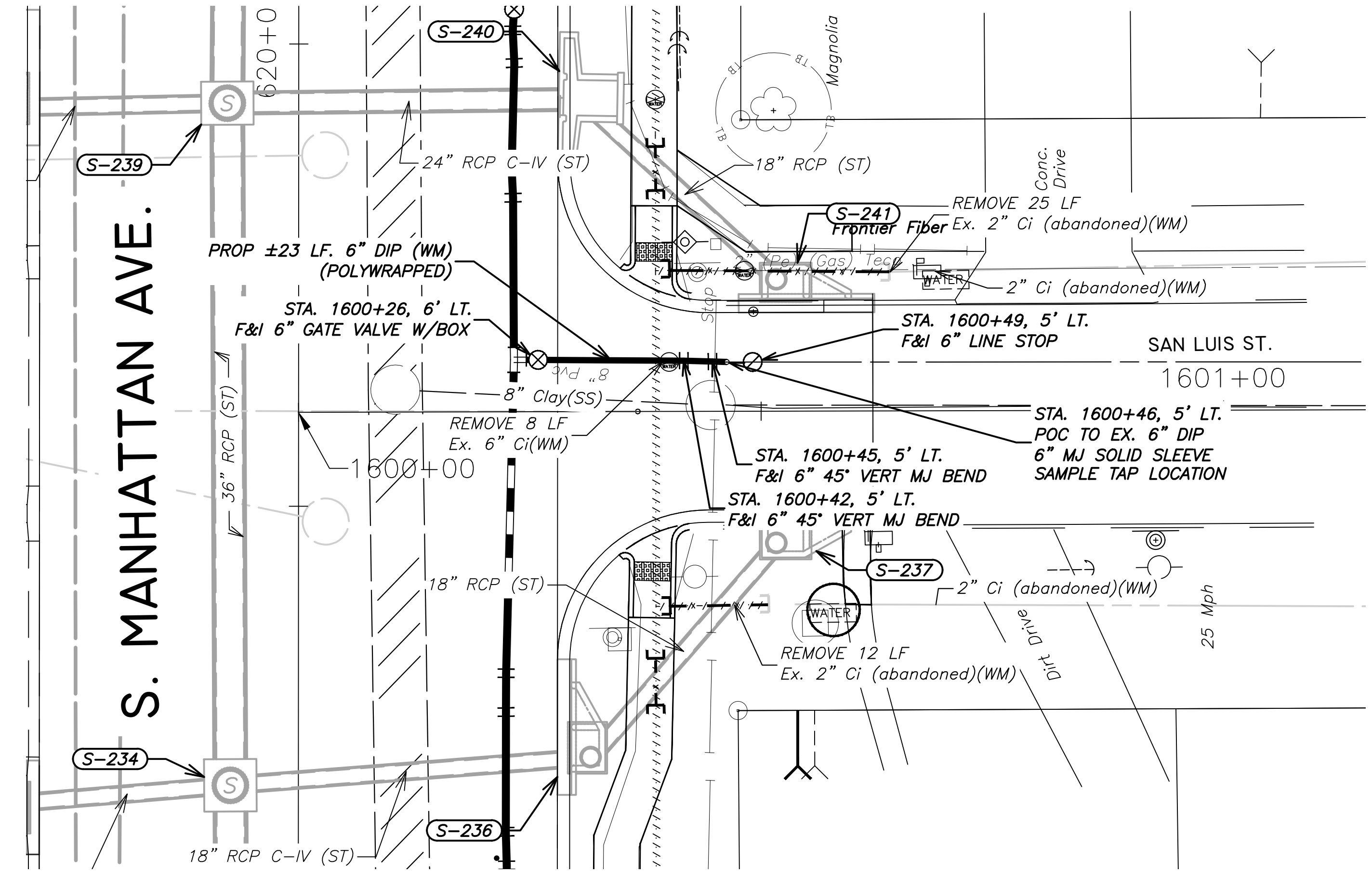
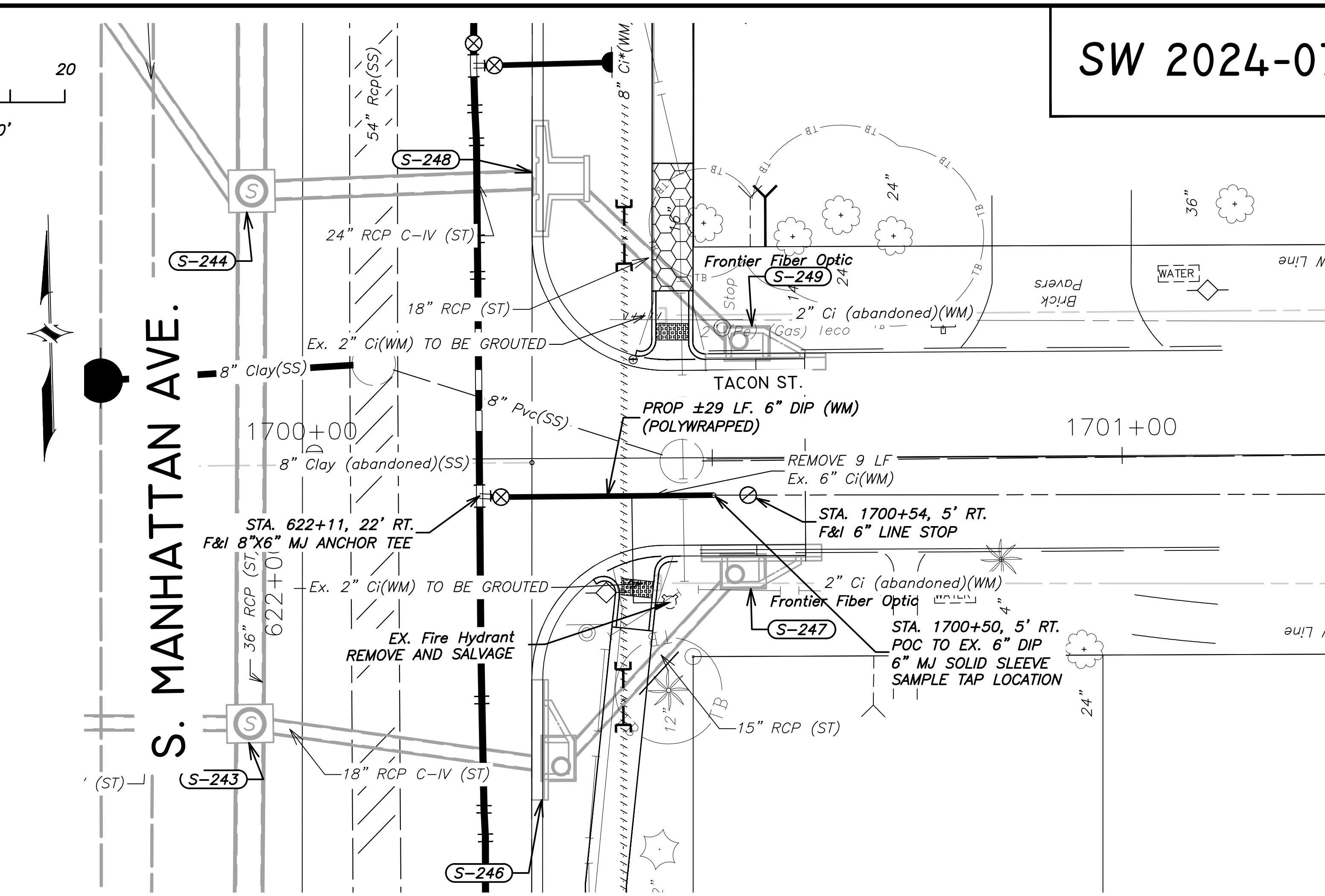
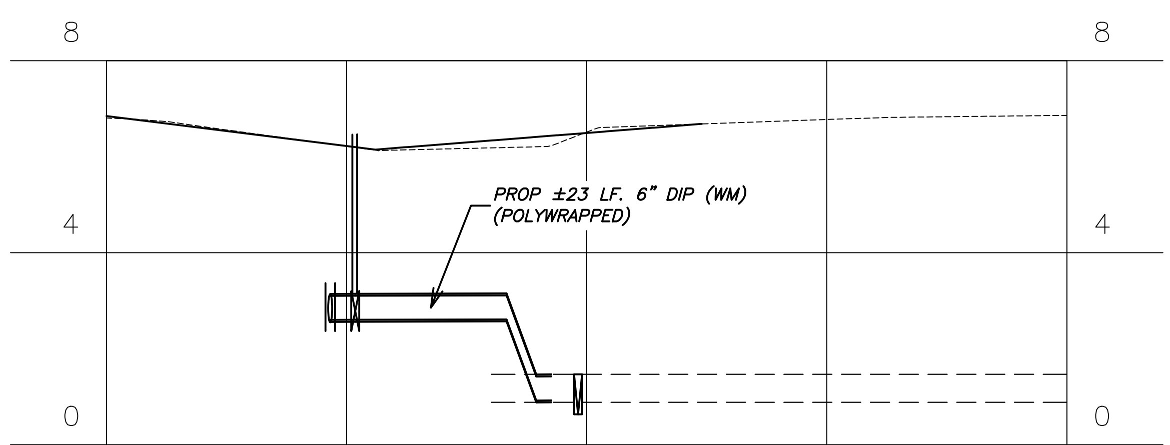
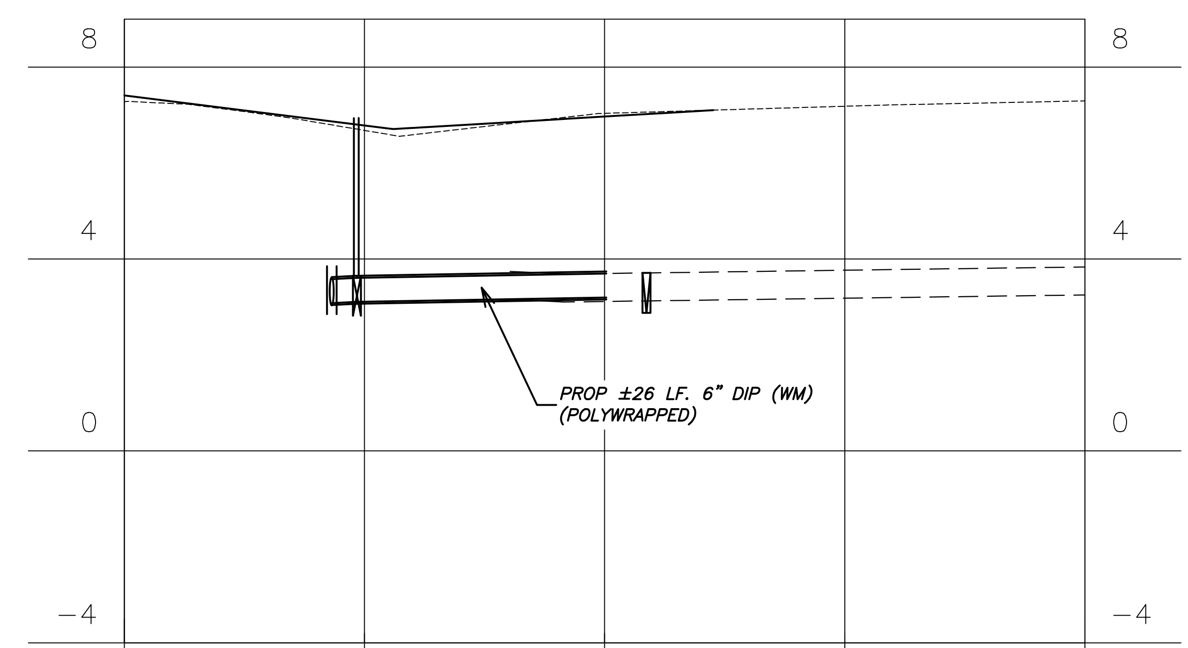
1"=20'







NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN
RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT



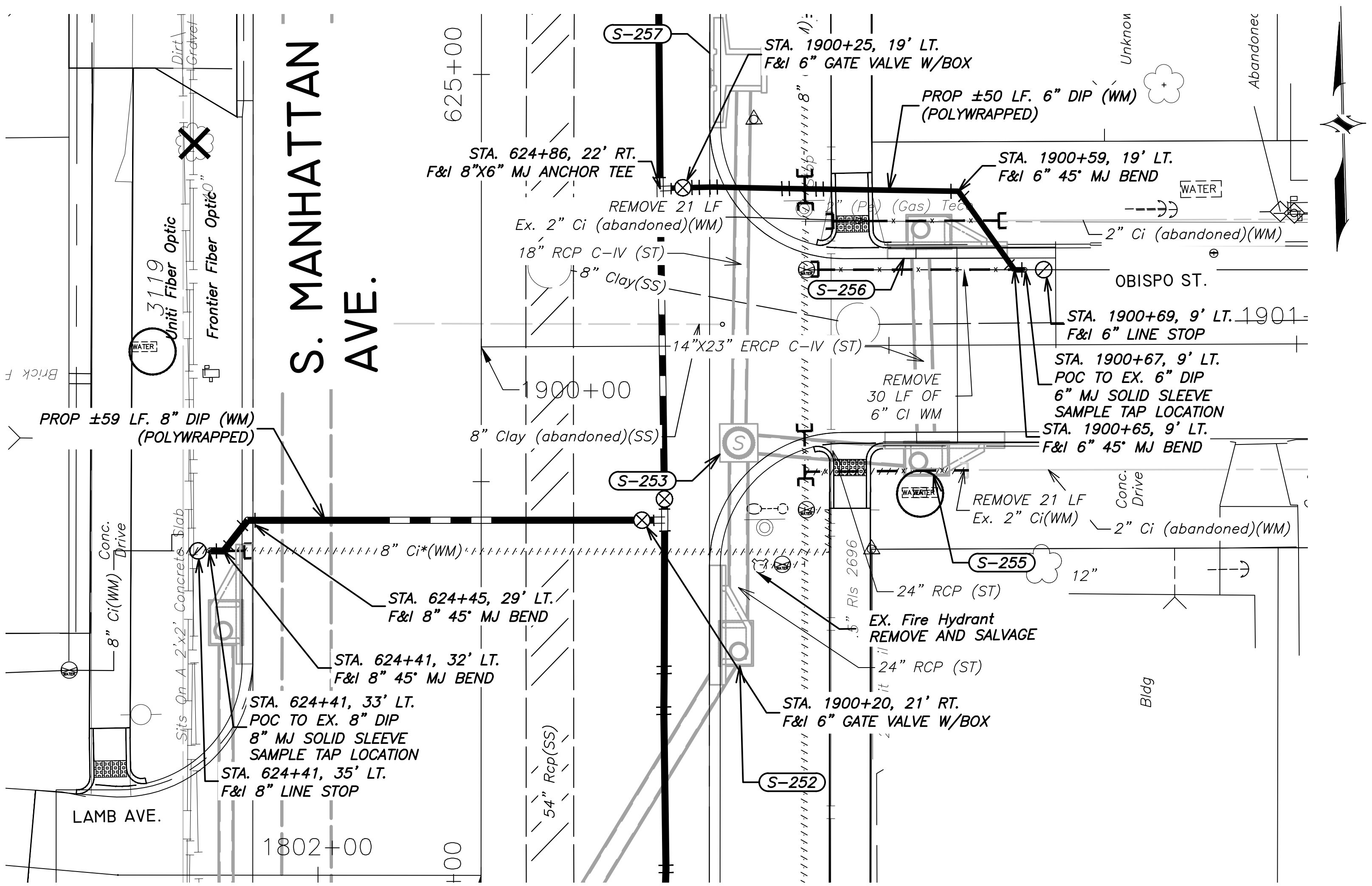
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

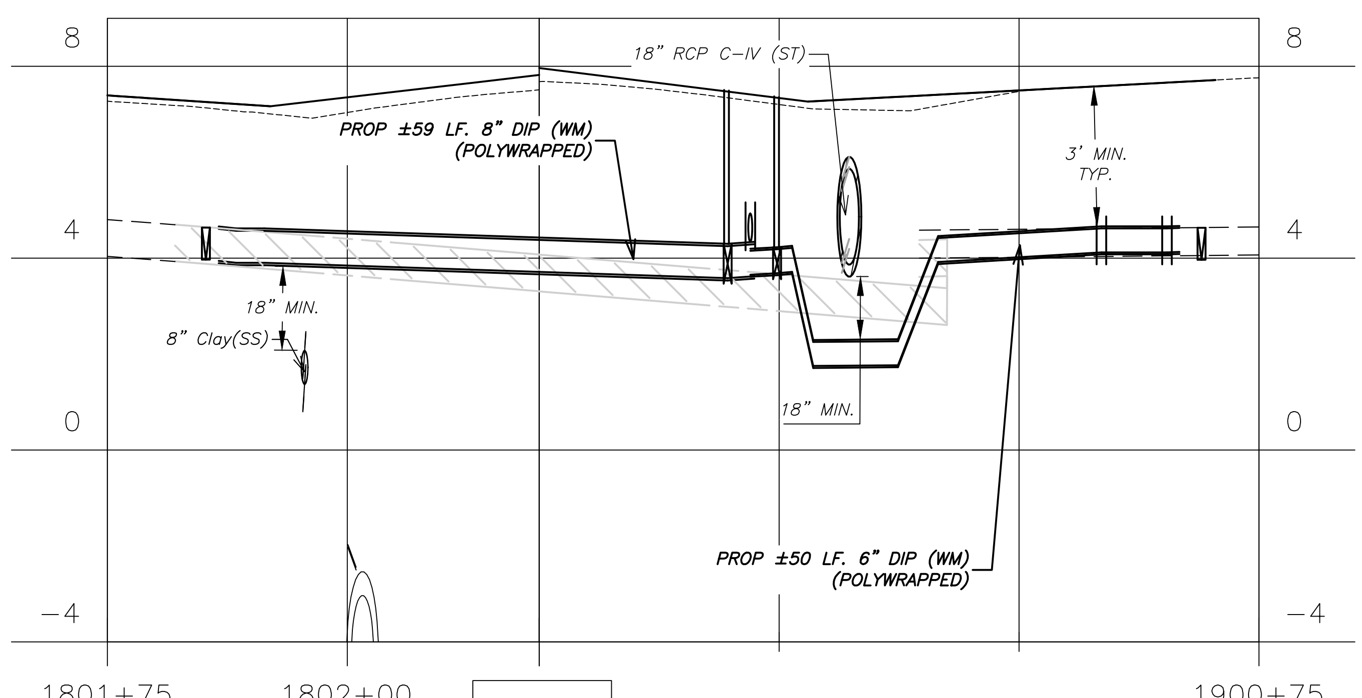
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
W. SAN LUIS ST. AND W. TACON ST. -
WATER PLAN AND PROFILE

SHEET 73 OF 100





ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75. PIPE TRENCH SPECIFICATIONS APPLY TO ALL PROPOSED STORMWATER, SEWER AND WATERMAIN PIPES PROPOSED WITHIN THESE PLANS.

NOTE:
SEE SEPARATE PLANS FOR STORM AND WASTEWATER DESIGN
RESTRAIN ALL WATERMAINS INSTALLED AS PART OF THIS PROJECT

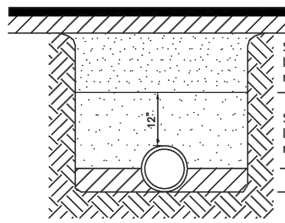
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
W. OBISPO ST. - WATER PLAN AND PROFILE

K:\Standard Details 02\201

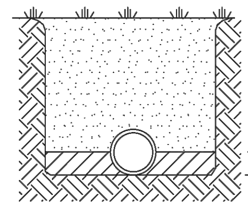


NOTES:

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

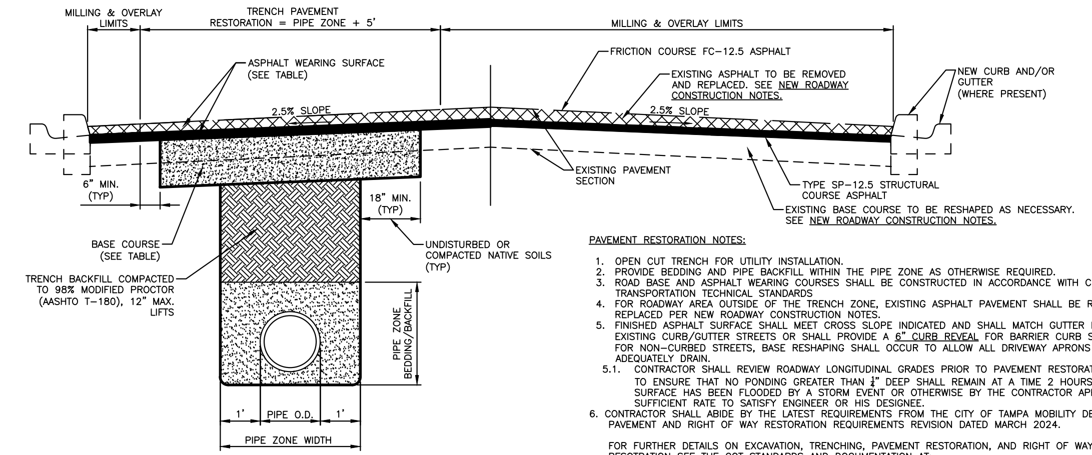
K:\Standard Details 02\202



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



PAVEMENT RESTORATION NOTES:

1. OPEN CUT TRENCH FOR UTILITY INSTALLATION.
2. PROVIDE BEDDING AND PIPE BACKFILL WITHIN THE PIPE ZONE AS OTHERWISE REQUIRED.
3. ROAD BASE AND ASPHALT WEARING COURSES SHALL BE CONSTRUCTED IN ACCORDANCE WITH C.O.T. TRANSPORTATION TECHNICAL STANDARDS
4. FOR ROADWAY AREA OUTSIDE OF THE TRENCH ZONE, EXISTING ASPHALT PAVEMENT SHALL BE REMOVED AND REPLACED PER NEW ROADWAY CONSTRUCTION NOTES.
5. FINISHED ASPHALT SURFACE SHALL MEET CROSS SLOPE INDICATED AND SHALL MATCH GUTTER LINE FOR EXISTING CURB/GUTTER STREETS OR SHALL PROVIDE A 6" CURB REVEAL FOR BARRIER CURB STREETS. FOR NON-CURBED STREETS, BASE RESHAPING SHALL OCCUR TO ALLOW ALL DRIVEWAY APRONS TO ADEQUATELY DRAIN.
   5.1. CONTRACTOR SHALL REVIEW ROADWAY LONGITUDINAL GRADES PRIOR TO PAVEMENT RESTORATION WORK TO ENSURE THAT NO PONDING GREATER THAN ¼" DEEP SHALL REMAIN AT A TIME 2 HOURS AFTER THE SURFACE HAS BEEN FLOODED BY A STORM EVENT OR OTHERWISE BY THE CONTRACTOR APPLIED AT A SUFFICIENT RATE TO SATISFY ENGINEER OR HIS DESIGNEE.
6. CONTRACTOR SHALL ABIDE BY THE LATEST REQUIREMENTS FROM THE CITY OF TAMPA MOBILITY DEPARTMENT PAVEMENT AND RIGHT OF WAY RESTORATION REQUIREMENTS REVISION DATED MARCH 2024.

FOR FURTHER DETAILS ON EXCAVATION, TRENCHING, PAVEMENT RESTORATION, AND RIGHT OF WAY RESOTRATION SEE THE COT STANDARDS AND DOCUMENTATION AT:
https://www.tampa.gov/document/city-tampa-pavement-restoration-standard-26101

NEW ROADWAY CONSTRUCTION NOTES:

BASE MATERIAL:

RESHAPE EXISTING BASE/ADD ADDITIONAL BASE AS NEEDED TO MATCH PROPOSED ROADWAY ELEVATION. THIS APPLIES TO BOTH COLLECTOR/ARTERIAL AND RESIDENTIAL ROADWAYS ALONG PROJECT.

ASPHALT MATERIAL:

COLLECTOR/ARTERIAL:
TYPE SP-12.5 STRUCTURAL COURSE (TRAFFIC E) (2.5")
FRICTION COURSE FC-12.5 (TRAFFIC E) (1.5") (PG76-22)

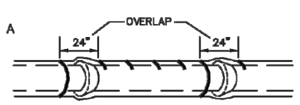
RESIDENTIAL:
TYPE SP-12.5 STRUCTURAL COURSE (TRAFFIC E) (2.0")

PAVEMENT REQUIREMENTS:

STREET CLASSIFICATION	BASE MATERIAL/THICKNESS (IN.)	ASPHALT MATERIAL/THICKNESS (STRUCTURAL COURSE) (IN.)	ASPHALT MATERIAL/THICKNESS (FRICTION COURSE) (IN.)
RESIDENTIAL (I)	CRUSHED CONC. / 8"	2"	0"
COLLECTOR / ARTERIAL (II)	CRUSHED CONC. / 12"	2.5"	1.5"

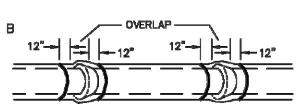
PIPE TRENCH / ROADWAY RESTORATION DETAIL

METHOD A



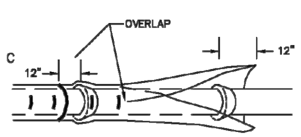
Polyethylene tube is cut into lengths approximately two feet longer than the pipe section and placed around it. After the pipe joint is assembled, the polyethylene tube is made to overlap the joint and the overlap secured in place. Since the tube is considerably larger than the barrel of pipe, it is made to fit snugly by folding over at the top and securing with tape every 24" along the pipe section.

METHOD B



Polyethylene tube is cut one foot shorter than the length of the pipe section. After placement of the pipe, it is folded and secured snugly overall. A three foot length of polyethylene tube placed over the end of the preceeding section is then pulled in place over the joint after assembly and secured.

