WARNING

The Project Manual and Drawings are provided in ADOBE® ACROBAT® PDF format solely for convenience in reviewing or printing the documents for bidding purposes. Downloaded files contain scanned images of the original bid documents and are not intended to be edited or otherwise modified.

The Project Manual and Drawings are intended to be used together to provide all information required to prepare a bid for the project. Pages obtained via partial printing of the files may not contain all of the information required to prepare an accurate bid for the project.

Neither the City of Lynchburg nor Wiley|Wilson are responsible for the quality, accessibility, or speed of downloading and printing of these Documents, or for inappropriate use of partial sets of the Documents.

Printed copies of the documents can be obtained from Wiley|Wilson by contacting Brooke Stephens 434/455-3244 or P. O. Box 877, Lynchburg, Va. 24505-0877.

DEPARTMENT OF WATER RESOURCES

SEWERAGE IMPROVEMENTS

FOR THE CITY OF LYNCHBURG, VIRGINIA

JAMES RIVER INTERCEPTOR

DIVISION 3B

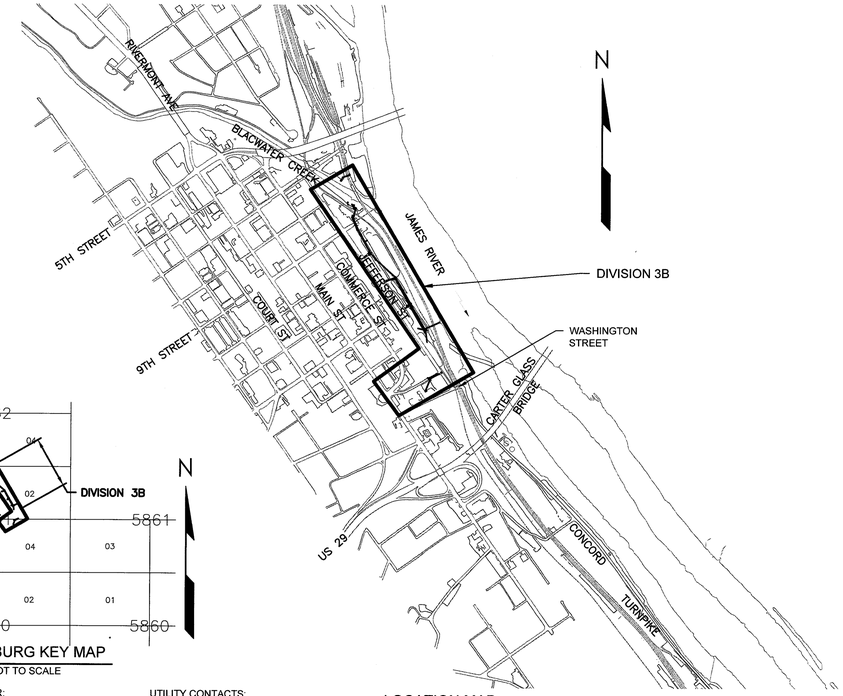
CITY PROJECT NO. 13023-S

LIST OF DRAWINGS

SHEET TITLE	SHEET NUMBER
G-001	COVER
C-001	OVERALL SHEET
C-101	SANITARY SEWER PLAN & PROFILE SAN-1 STA 10+00 TO 17+00
C-102	SANITARY SEWER PLAN & PROFILE SAN-1(CONT) STA 17+00 TO 25+00
C-103	SANITARY SEWER PLAN & PROFILE SAN-1(CONT) STA 25+00 TO 28+00 SAN-2 STA 29+00 TO 30+00 SAN-3 STA 31+00 TO 33+00
C-104	SANITARY SEWER PLAN & PROFILE SAN-4 STA 34+00 TO 38+00
C-105	STORM SEWER PLAN & PROFILE STM-1 STA 99+00 TO 107+00
C-106	STORM SEWER PLAN & PROFILE STM-1(CONT) STA 107+00 TO 110+00 STM-2 STA 113+00 TO 115+00
C-107	CSO 56 & HORSEFORD ROAD WATERLINE
C-401	CSO 56 - DEMOLITION PLAN
C-402	CSO 56 - DIMESIONAL LAYOUT
C-403	SIGNAGE PLAN
C-404	SIGNAGE PLAN
C-405	SIGNAGE PLAN
C-406	SIGNAGE PLAN
C-407	SIGNAGE PLAN
C-408	SIGNAGE PLAN
C-409	SIGNAGE AND SITE DETAILS
C-410	AMAZEMENT SQUARE PHASING
C-501	EROSION & SEDIMENT CONTROL NARRATIVE & DETAILS
C-502	SITE IMPROVEMENTS DETAILS
S-001	GENERAL NOTES
S-101	CSO 56 NEW VAULT PLAN & SECTION VIEWS
S-102	JUNCTION BOX 6 PLAN & SECTION VIEWS
S-501	DETAILS

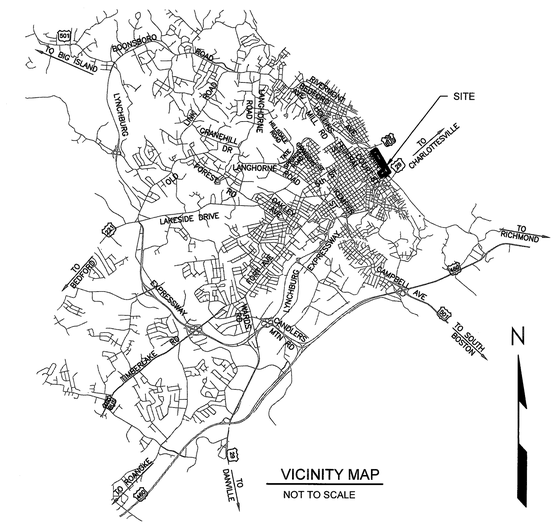
CONVENTIONAL SYMBOLS

SS	SANITARY SEWER
SS	EXISTING SANITARY SEWER
SD	STORM SEWER
SD	EXISTING STORM SEWER
	PIPE TO BE ABANDONED
W	WATER LINE
ugt	UG TELEPHONE, FIBER OPTIC
uge	UG ELECTRIC
NG	GAS
	FENCE
	WOODS LINE
	STREAM/ EDGE OF WATER
	TAX MAP LINE
	OVERHEAD POWER, TELEPHONE, TELEGRAPH
	EDGE OF PAVEMENT
	TRACKS
	RETAINING WALL
	GRAVEL
	CONCRETE
	BRICK
	BENCHMARK
	TREE
	EXISTING MANHOLE
	EXISTING MANHOLE TO BE ABANDONED
	SANITARY MANHOLE
	STORM MANHOLE
	STORM DROP INLET
	RAILROAD MILEPOST
	STORM INLET
	VALVE
	UTILITY POLE
	DEFLECTION
	SURVEY POINT OF INTERSECTION
	LIGHT POLE
SH	SPRINKLER HEAD



LOCATION MAP

SCALE 1" = 800'



VICINITY MAP

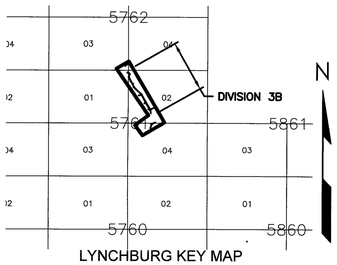
NOT TO SCALE

ABBREVIATIONS

APPROX	APPROXIMATE	N/F	NOW OR FORMERLY
℄	CENTER LINE	NIC	NOT IN CONTRACT
COMM	COMMUNICATION	OH	OVERHEAD
DIA	DIAMETER	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	RR	RAILROAD
E	EASTING	RT	RIGHT
ELEC	ELECTRIC	SAN OR SS	SANITARY
EW	ENDWALL	SD	STORM SEWER
EX OR EXIST	EXISTING	STA	STATION
INV	INVERT	TBA	TO BE ABANDONED
LF	LINEAR FEET	TM	TAX MAP
LT	LEFT	TYP	TYPICAL
MH	MANHOLE	UG	UNDERGROUND
MP	MILE POST	WT	WATERTIGHT
N	NORTHING		

NOTES:

1. THE SIZE OF THE SYMBOLS MAY VARY FROM THOSE SHOWN.
2. ALL ABBREVIATIONS AND SYMBOLS SHOWN MAY NOT BE USED.



LYNCHBURG KEY MAP

NOT TO SCALE

OWNER:
CITY OF LYNCHBURG
DEPARTMENT OF WATER RESOURCES
525 TAYLOR STREET
LYNCHBURG, VIRGINIA 24501
CONTACT: JAMES TALIAN
WATER QUALITY MANAGER-CSO
434-455-3953
JAMES.TALIAN@LYNCHBURGVA.GOV

ENGINEER:
WILEY|WILSON
127 NATIONWIDE DRIVE
LYNCHBURG, VA 24502
CONTACT: WAYNE MASSIE, PE
434-455-3690
WMASSIE@WILEYWILSON.COM

UTILITY CONTACTS:
AEP
VERIZON
COLUMBIA GAS
NORFOLK SOUTHERN RAILROAD
CSX RAILROAD

"I HEREBY CERTIFY THAT, TO THE BEST OF MY ABILITY, THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE LATEST CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS AND CITY CODE.

SIGNATURE:_____
PRINTED NAME AND TITLE:_____
DATE:_____REGISTRATION NUMBER:_____

NOTES:

1. CONTACT CITY CONSTRUCTION COORDINATOR AND MISS UTILITY 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITY.
2. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS, AND THE PROJECT MANUAL.

CITY ENGINEER

UTILITIES ENGINEER

ESC/SWM APPROVAL

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38485
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

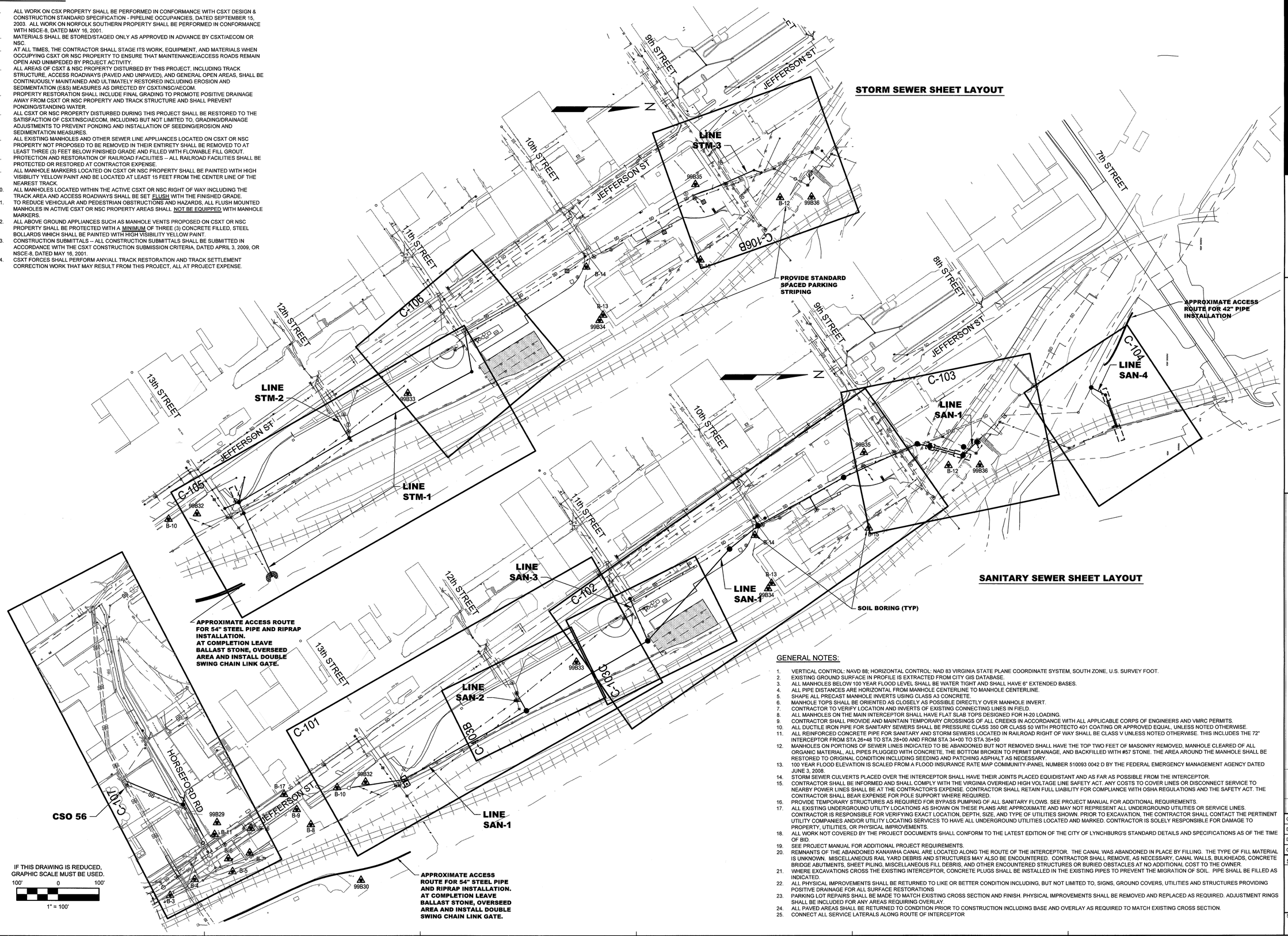
MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	COVER SHEET
SHT. NO.	G-001
REV. NO.	0

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Civil \2012\213169-G-001.dwg October 11, 2013

RAILROAD NOTES:

1. ALL WORK ON CSX PROPERTY SHALL BE PERFORMED IN CONFORMANCE WITH CSXT DESIGN & CONSTRUCTION STANDARD SPECIFICATION - PIPELINE OCCUPANCIES, DATED SEPTEMBER 15, 2003. ALL WORK ON NORFOLK SOUTHERN PROPERTY SHALL BE PERFORMED IN CONFORMANCE WITH NSCE-8, DATED MAY 16, 2001.
2. MATERIALS SHALL BE STORED/STAGED ONLY AS APPROVED IN ADVANCE BY CSXT/AECOM OR NSC.
3. AT ALL TIMES, THE CONTRACTOR SHALL STAGE ITS WORK, EQUIPMENT, AND MATERIALS WHEN OCCUPYING CSXT OR NSC PROPERTY TO ENSURE THAT MAINTENANCE/ACCESS ROADS REMAIN OPEN AND UNIMPEDED BY PROJECT ACTIVITY.
4. ALL AREAS OF CSXT & NSC PROPERTY DISTURBED BY THIS PROJECT, INCLUDING TRACK STRUCTURE, ACCESS ROADWAYS (PAVED AND UNPAVED), AND GENERAL OPEN AREAS, SHALL BE CONTINUOUSLY MAINTAINED AND ULTIMATELY RESTORED INCLUDING EROSION AND SEDIMENTATION (E&S) MEASURES AS DIRECTED BY CSXT//NSC/AECOM.
5. PROPERTY RESTORATION SHALL INCLUDE FINAL GRADING TO PROMOTE POSITIVE DRAINAGE AWAY FROM CSXT OR NSC PROPERTY AND TRACK STRUCTURE AND SHALL PREVENT PONDING/STANDING WATER.
6. ALL CSXT OR NSC PROPERTY DISTURBED DURING THIS PROJECT SHALL BE RESTORED TO THE SATISFACTION OF CSXT/NSC/AECOM, INCLUDING BUT NOT LIMITED TO, GRADING/DRAINAGE ADJUSTMENTS TO PREVENT PONDING AND INSTALLATION OF SEEDING/EROSION AND SEDIMENTATION MEASURES.
7. ALL EXISTING MANHOLES AND OTHER SEWER LINE APPLIANCES LOCATED ON CSXT OR NSC PROPERTY NOT PROPOSED TO BE REMOVED IN THEIR ENTIRETY SHALL BE REMOVED TO AT LEAST THREE (3) FEET BELOW FINISHED GRADE AND FILLED WITH FLOWABLE FILL GROUT.
8. PROTECTION AND RESTORATION OF RAILROAD FACILITIES -- ALL RAILROAD FACILITIES SHALL BE PROTECTED OR RESTORED AT CONTRACTOR EXPENSE.
9. ALL MANHOLE MARKERS LOCATED ON CSXT OR NSC PROPERTY SHALL BE PAINTED WITH HIGH VISIBILITY YELLOW PAINT AND BE LOCATED AT LEAST 15 FEET FROM THE CENTER LINE OF THE NEAREST TRACK.
10. ALL MANHOLES LOCATED WITHIN THE ACTIVE CSXT OR NSC RIGHT OF WAY INCLUDING THE TRACK AREA AND ACCESS ROADWAYS SHALL BE SET FLUSH WITH THE FINISHED GRADE.
11. TO REDUCE VEHICULAR AND PEDESTRIAN OBSTRUCTIONS AND HAZARDS, ALL FLUSH MOUNTED MANHOLES IN ACTIVE CSXT OR NSC PROPERTY AREAS SHALL NOT BE EQUIPPED WITH MANHOLE MARKERS.
12. ALL ABOVE GROUND APPLIANCES SUCH AS MANHOLE VENTS PROPOSED ON CSXT OR NSC PROPERTY SHALL BE PROTECTED WITH A MINIMUM OF THREE (3) CONCRETE FILLED, STEEL BOLLARDS WHICH SHALL BE PAINTED WITH HIGH VISIBILITY YELLOW PAINT.
13. CONSTRUCTION SUBMITTALS -- ALL CONSTRUCTION SUBMITTALS SHALL BE SUBMITTED IN ACCORDANCE WITH THE CSXT CONSTRUCTION SUBMISSION CRITERIA, DATED APRIL 3, 2009, OR NSCE-8, DATED MAY 16, 2001.
14. CSXT FORCES SHALL PERFORM ANY/ALL TRACK RESTORATION AND TRACK SETTLEMENT CORRECTION WORK THAT MAY RESULT FROM THIS PROJECT, ALL AT PROJECT EXPENSE.