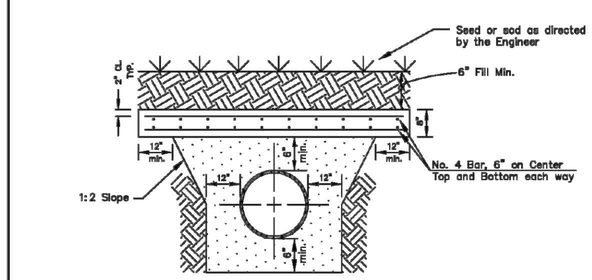
METHOD C



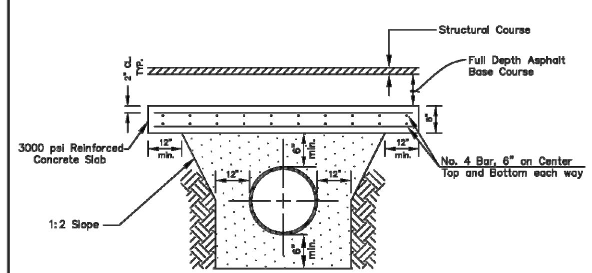
Polyethylene sheet is cut to a length two feet longer than the pipe section. The sheet is wrapped around the pipe so that it overlaps circumferentially over the top quadrant of the pipe, then secured. After joint assembly, the surplus length of polyethylene film is secured around the joint, providing an overlap of each joint. Tape at each joint and at 3' intervals in between.

NOTES:
1. Use blue polyethylene film and tape only.
2. Polyethylene film shall be a minimum of 8 mil. thickness.
3. Spiral Wrap not required with polywrap.

TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED JRD 4/09 JRD 9/2011	POLYETHYLENE ENCASEMENT INSTALLATION DETAIL	2.05



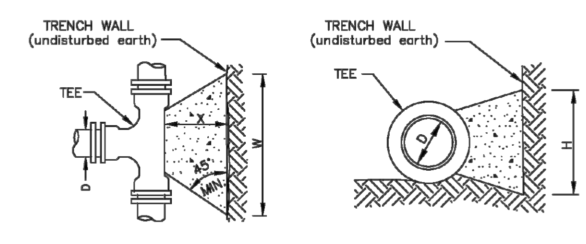
GRASSED SECTION



ROADWAY SECTION

NOTES:
1. Structural course and base course requirement shall be established by the agency having jurisdiction.
2. Shock pads for mains too shallow for the above configuration shall be designed on a case-by-case basis.

TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED	REINFORCED CONCRETE SHOCK PAD (FOR COVER LESS THAN 2.5')	2.06



DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL

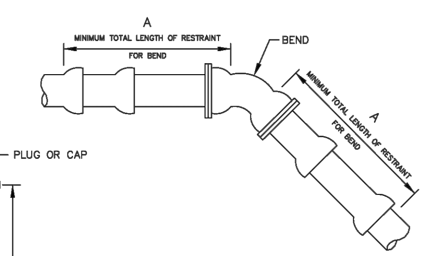
	SIZE (D)	4"	6"	8"	12"	16"	20"	24"
TEES	THRUST (lbs.)	3439	7104	12,223	26,002	45,180	69,624	99,330
	BEARING AREA ($ft.^2$)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
	CONCRETE ($yds.^3$)	0.042	0.126	0.285	0.891	1.811	3.005	4.594
	H (ft.)	1.3	1.9	2.5	3.6	4.8	5.9	7.0
	W (ft.)	2.0	2.8	3.7	5.4	7.1	8.9	10.6
	X (ft.)	1.0 Min.	1.4 Min.	1.9 Min.	2.7 Min.	3.0 Min.	3.0 Min.	3.0 Min.

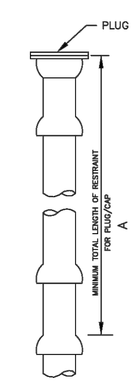
NOTES:
1. Size (D), shall be the branch size of tees.
2. Concrete shall be kept at sufficient distance from joint for removal of all joint accessories including bolts.
3. All bearing surfaces to be carried to undisturbed soil.
4. This table shows the minimum size thrust blocks for soil bearing pressure of 2000 psf and an internal pressure of 190 psi.
*5. Cover to T.O.P. is 3 feet for 12" and smaller mains; 4 feet for 16" and larger mains. poor and wet soil (silty soils, clay, muck and peat) will require larger thrust blocks.
6. Tees shall be completely polywrapped prior to pouring thrust block.

*WARNING

TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED	THRUST BLOCKS FOR TEES	2.09

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

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

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
WATER DETAILS

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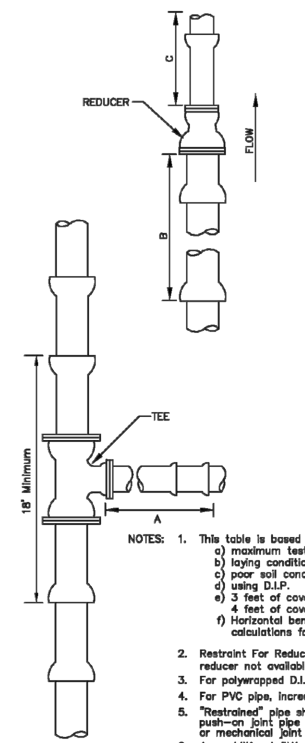


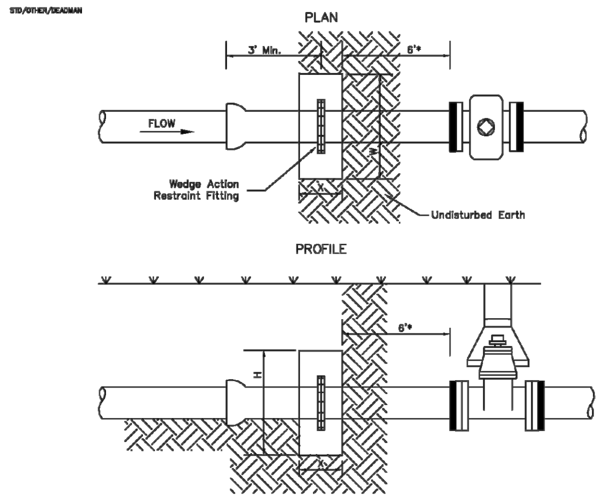
Fitting Size	Restrain (LF) Tee "A"	Restrain (LF) Reducer "B"	Unrestrained Straight Run (LF) Reducer "C"
4x4	25	*	*
6x4	11	40	59
6x6	48	*	*
8x4	A.T.	73	142
8x6	38	43	56
8x8	72	*	*
12x4	A.T.	124	364
12x6	19	104	208
12x8	57	76	115
12x12	114	*	*
16x6	A.T.	121	321
16x8	27	104	212
16x12	77	61	82
16x16	118	*	*
20x6	A.T.	156	527
20x8	14	144	369
20x12	68	109	186
20x16	111	61	77
20x20	149	*	*
24x6	A.T.	189	777
24x8	A.T.	179	560
24x12	59	150	313
24x16	104	111	172
24x20	144	61	74
24x24	179	*	*
30x6	A.T.	234	1227
30x8	A.T.	226	904
30x12	45	204	542
30x16	94	173	341
30x20	135	134	208
30x24	172	86	110
30x30	220	*	*
36x6	A.T.	276	1784
36x8	A.T.	269	1328
36x12	30	251	824
36x16	83	226	551
36x20	127	195	373
36x24	165	156	245
36x30	215	86	106
36x36	261	*	*

A.T.—Restraint required at Tee only.
*—not applicable

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. Restraint For Reducers: If "C" straight run of pipe downstream of reducer not available, then restrain "B" upstream of reducer.
3. For polywrapped D.I.P., increase the footage to restrain by 25%.
4. For PVC pipe, increase the footage to restrain by 20%.
5. "Restrained" pipe shall be Manufactured Restrained Joint pipe, push-on joint pipe restrained w/gasket-type "Gripper Restraints", or mechanical joint pipe restrained by Megalug (or approved equivalant).
6. Any additional fittings within the restrained section shall be restrained accordingly.

TAMPA WATER DEPARTMENT	APPROVED Sept., 2011	REVISED	RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS	2.12

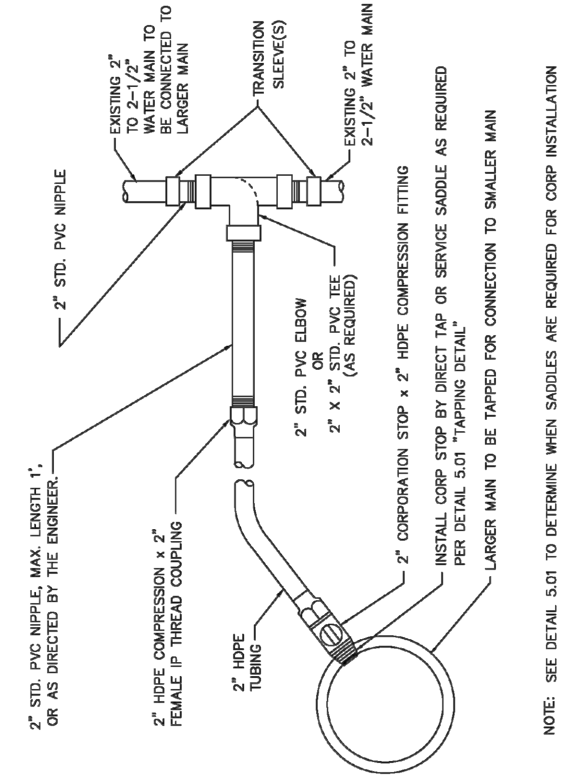
STD/OTHER/DEADMAN



SIZE (D) THRUST (lbs.)	4" 3439	6" 7104	8" 12,223	12" 26,002	16" 45,180	20" 69,624	24" 99,330
BEARING AREA ($ft.^2$)	2.58	5.33	9.17	19.50	33.89	52.22	74.50
CONCRETE ($yds.^3$)	0.15	0.31	0.71	1.51	3.29	5.07	7.23
H (ft.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
W (ft.)	1.6	2.4	3.1	4.5	6.0	7.4	8.8
X (ft.)	1.5 Min.	1.5 Min.	2.0 Min.	2.0 Min.	2.5 Min.	2.5 Min.	2.5 Min.

NOTES:
1. Concrete shall be kept at sufficient distance from joint for removal of all joint accessories including bolts.
2. All bearing surfaces to be carried to undisturbed soil.
3. This table shows the minimum size thrust blocks for soil bearing pressure of 2000 psf and an internal pressure of 190 psi. Cover to T.O.P. is 3 feet for 12" and smaller mains; 4 feet for 16" and larger mains.
4. Poor and wet soil (silty soils, clay, muck and peat) will require larger thrust blocks, as directed by the Engineer.
5. Fittings shall be completely polywrapped prior to pouring thrust blocks.
*6. Closest distance to valve for deadman to remain effective.

TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED	DEADMAN THRUST BLOCK	2.12A



TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED	"TAPPED" CONNECTION FROM DI,CI, OR PVC PIPE TO <4" WATER MAINS	2.13

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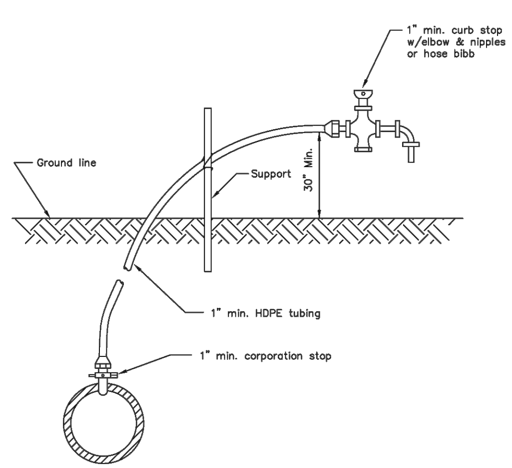

Notes:
1. Water outlet shall be held up off the ground so as not to interfere with the sampling process.
2. Corporation stop to be removed and plugged after operation.

TAMPA WATER DEPARTMENT	APPROVED	REVISED	TEMPORARY SAMPLE TAP INSTALLATION	2.17

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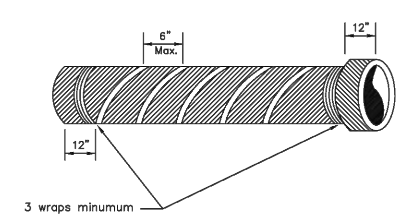
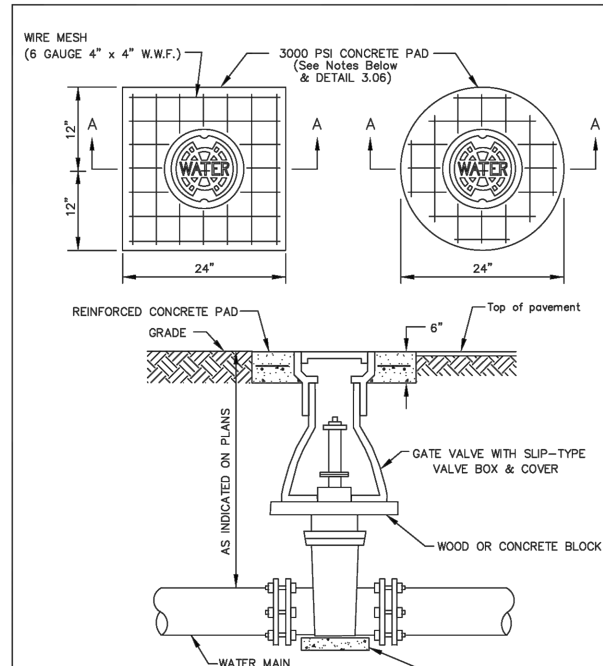


SPIRAL WRAP

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



SECTION A–A

N.T.S.

Notes :
1. Circular or square concrete pad required for all valve box installations.
2. Cast iron valve boxes shall be firmly supported and centered and plumb over the operating nut of the valve. Valve box cover shall be flush with the surface of the finished pavement, or grade or at such other level as may be directed by the Department.
3. "Blue" Water Valve locate markers (curb markers) required for all valve installations.
4. Embed bronze valve info disk into concrete valve box collar, per Detail 3.06.

TAMPA WATER DEPARTMENT	APPROVED Sept. 2015	REVISED	VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE	3.01

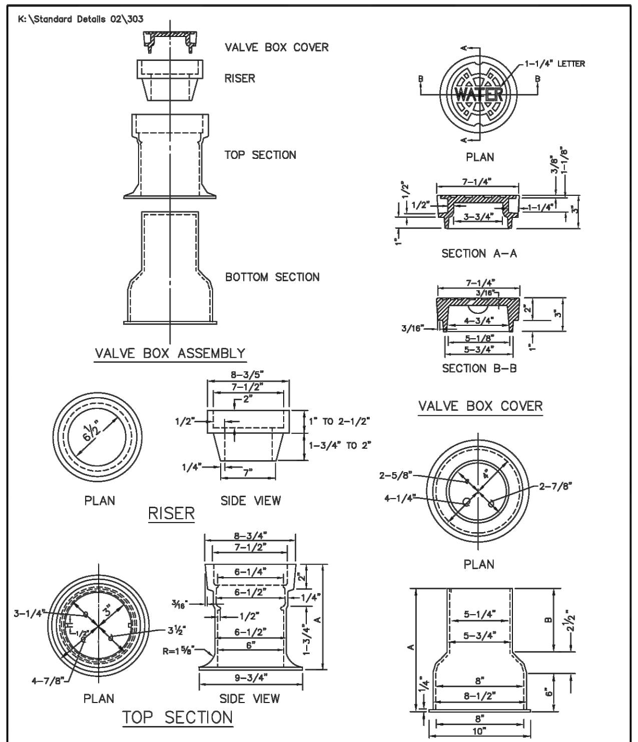
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
WATER DETAILS

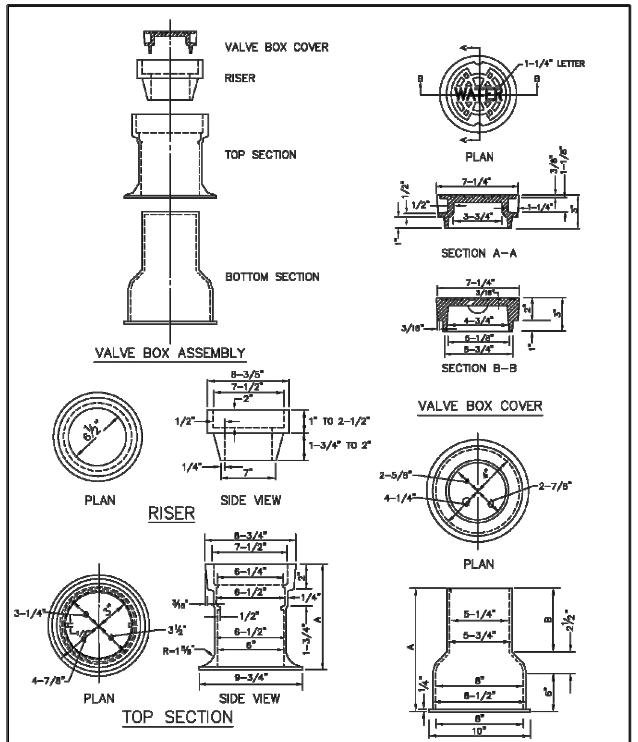
SW 2024-07



	SIZE	A
TOP SECTION	10"	10"
	16"	16"

	SIZE	A	B
BOTTOM SECTION	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

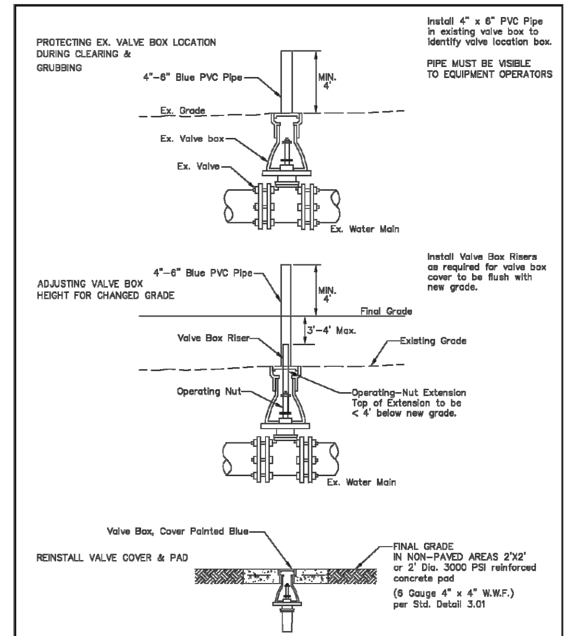
TAMPA WATER DEPARTMENT	APPROVED	REVISED	VALVE BOX	3.03



	SIZE	A
TOP SECTION	10"	10"
	16"	16"

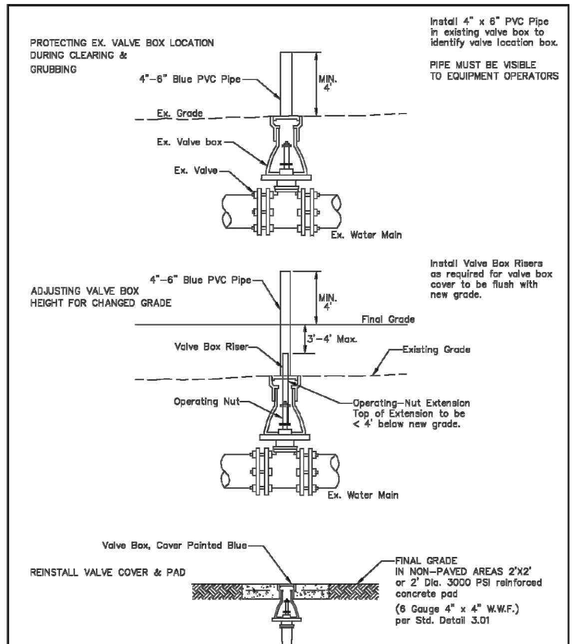
	SIZE	A	B
BOTTOM SECTION	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

TAMPA WATER DEPARTMENT	APPROVED Sept. 2011	REVISED	VALVE BOX, SLIP-TYPE	3.04



NOTES:
1. MATERIALS FOR & INSTALLATION OF VALVE BOXES & PADS SHALL CONFORM TO TAMPA WATER DEPT. STANDARDS & CONSTRUCTION DETAILS (DETAILS 3.01 & 3.03)

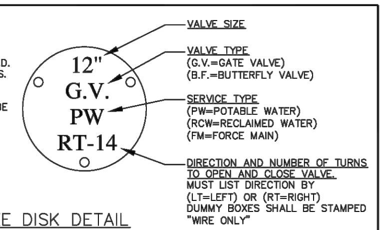
TAMPA WATER DEPARTMENT	APPROVED Dec. 2011	REVISED	VALVE BOX ADJUSTMENTS FOR GRADE CHANGE	3.05



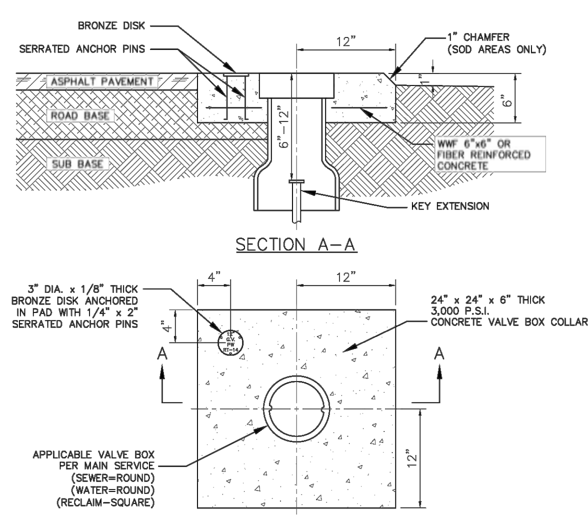
NOTES:
1. MATERIALS FOR & INSTALLATION OF VALVE BOXES & PADS SHALL CONFORM TO TAMPA WATER DEPT. STANDARDS & CONSTRUCTION DETAILS (DETAILS 3.01 & 3.03)

TAMPA WATER DEPARTMENT	APPROVED Dec. 2011	REVISED	VALVE BOX ADJUSTMENTS FOR GRADE CHANGE	3.05

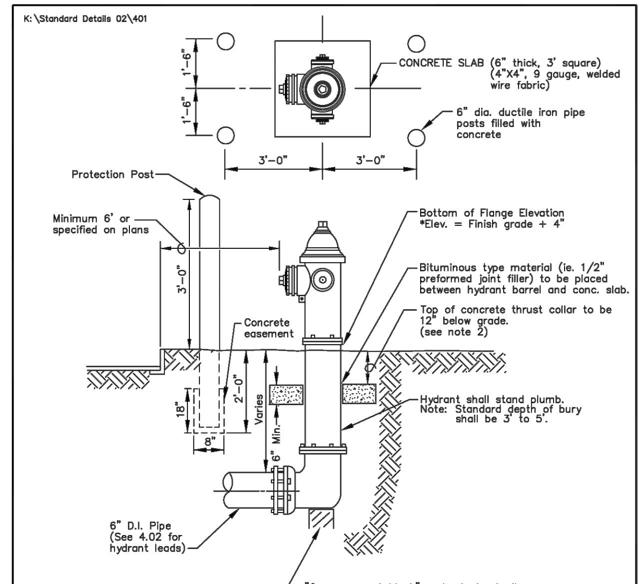
NOTE:
1. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST T.W.D. APPROVED MATERIAL SPECIFICATIONS.
2. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
3. BRONZE DISK REQUIRED FOR ALL VALVES AND DUMMY BOXES.



BRONZE DISK DETAIL

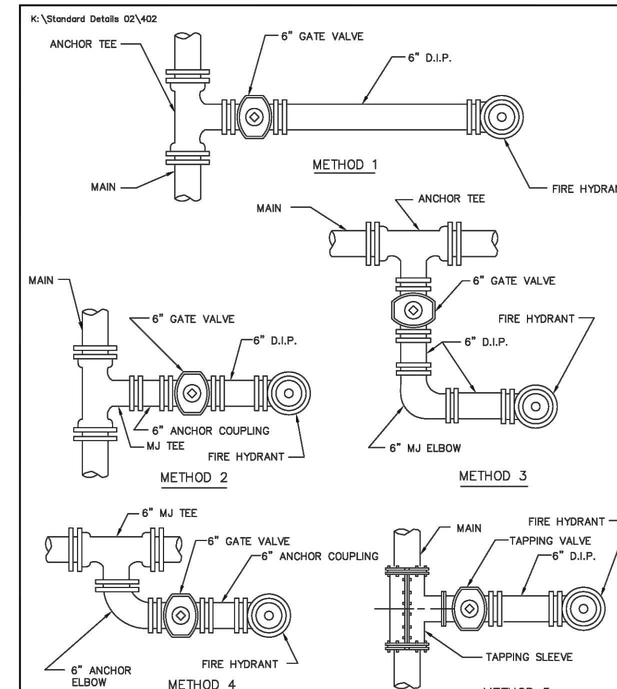


TAMPA WATER DEPARTMENT	APPROVED	REVISED MAR 2016	CONCRETE VALVE BOX COLLAR DETAIL	3.06



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



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

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
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DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
WATER DETAILS

SHEET 77 OF 100

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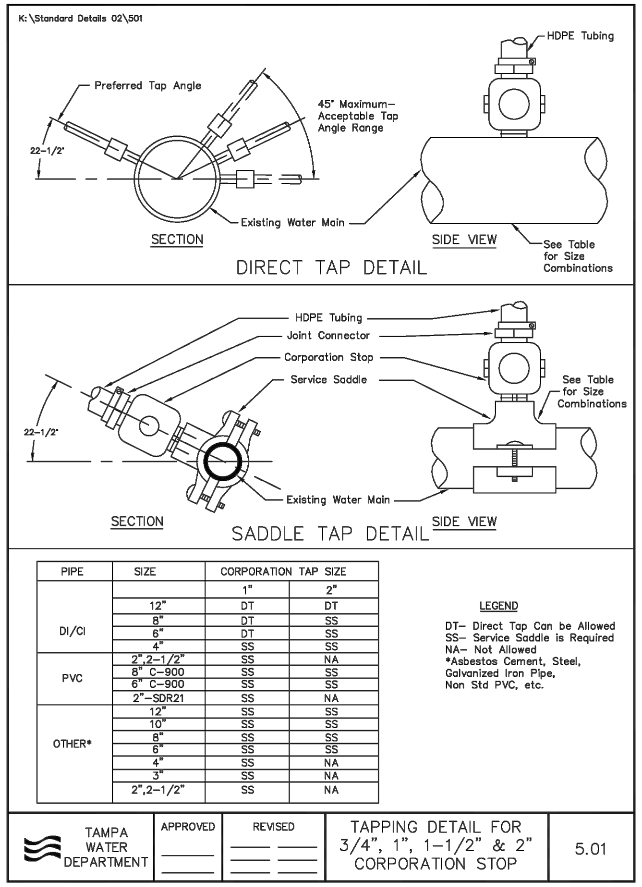

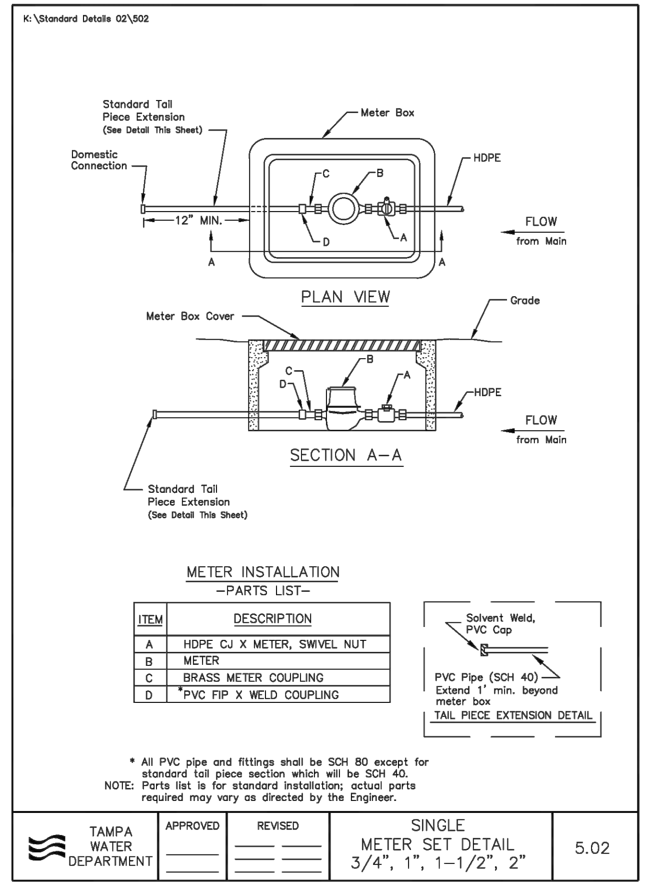

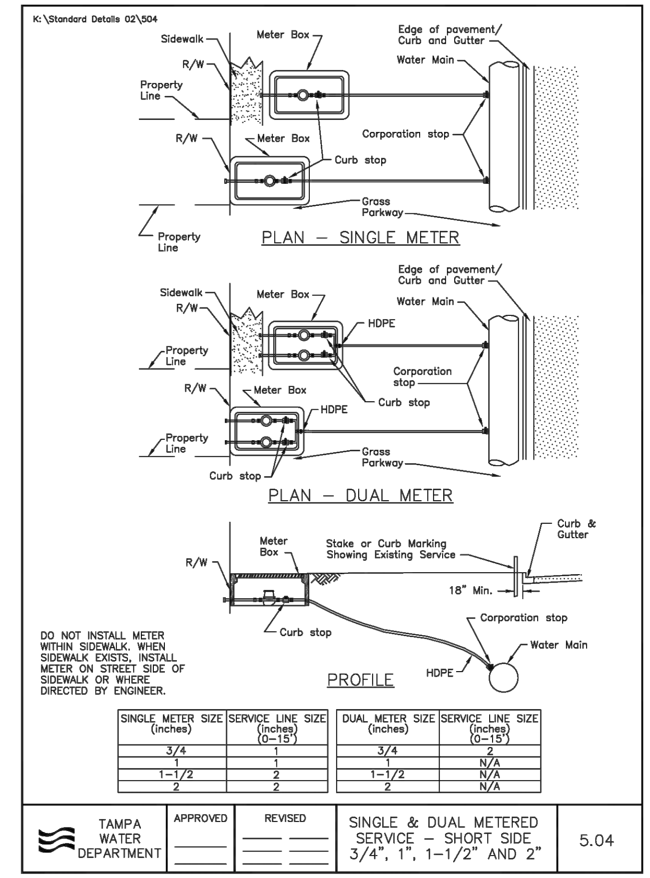

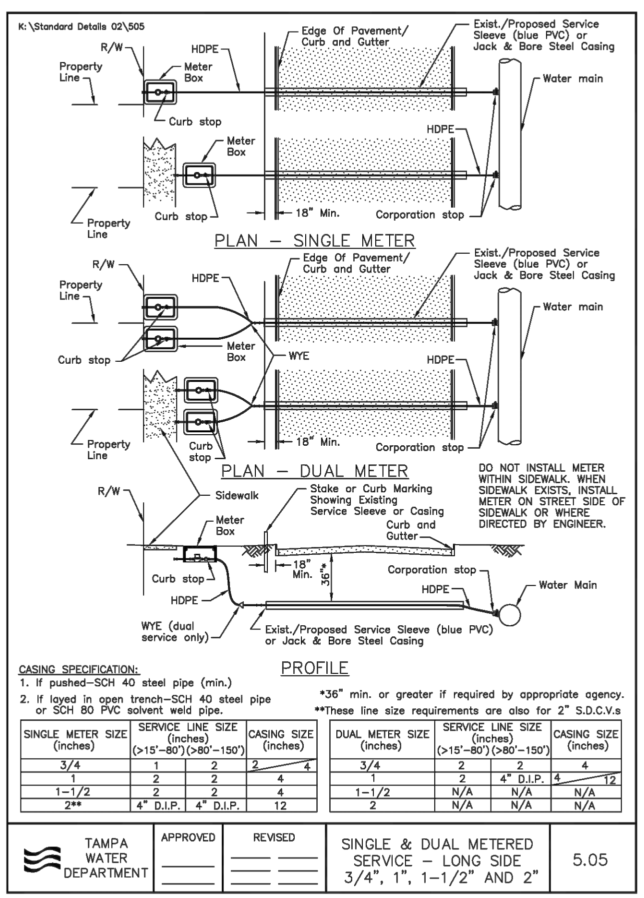

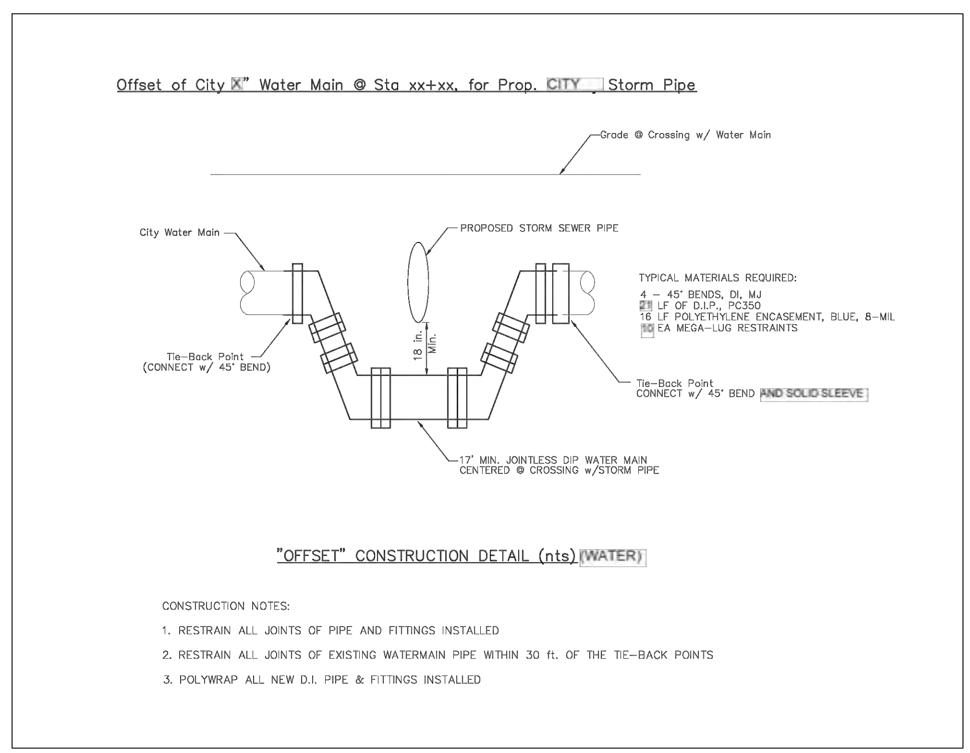

WATER MAIN DIVERSION/OFFSET NOTES:

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 INCLUDE: 1)WHAT VALVES DOES THE CONTRACTOR PROPOSE TO CLOSE? 2) ARE THESE VALVES OPERABLE? 3) WHAT IS PLAN "B" IF THESE VALVE DO NOT WORK (SCHEDULE A PRE-VALVE EXERCISE) ADDITIONAL LINE STOPS MAY BE NECESSARY.
2. TEST AND DISINFECT NEW OFFSET WATER MAIN SEGMENTS AND PULL AT LEAST ONE BACTERIOLOGICAL TEST.
3. TURN ON THE WATER AND COMPLETE A VISUAL INSPECTION ON THE TWO TOP 45° MJ FITTINGS TO INSURE NO LEAKS.
4. FLUSH GENTLY FROM THE NEAREST FIRE HYDRANT TO INSURE NO SEDIMENTS OR DIRTY WATER.
5. COMPLETE BACK FILL WITH COMPACTION AND PROCURE DENSITY TESTS.
6. AS-BUILT THE NEW ELEVATIONS AND VERIFY THE SEPARATION BETWEEN THE WATER MAIN AND THE NEW STORM IN ACCORDANCE WITH CONTRACT DOCUMENTS WATER ASBUILT SPECIFICATIONS.
7. ALL PIPING TO BE DUCTILE IRON. ALL PIPING AND FITTINGS TO BE POLY WRAPPED.

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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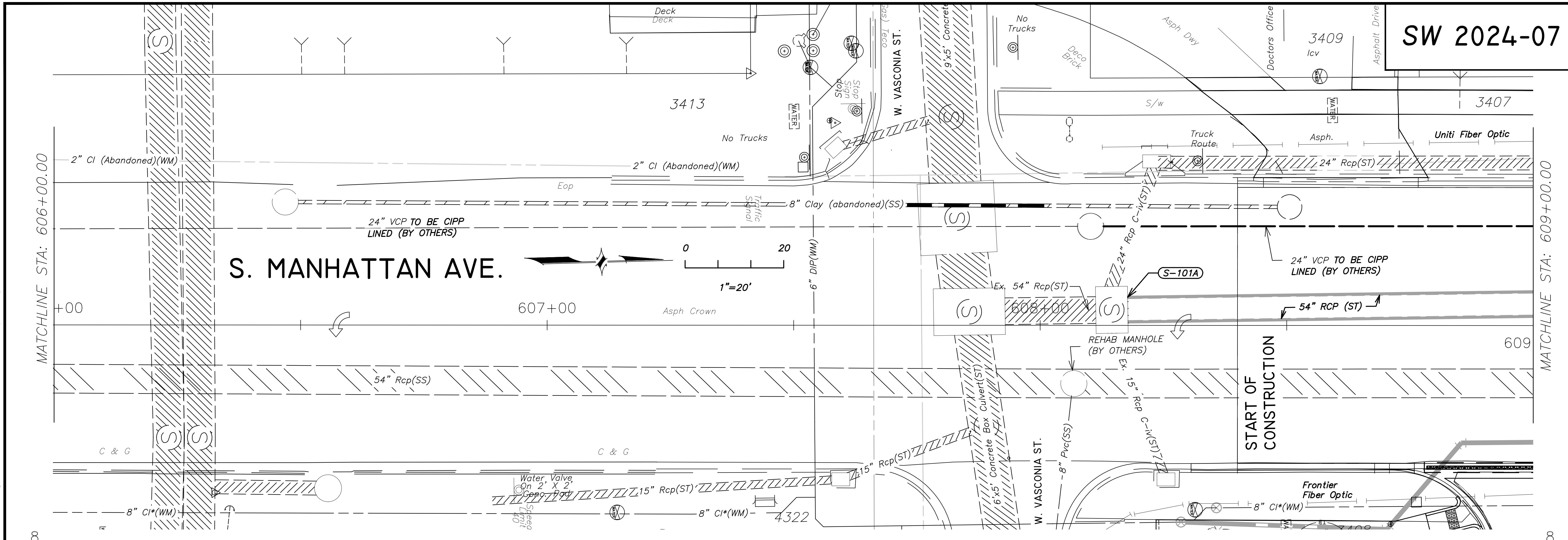
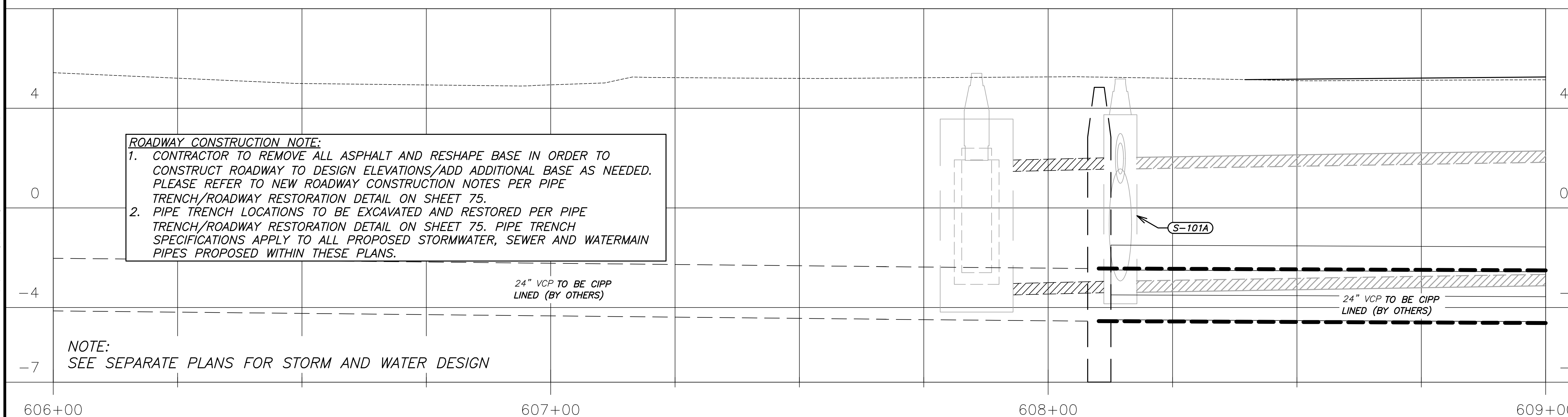
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
WATER DETAILS



ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75. PIPE TRENCH SPECIFICATIONS APPLY TO ALL PROPOSED STORMWATER, SEWER AND WATERMAIN PIPES PROPOSED WITHIN THESE PLANS.



NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN

No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
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CITY of TAMPA
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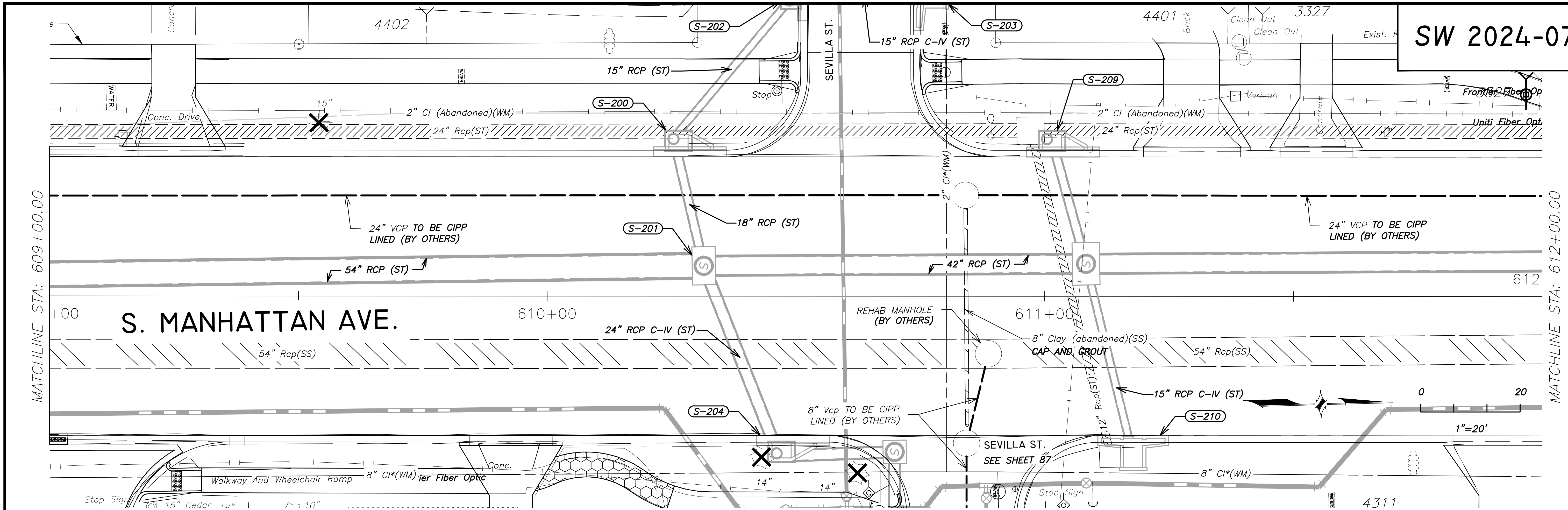
MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SW 2024-07



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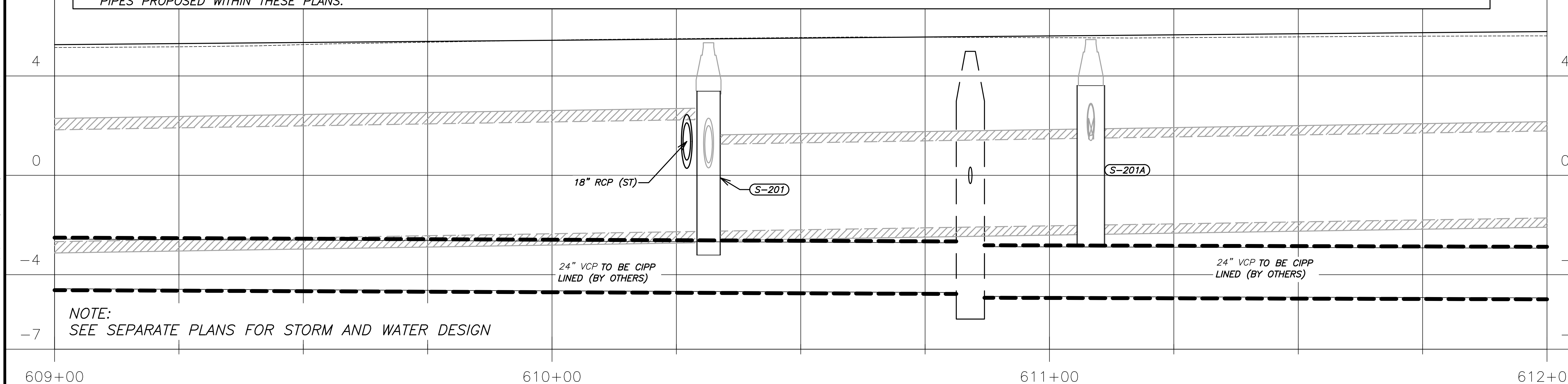

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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SHEET 80 OF 100

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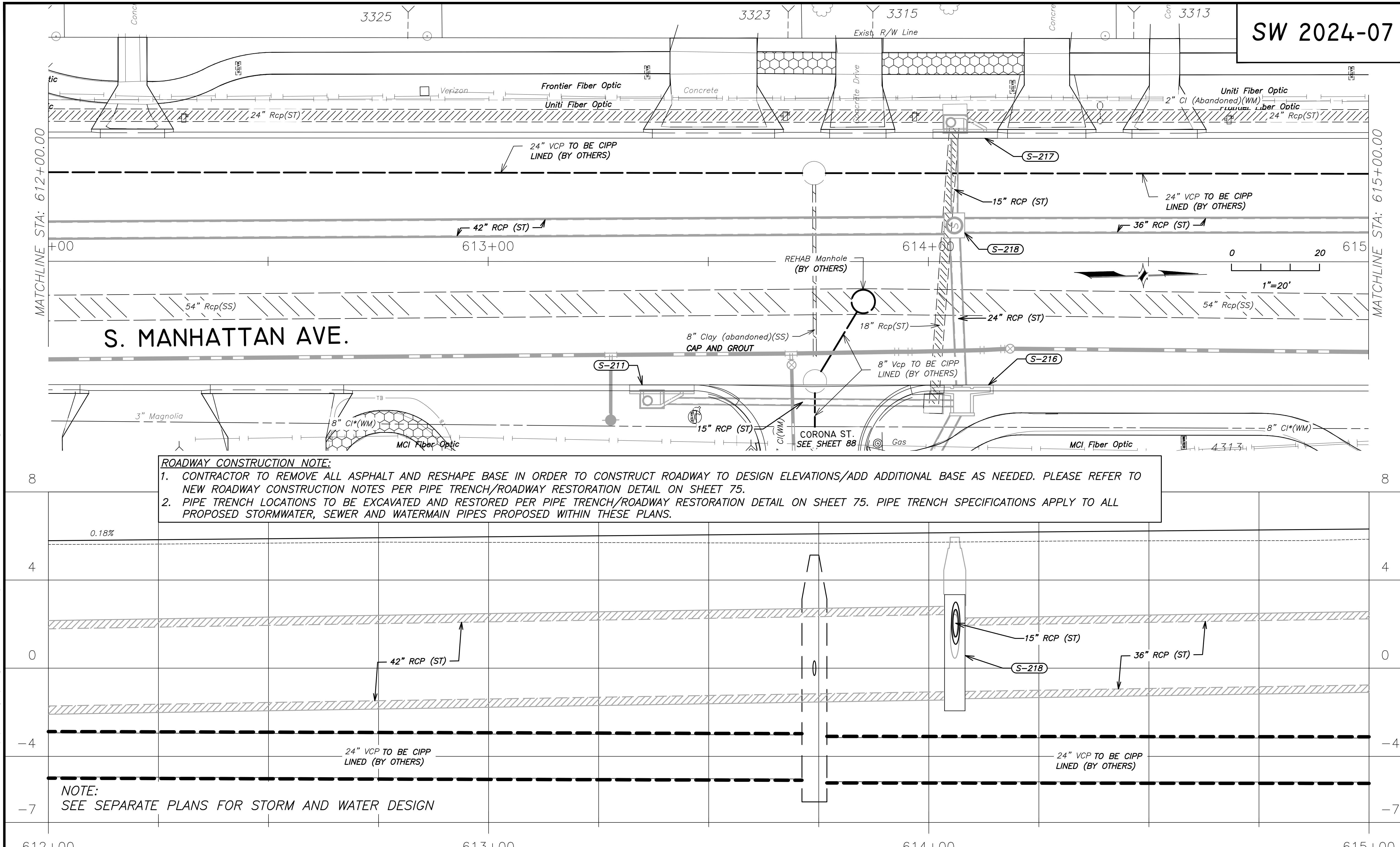