GENERAL NOTES:

1. VERTICAL CONTROL: NAVD 88; HORIZONTAL CONTROL: NAD 83 VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, U.S. SURVEY FOOT.
2. EXISTING GROUND SURFACE IN PROFILE IS EXTRACTED FROM CITY GIS DATABASE.
3. ALL MANHOLES BELOW 100 YEAR FLOOD LEVEL SHALL BE WATER TIGHT AND SHALL HAVE 6" EXTENDED BASES.
4. ALL PIPE DISTANCES ARE HORIZONTAL FROM MANHOLE CENTERLINE TO MANHOLE CENTERLINE.
5. SHAPE ALL PRECAST MANHOLE INVERTS USING CLASS A3 CONCRETE.
6. MANHOLE TOPS SHALL BE ORIENTED AS CLOSELY AS POSSIBLE DIRECTLY OVER MANHOLE INVERT.
7. CONTRACTOR TO VERIFY LOCATION AND INVERTS OF EXISTING CONNECTING LINES IN FIELD.
8. ALL MANHOLES ON THE MAIN INTERCEPTOR SHALL HAVE FLAT SLAB TOPS DESIGNED FOR H-20 LOADING.
9. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY CROSSINGS OF ALL CREEKS IN ACCORDANCE WITH ALL APPLICABLE CORPS OF ENGINEERS AND VMRC PERMITS.
10. ALL DUCTILE IRON PIPE FOR SANITARY SEWERS SHALL BE PRESSURE CLASS 350 OR CLASS 50 WITH PROTECTO 401 COATING OR APPROVED EQUAL, UNLESS NOTED OTHERWISE.
11. ALL REINFORCED CONCRETE PIPE FOR SANITARY AND STORM SEWERS LOCATED IN RAILROAD RIGHT OF WAY SHALL BE CLASS V UNLESS NOTED OTHERWISE. THIS INCLUDES THE 72" INTERCEPTOR FROM STA 26+48 TO STA 28+00 AND FROM STA 34+00 TO STA 35+50
12. MANHOLES ON PORTIONS OF SEWER LINES INDICATED TO BE ABANDONED BUT NOT REMOVED SHALL HAVE THE TOP TWO FEET OF MASONRY REMOVED, MANHOLE CLEARED OF ALL ORGANIC MATERIAL, ALL PIPES PLUGGED WITH CONCRETE, THE BOTTOM BROKEN TO PERMIT DRAINAGE, AND BACKFILLED WITH #57 STONE. THE AREA AROUND THE MANHOLE SHALL BE RESTORED TO ORIGINAL CONDITION INCLUDING SEEDING AND PATCHING ASPHALT AS NECESSARY.
13. 100 YEAR FLOOD ELEVATION IS SCALED FROM A FLOOD INSURANCE RATE MAP COMMUNITY-PANEL NUMBER 510093 0042 D BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY DATED JUNE 3, 2008.
14. STORM SEWER CULVERTS PLACED OVER THE INTERCEPTOR SHALL HAVE THEIR JOINTS PLACED EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE INTERCEPTOR.
15. CONTRACTOR SHALL BE INFORMED AND SHALL COMPLY WITH THE VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT. ANY COSTS TO COVER LINES OR DISCONNECT SERVICE TO NEARBY POWER LINES SHALL BE AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL RETAIN FULL LIABILITY FOR COMPLIANCE WITH OSHA REGULATIONS AND THE SAFETY ACT. THE CONTRACTOR SHALL BEAR EXPENSE FOR POLE SUPPORT WHERE REQUIRED.
16. PROVIDE TEMPORARY STRUCTURES AS REQUIRED FOR BYPASS PUMPING OF ALL SANITARY FLOWS. SEE PROJECT MANUAL FOR ADDITIONAL REQUIREMENTS.
17. ALL EXISTING UNDERGROUND UTILITY LOCATIONS AS SHOWN ON THESE PLANS ARE APPROXIMATE AND MAY NOT REPRESENT ALL UNDERGROUND UTILITIES OR SERVICE LINES. CONTRACTOR IS RESPONSIBLE FOR VERIFYING EXACT LOCATION, DEPTH, SIZE, AND TYPE OF UTILITIES SHOWN. PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT THE PERTINENT UTILITY COMPANIES AND/OR UTILITY LOCATING SERVICES TO HAVE ALL UNDERGROUND UTILITIES LOCATED AND MARKED. CONTRACTOR IS SOLELY RESPONSIBLE FOR DAMAGE TO PROPERTY, UTILITIES, OR PHYSICAL IMPROVEMENTS.
18. ALL WORK NOT COVERED BY THE PROJECT DOCUMENTS SHALL CONFORM TO THE LATEST EDITION OF THE CITY OF LYNCHBURG'S STANDARD DETAILS AND SPECIFICATIONS AS OF THE TIME OF BID.
19. SEE PROJECT MANUAL FOR ADDITIONAL PROJECT REQUIREMENTS.
20. REMNANTS OF THE ABANDONED KANAWHA CANAL ARE LOCATED ALONG THE ROUTE OF THE INTERCEPTOR. THE CANAL WAS ABANDONED IN PLACE BY FILLING. THE TYPE OF FILL MATERIAL IS UNKNOWN. MISCELLANEOUS RAIL YARD DEBRIS AND STRUCTURES MAY ALSO BE ENCOUNTERED. CONTRACTOR SHALL REMOVE, AS NECESSARY, CANAL WALLS, BULKHEADS, CONCRETE BRIDGE ABUTMENTS, SHEET PILING, MISCELLANEOUS FILL DEBRIS, AND OTHER ENCOUNTERED STRUCTURES OR BURIED OBSTACLES AT NO ADDITIONAL COST TO THE OWNER.
21. WHERE EXCAVATIONS CROSS THE EXISTING INTERCEPTOR, CONCRETE PLUGS SHALL BE INSTALLED IN THE EXISTING PIPES TO PREVENT THE MIGRATION OF SOIL. PIPE SHALL BE FILLED AS INDICATED.
22. ALL PHYSICAL IMPROVEMENTS SHALL BE RETURNED TO LIKE OR BETTER CONDITION INCLUDING, BUT NOT LIMITED TO, SIGNS, GROUND COVERS, UTILITIES AND STRUCTURES PROVIDING POSITIVE DRAINAGE FOR ALL SURFACE RESTORATIONS.
23. PARKING LOT REPAIRS SHALL BE MADE TO MATCH EXISTING CROSS SECTION AND FINISH. PHYSICAL IMPROVEMENTS SHALL BE REMOVED AND REPLACED AS REQUIRED. ADJUSTMENT RINGS SHALL BE INCLUDED FOR ANY AREAS REQUIRING OVERLAY.
24. ALL PAVED AREAS SHALL BE RETURNED TO CONDITION PRIOR TO CONSTRUCTION INCLUDING BASE AND OVERLAY AS REQUIRED TO MATCH EXISTING CROSS SECTION.
25. CONNECT ALL SERVICE LATERALS ALONG ROUTE OF INTERCEPTOR

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

100' 0 100'

1" = 100'

Wiley|Wilson® Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36486
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

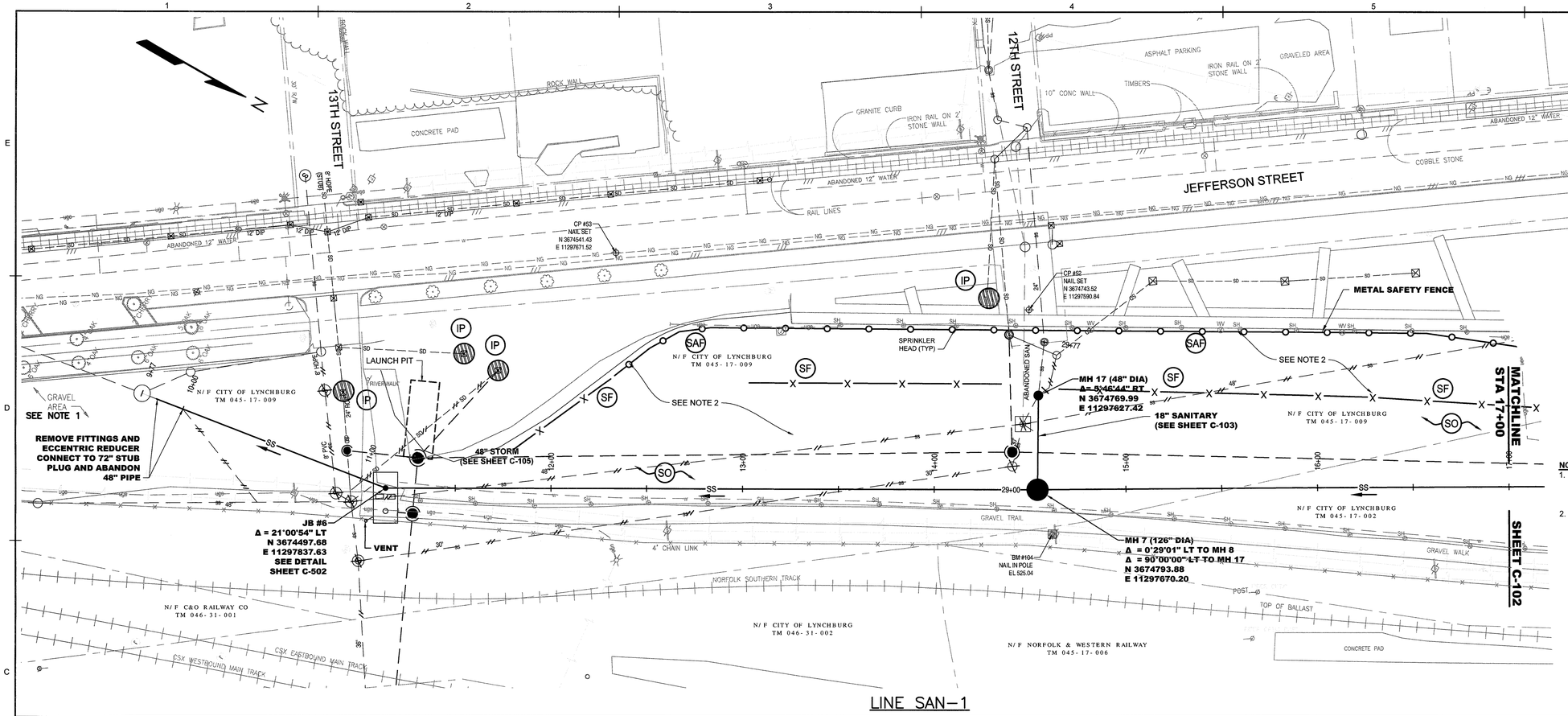
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN:	RDL
DESIGN:	WRM
CHECK:	WRM

SHEET TITLE

OVERALL SHEET

SHT. NO. **C-001** REV. NO. **0**

X:\2013\213169 Lyng JRI 3B Redesign\CAD\Civil v2012\213169-C-001.dwg October 11, 2013



NOTES:

1. CONSTRUCTION TO ALLOW HALF OF PARKING AREA TO REMAIN OPEN AT ALL TIMES FOR PATRONS THROUGHOUT THE DURATION OF THE PROJECT. PROVIDE PROTECTIVE MEASURES AND BARRICADES AS REQUIRED
2. LAWN IRRIGATION AREA. THE SPRINKLER SYSTEM HEADER PIPE AND CONTROL VALVES SHALL BE PROTECTED.THE IRRIGATION LINES FROM THE HEADER, AND THE SPRINKLER HEADS SHALL BE REPLACED. ALL GRASSED AREAS BETWEEN 10TH AND 13TH STREETS SHALL RECEIVE SOD. COORDINATE WITH BUILDINGS AND GROUNDS

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

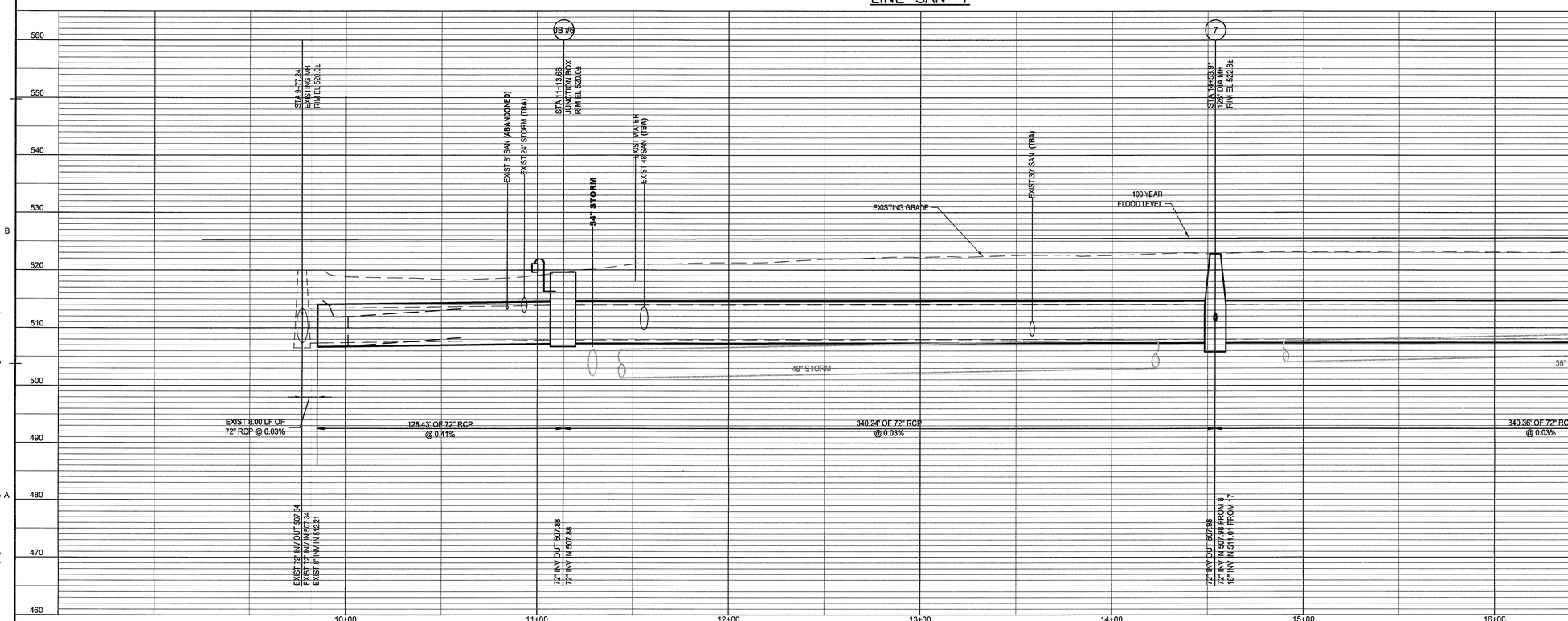
VERT: 1" = 10'

10' 0 10'

30' 0 30'

HORZ: 1" = 30'

LINE SAN-1



Wiley|Wilson
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7901 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

REVISION DESCRIPTION

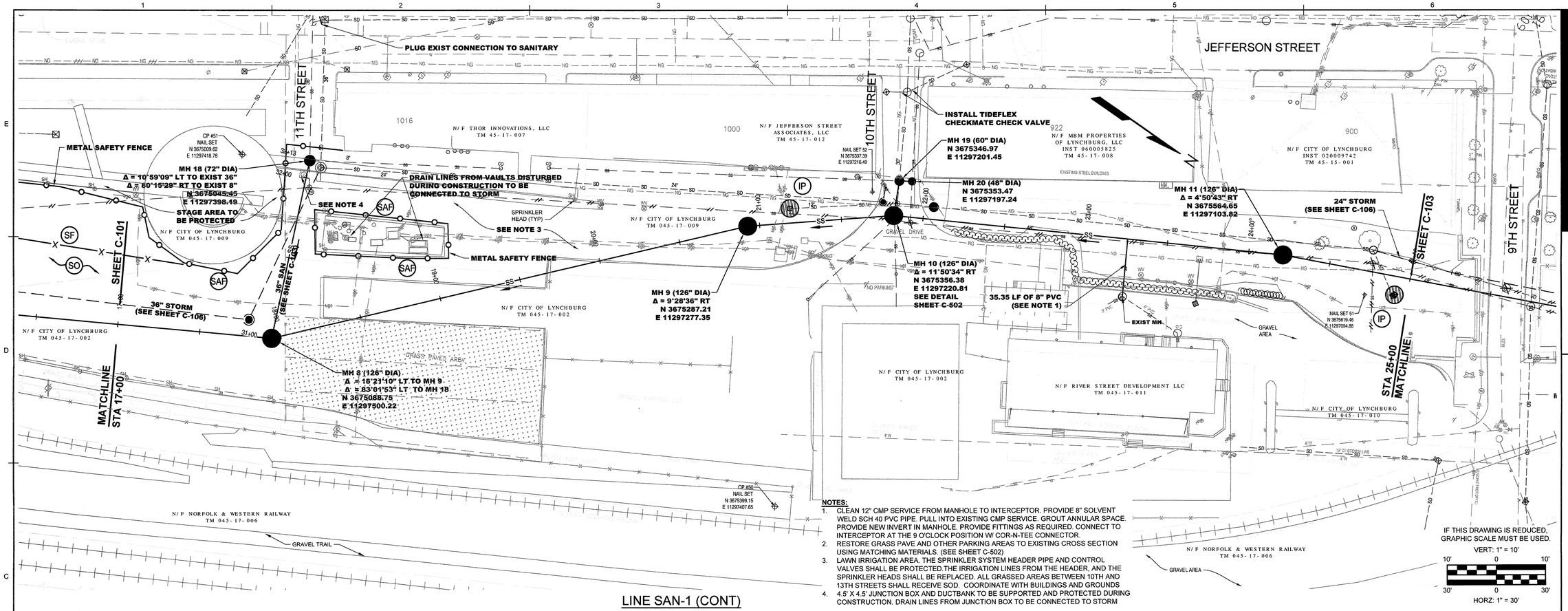
MRK. DATE

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	

SANITARY SEWER
PLAN & PROFILE
STA 10+00 TO 17+00

SHT. NO. C-101 | REV. NO. 0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil \2012\213169-C-101.dwg October 11, 2013

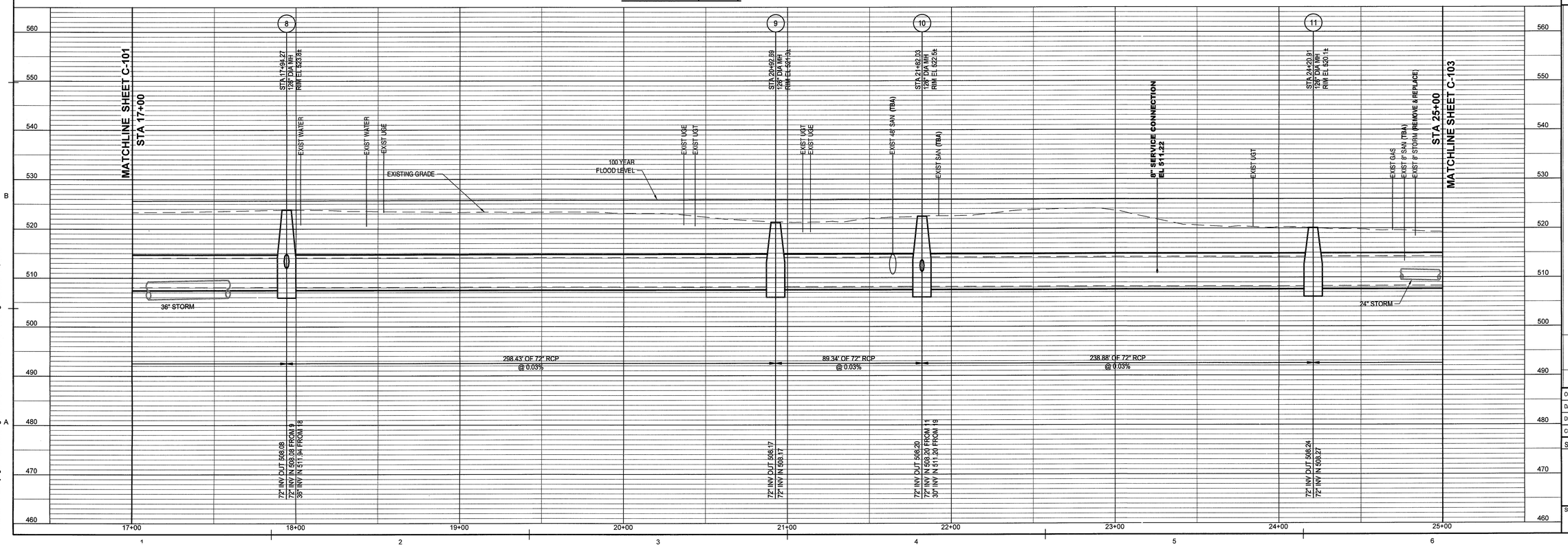


LINE SAN-1 (CONT)

NOTES:

1. CLEAN 12" CMP SERVICE FROM MANHOLE TO INTERCEPTOR. PROVIDE 8" SOLVENT WELD SCH 40 PVC PIPE. PULL INTO EXISTING CMP SERVICE. GROUT ANNULAR SPACE. PROVIDE NEW INVERT IN MANHOLE. PROVIDE FITTINGS AS REQUIRED. CONNECT TO INTERCEPTOR AT THE 9 O'CLOCK POSITION W/ COR-N-TEE CONNECTOR.
2. RESTORE GRASS PAVE AND OTHER PARKING AREAS TO EXISTING CROSS SECTION USING MATCHING MATERIALS. (SEE SHEET C-502)
3. LAWN IRRIGATION AREA. THE SPRINKLER SYSTEM HEADER PIPE AND CONTROL VALVES SHALL BE PROTECTED.THE IRRIGATION LINES FROM THE HEADER, AND THE SPRINKLER HEADS SHALL BE REPLACED. ALL GRASSED AREAS BETWEEN 10TH AND 13TH STREETS SHALL RECEIVE SOD. COORDINATE WITH BUILDINGS AND GROUNDS
4. 4.5' X 4.5' JUNCTION BOX AND DUCTBANK TO BE SUPPORTED AND PROTECTED DURING CONSTRUCTION. DRAIN LINES FROM JUNCTION BOX TO BE CONNECTED TO STORM

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.
VERT: 1" = 10'
HORZ: 1" = 30'



Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7601 | fax 434.947.7601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36486
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

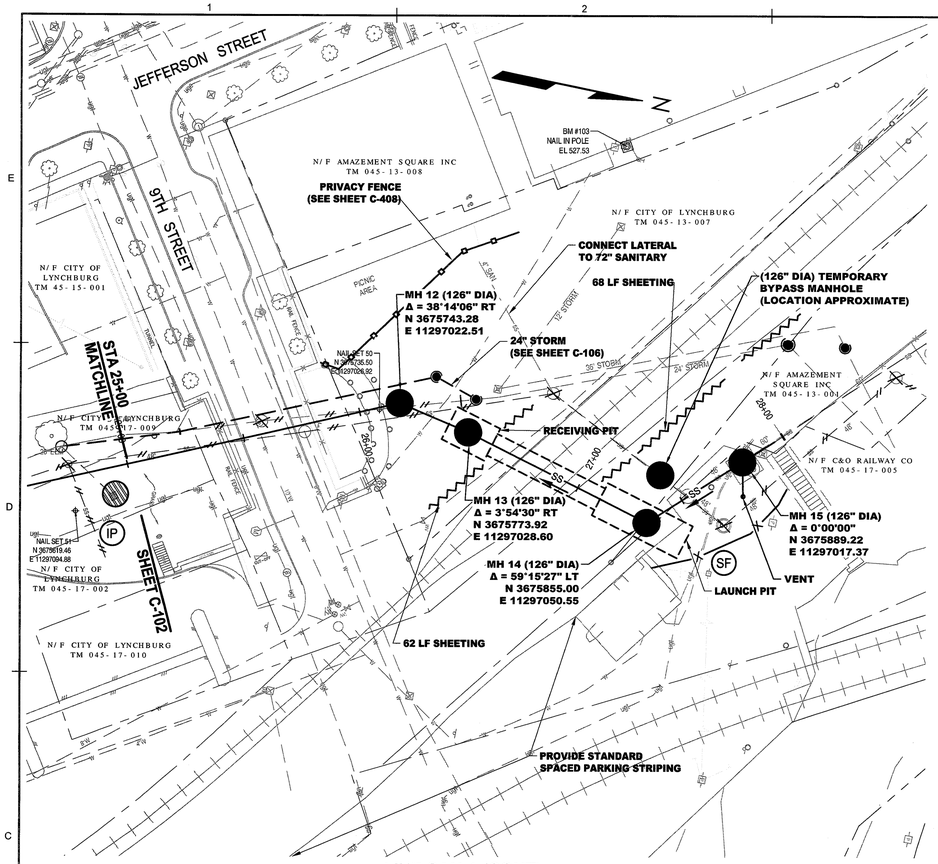
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

SHEET TITLE

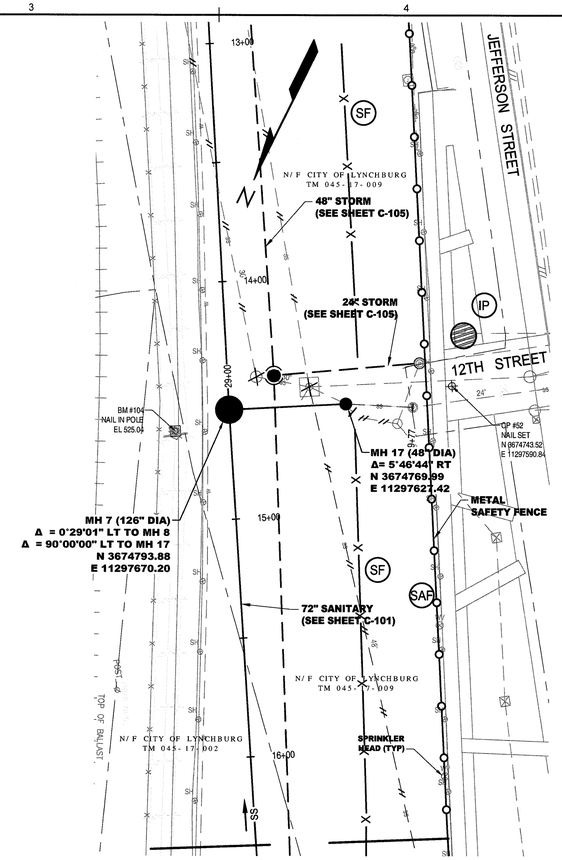
SANITARY SEWER PLAN & PROFILE STA 17+00 TO 25+00

SHT. NO.	REV. NO.
C-102	0

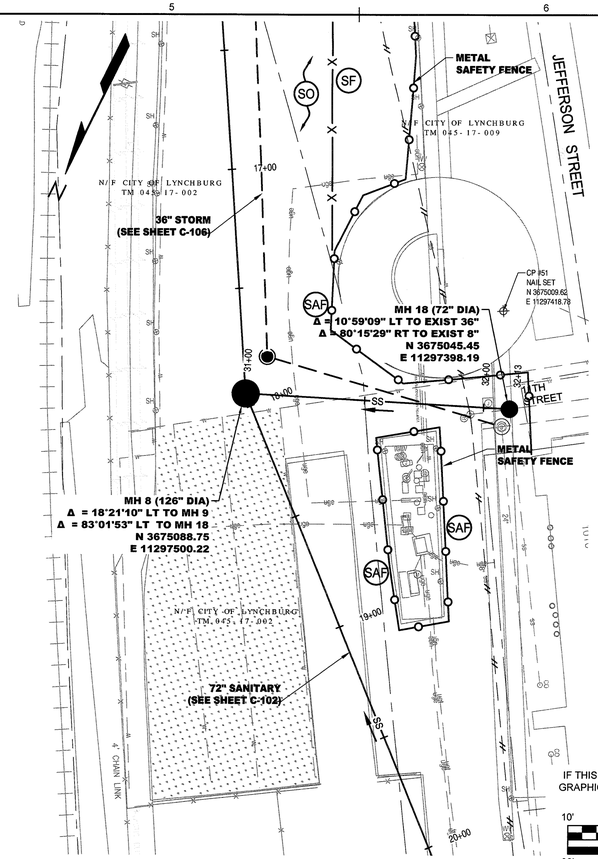
X:\2013\213169 Lyng JRI 3B Redesign\CAD\Civil v2012\213169-C-102.dwg October 11, 2013



LINE SAN-1 (CONT)

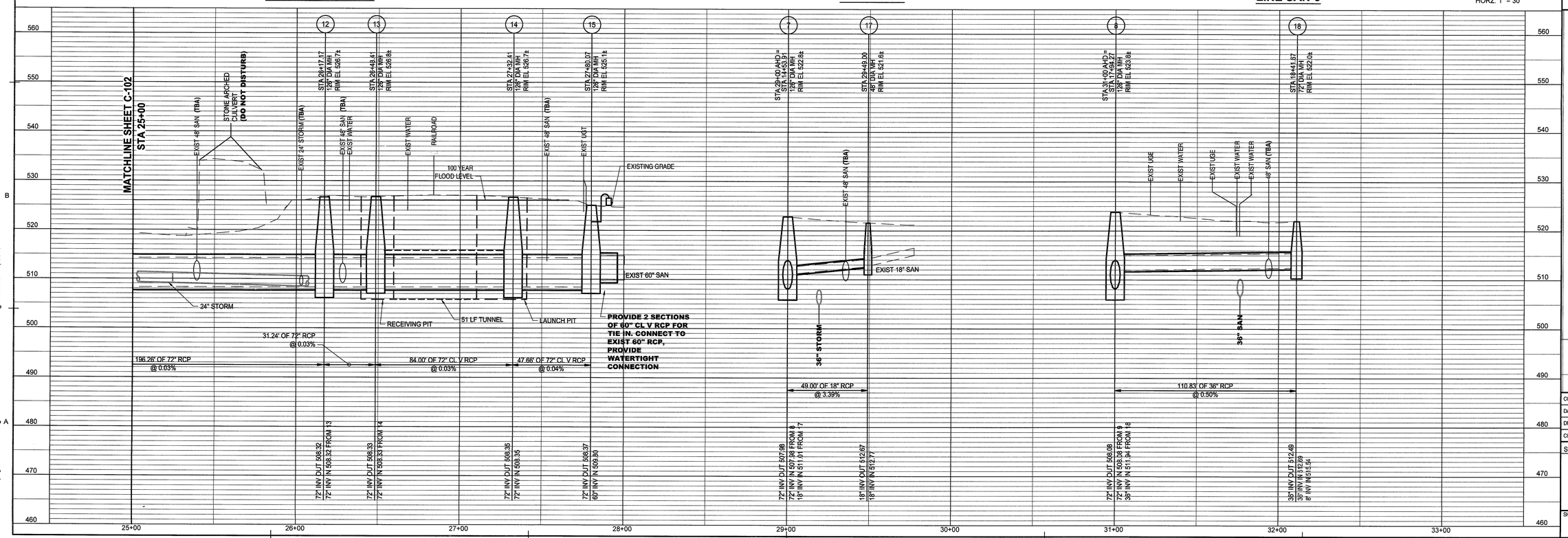


LINE SAN-2



LINE SAN-3

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.
VERT: 1" = 10'
10' 0 10'
30' 0 30'
HORZ: 1" = 30'



Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1591 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

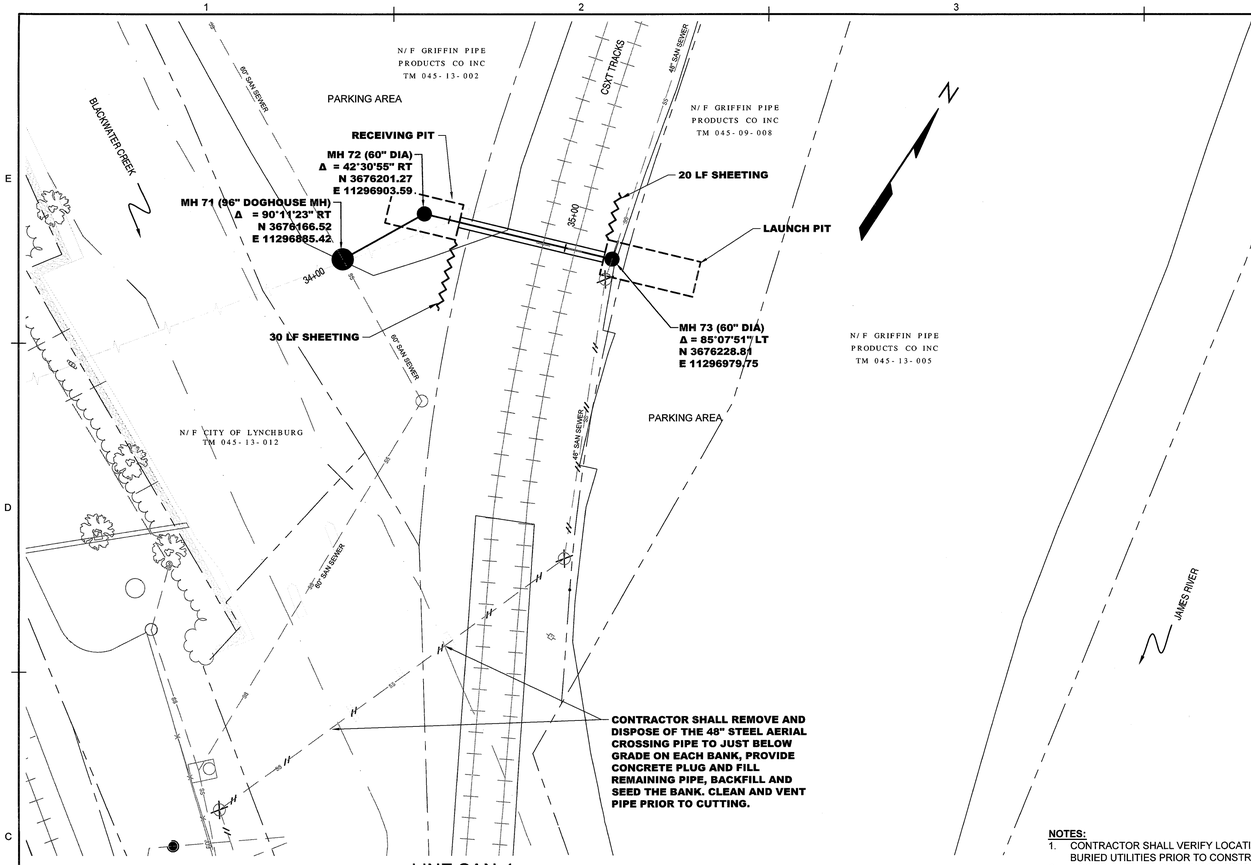
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

SHEET TITLE

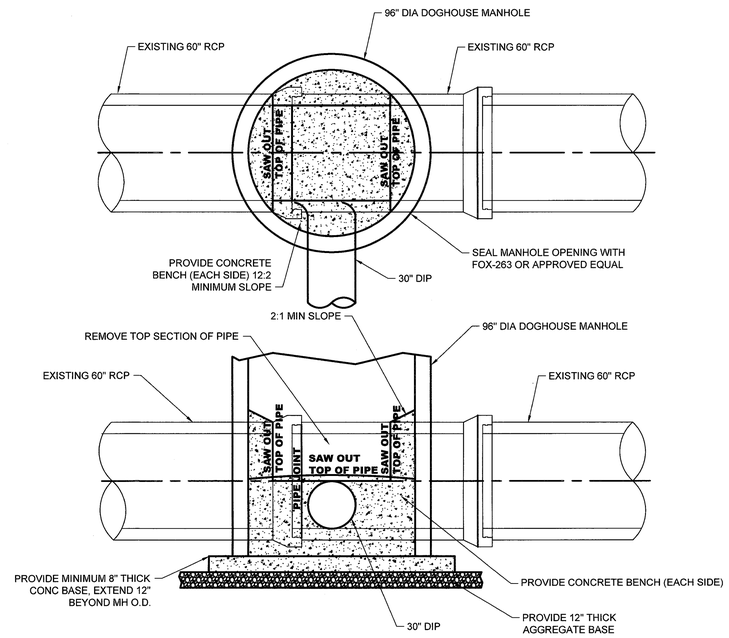
SANITARY SEWER PLAN & PROFILE
SAN-1 STA 25+00 TO 28+00
SAN-2 STA 29+00 TO 30+00
SAN-3 STA 31+00 TO 33+00

SHT. NO. C-103 | REV. NO. 0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169-C-103.dwg October 11, 2013



LINE SAN-4



NOTES:

1. CONTRACTOR SHALL VERIFY LOCATION OF BURIED UTILITIES PRIOR TO CONSTRUCTION
2. COORDINATE RELOCATION OF STORED PIPE AND WORK AREA WITH GRIFFIN PIPE PRODUCTS, INC