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CITY of TAMPA
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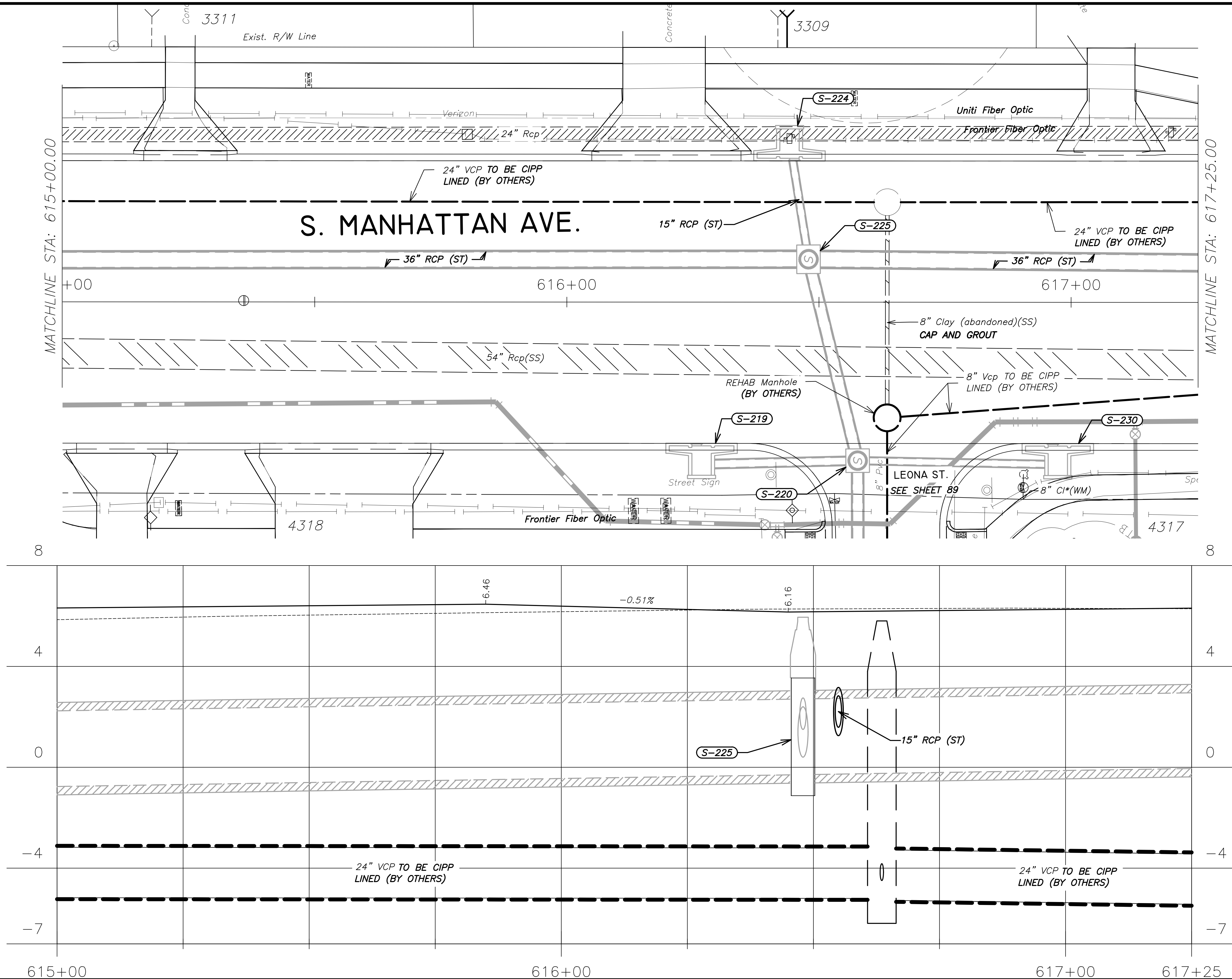
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SHEET 81 OF 100

SW 2024-07



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CITY of TAMPA
Mobility Department
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MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SHEET 82 OF 100

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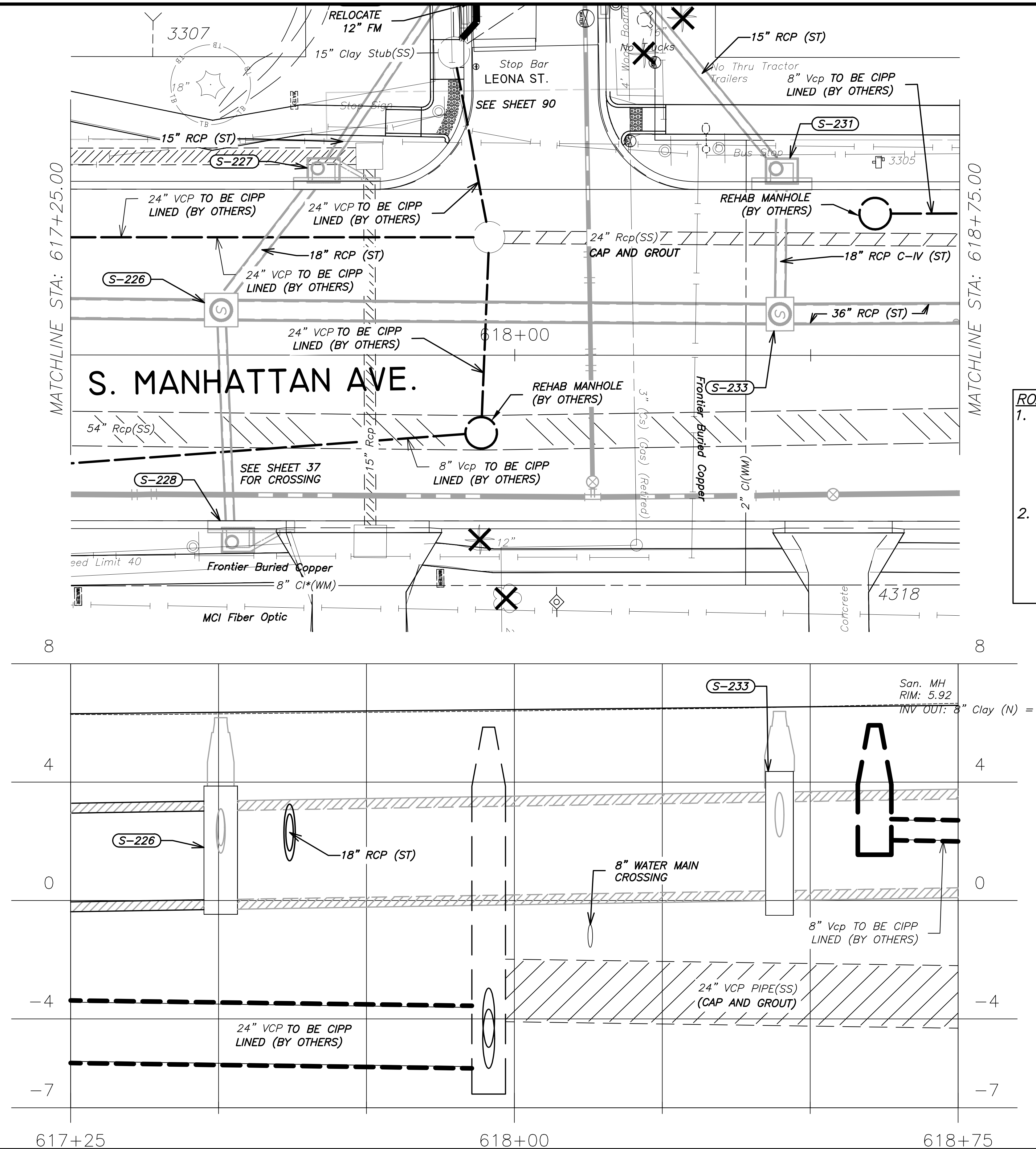

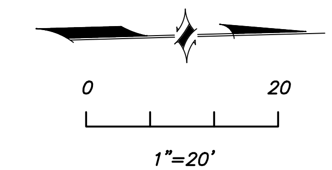

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CITY of TAMPA
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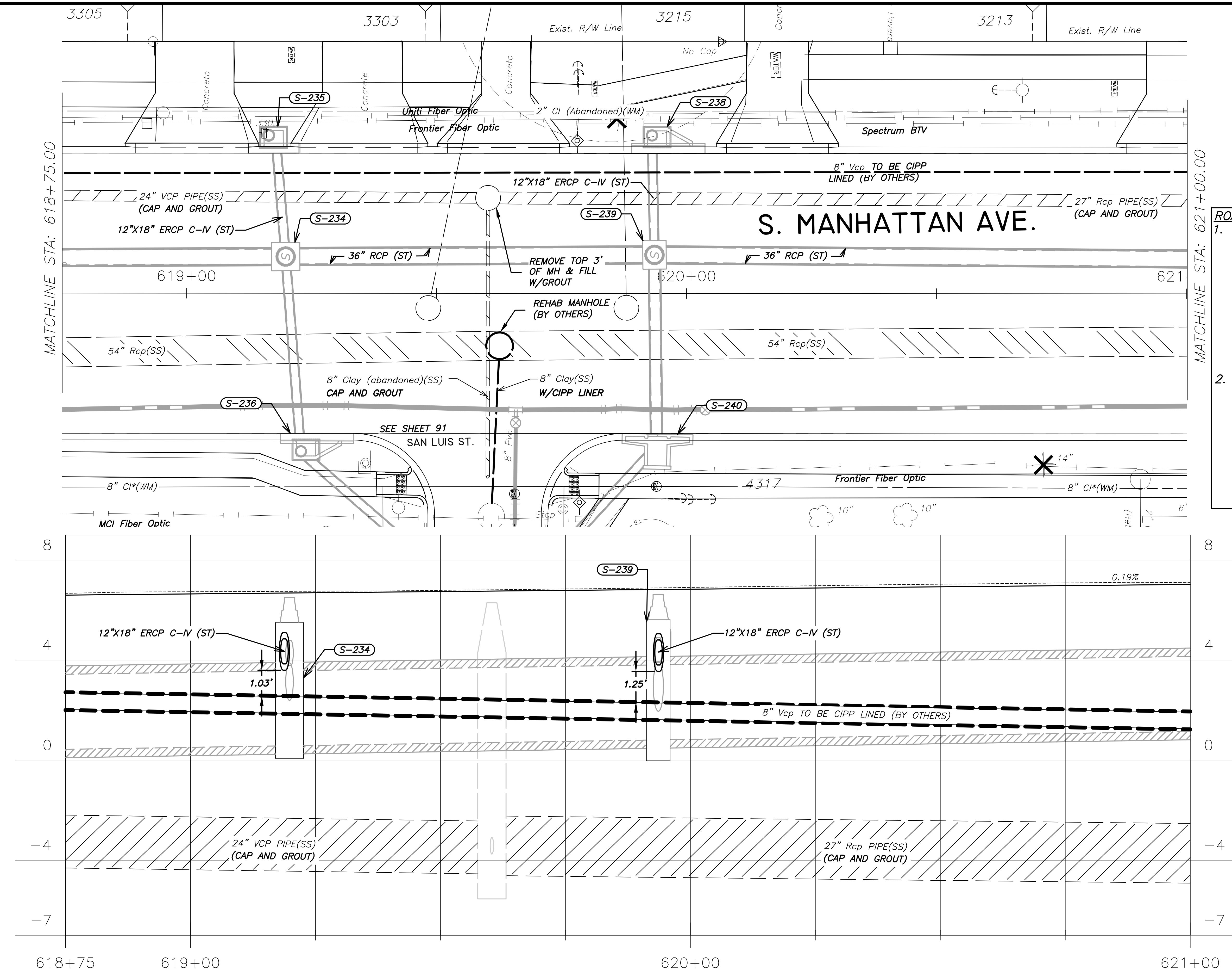
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SHEET 83 OF 100

SW 2024-07



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NOTE:
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DES: MDC/ASA
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CITY of TAMPA
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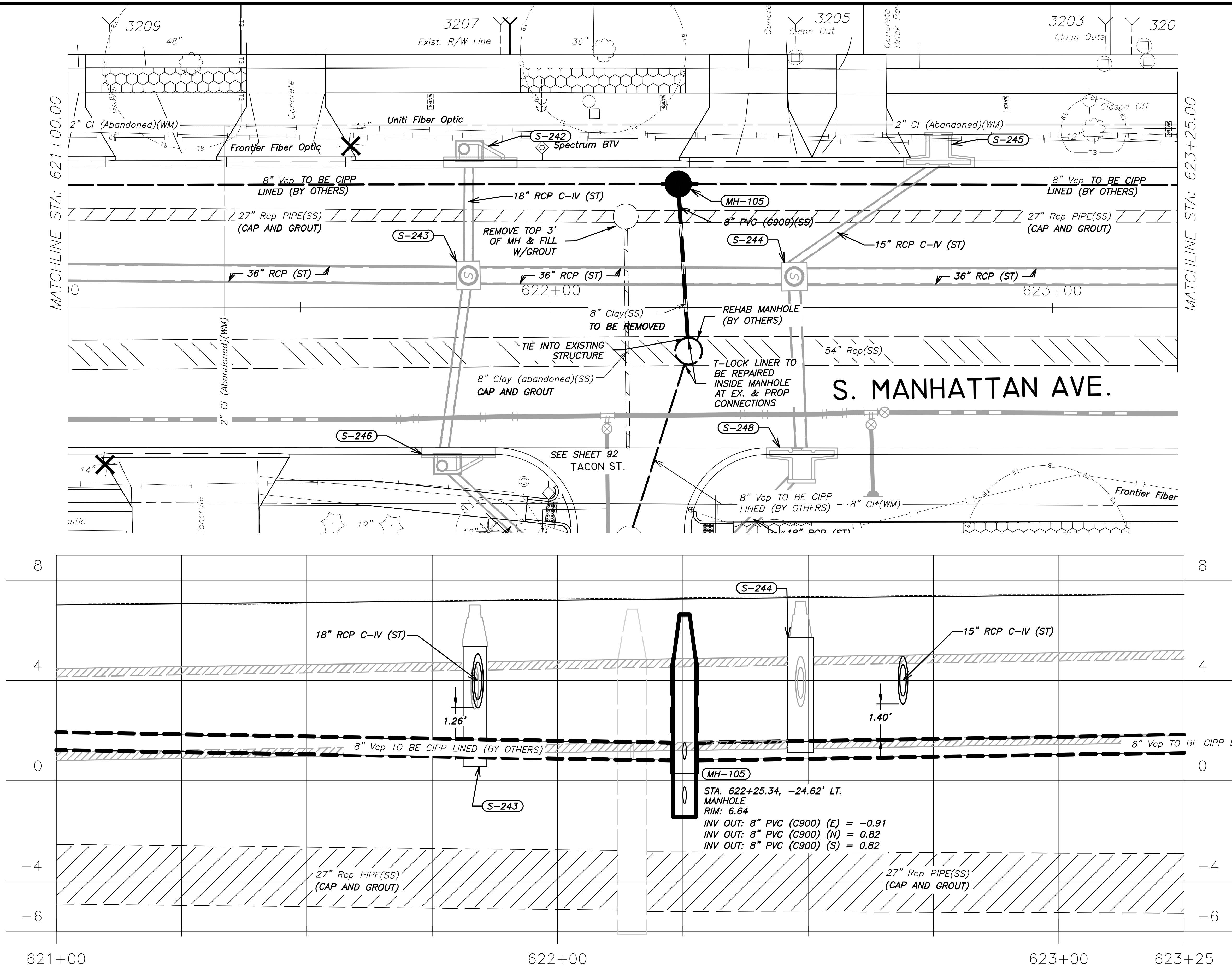
MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SHEET 84 OF 100



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NOTE:
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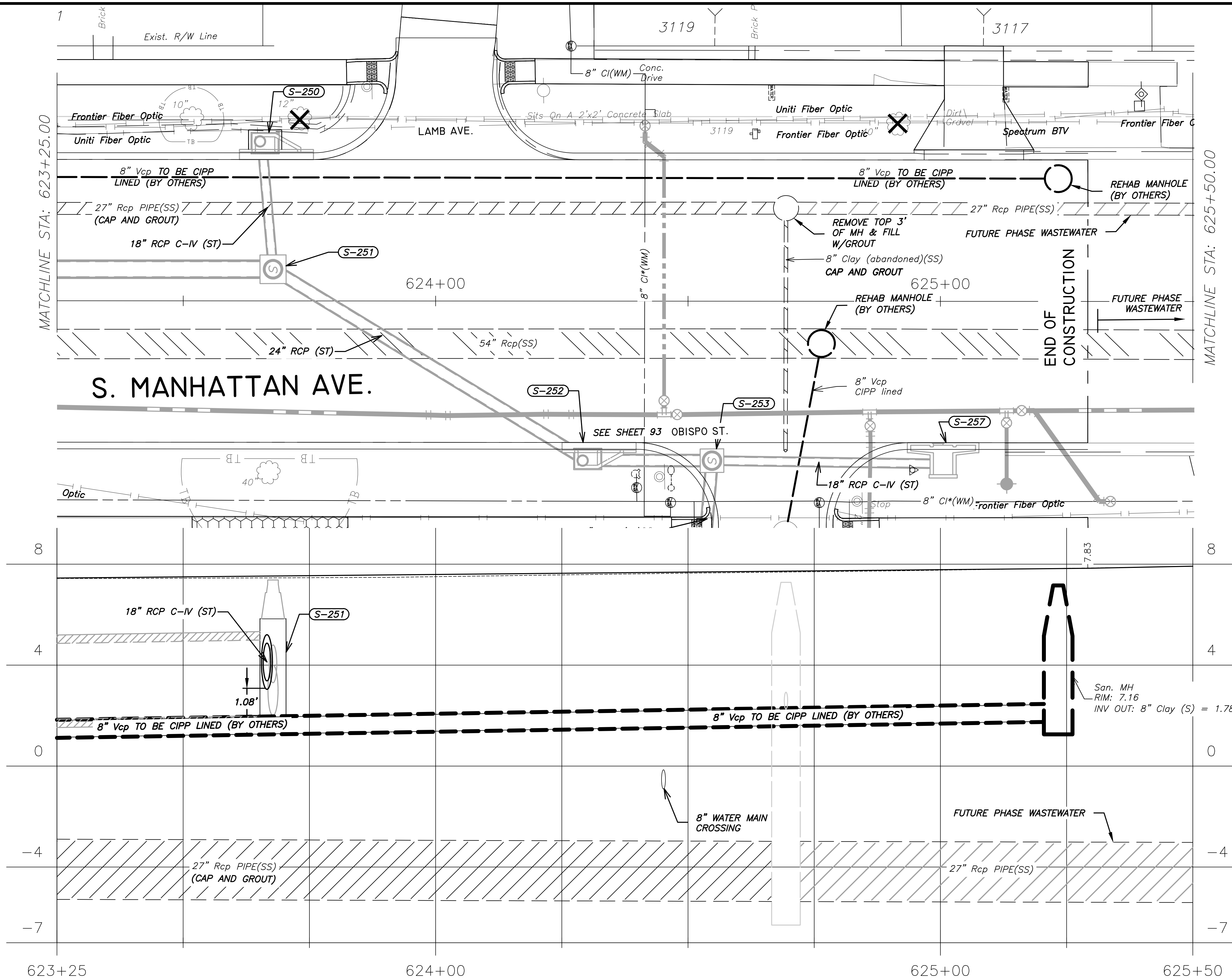
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE

SW 2024-07



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0 20
1"=20'

NOTE:
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3			6		
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DES: MDC/ASA
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CITY of TAMPA
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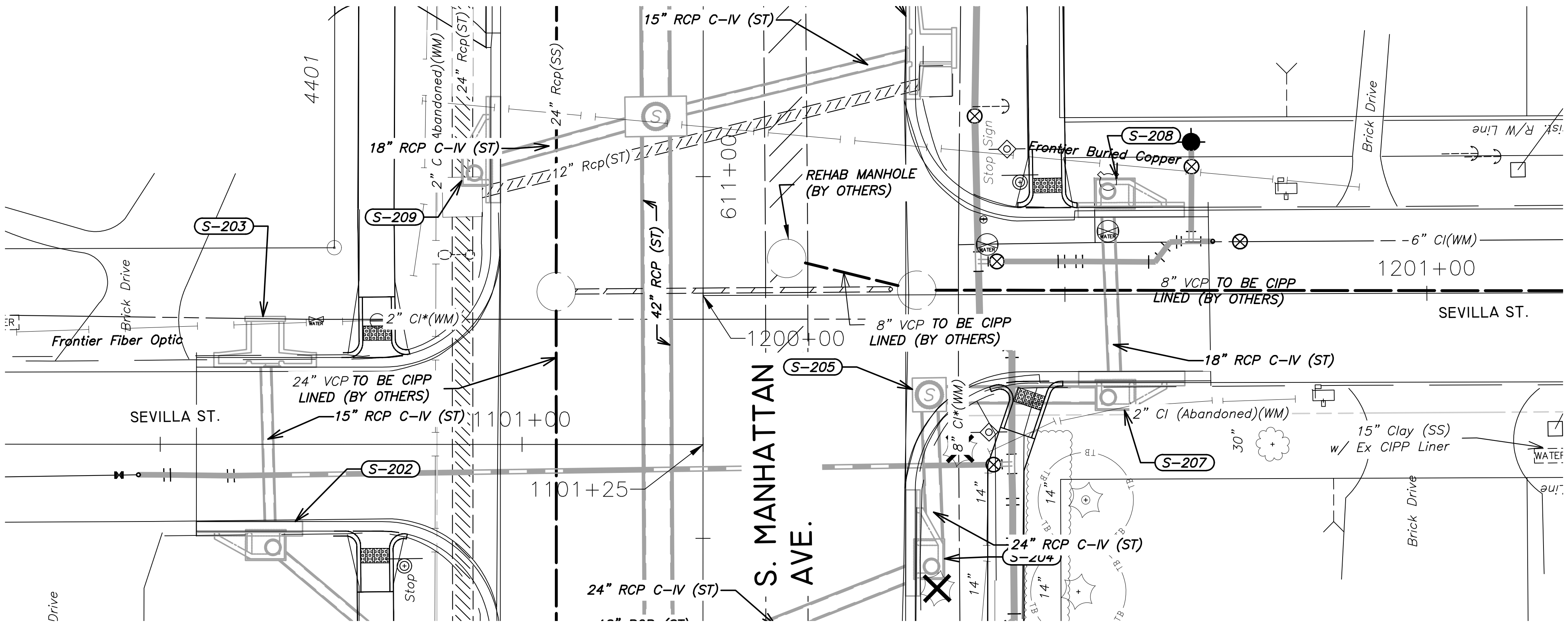
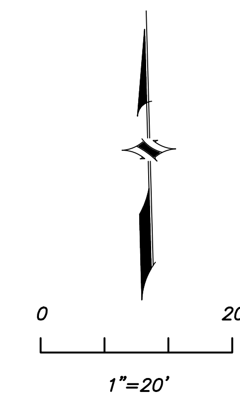
MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
S. MANHATTAN AVE. - SANITARY PLAN AND PROFILE





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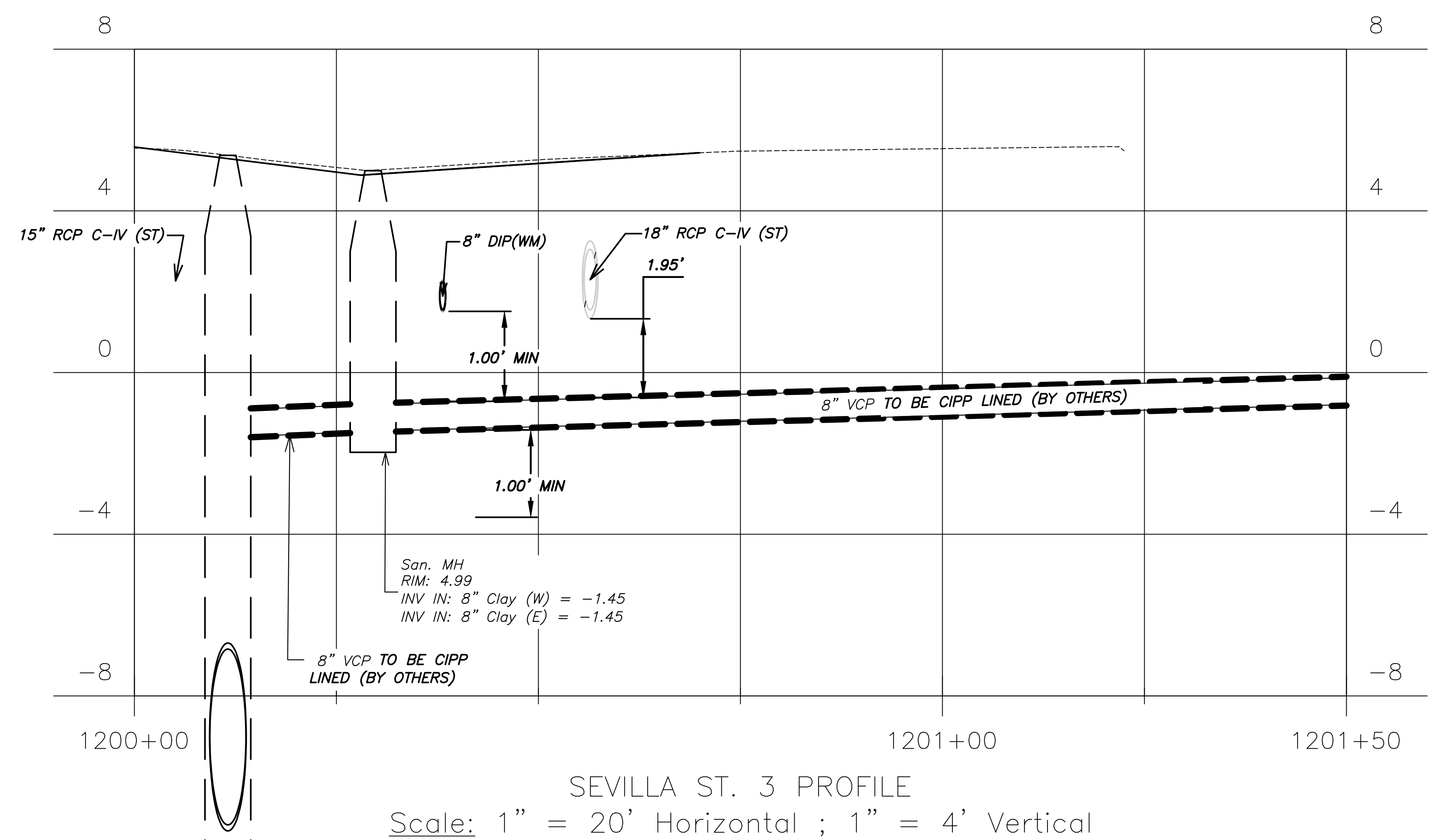