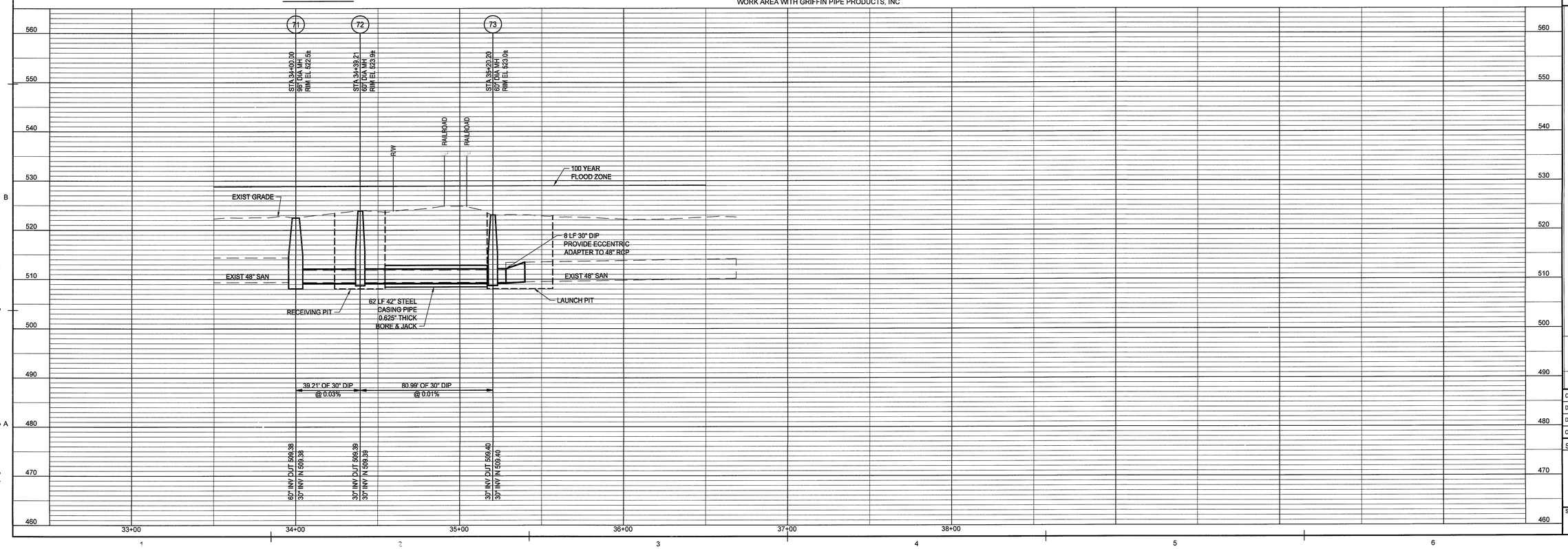
IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

VERT: 1" = 10'

10' 0 10'

30' 0 30'

HORZ: 1" = 30'



Wiley|Wilson
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7911 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36486
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

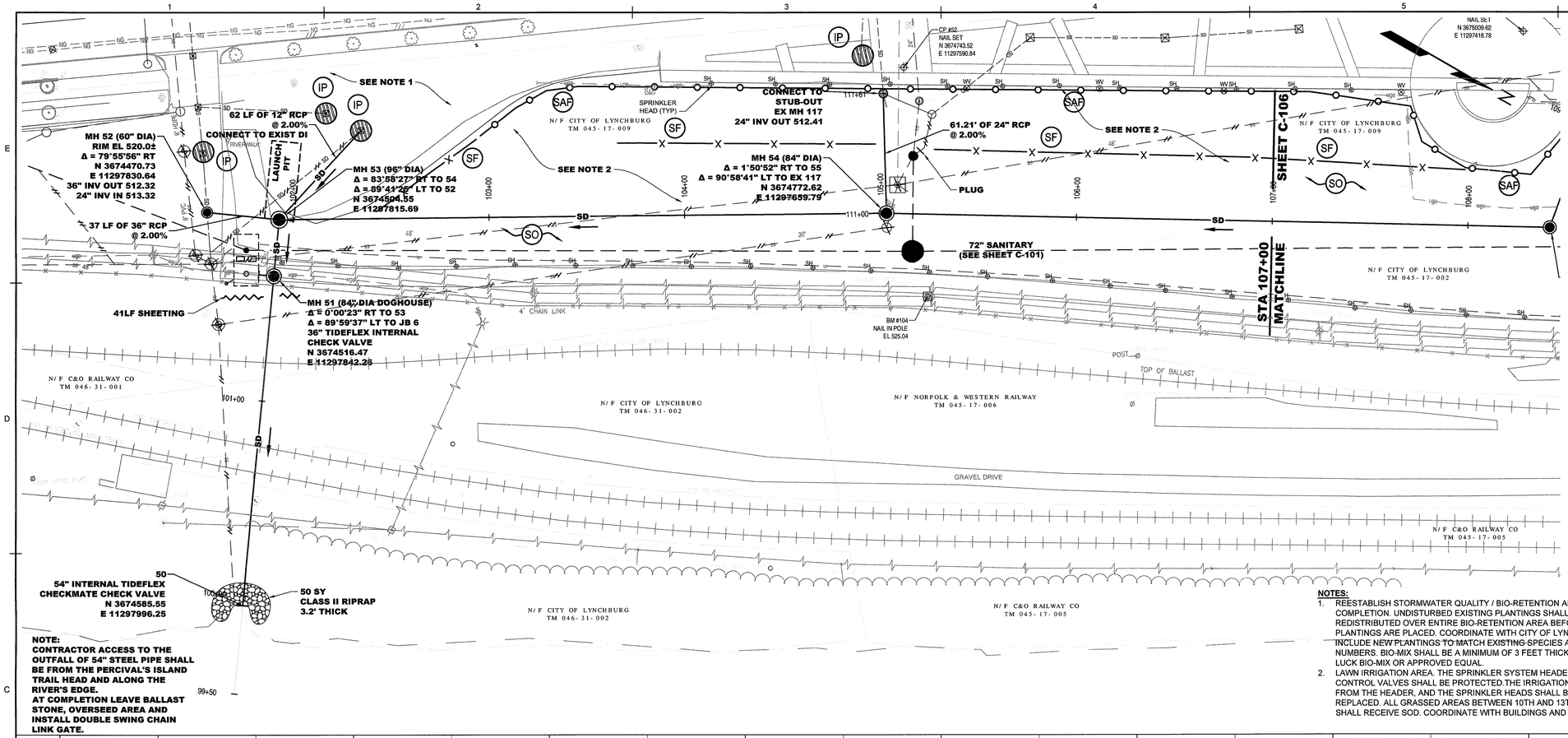
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

SHEET TITLE

SANITARY SEWER PLAN & PROFILE STA 34+00 TO 38+00

SHT. NO.	REV. NO.
C-104	0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169-C-104.dwg October 11, 2013

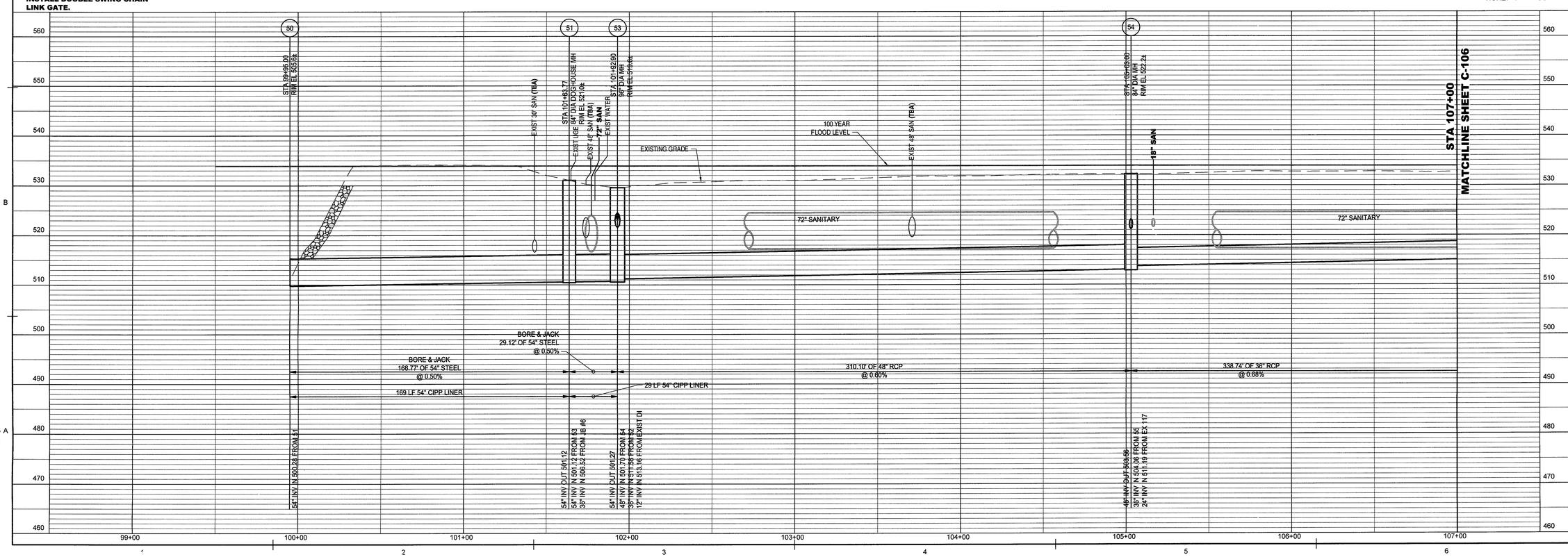


NOTE:
CONTRACTOR ACCESS TO THE OUTFALL OF 54" STEEL PIPE SHALL BE FROM THE PERCIVAL'S ISLAND TRAIL HEAD AND ALONG THE RIVER'S EDGE.
AT COMPLETION LEAVE BALLAST STONE, OVERSEED AREA AND INSTALL DOUBLE SWING CHAIN LINK GATE.

NOTES:

1. REESTABLISH STORMWATER QUALITY / BIO-RETENTION AREA AFTER COMPLETION. UNDISTURBED EXISTING PLANTINGS SHALL BE REDISTRIBUTED OVER ENTIRE BIO-RETENTION AREA BEFORE NEW PLANTINGS ARE PLACED. COORDINATE WITH CITY OF LYNCHBURG. INCLUDE NEW PLANTINGS TO MATCH EXISTING SPECIES AND NUMBERS. BIO-MIX SHALL BE A MINIMUM OF 3 FEET THICK AND BE LUCK BIO-MIX OR APPROVED EQUAL.
2. LAWN IRRIGATION AREA. THE SPRINKLER SYSTEM HEADER PIPE AND CONTROL VALVES SHALL BE PROTECTED.THE IRRIGATION LINES FROM THE HEADER, AND THE SPRINKLER HEADS SHALL BE REPLACED. ALL GRASSED AREAS BETWEEN 10TH AND 13TH STREETS SHALL RECEIVE SOD. COORDINATE WITH BUILDINGS AND GROUNDS

VERT: 1" = 10'
10' 0 10'
30' 0 30'
HORZ: 1" = 30'



Wiley|Wilson
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7500 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36485
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

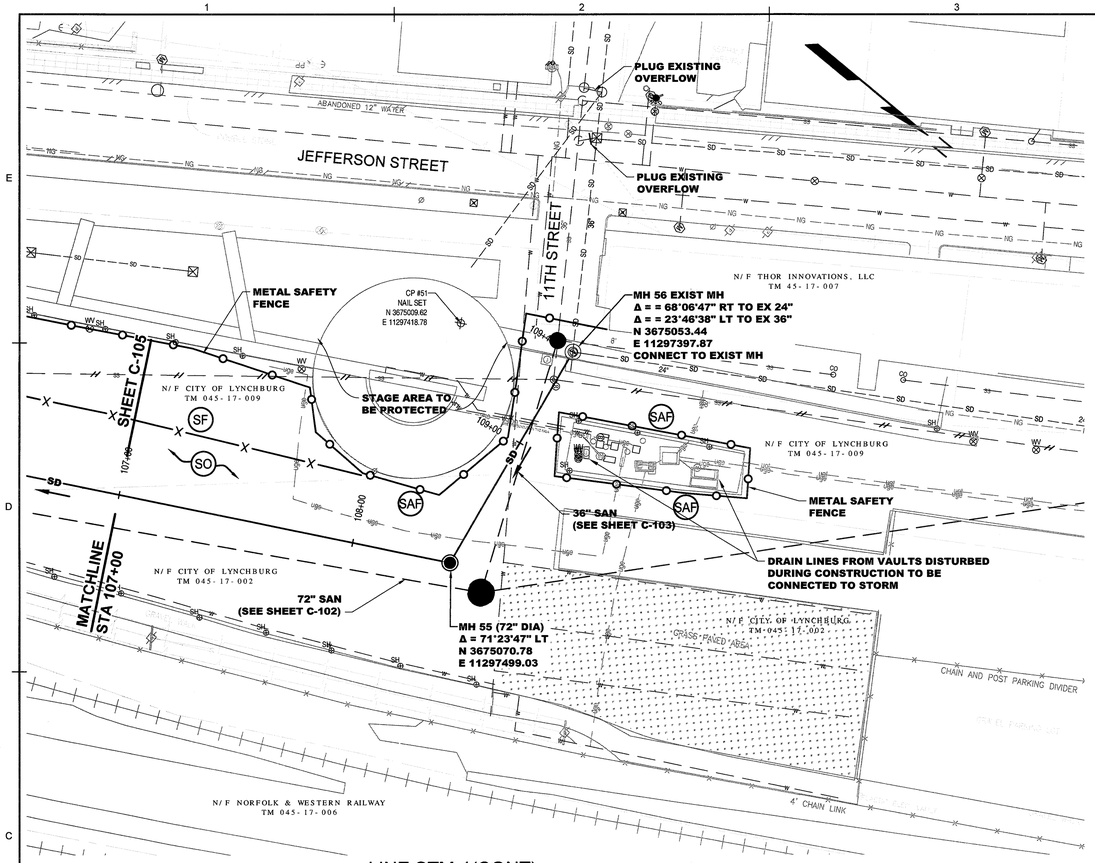
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

SHEET TITLE

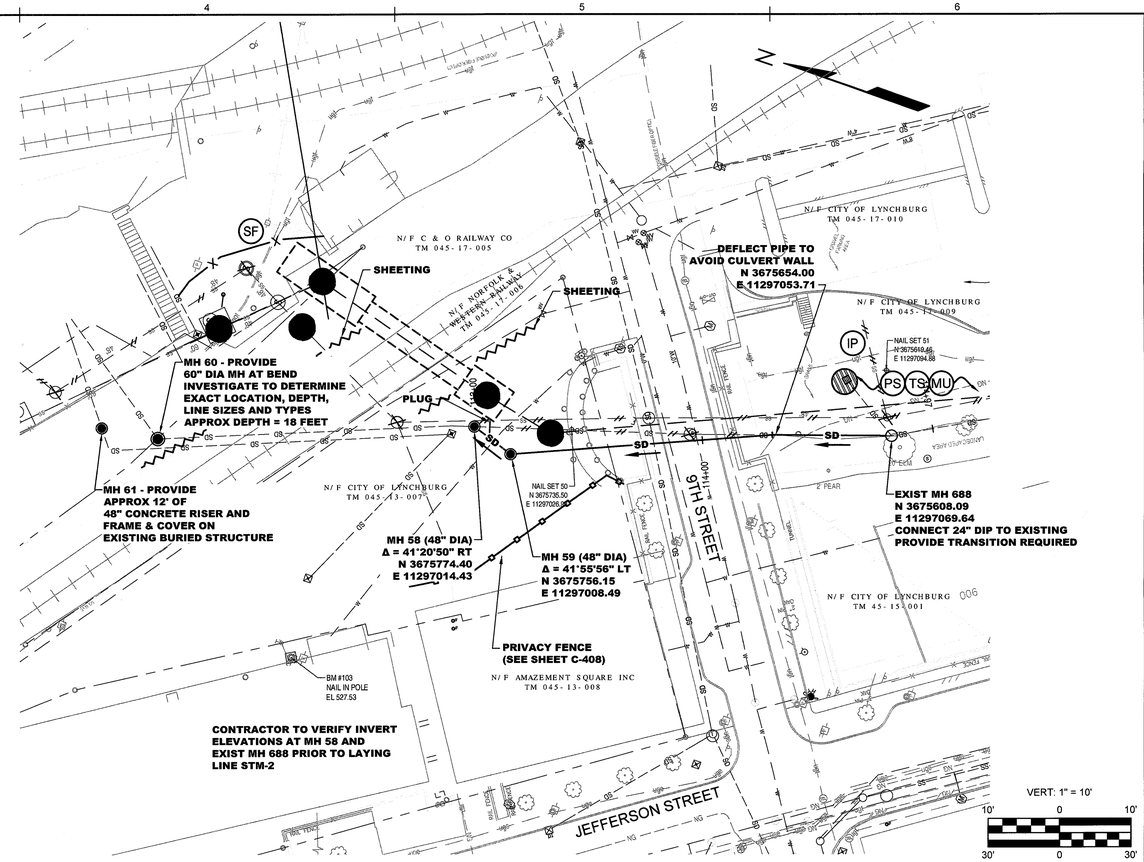
STORM SEWER PLAN & PROFILE STA 99+00 TO 107+00

SHT. NO.	REV. NO.
C-105	0

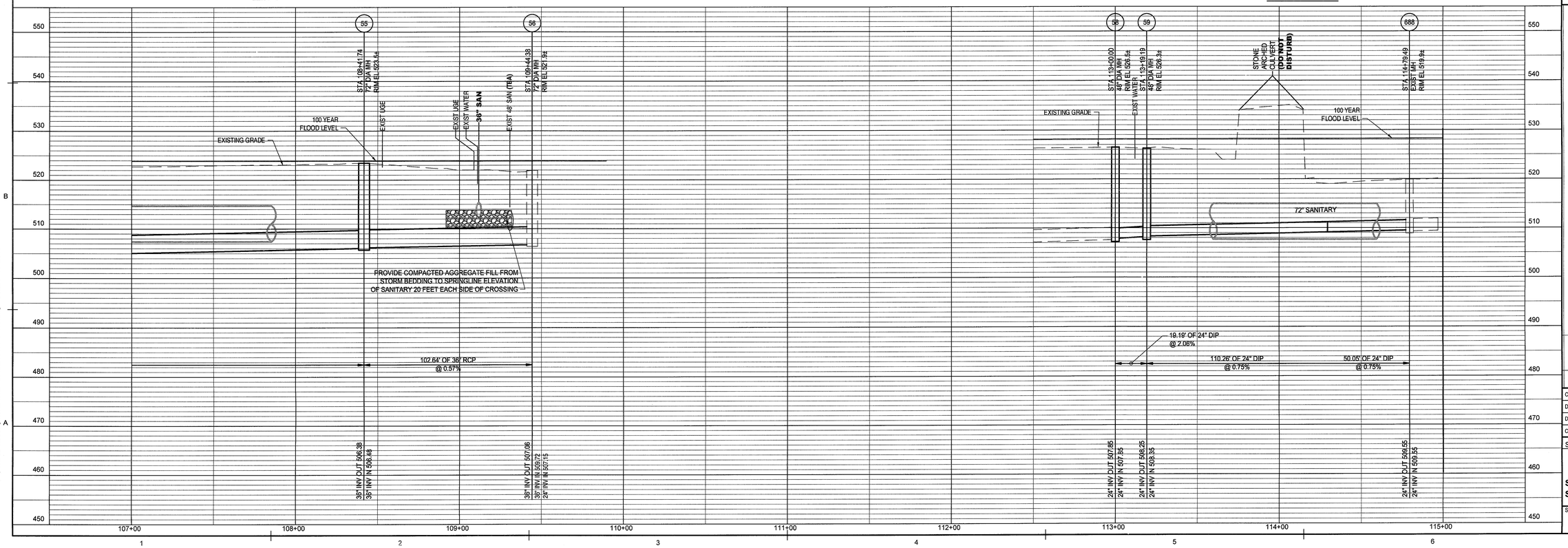
X:\2013\213169 Lybg JRI 3B Redesign\CAD\Civil v2012\213169-C-105.dwg October 11, 2013



LINE STM-1(CONT)



LINE STM-2



Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7601 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

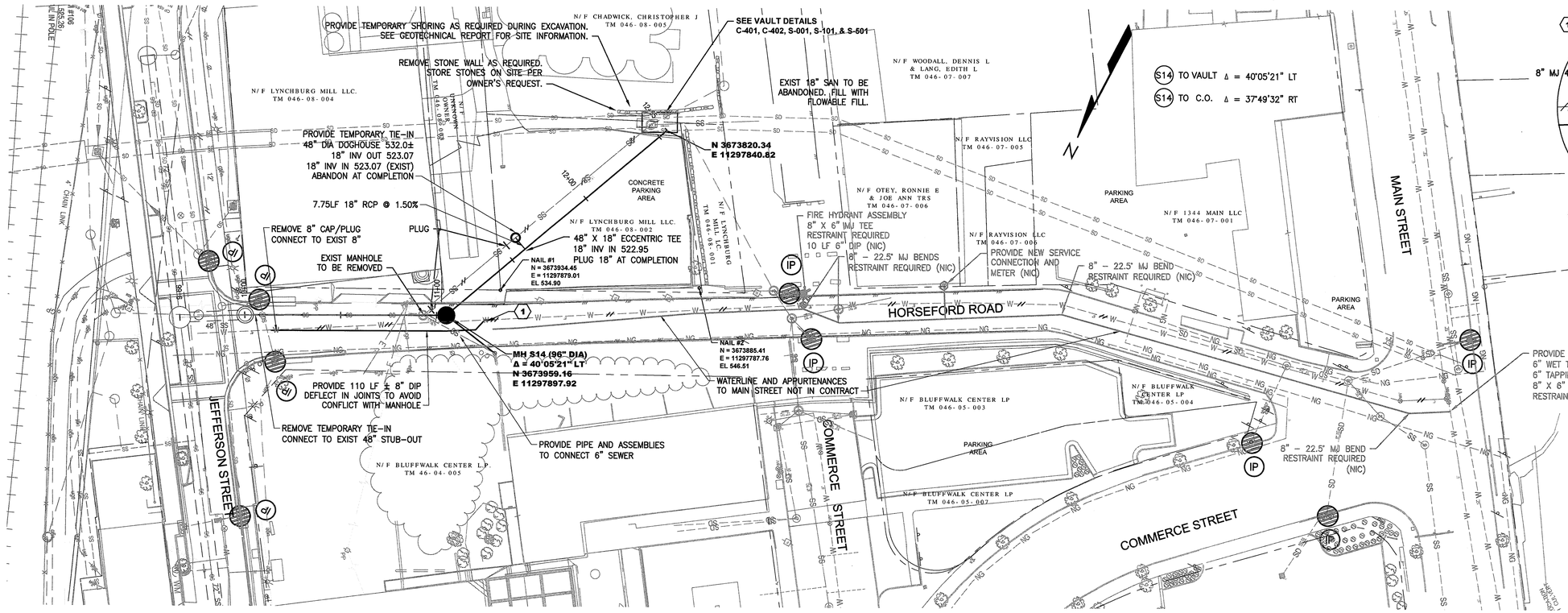
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

SHEET TITLE

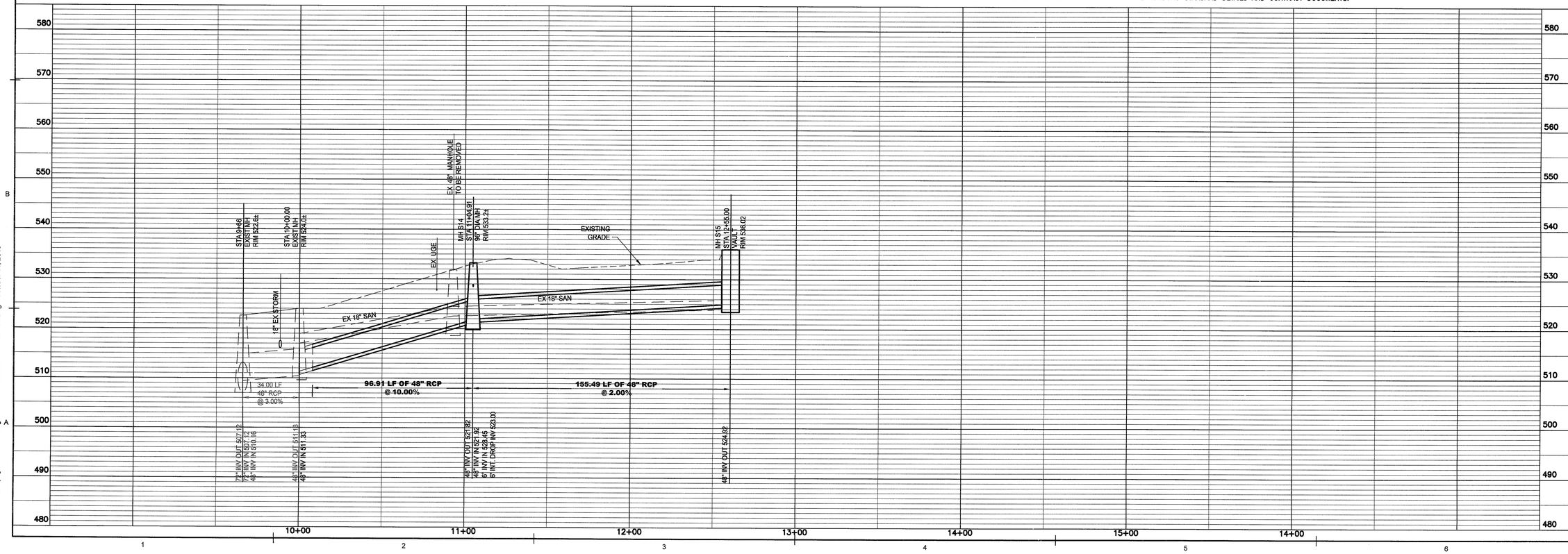
STORM SEWER PLAN & PROFILE
STM-1 STA 107+00 TO 110+00
STM-2 STA 113+00 TO 115+00

SHT. NO.	REV. NO.
C-106	0

X:\2013\213169 Lybg JIR 3B Redesign\CAD\Civil v2012\213169-C-106.dwg October 11, 2013



NOTES:
1. PROVIDE CONNECTION OF ALL WATER AND SEWER SERVICE LATERALS.
2. PROVIDE CONCRETE PATCH IN PARKING LOT, AND MATCH EXISTING CROSS SECTION.
3. RESTORE HORSEFORD ROAD CROSS SECTION IN AREAS OF DISTURBANCE. CROSS SECTION INCLUDES BRICK OR STONE PAVERS WITH ASPHALT OVERLAY. SALVAGE ANY COBBLESTONES ENCOUNTERED.
4. INSTALL COMPONENTS IN ACCORDANCE WITH CITY OF LYNCHBURG STANDARD DETAILS AND CONTRACT DOCUMENTS.



Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

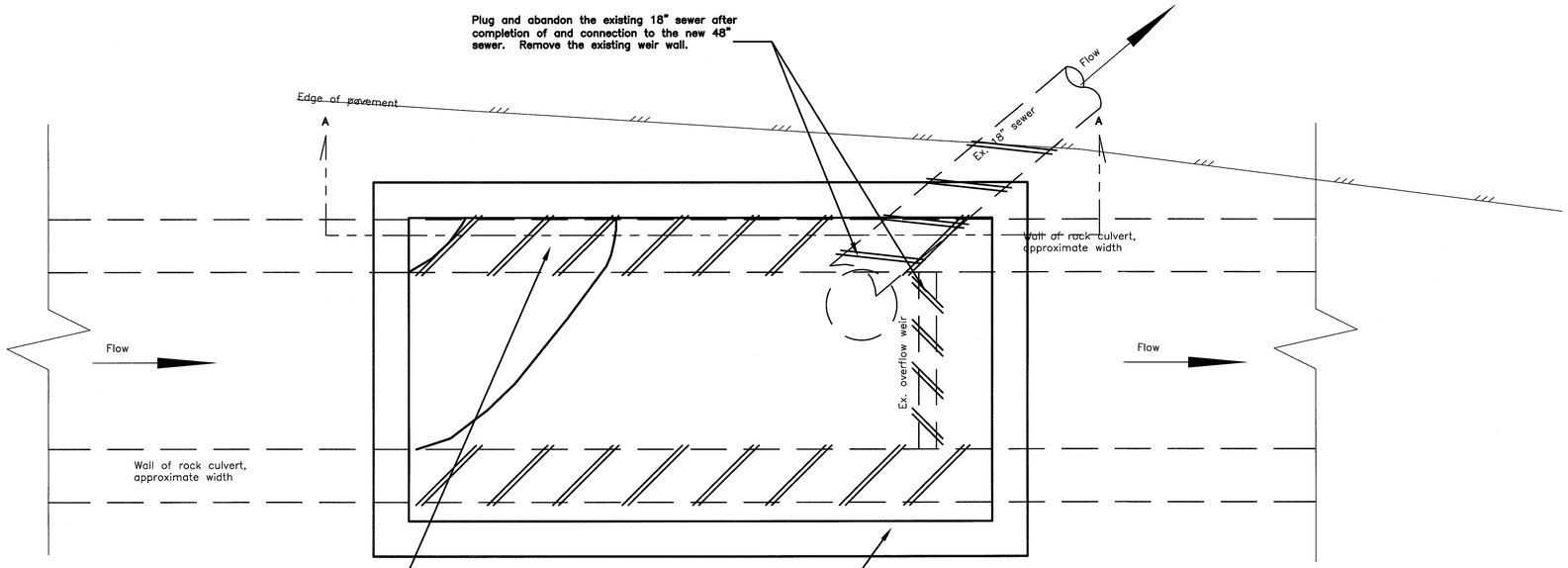
COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	CSO 56 & HORSEFORD WATERLINE
SHT. NO.	C-107
REV. NO.	0

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Civil v2012\213169-C-107.dwg October 11, 2013



PLAN VIEW
Scale: 1/2" = 1'-0"

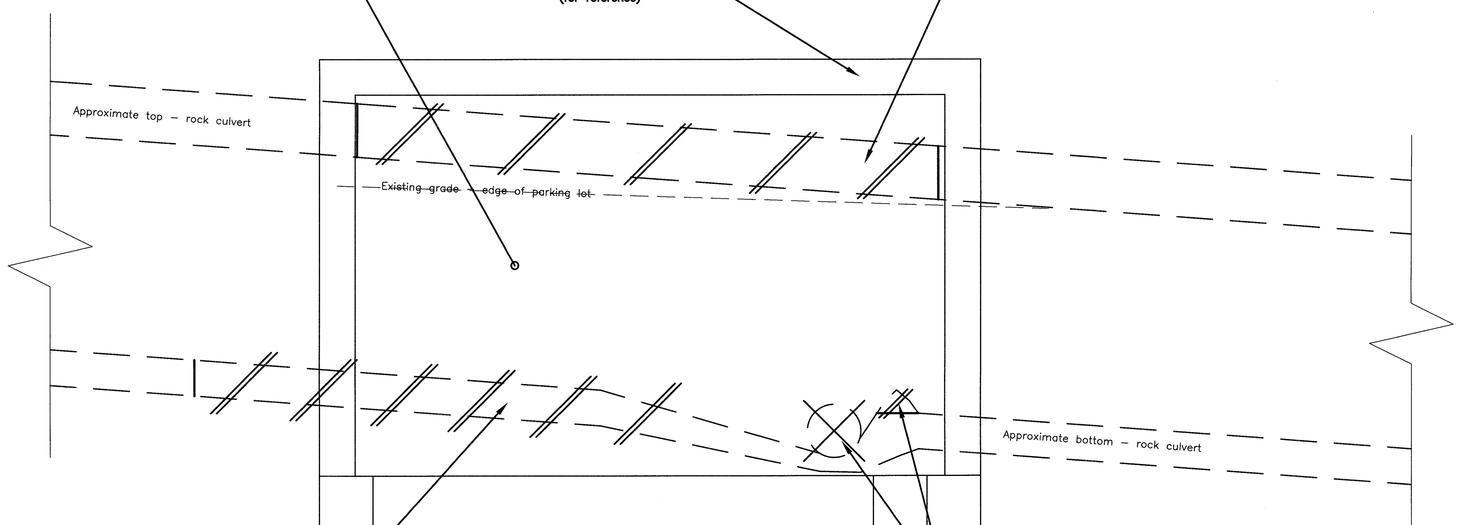
Remove the side wall of the box culvert to the limits shown on S-101 after completion of and connection to the new 48" sewer.

Outline of new vault (for reference)

Remove top of culvert to the limits shown or as required to install the new overflow vault.

Remove existing stone wall to extent necessary and salvage stones to location approved by property owner.

Remove and reinstall air curtain located downstream of existing overflow as required by construction.



Remove culvert base to extent necessary to shape the channel for connection to the new 48" sewer and to install the grade beams (see sheet S-101).

Plug and abandon the existing 18" sewer after completion of and connection to the new 48" sewer. Remove the existing weir wall.

SECTION A-A
Scale: 1/2" = 1'-0"

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1801 | fax 434.947-1801 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

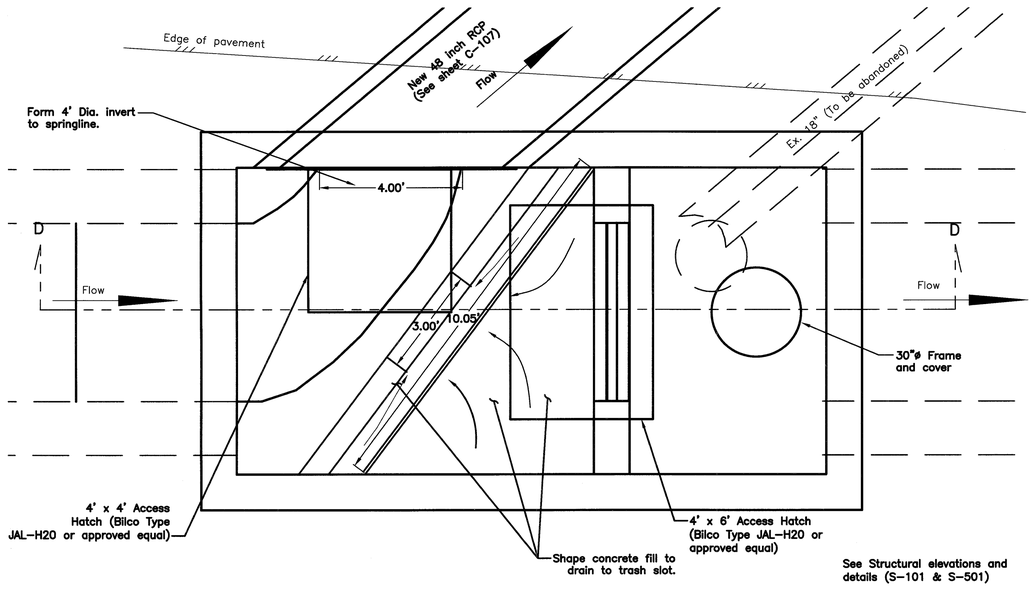
MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

SHEET TITLE
CSO 56 - DEMOLITION PLAN

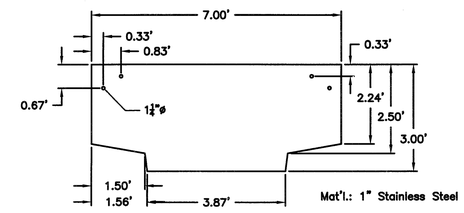
SHT. NO. C-401
REV. NO. 0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\cso56-layout-2.dwg October 11, 2013

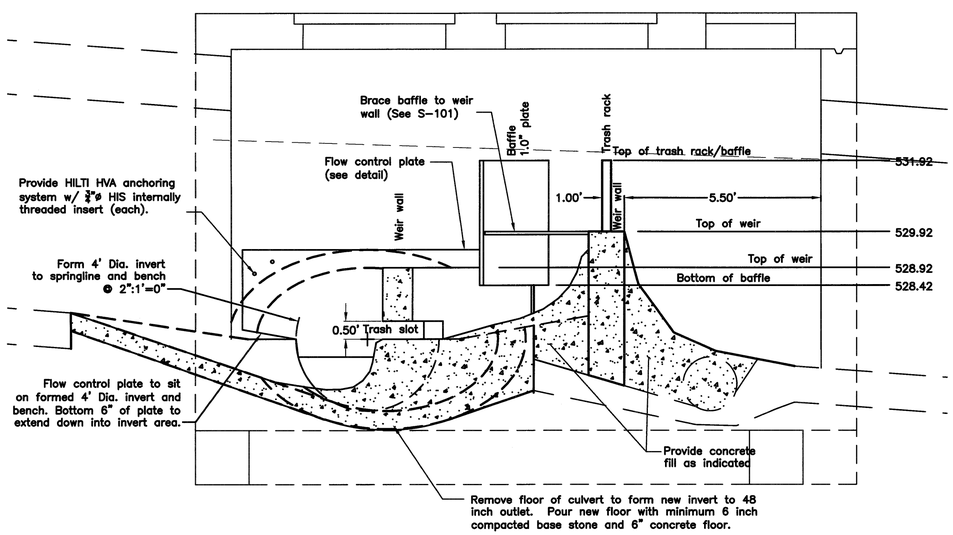


See Structural elevations and details (S-101 & S-501)

PLAN VIEW
Scale: 1/2" = 1'-0"



DETAIL – FLOW CONTROL PLATE
Scale: 1/2" = 1'-0"