SEVILLA ST. 3 PROFILE

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: MDC/ASA
DRN: ASA/JBA
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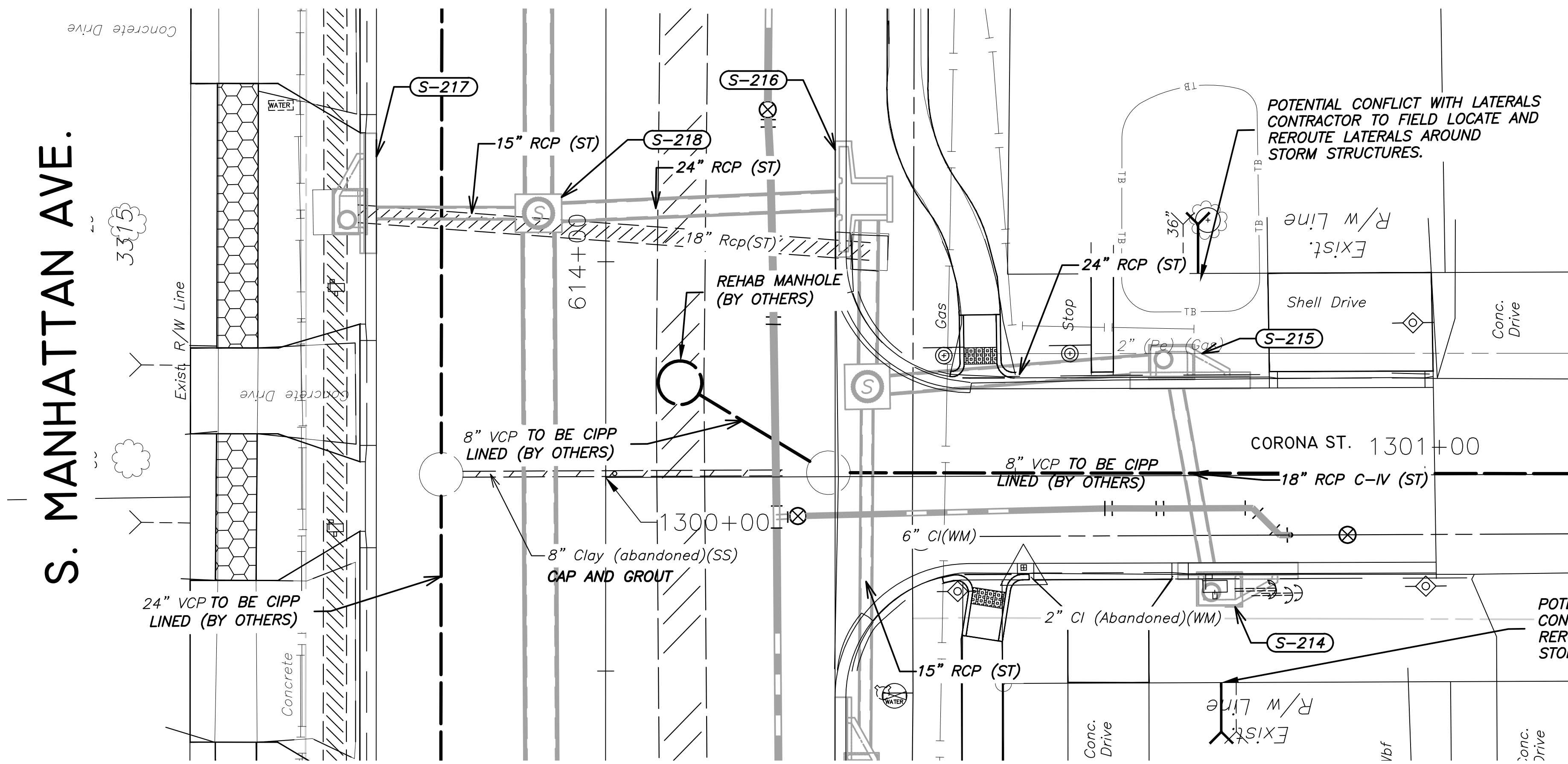
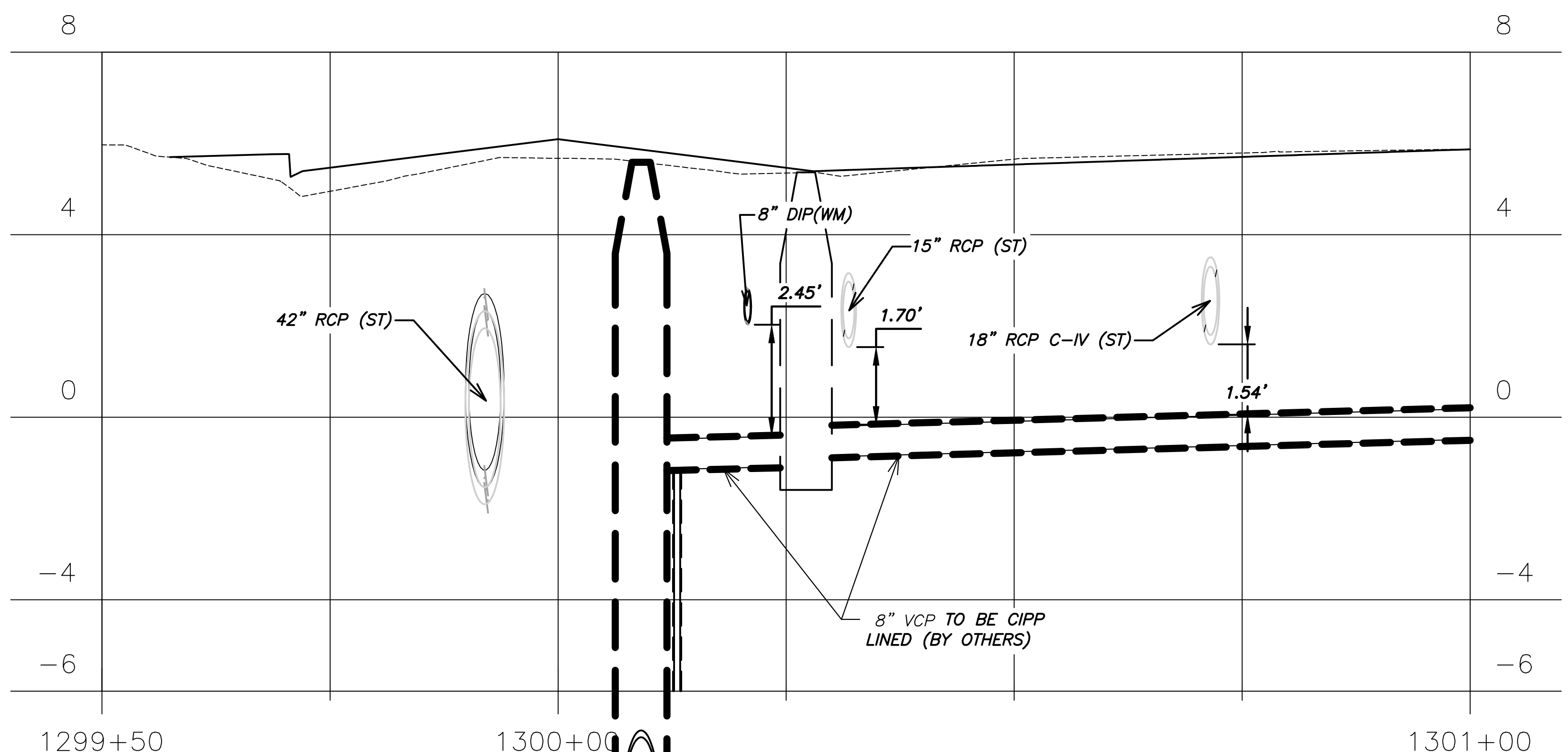
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
W. SEVILLA ST. - SANITARY PLAN AND PROFILE





CORONA Sewer PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

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NOTE:
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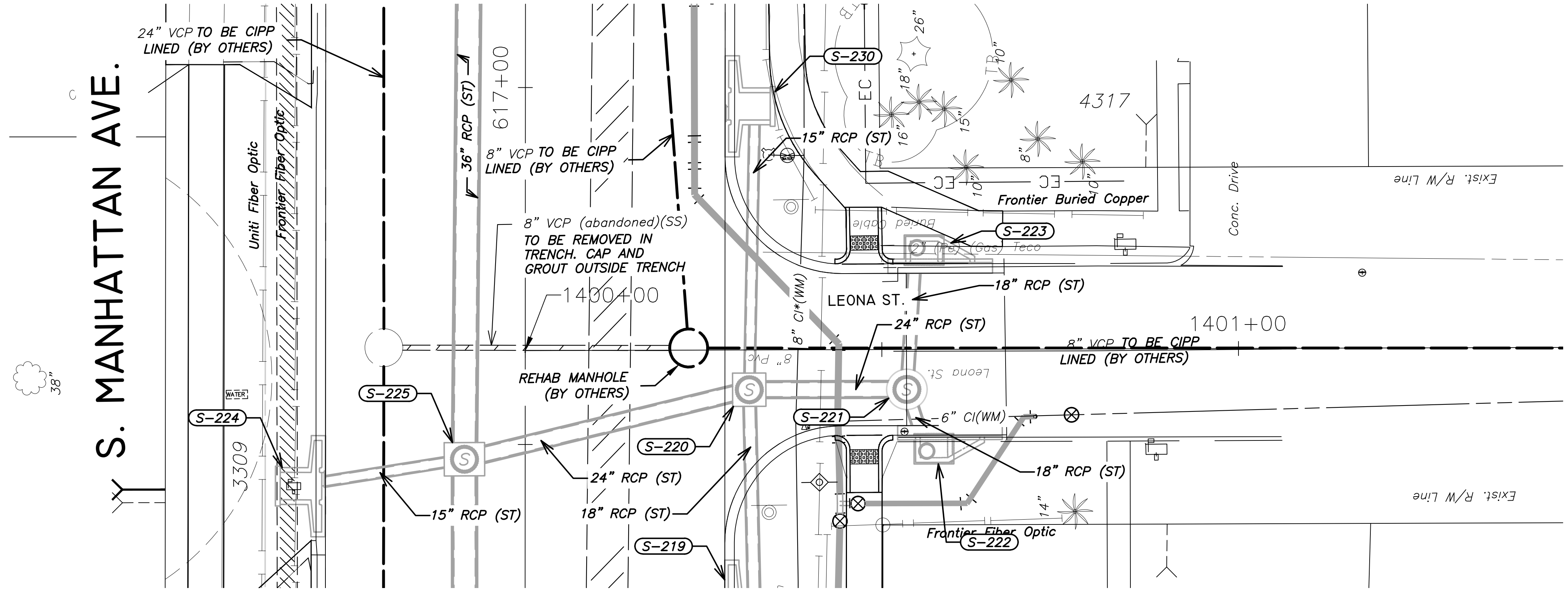
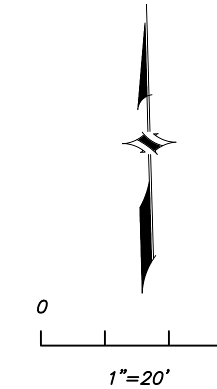
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
W. CORONA ST. - SANITARY PLAN AND PROFILE

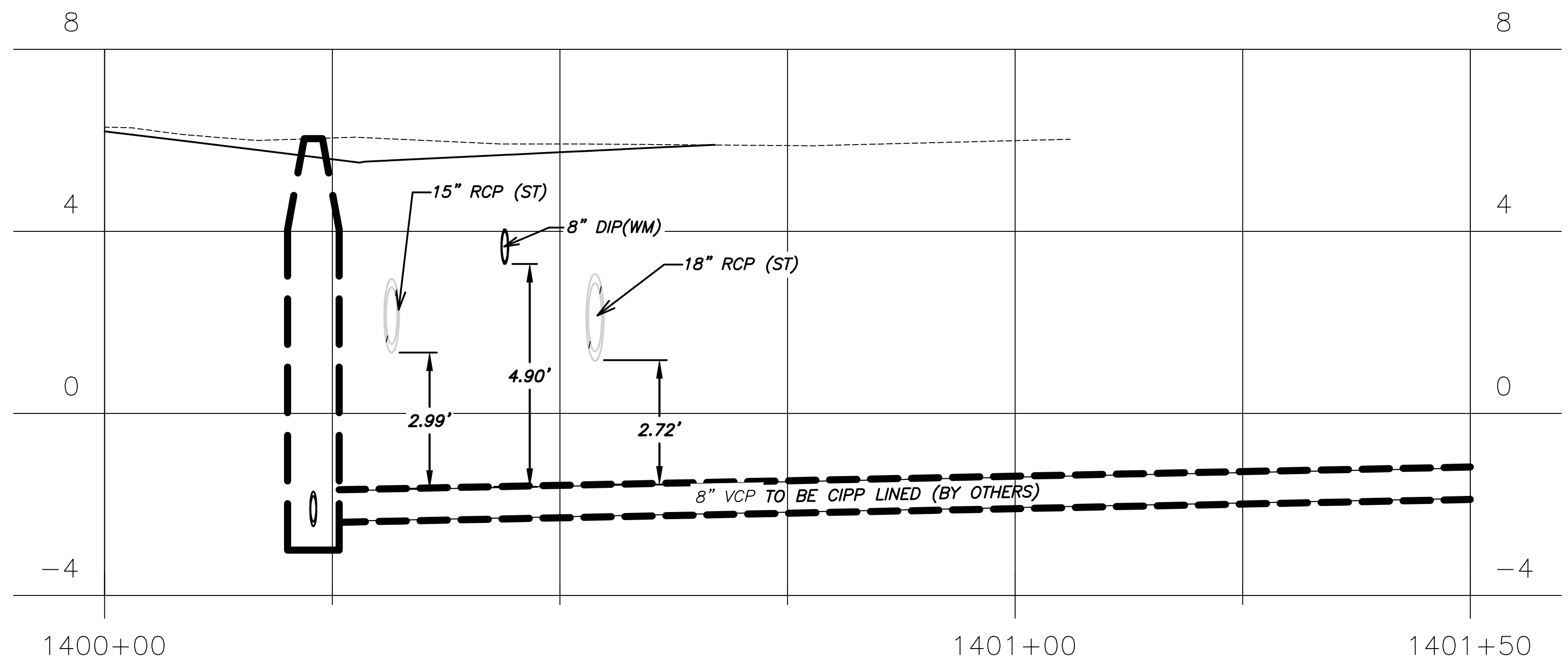
SHEET 88 OF 100





ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
2. PIPE TRENCH LOCATIONS TO BE EXCAVATED AND RESTORED PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.



LEONA ST. PROFILE

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

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN

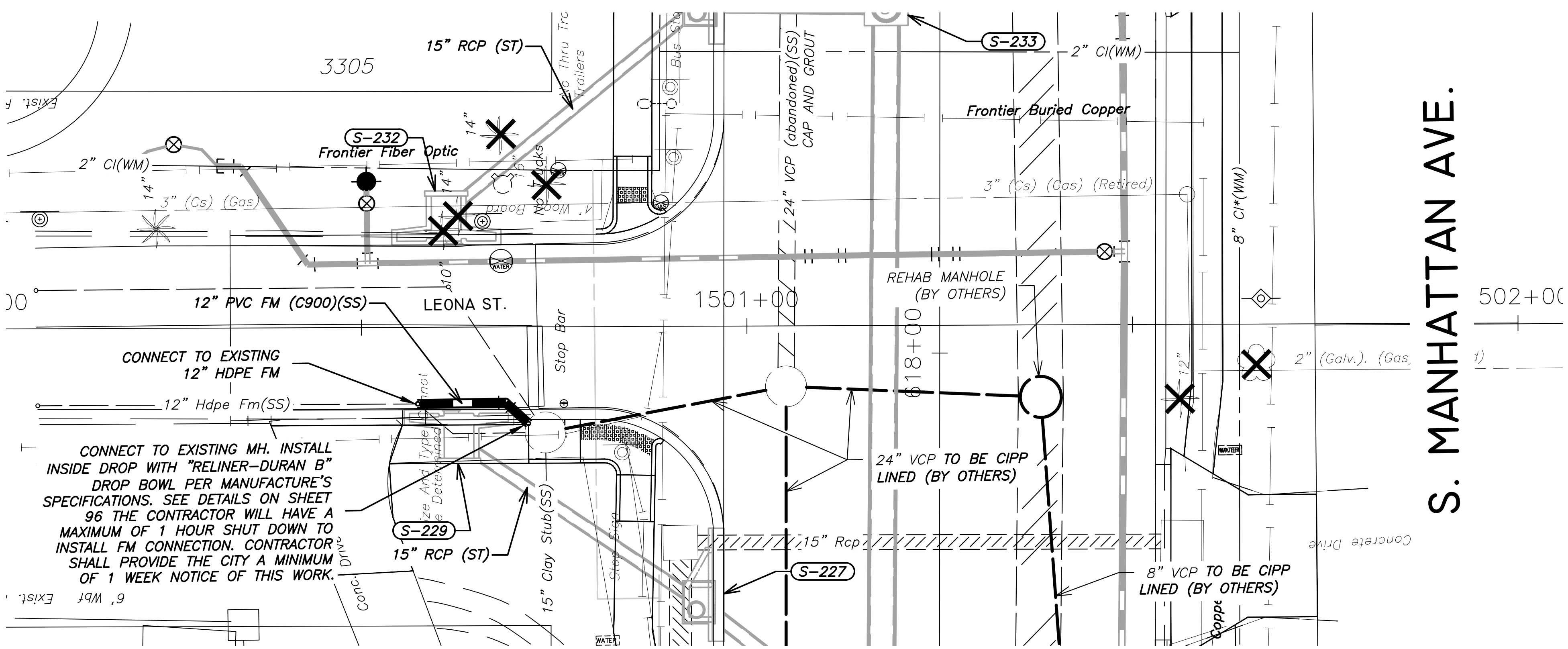
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

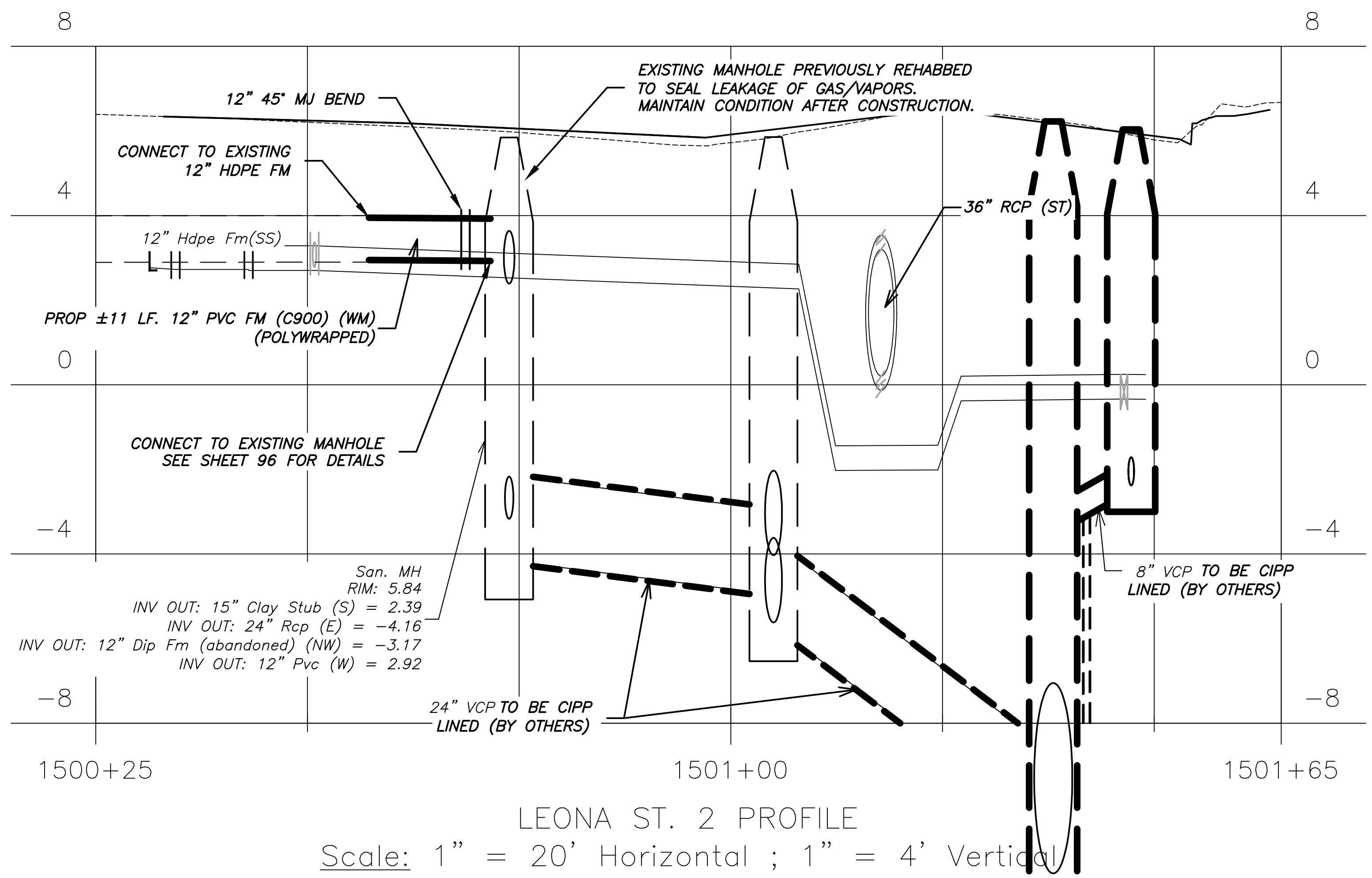
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
W. LEONA ST. - SANITARY PLAN AND PROFILE

SW 2024-07





LEONA ST. 2 PROFILE

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

ROADWAY CONSTRUCTION NOTE:

1. CONTRACTOR TO REMOVE ALL ASPHALT AND RESHAPE BASE IN ORDER TO CONSTRUCT ROADWAY TO DESIGN ELEVATIONS/ADD ADDITIONAL BASE AS NEEDED. PLEASE REFER TO NEW ROADWAY CONSTRUCTION NOTES PER PIPE TRENCH/ROADWAY RESTORATION DETAIL ON SHEET 75.
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NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN

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

DES: MDC/ASA
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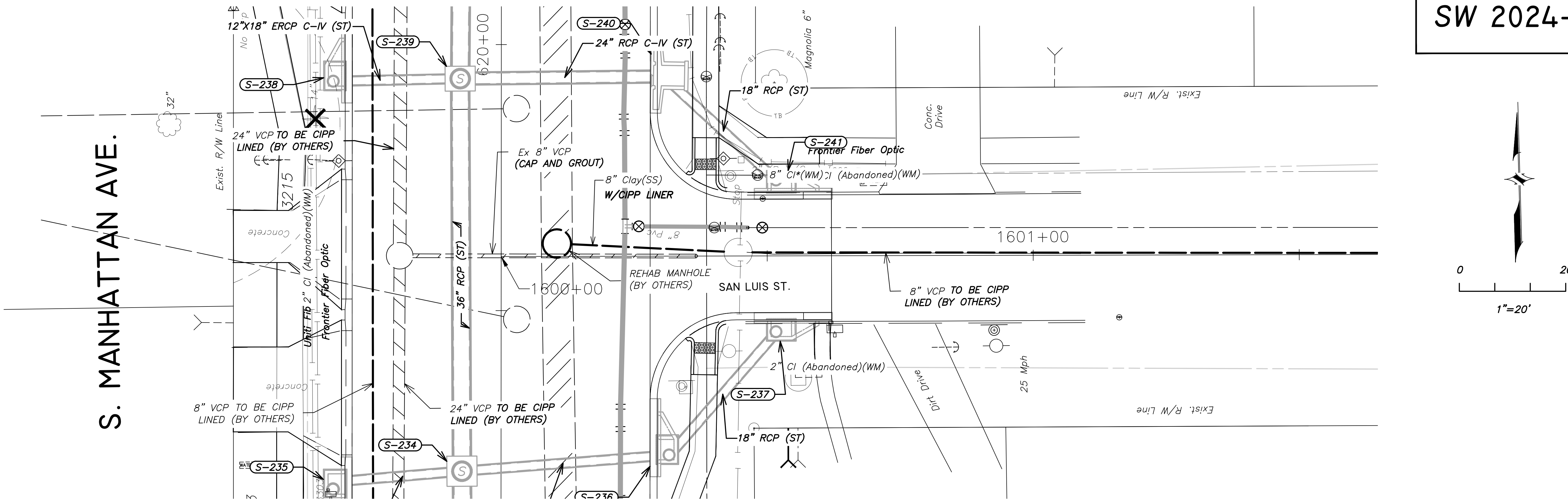
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
W. LEONA ST. - SANITARY PLAN AND PROFILE

SW 2024-07



ROADWAY CONSTRUCTION NOTE:

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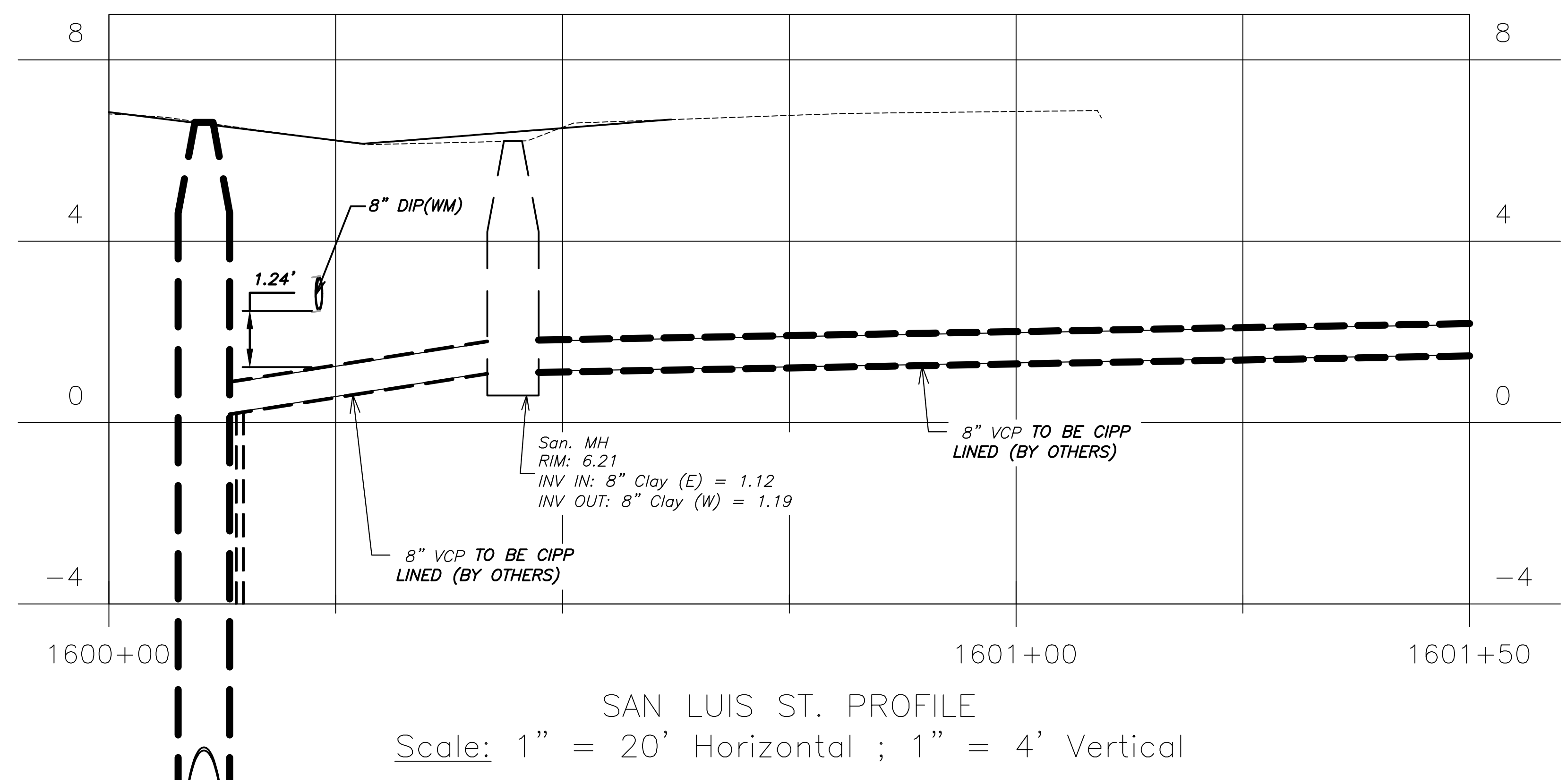

SAN LUIS ST. PROFILE

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: MDC/ASA
DRN: ASA/JBA
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DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS (VASCONIA ST. TO OBISPO ST.) - PHASE I
W. SAN LUIS ST. - SANITARY PLAN AND PROFILE

SHEET 91 OF 100

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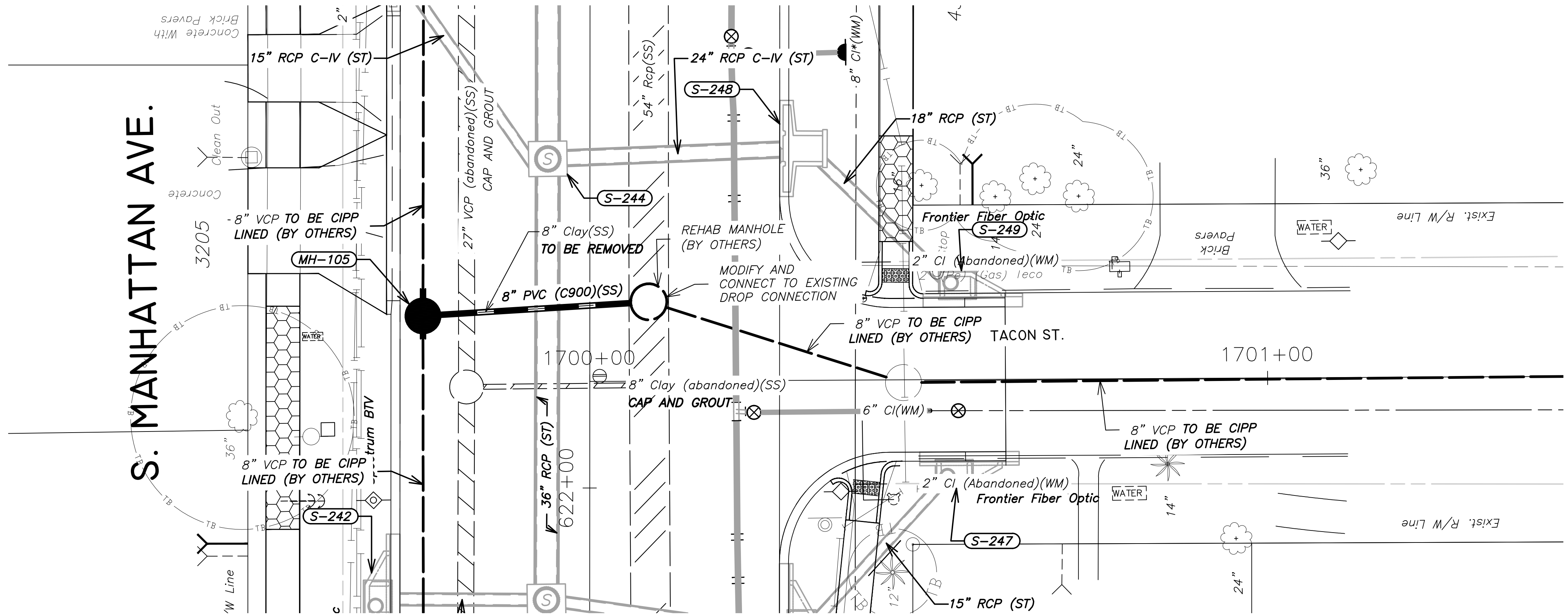
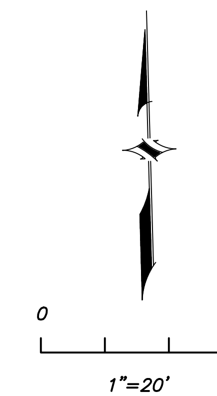
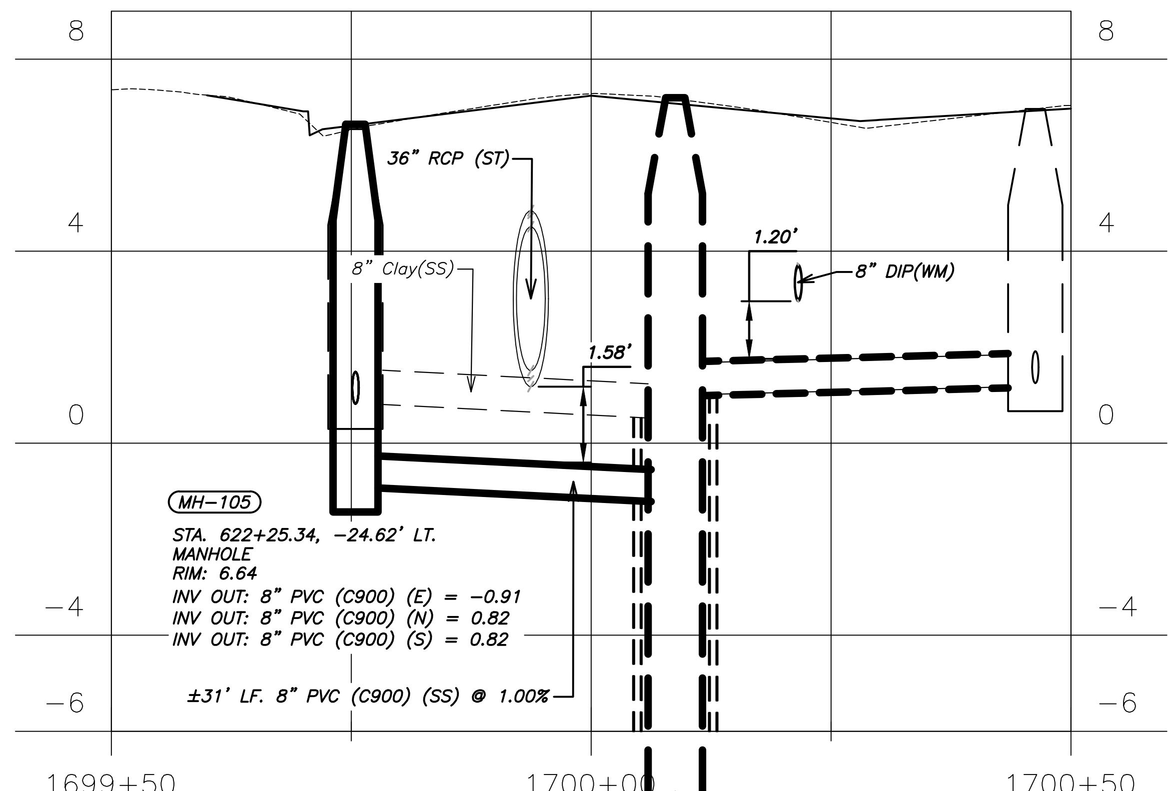
SW 2024-07







TACON Sewer PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

ROADWAY CONSTRUCTION NOTE:

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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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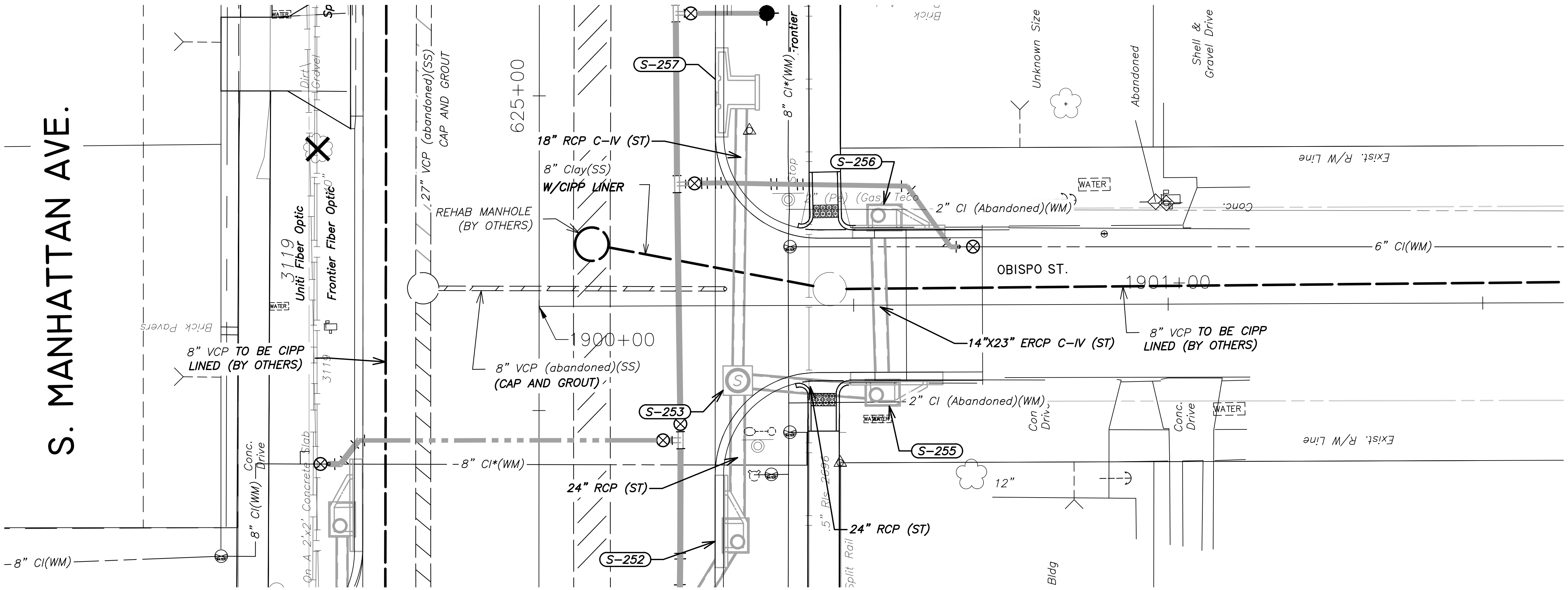
DATE: 09/03/24

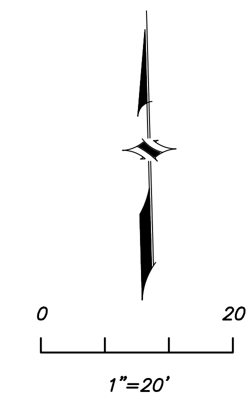
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
W. TACON ST. - SANITARY PLAN AND PROFILE

SHEET 92 OF 100

SW 2024-07





ROADWAY CONSTRUCTION NOTE:

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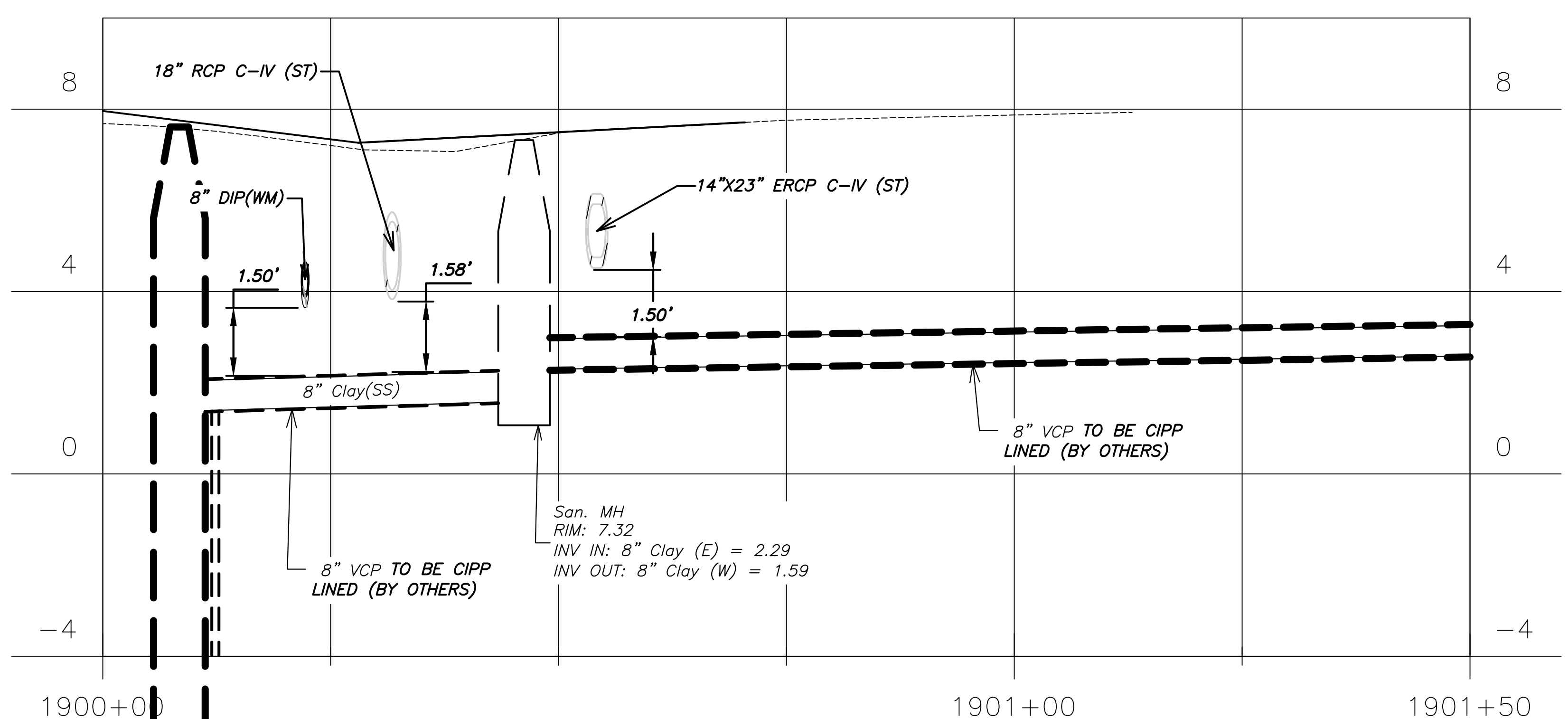

OBISPO ST. PROFILE
Scale: 1" = 20' Horizontal ; 1" = 4' Vertical

NOTE:
SEE SEPARATE PLANS FOR STORM AND WATER DESIGN

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

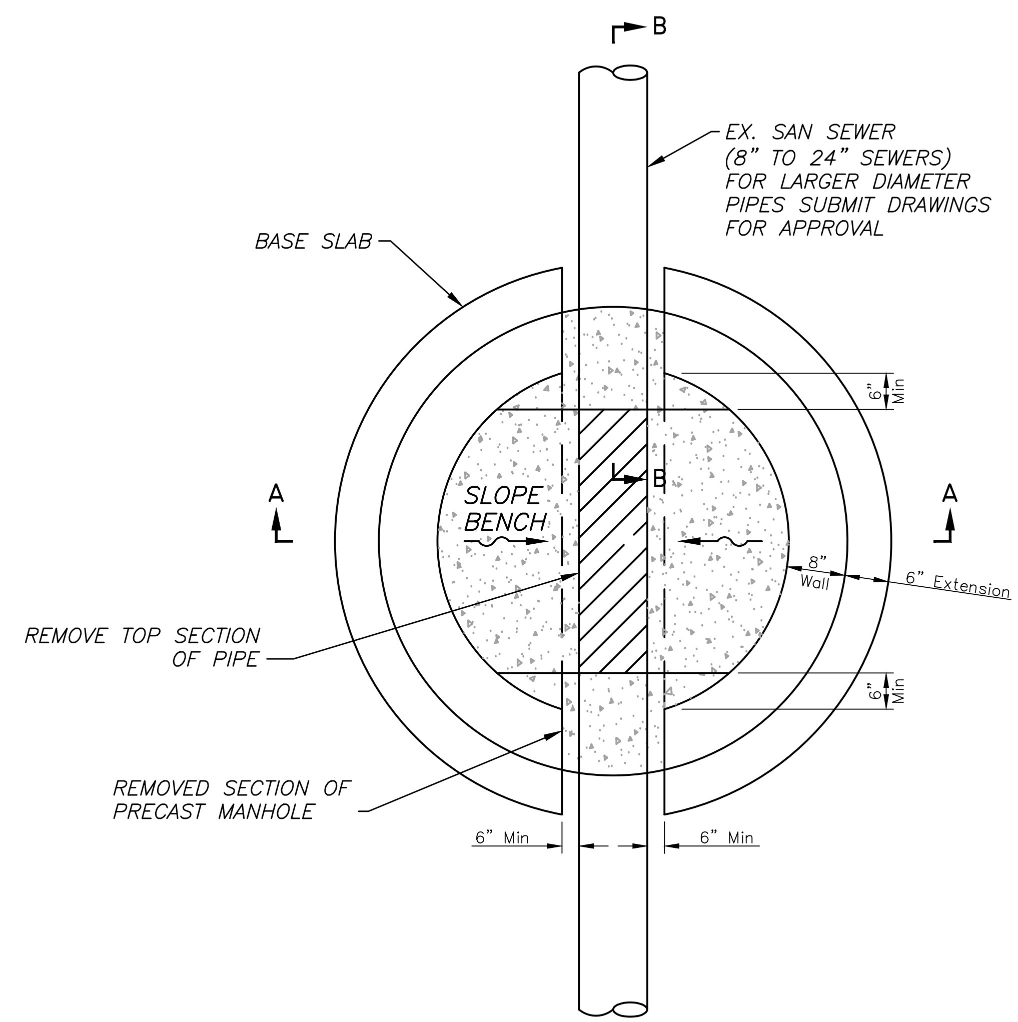
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

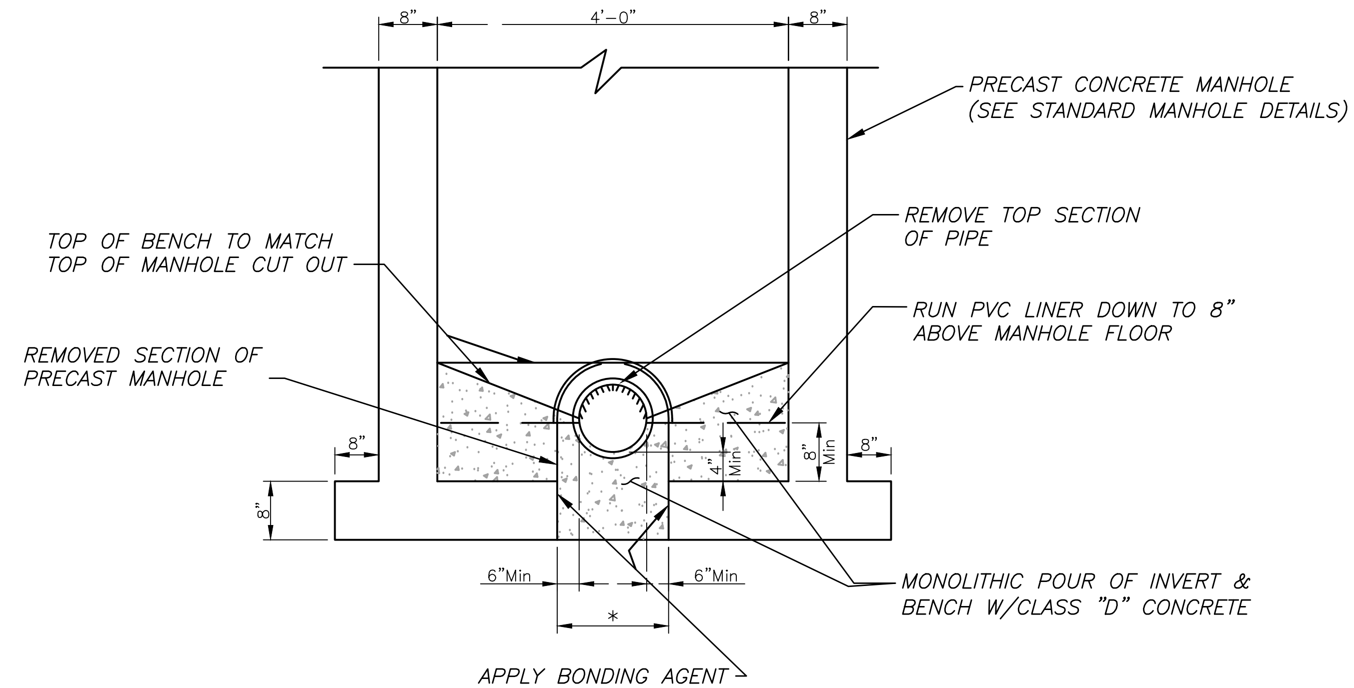
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
W. OBISPO ST. - SANITARY PLAN AND PROFILE