SECTION D–D
Scale: 1/2" = 1'-0"

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7801 | fax 434.947.1601 | web wileywilson.com

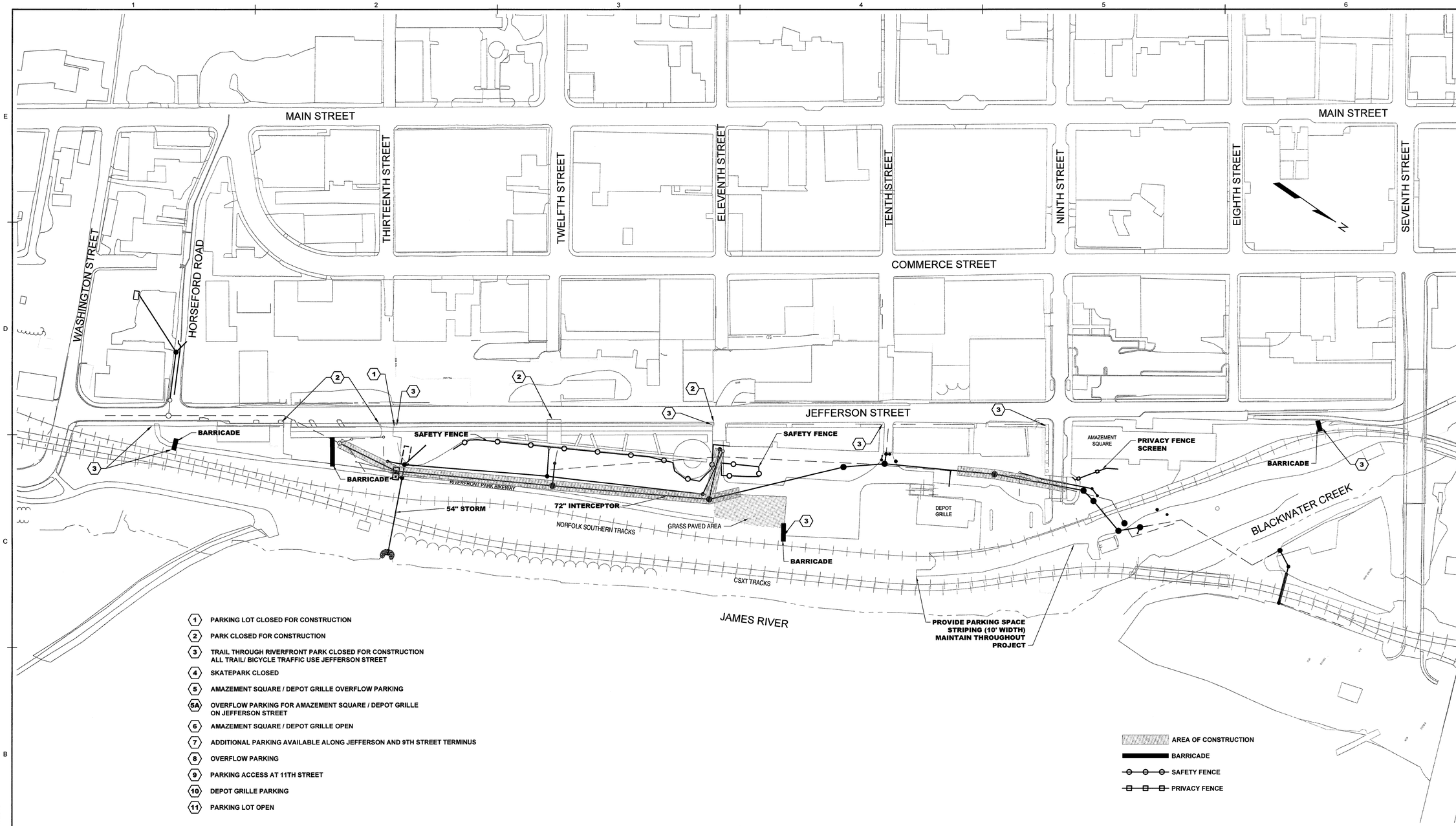
COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38485
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

MRK.	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	
CSO 56 - DIMENSIONAL LAYOUT	
SHT. NO. C-402	REV. NO. 0

X:\2013\213169 Lyng JRI 3B Redesign\CAD\Civil v2012\cso56-layout-2.dwg October 11, 2013



1 PARKING LOT CLOSED FOR CONSTRUCTION

2 PARK CLOSED FOR CONSTRUCTION

3 TRAIL THROUGH RIVERFRONT PARK CLOSED FOR CONSTRUCTION ALL TRAIL/ BICYCLE TRAFFIC USE JEFFERSON STREET

4 SKATEPARK CLOSED

5 AMAZEMENT SQUARE / DEPOT GRILLE OVERFLOW PARKING

5A OVERFLOW PARKING FOR AMAZEMENT SQUARE / DEPOT GRILLE ON JEFFERSON STREET

6 AMAZEMENT SQUARE / DEPOT GRILLE OPEN

7 ADDITIONAL PARKING AVAILABLE ALONG JEFFERSON AND 9TH STREET TERMINUS

8 OVERFLOW PARKING

9 PARKING ACCESS AT 11TH STREET

10 DEPOT GRILLE PARKING

11 PARKING LOT OPEN

AREA OF CONSTRUCTION

BARRICADE

SAFETY FENCE

PRIVACY FENCE

ENTIRE CONSTRUCTION PERIOD

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

0 100' 200'

SCALE: 1" = 100'

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7601 | fax 434.947.7601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

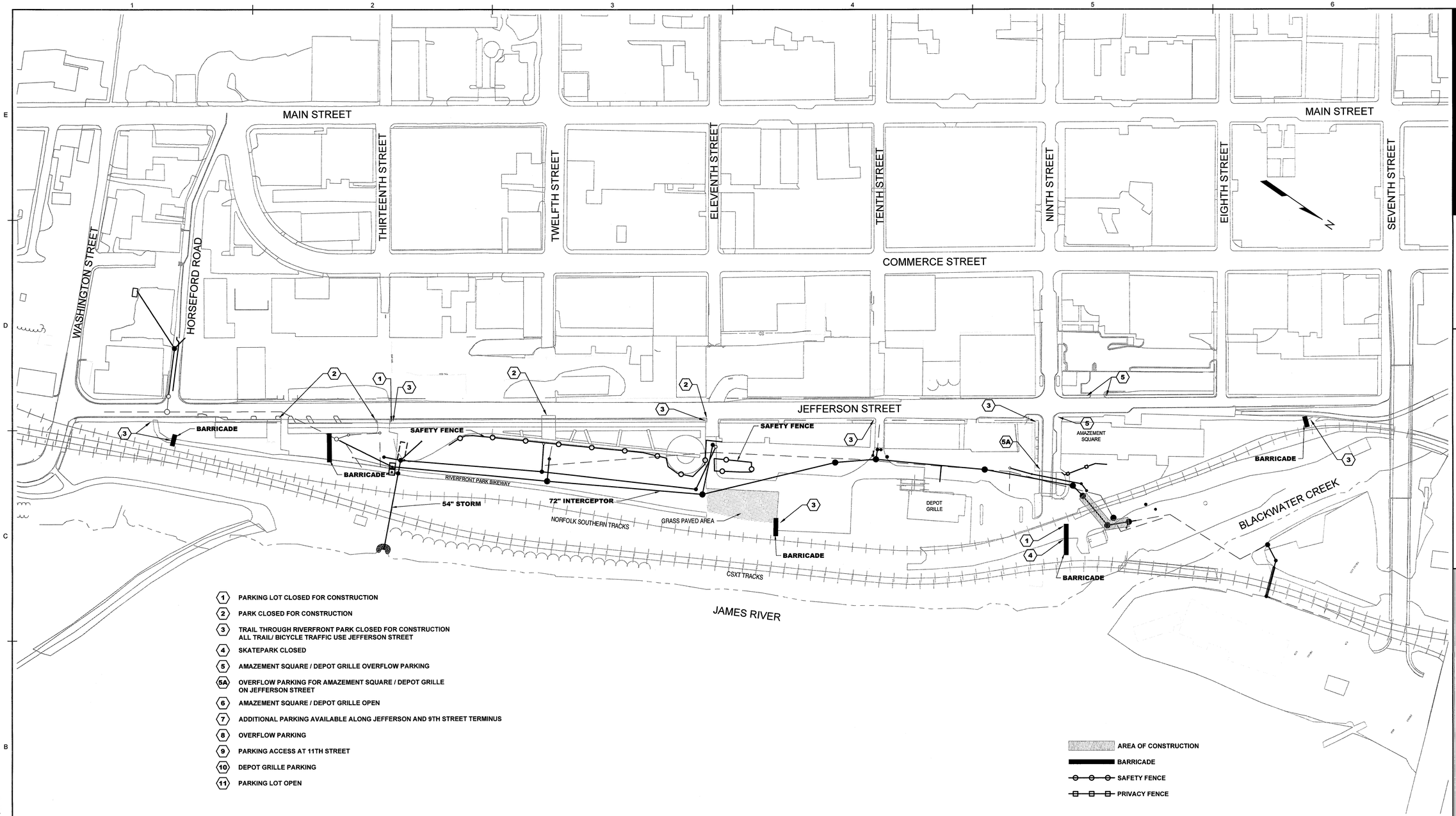
JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	SIGNAGE PLAN
SHT. NO.	C-403
REV. NO.	0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169C-403.dwg October 11, 2013



1. PARKING LOT CLOSED FOR CONSTRUCTION
2. PARK CLOSED FOR CONSTRUCTION
3. TRAIL THROUGH RIVERFRONT PARK CLOSED FOR CONSTRUCTION ALL TRAIL/ BICYCLE TRAFFIC USE JEFFERSON STREET
4. SKATEPARK CLOSED
5. AMAZEMENT SQUARE / DEPOT GRILLE OVERFLOW PARKING
5A. OVERFLOW PARKING FOR AMAZEMENT SQUARE / DEPOT GRILLE ON JEFFERSON STREET
6. AMAZEMENT SQUARE / DEPOT GRILLE OPEN
7. ADDITIONAL PARKING AVAILABLE ALONG JEFFERSON AND 9TH STREET TERMINUS
8. OVERFLOW PARKING
9. PARKING ACCESS AT 11TH STREET
10. DEPOT GRILLE PARKING
11. PARKING LOT OPEN

AREA OF CONSTRUCTION
BARRICADE
SAFETY FENCE
PRIVACY FENCE

DIG BEHIND AMAZEMENT SQUARE
STORM AND SANITARY SEWER

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

0 100' 200'

SCALE: 1" = 100'

Wiley|Wilson®
Constant Progress
927 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

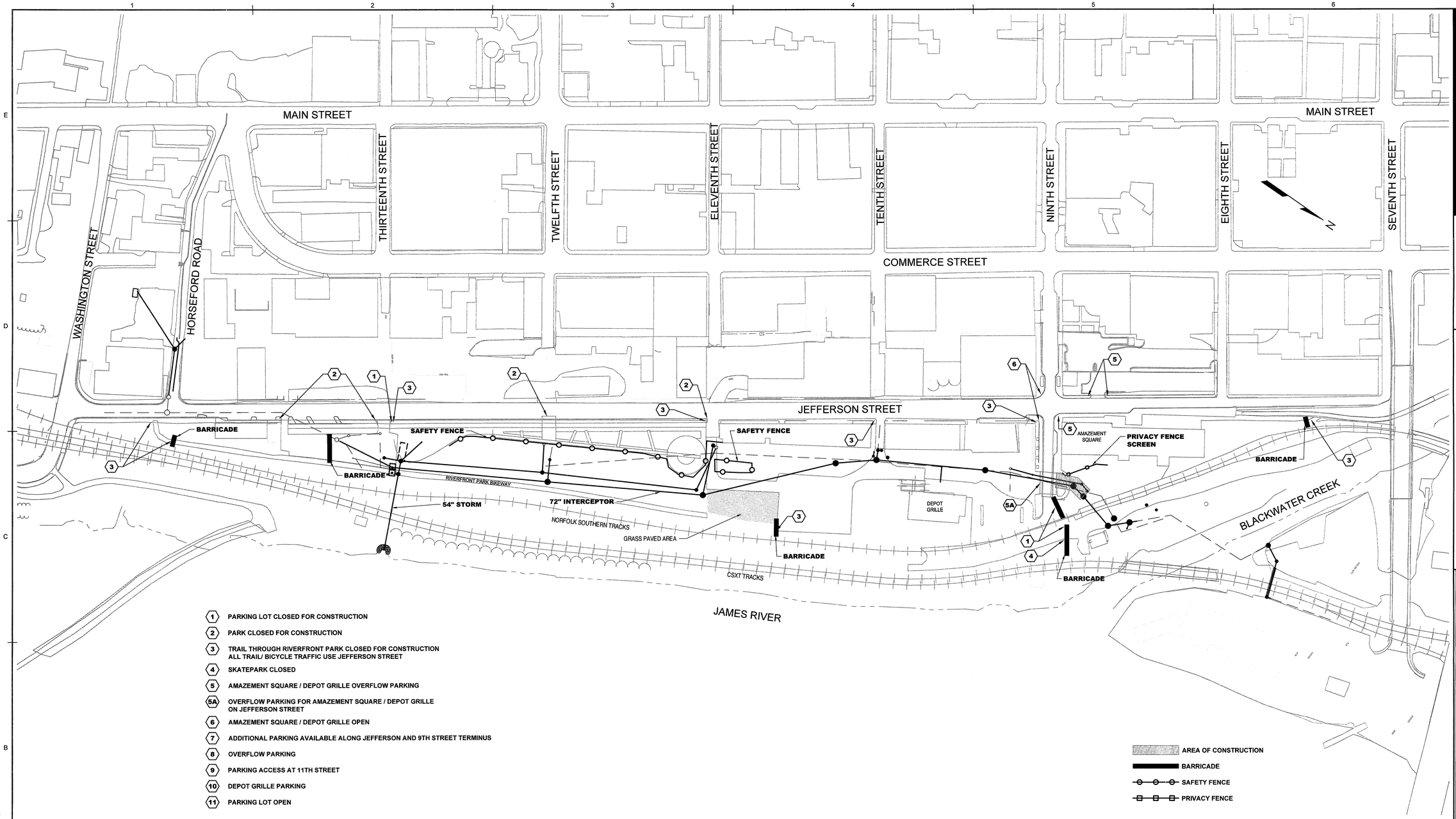
COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	SIGNAGE PLAN
SHT. NO.	C-404
REV. NO.	0

X:\2013\213169 Lyhg JRI 3B Redesign\CAD\Civil \2012\213169C-403.dwg October 11, 2013



1. PARKING LOT CLOSED FOR CONSTRUCTION
2. PARK CLOSED FOR CONSTRUCTION
3. TRAIL THROUGH RIVERFRONT PARK CLOSED FOR CONSTRUCTION ALL TRAIL/ BICYCLE TRAFFIC USE JEFFERSON STREET
4. SKATEPARK CLOSED
5. AMAZEMENT SQUARE / DEPOT GRILLE OVERFLOW PARKING
5A. OVERFLOW PARKING FOR AMAZEMENT SQUARE / DEPOT GRILLE ON JEFFERSON STREET
6. AMAZEMENT SQUARE / DEPOT GRILLE OPEN
7. ADDITIONAL PARKING AVAILABLE ALONG JEFFERSON AND 9TH STREET TERMINUS
8. OVERFLOW PARKING
9. PARKING ACCESS AT 11TH STREET
10. DEPOT GRILLE PARKING
11. PARKING LOT OPEN

AREA OF CONSTRUCTION
BARRICADE
SAFETY FENCE
PRIVACY FENCE

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

0 100' 200'

SCALE: 1" = 100'

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1001 | fax 434.947.1001 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38495
PROFESSIONAL ENGINEER
10/11/13

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

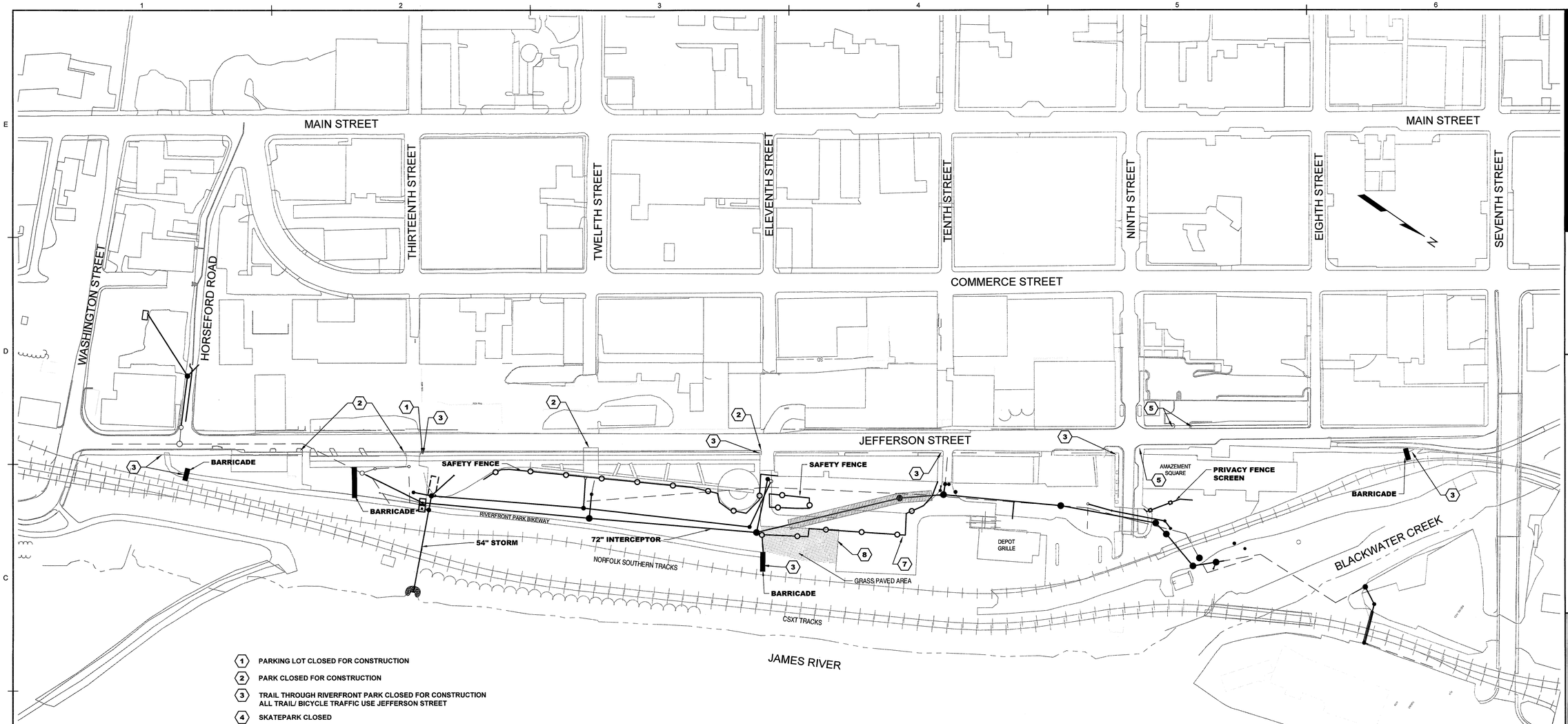
SHEET TITLE

SIGNAGE PLAN

SHT. NO. C-405

REV. NO. 0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169C-403.dwg October 11, 2013



1 PARKING LOT CLOSED FOR CONSTRUCTION

2 PARK CLOSED FOR CONSTRUCTION

3 TRAIL THROUGH RIVERFRONT PARK CLOSED FOR CONSTRUCTION
ALL TRAIL/ BICYCLE TRAFFIC USE JEFFERSON STREET

4 SKATEPARK CLOSED

5 AMAZEMENT SQUARE / DEPOT GRILLE OVERFLOW PARKING

5A OVERFLOW PARKING FOR AMAZEMENT SQUARE / DEPOT GRILLE
ON JEFFERSON STREET

6 AMAZEMENT SQUARE / DEPOT GRILLE OPEN

7 ADDITIONAL PARKING AVAILABLE ALONG JEFFERSON AND 9TH STREET TERMINUS

8 OVERFLOW PARKING

9 PARKING ACCESS AT 11TH STREET

10 DEPOT GRILLE PARKING

11 PARKING LOT OPEN

AREA OF CONSTRUCTION

BARRICADE

SAFETY FENCE

PRIVACY FENCE

IF THIS DRAWING IS REDUCED,
GRAPHIC SCALE MUST BE USED.

0 100' 200'

SCALE: 1" = 100'

Wiley|Wilson®
Constant Progress
727 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7801 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

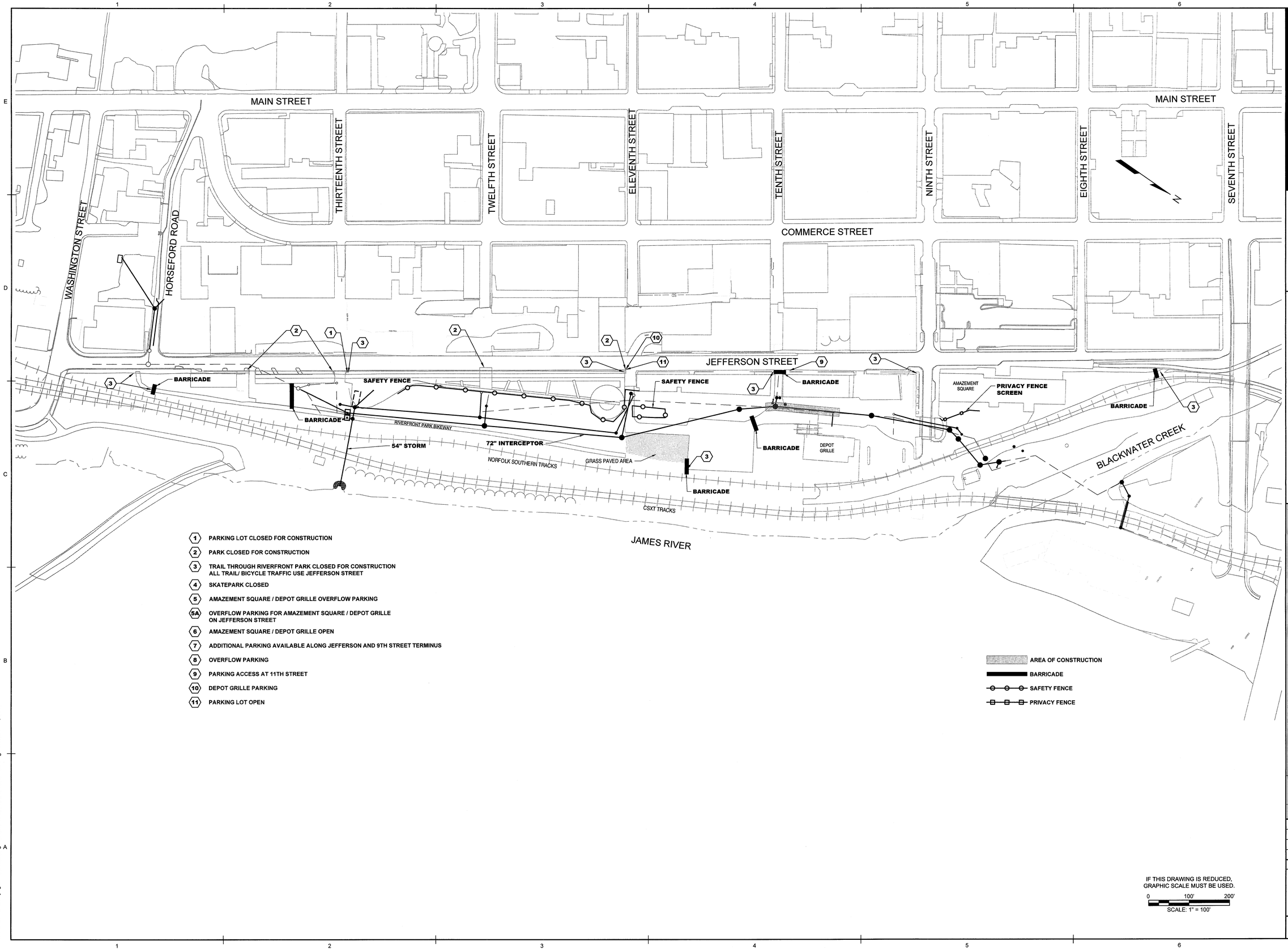
SHEET TITLE

SIGNAGE PLAN

SHT. NO. C-406

REV. NO. 0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169C-403.dwg October 11, 2013



Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7801 | fax 434.947.7801 | web wileywilson.com

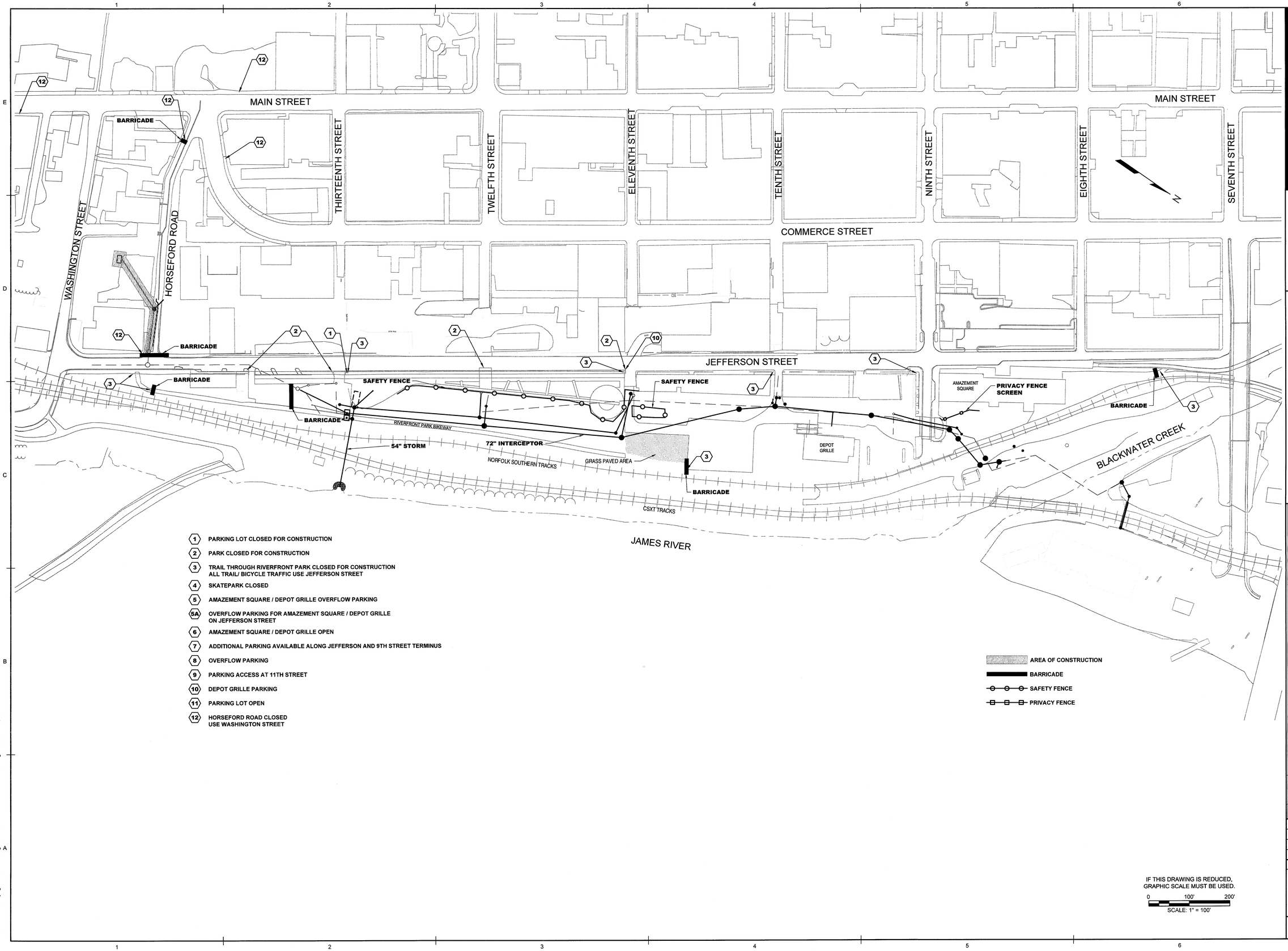
COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	SIGNAGE PLAN
SHT. NO. C-407	REV. NO. 0

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Civil v2012\213169C-403.dwg October 11, 2013



1. PARKING LOT CLOSED FOR CONSTRUCTION
2. PARK CLOSED FOR CONSTRUCTION
3. TRAIL THROUGH RIVERFRONT PARK CLOSED FOR CONSTRUCTION ALL TRAIL/ BICYCLE TRAFFIC USE JEFFERSON STREET
4. SKATEPARK CLOSED
5. AMAZEMENT SQUARE / DEPOT GRILLE OVERFLOW PARKING
5A. OVERFLOW PARKING FOR AMAZEMENT SQUARE / DEPOT GRILLE ON JEFFERSON STREET
6. AMAZEMENT SQUARE / DEPOT GRILLE OPEN
7. ADDITIONAL PARKING AVAILABLE ALONG JEFFERSON AND 9TH STREET TERMINUS
8. OVERFLOW PARKING
9. PARKING ACCESS AT 11TH STREET
10. DEPOT GRILLE PARKING
11. PARKING LOT OPEN
12. HORSEFORD ROAD CLOSED USE WASHINGTON STREET

AREA OF CONSTRUCTION
BARRICADE
SAFETY FENCE
PRIVACY FENCE

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.
0 100' 200'
SCALE: 1" = 100'

Wiley|Wilson®
Constant Progress
727 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

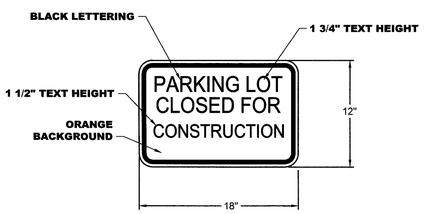
MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM

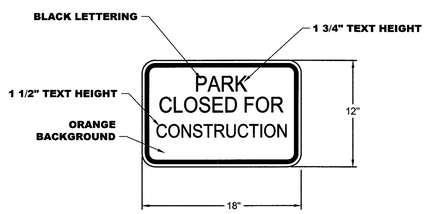
SHEET TITLE
SIGNAGE PLAN

SHT. NO. C-408
REV. NO. 0

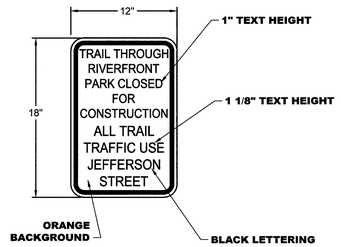
X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169C-403.dwg October 11, 2013



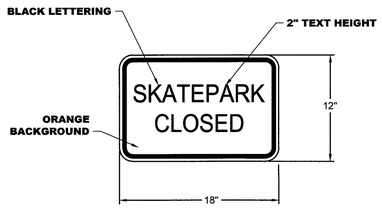
1 PARKING LOT CLOSED FOR CONSTRUCTION



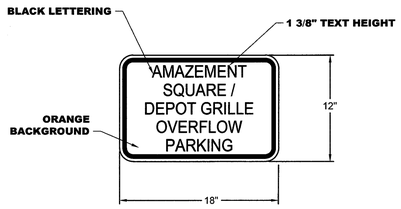
2 PARK CLOSED FOR CONSTRUCTION



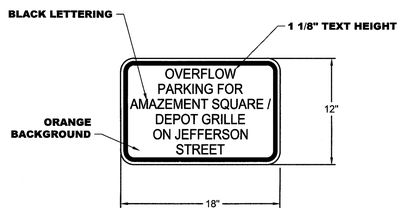
3 TRAIL THROUGH RIVERFRONT PARK CLOSED FOR CONSTRUCTION ALL TRAIL/ BICYCLE TRAFFIC USE JEFFERSON STREET



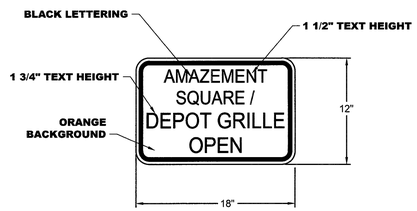
4 SKATEPARK CLOSED



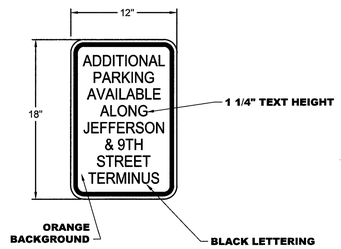
5 AMAZEMENT SQUARE / DEPOT GRILLE OVERFLOW PARKING



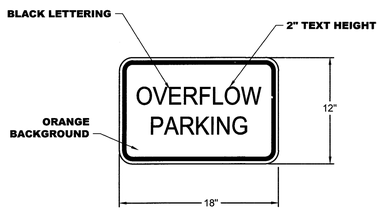
5A OVERFLOW PARKING FOR AMAZEMENT SQUARE / DEPOT GRILLE ON JEFFERSON STREET



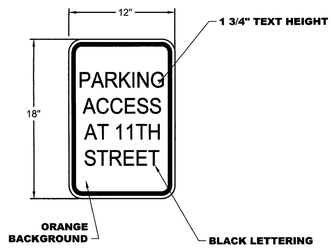
6 AMAZEMENT SQUARE / DEPOT GRILLE OPEN



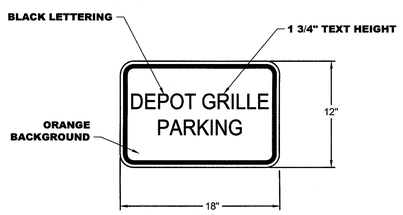
7 ADDITIONAL PARKING AVAILABLE ALONG JEFFERSON AND 9TH STREET TERMINUS



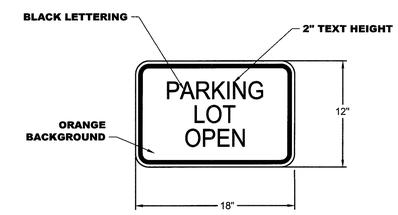
8 OVERFLOW PARKING



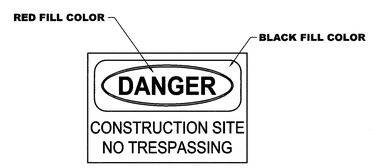
9 PARKING ACCESS AT 11TH STREET



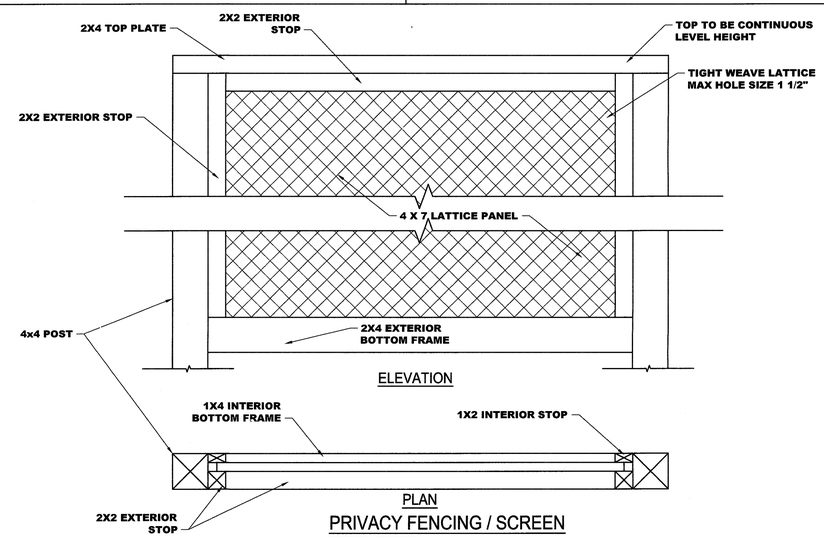
10 DEPOT GRILLE PARKING



11 PARKING LOT OPEN



SIGN TO BE PLACED ON ALL BARRICADES AND AT 50 FOOT INTERVALS ALONG THE SAFETY FENCE



PRIVACY FENCING / SCREEN

NOT TO SCALE

Wiley | Wilson
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7779 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36486
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