SHEET 93 OF 100

SW 2024-07

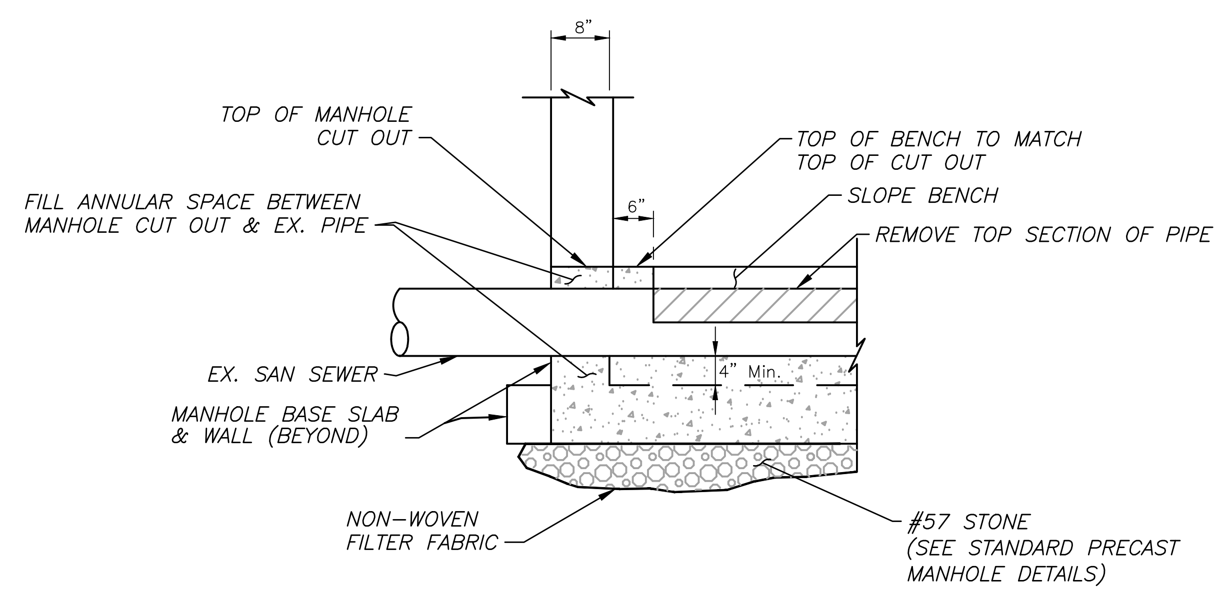


DOGHOUSE MANHOLE PLAN VIEW
Not to Scale



SECTION A-A
Not to Scale

* TYPICAL WIDTH OF OPENING IS
24" FOR AN EX. 8" PIPE



SECTION B-B
Not to Scale

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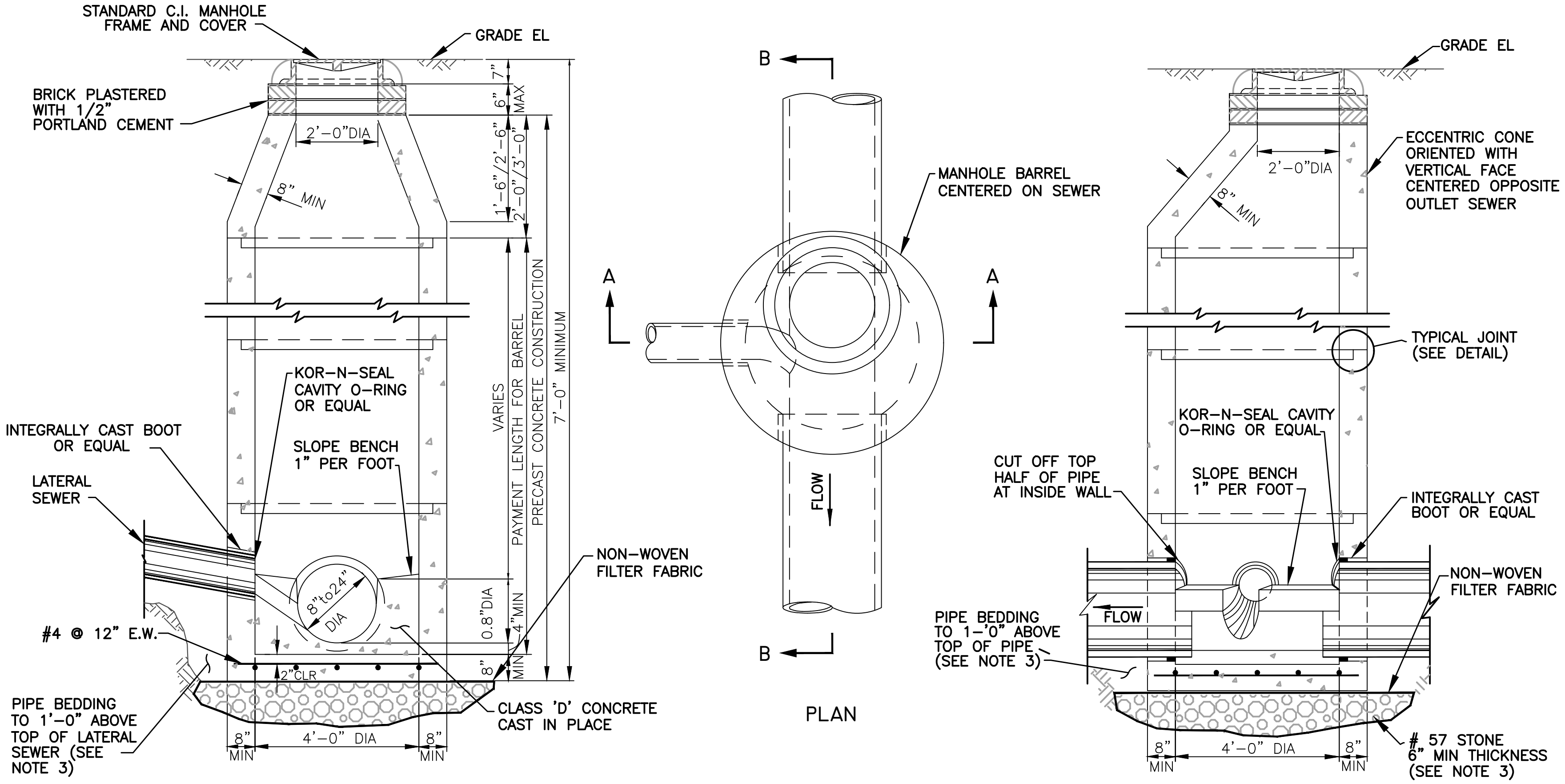
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
DOGHOUSE MANHOLE

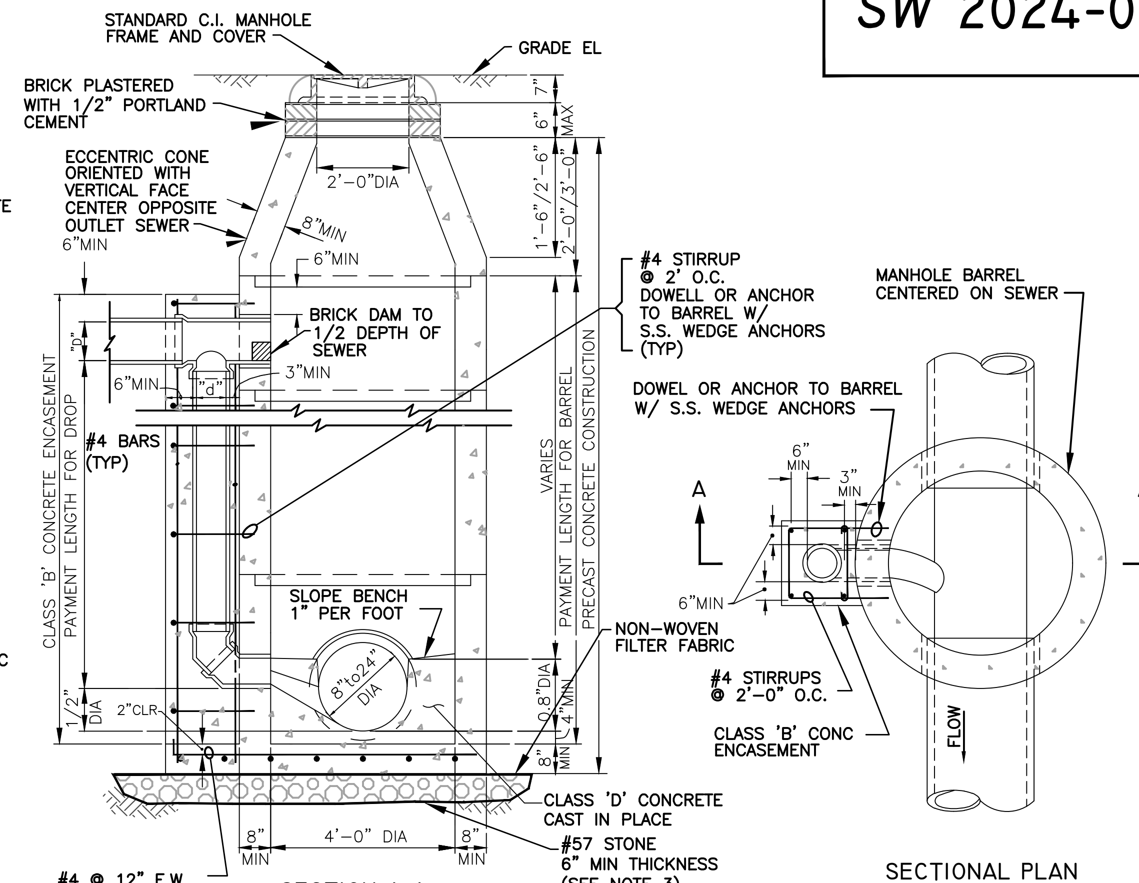
SW 2024-07



STANDARD MANHOLE – DEEP TYPE

FOR SEWERS 24" OR LESS IN DIAMETER

N.T.S

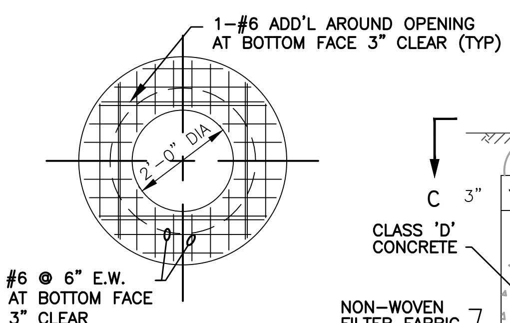


STANDARD DROP MANHOLE

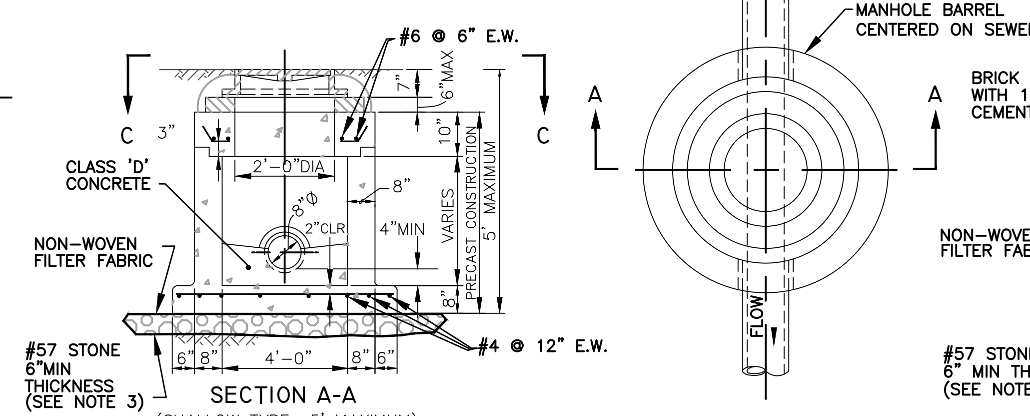
FOR SEWERS 24" OR LESS IN DIAMETER

N.T.S

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"



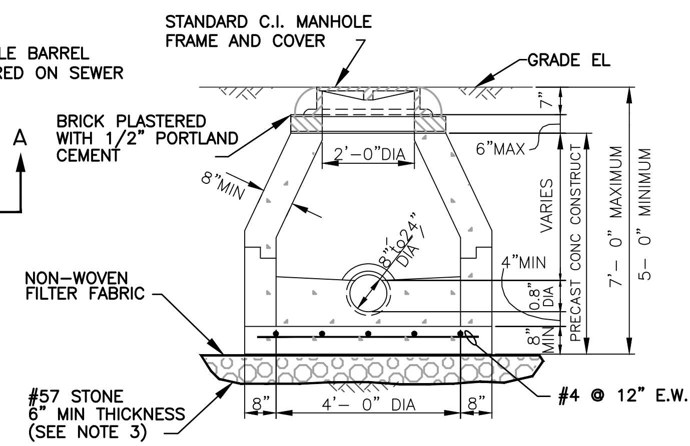
CONCRETE SLAB DETAIL
SECTION C-C



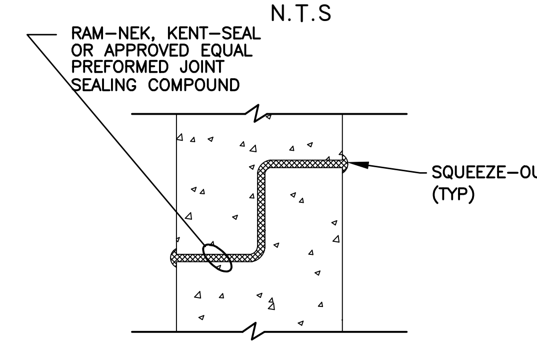
STANDARD MANHOLE – SHALLOW TYPE

FOR SEWERS 24" OR LESS IN DIAMETER

N.T.S



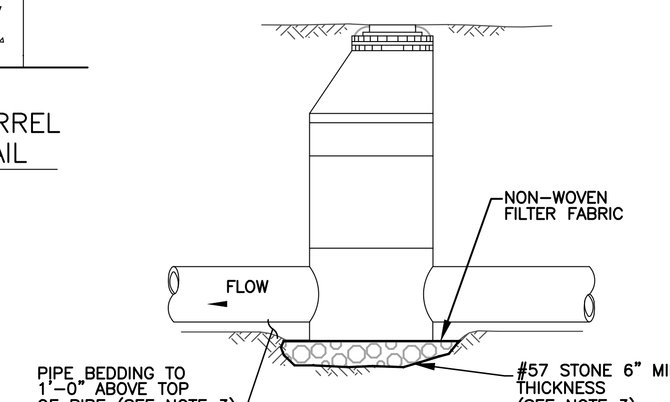
SECTION A-A
5'-0" TO 7'-0" DEEP
(SEE NOTE 4)



MANHOLE BARREL JOINT DETAIL

N.T.S

(SEE NOTE 5)



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.

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

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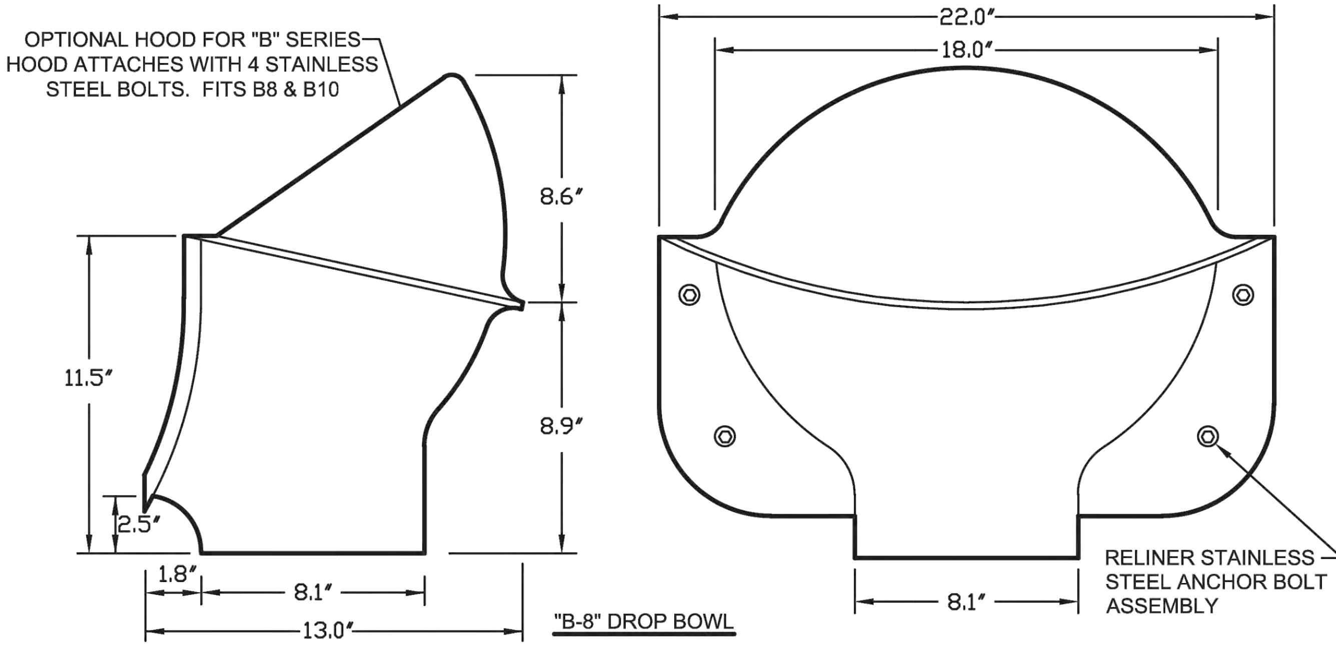
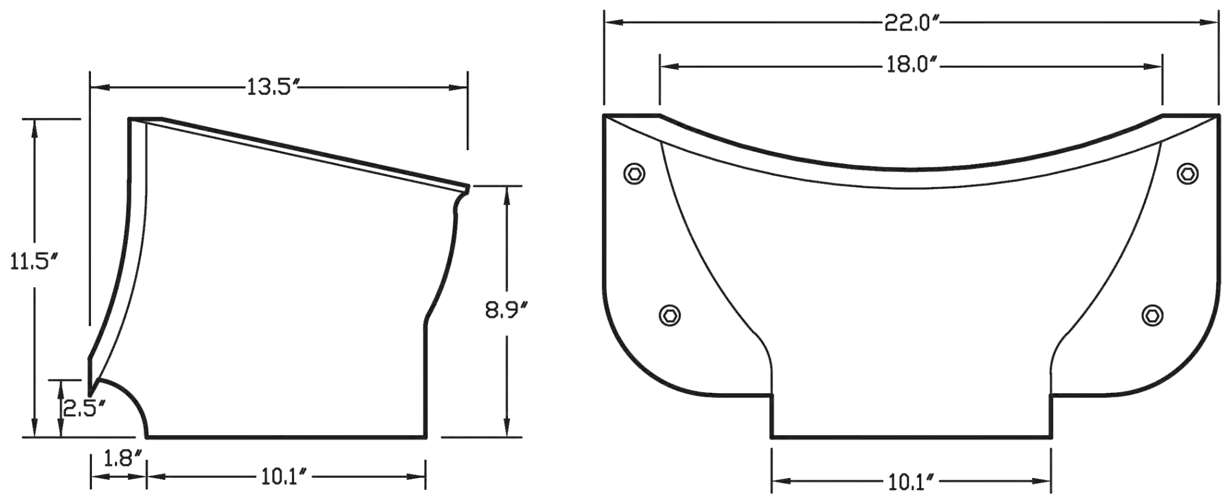
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
STANDARD MANHOLE 8 TO 24

SHEET 95 OF 100



"B-8" DROP BOWL



"B-10" DROP BOWL

MODEL #

B8DB	- 18" DROP BOWL WITH 8" OUTLET - USE FOR 4' - 5' DIA MH
B8DBR84	- 18" DROP BOWL WITH 8" OUTLET - USE FOR 6' - 8' DIA MH
B8DBR144	- 18" DROP BOWL WITH 8" OUTLET - USE FOR 9' - 12' DIA MH
B10DB	- 18" DROP BOWL WITH 10" OUTLET - USE FOR 4' - 5' DIA MH
B10R96	- 18" DROP BOWL WITH 10" OUTLET - USE FOR 6' - 8' DIA MH
B10R144	- 18" DROP BOWL WITH 10" OUTLET - USE FOR 9' -12' DIA MH

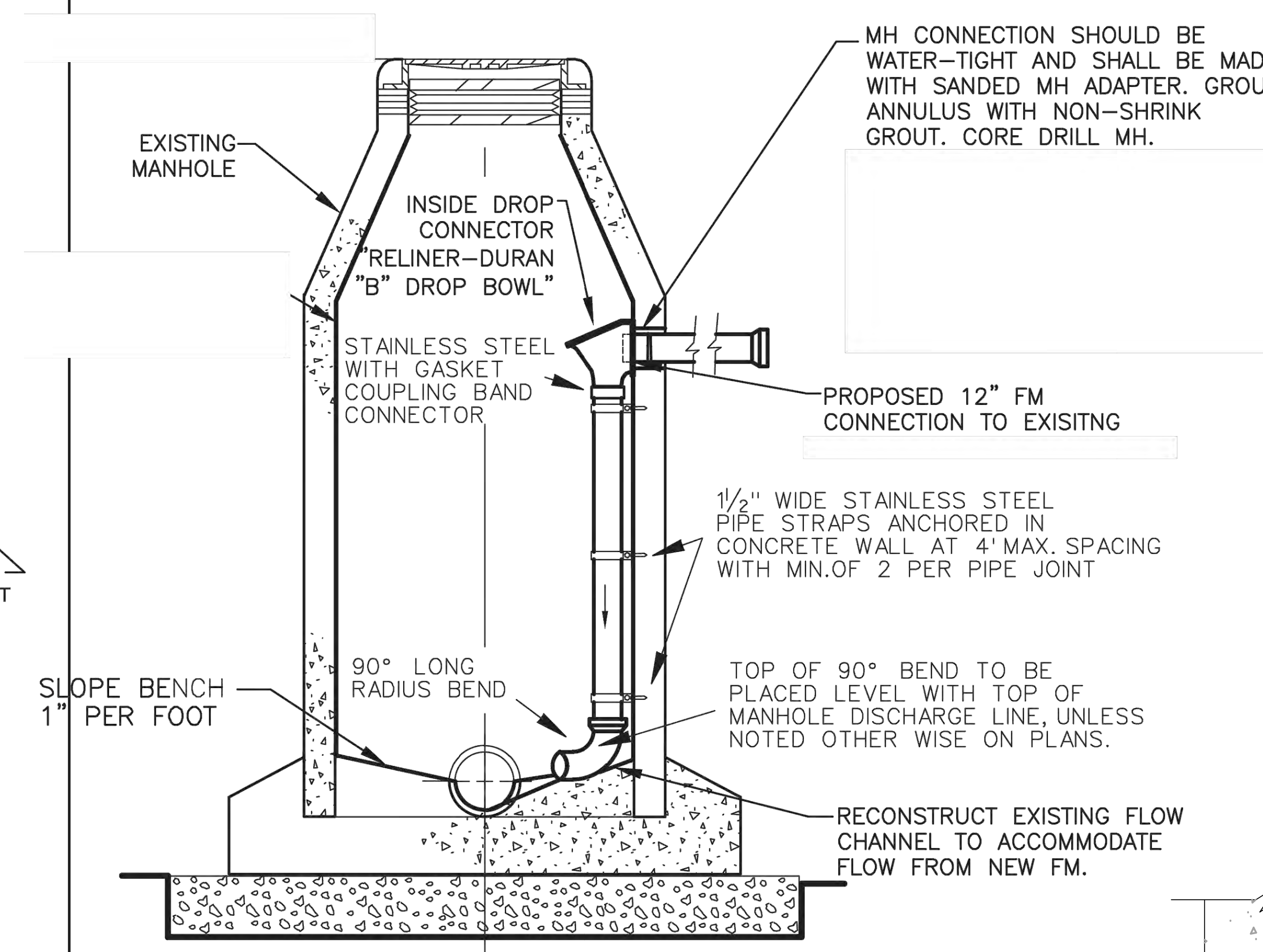
THE "B-8" BOWL WILL SERVICE UP THROUGH FULL 10" INLETS. THE "B-10" BOWL WILL SERVICE UP THROUGH FULL 12" INLETS. CAN BE USED FOR 15" AND 16" INLET MODERATE FLOWS. ALL SIZES ARE FOR RETROFIT OR NEW CONSTRUCTION. FABRICATED IN MARINE GRADE FIBERGLASS AND FINISHED IN BRIGHT WHITE GEL COAT.

USE 4 RELINER ANCHOR ASSEMBLIES TO ATTACH DROP BOWL TO MANHOLE WALL. USE RELINER STAINLESS STEEL PIPE BRACKETS TO SUPPORT DOWN PIPE. EXTERNAL PIPE COUPLER REQUIRED. PROVIDE SWEEP AT DOWN PIPE OUTLET.

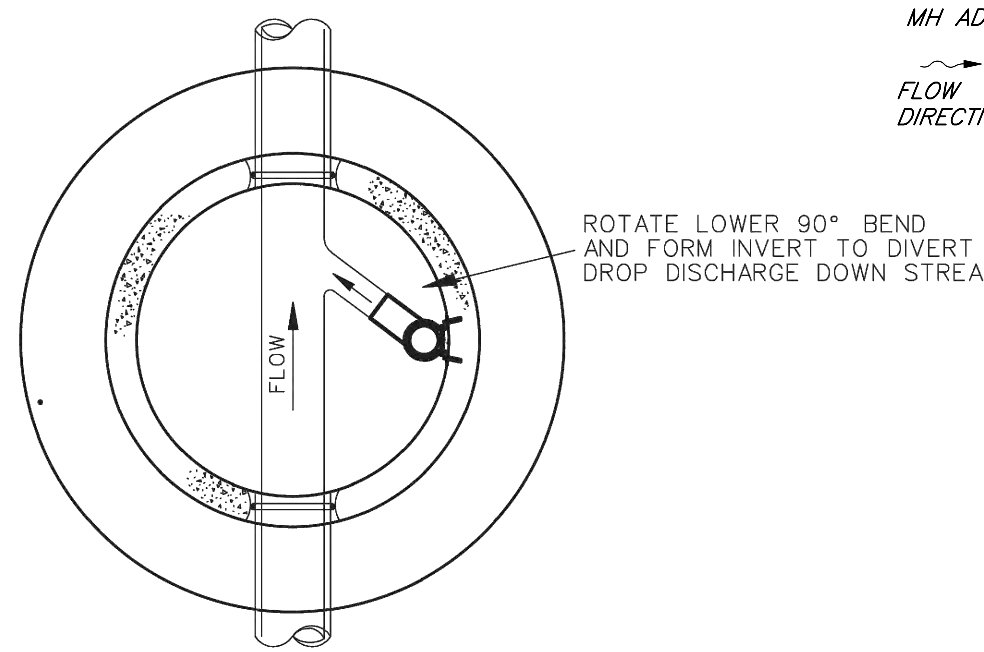
MADE IN U.S.A.
U.S. PAT. # 6074130
CANADIAN PAT. # 2269565

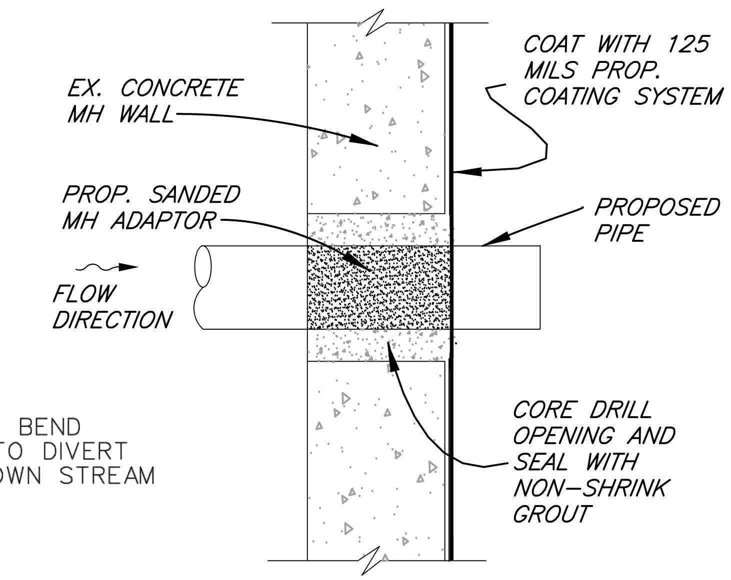
RELINER / DURAN, INC.
53 MT. ARCHER ROAD, LYME, CT. 06371
(800) 508-6001 FAX: (877)434-3191
WWW.RELINER.COM

DESCRIPTION	DATE	SCALE
B8 & B10 DROP BOWLS FOR ROUND WALLS	11/28/16	NONE
	DRAWING NUMBER	
	B8DB B10DB	



ELEVATION





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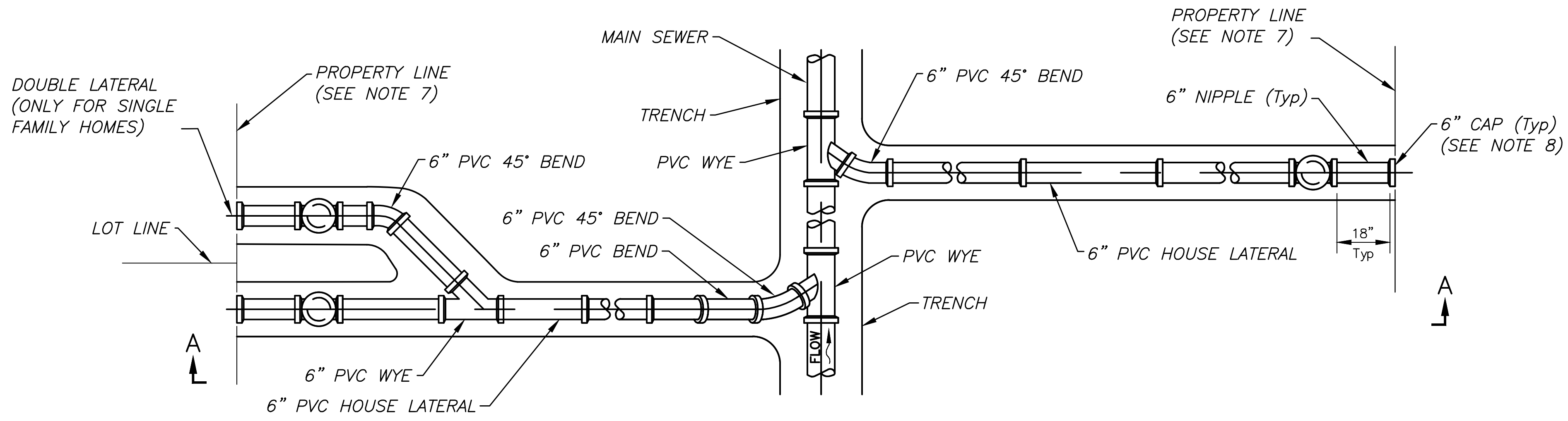
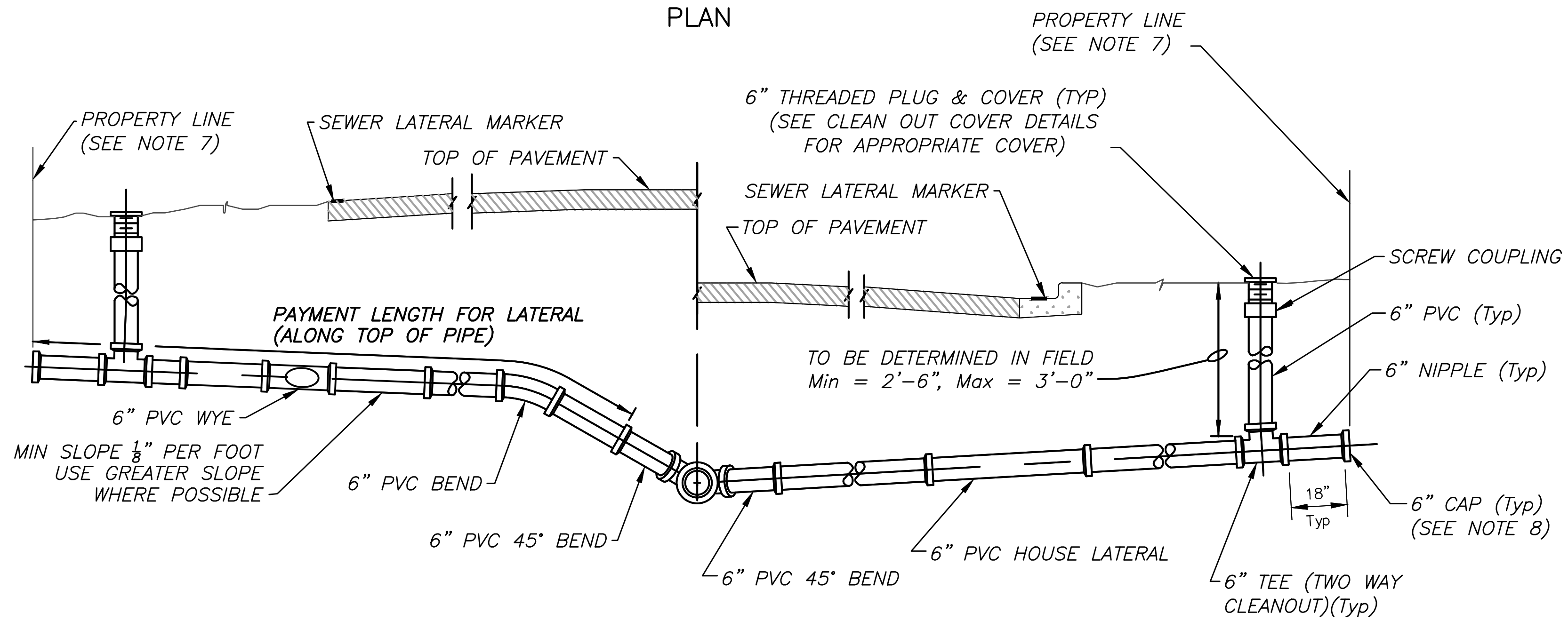
CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
CONNECT TO EXISTING WALL
PENETRATION DETAIL



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.*

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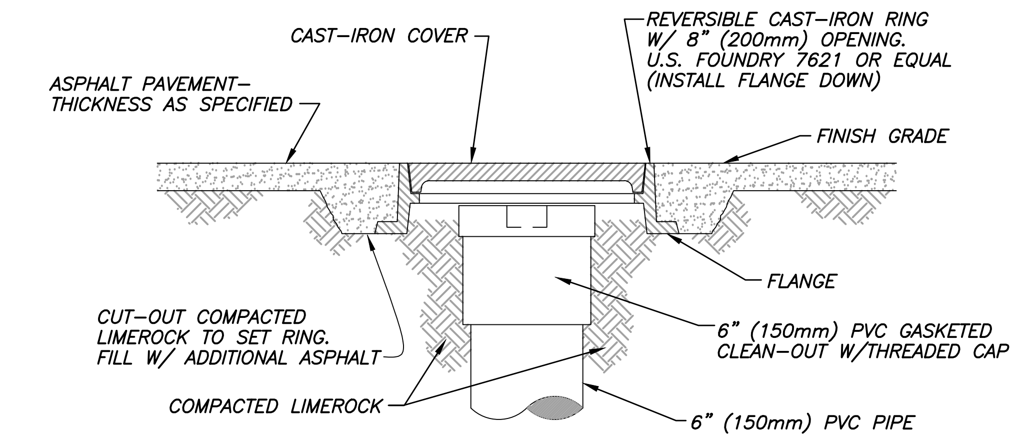
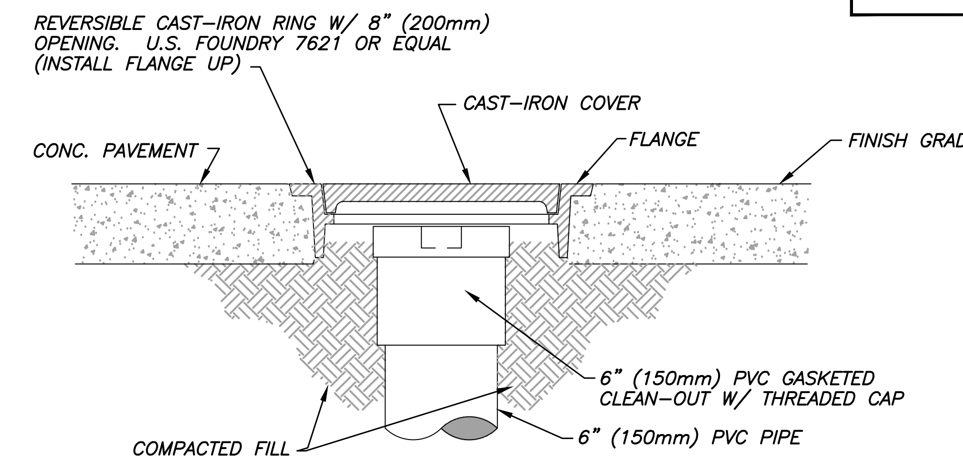
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
NEW LATERAL
CONNECTION



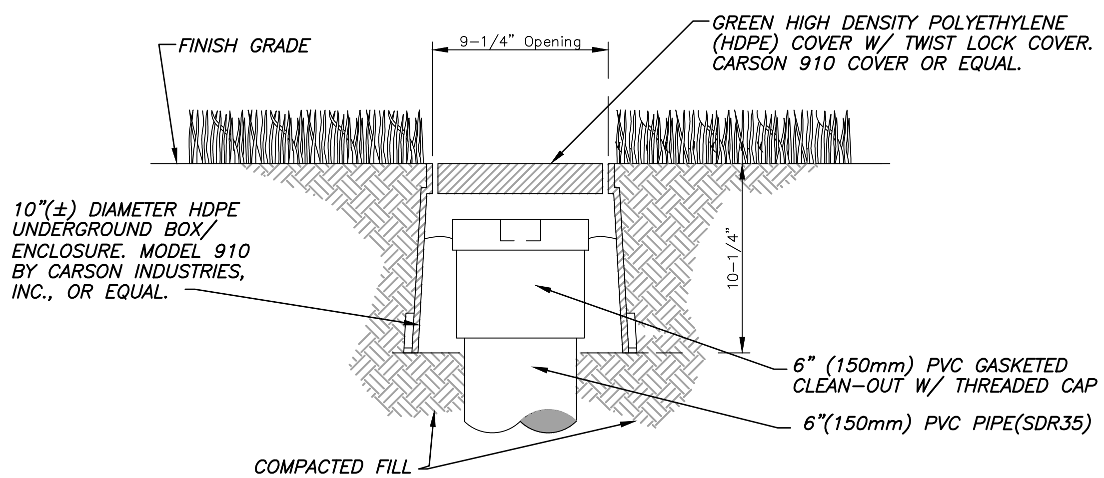
CLEAN-OUT W/ COVER FOR ASPHALT PAVED AREAS

Not to Scale



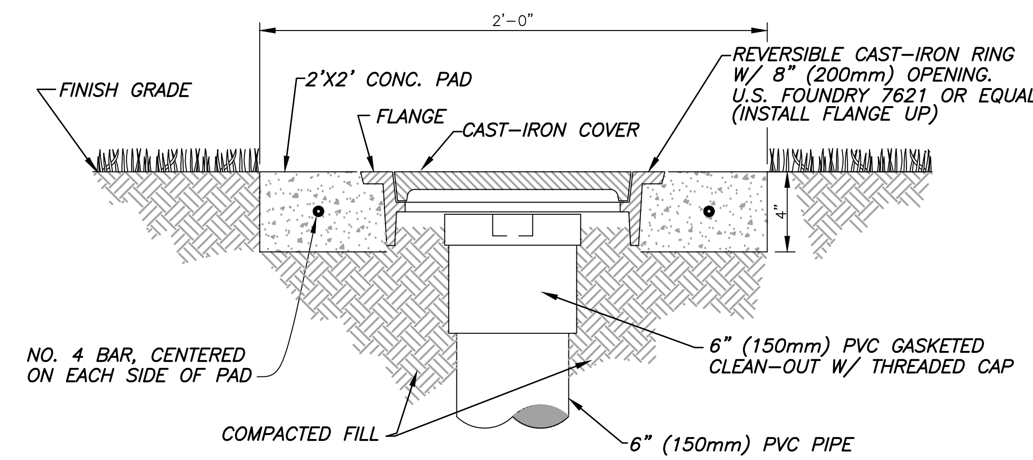
CLEAN-OUT W/ COVER FOR CONCRETE PAVED AREAS

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		

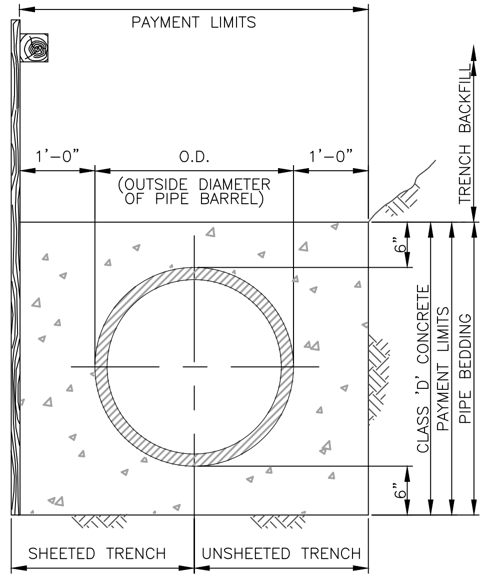
DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

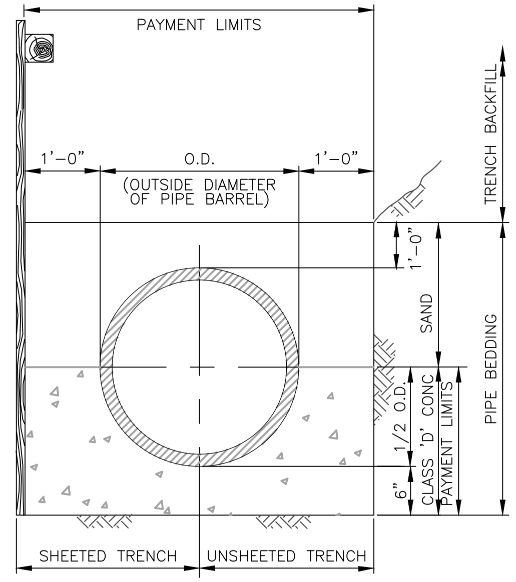
MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
CLEANOUT COVER DETAIL

SHEET 98 OF 100

SW 2024-07



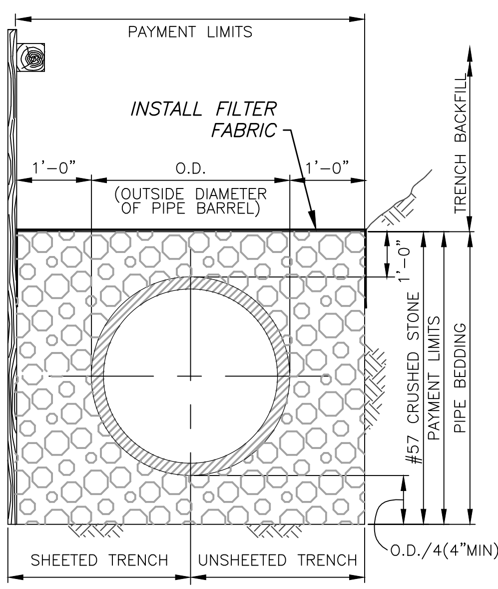
CONCRETE ENCASEMENT



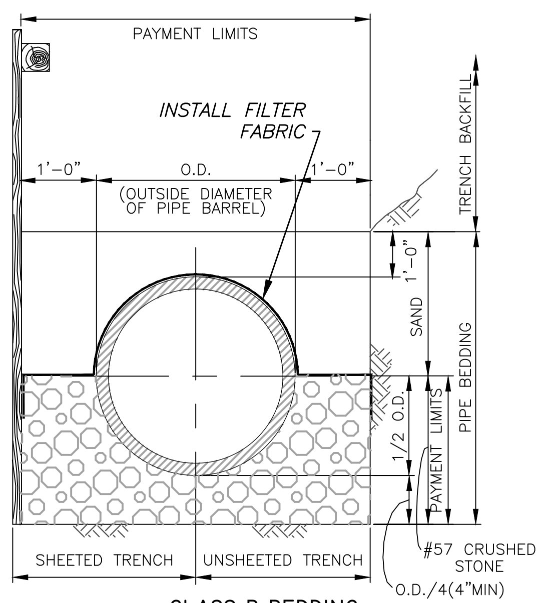
CLASS A BEDDING (CONCRETE CRADLE)

NOTES:

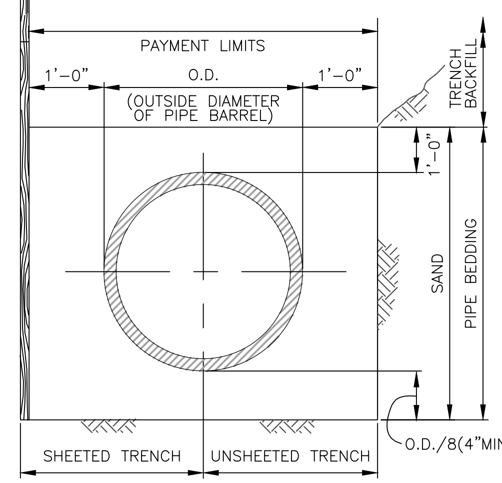
1 ALL TYPES OF PIPE BEDDING SHALL EXTEND TO UNDISTURBED EARTH AT SIDES AND BOTTOM OF THE TRENCH.
2. SAND AND CRUSHED STONE PIPE BEDDING SHALL BE PLACED AND COMPACTED IN ACCORDANCE WITH SPECIFICATIONS.



CLASS B-I BEDDING

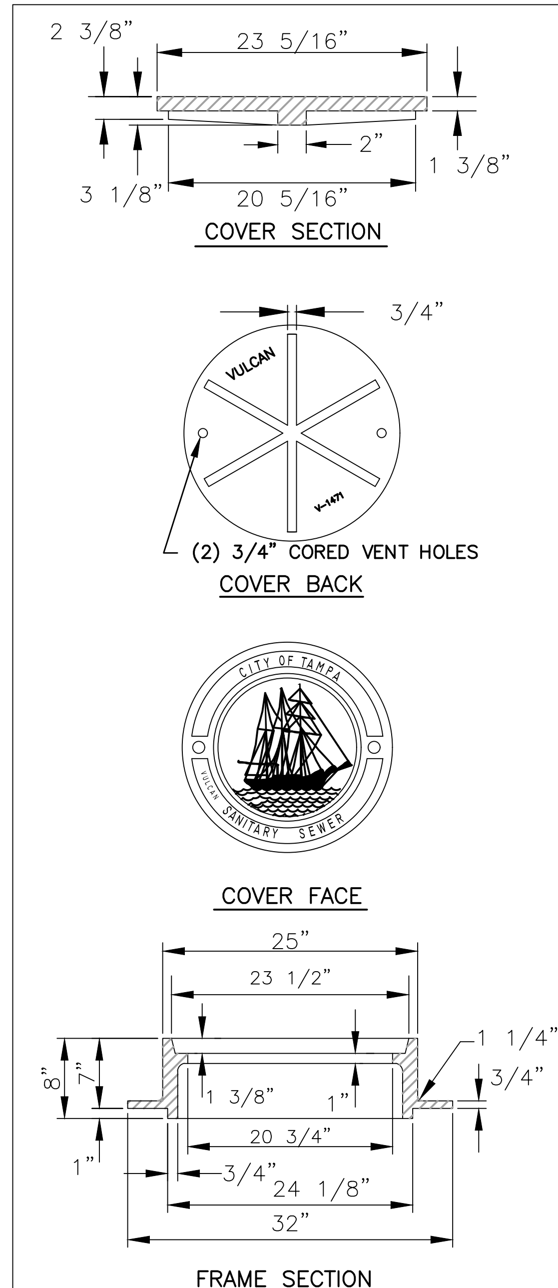


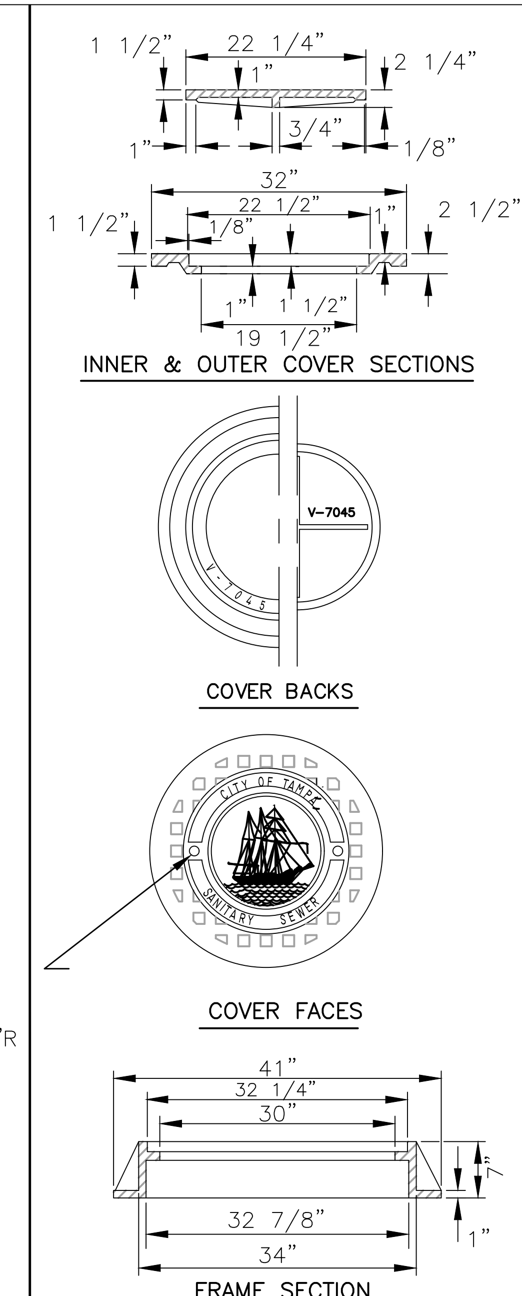
CLASS B BEDDING
(ONLY ALLOWED WITH CITY INSPECTOR APPROVAL)



CLASS C BEDDING

PIPE BEDDING DETAILS
N.T.S.





FOR MH'S OF SEWERS 24" OR LESS IN DIAMETER: VULCAN FOUNDRY NO. V-1471, U.S. FOUNDRY NO. 575-AT, OR EQUAL	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.

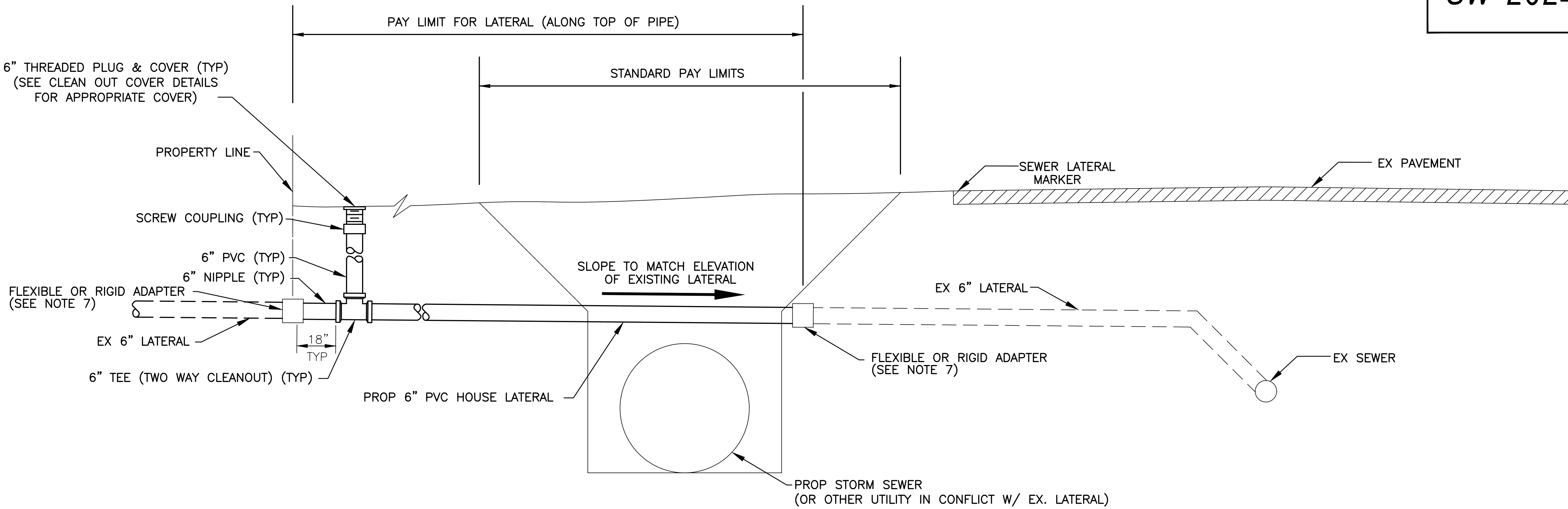
No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
1			4		

DES: MDC/ASA
DRN: ASA/JBA
CKD: MDC
DATE: 09/03/24

CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
MISCELLANEOUS GRAVITY

SW 2024-07



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

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No.	DATE	REVISIONS	No.	DATE	REVISIONS
3			6		
2			5		
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CITY of TAMPA
Mobility Department
Stormwater Engineering Division

MANHATTAN AVE. STORMWATER IMPROVEMENTS
(VASCONIA ST. TO OBISPO ST.) - PHASE I
LATERAL REPLACEMENT

SHEET 100 OF 100