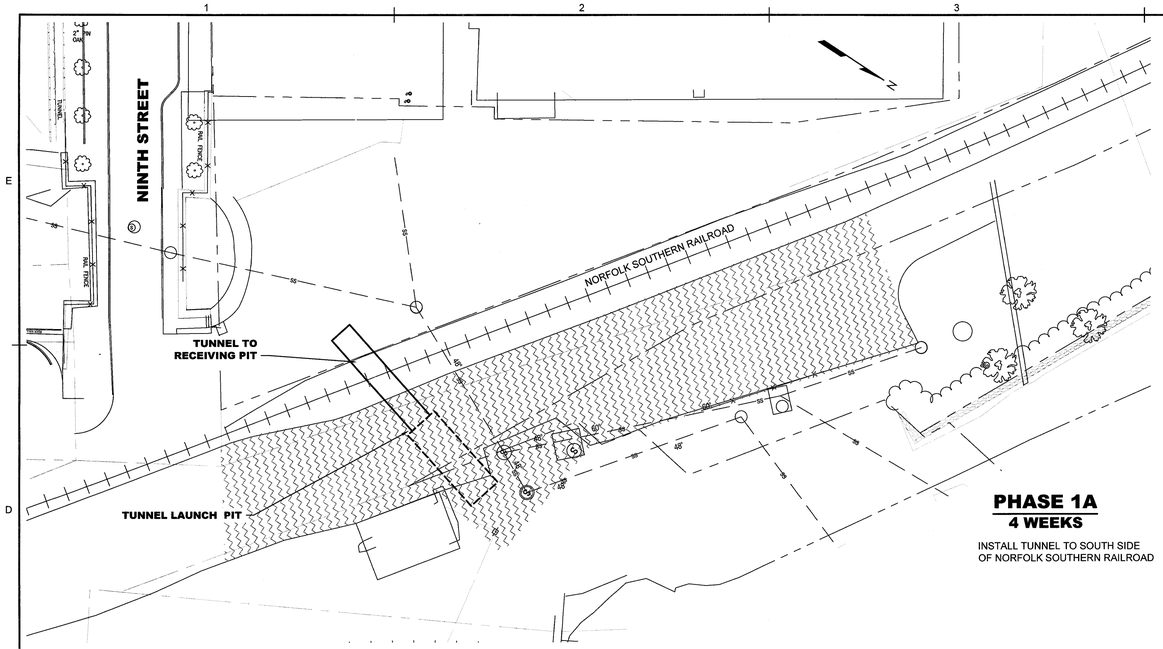
MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	

SIGNAGE AND SITE DETAILS

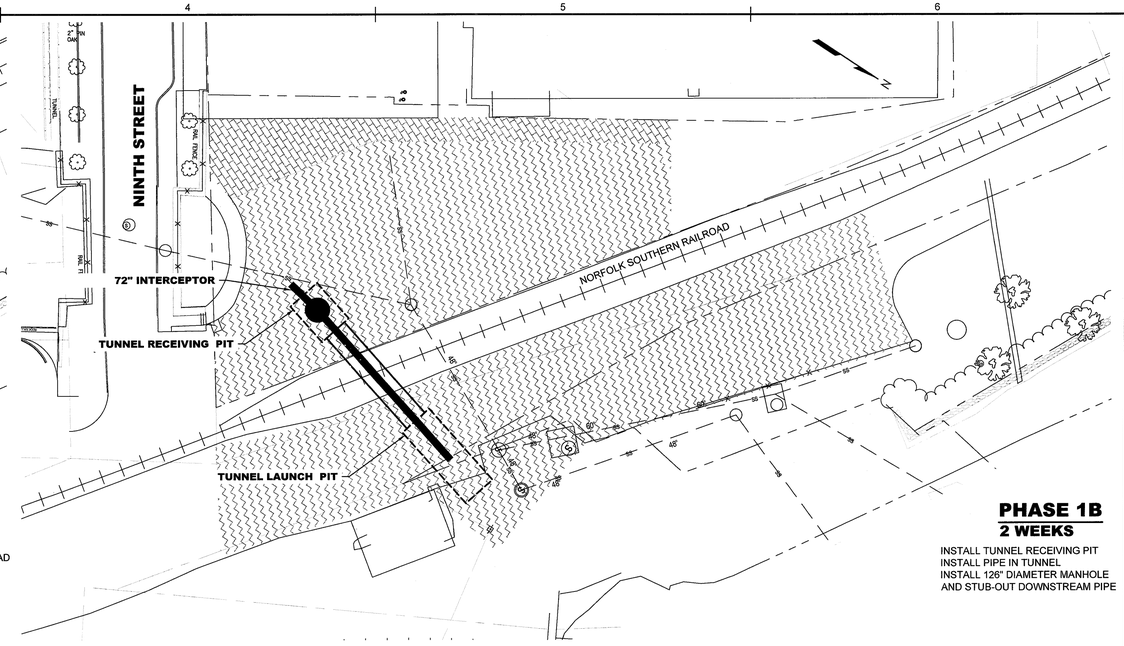
SHT. NO.	REV. NO.
C-409	0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil v2012\213169C-403.dwg October 11, 2013



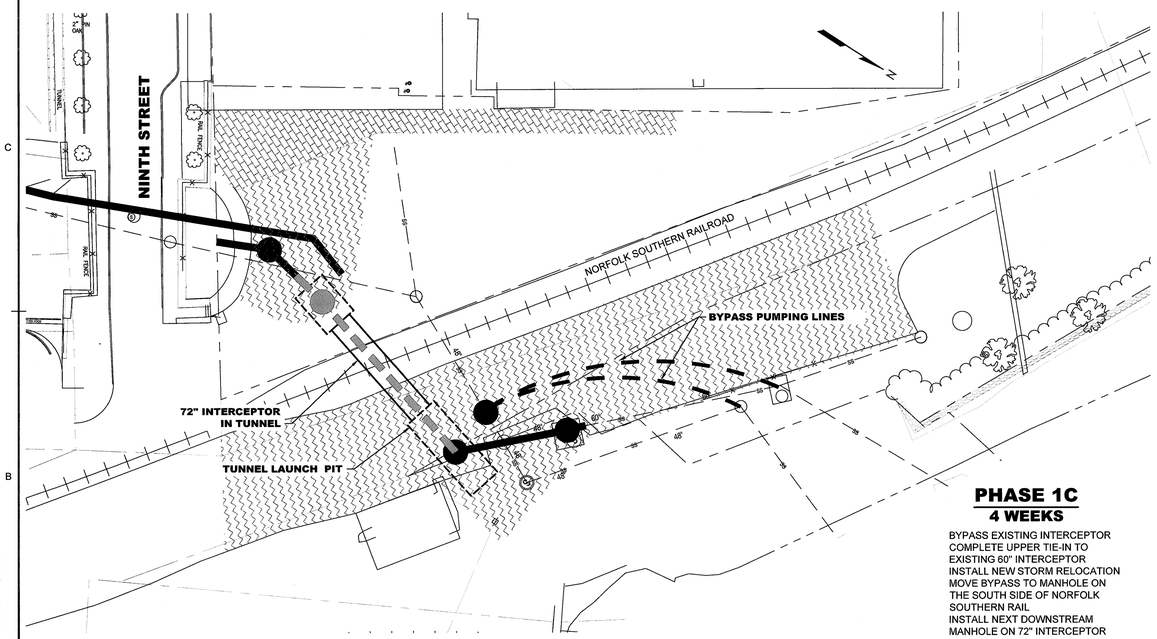
PHASE 1A
4 WEEKS

INSTALL TUNNEL TO SOUTH SIDE OF NORFOLK SOUTHERN RAILROAD



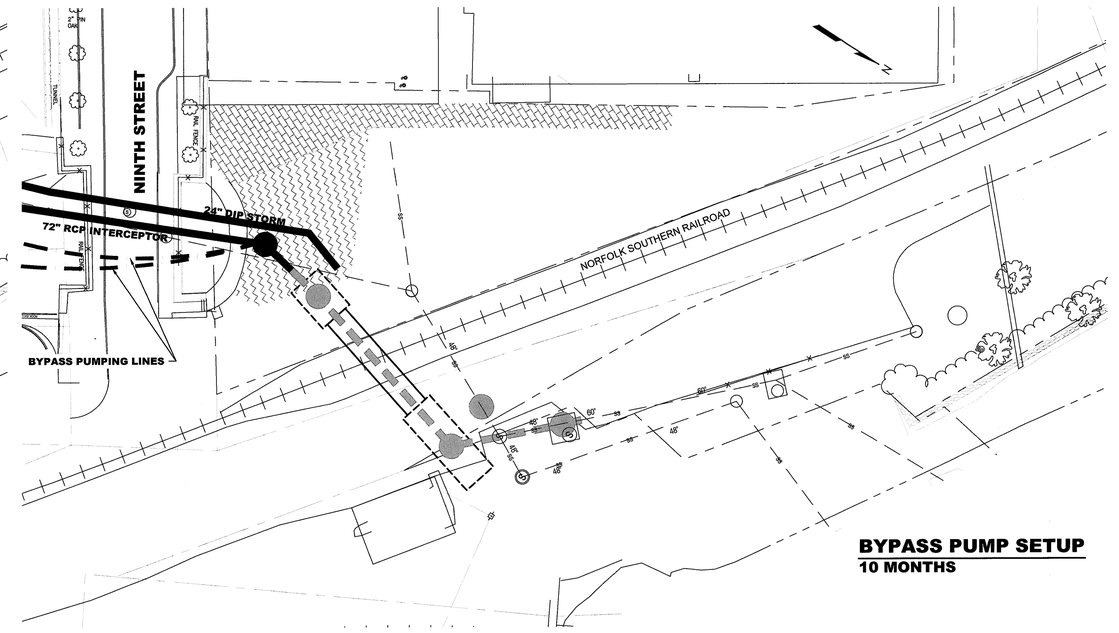
PHASE 1B
2 WEEKS

INSTALL TUNNEL RECEIVING PIT
INSTALL PIPE IN TUNNEL
INSTALL 126" DIAMETER MANHOLE
AND STUB-OUT DOWNSTREAM PIPE



PHASE 1C
4 WEEKS

BYPASS EXISTING INTERCEPTOR
COMPLETE UPPER TIE-IN TO
EXISTING 60" INTERCEPTOR
INSTALL NEW STORM RELOCATION
MOVE BYPASS TO MANHOLE ON
THE SOUTH SIDE OF NORFOLK
SOUTHERN RAIL
INSTALL NEXT DOWNSTREAM
MANHOLE ON 72" INTERCEPTOR
AND STUB-OUT 72" PIPE
MOVE BYPASS SUCTION LINES TO
NEWLY INSTALLED MANHOLE



BYPASS PUMP SETUP
10 MONTHS

LEGEND

- EXISTING STORM
- EXISTING SANITARY
- EXISTING WATER
- EXISTING UNDERGROUND TELEPHONE
- STORM
- SANITARY
- SANITARY/STORM MANHOLE
- OPEN PEDESTRIAN WALKWAY
- ROAD AND WALKWAY CLOSURES

IF THIS DRAWING IS REDUCED, GRAPHIC SCALE MUST BE USED.

0 30' 60'

SCALE: 1" = 30'

Wiley|Wilson
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	AMAZEMENT SQUARE PHASING
SHT. NO. C-410	REV. NO. 0

X:\2013\213169 Lyng JRI 3B Redesign\CAD\Civil v2012\213169C-410.dwg October 11, 2013

EROSION & SEDIMENT CONTROL NARRATIVE

I. PROJECT DESCRIPTION
THE PURPOSE OF THIS PROJECT IS TO REPLACE THE JAMES RIVER INTERCEPTOR - DIVISION 3B IN LYNCHBURG, VIRGINIA FROM 13TH STREET TO BLACKWATER CREEK. THIS PROJECT WILL INCLUDE EXCAVATION AND REMOVAL OF EXISTING SANITARY SEWER PIPING AND STRUCTURES AND INSTALLATION OF NEW SANITARY PIPING AND STRUCTURES BY TRENCHING AND TUNNELING. THE SANITARY SEWER WILL BE INSTALLED ADJACENT TO THE CSX AND NORFOLK SOUTHERN RAILROAD TRACKS NEAR THE LOCATION OF THE EXISTING INTERCEPTOR. THIS PLAN PROVIDES THE NECESSARY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT DOWNSTREAM AREAS. APPROXIMATELY 1.80 ACRES ARE EXPECTED TO BE DISTURBED DURING CONSTRUCTION.

II. EXISTING SITE CONDITIONS.
THE MAJORITY OF THE INTERCEPTOR REPLACEMENT IS LOCATED INA GRASSED PARK BETWEEN JEFFERSON STREET AND NORFOLK SOUTHERN RAILROAD. THE REMAINING LENGTH OF INTERCEPTOR SEWER AND STORM SEWER IS LOCATED IN PAVED AREAS BEHIND AMAZEMENT SQUARE.

III. ADJACENT PROPERTIES
THE MAJORITY OF THE PROJECT IS LOCATED ON AND ADJACENT TO THE CITY PARK ALONG JEFFERSON STREET WITH A PORTION OF THE ALIGNMENT THROUGH EXISTING INDUSTRIAL AREAS LOCATED ALONG THE RAILROAD TRACKS.

IV. OFFSITE AREAS
FILL MATERIAL WILL BE OBTAINED FROM AREAS OF EXCAVATION CONTAINED WITHIN THE SITE. UNSUITABLE MATERIAL WILL BE HAULED FROM THE SITE AND DISPOSED OF IN AN APPROVED MANNER. THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN TO THE EROSION AND SEDIMENT CONTROL REGULATOR PERTAINING TO OFF-SITE DISTURBED AREAS (IF ANY SUCH AREAS ARE REQUIRED) SUCH AS STOCKPILES, STAGING AREAS, AND SPOIL AREAS THAT ARE USED FOR THIS PROJECT.

V. SOILS
ACCORDING TO USDA NRCS SOIL MAPPING, THE PROJECT SITE LIES ON SOIL TYPE URBAN LAND (UL).

URBAN LAND MAKES UP 100 PERCENT OF THE PROJECT AREA. THIS SOIL GROUP CONSISTS OF COMMERCIAL, INDUSTRIAL AND RESIDENTIAL DEVELOPMENTS COVERING MUCH OF THE AREA. THIS GROUP ALSO INCLUDES AREAS DISTURBED DURING CONSTRUCTION, BASEMENTS, STREETS, PIPELINES, PARKING LOTS AND OTHER STRUCTURES. THE PROPERTIES AND CHARACTERISTICS OF THESE SOILS HAVE BEEN CHANGED BY URBAN USE. SLOPES ARE GENERALLY 2-15 PERCENT.

VI. EROSION AND SEDIMENT CONTROL MEASURES
ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK. SYMBOLS, DETAILS, AND DIMENSIONS USED ARE TAKEN FROM THE HANDBOOK, AS WELL AS THE LATEST EDITION OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S ROAD AND BRIDGE STANDARDS.

A. STRUCTURAL PRACTICES
1. SILT FENCE (SF), SPEC. 3.05: SILT FENCE BARRIERS SHALL BE PROVIDED WHERE SHOWN AND AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE.
2. STORM DRAIN INLET PROTECTION (IP), SPEC. 3.07: STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR INLETS AS SHOWN ON THE PLANS.

B. VEGETATIVE PRACTICES
1. TEMPORARY SEEDING (TS), SPEC. 3.31: TEMPORARY SEEDING SHALL BE PROVIDED ON SITE TO PROVIDE STABILIZATION UNTIL SITE DEVELOPMENT OCCURS. APPLY SEED BASED ON THE TEMPORARY SEEDING SCHEDULE ON THE PLANS.
2. PERMANENT SEEDING (PS), SPEC. 3.32: PERMANENT SEEDING SHALL BE PROVIDED ON SITE TO PROVIDE STABILIZATION FOR ALL DISTURBED AREAS. APPLY SEED BASED ON PERMANENT SEEDING SCHEDULE SHOWN ON THE PLANS.
3. SODDING (SO), SPEC. 3.33: STABILIZE FINE-GRADED DISTURBED AREAS BY ESTABLISHING PERMANENT GRASS STRANDS WITH SOD.
4. MULCHING (MU), SPEC. 3.35: ALL PERMANENT AND TEMPORARY SEEDING SHALL BE STRAW MULCHED IMMEDIATELY UPON COMPLETION OF SEED APPLICATION. STRAW ON STEEP SLOPES SHALL BE ANCHORED UNLESS SEEDING WAS PROVIDED BY MEANS OF A HYDROSEEDING, IN WHICH CASE, MULCHING IS NOT REQUIRED.

C. MAINTENANCE
ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND SYSTEMS SHALL BE MAINTAINED, INSPECTED, AND REPAIRED AS NEEDED TO INSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED AT THE END OF EACH DAY AND AFTER EVERY RAINFALL EVENT.

1. DAMAGE TO EROSION CONTROL MEASURES CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY SHALL BE REPAIRED BEFORE THE END OF EACH WORKING DAY.
2. MAINTAIN ALL SEEDED AREAS UNTIL A UNIFORM STAND IS ACCEPTED.
3. PROVIDE FOR EQUIPMENT WASHING AS NEEDED TO PREVENT THE TRANSPORT OF SOIL ONTO EXISTING ASPHALT ROADWAYS. ANY SEDIMENT ON THE PAVEMENT SHALL BE REMOVED IMMEDIATELY.
4. SILT FENCE BARRIERS WILL BE CHECKED DAILY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL REACHES HALF WAY TO THE TOP OF THE BARRIER.
5. WHERE EROSION OR WASHOUT IS OBSERVED IN MULCHED AREAS, ADDITIONAL MULCH SHOULD BE APPLIED.

D. MINIMUM STANDARDS

MS-1. STABILIZATION OF DENUDED AREAS:
PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT OR UNDISTURBED FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.

MS-2. STABILIZATION OF SOIL STOCKPILES:
DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

MS-3. PERMANENT VEGETATIVE COVER:
A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT, IN THE OPINION OF THE E&S INSPECTOR, IS UNIFORM AND MATURE ENOUGH TO SURVIVE AND INHIBIT EROSION.

MS-4. TIMING AND STABILIZATION OF SILT TRAPPING MEASURES:
SEDIMENT BASINS AND TRAPS, STORM INLET PROTECTION, SILT FENCING, AND OTHER MESURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

MS-5. STABILIZATION OF EARTHEN STRUCTURES:
STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

MS-6. SEDIMENT BASINS AND TRAPS:
SEDIMENT TRAPS AND BASINS SHALL BE CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED.
A. THE MINIMUM CAPACITY OF A SEDIMENT TRAP SHALL BE 134-CUBIC YARDS PER ACRE OF DRAINAGE AREA, AND SHALL CONTROL A DRAINAGE AREA OF LESS THAN 3-ACRES.
B. THE MINIMUM CAPACITY OF A SEDIMENT BASIN SHALL BE 134-CUBIC YARDS PER ACRE OF DRAINAGE AREA, AND SHALL CONTROL A DRAINAGE AREA OF 3-ACRES OR GREATER.

MS-7. CUT AND FILL SLOPES:
CUT AND FILL SLOPES SHALL BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

MS-8. CONCENTRATED RUNOFF DOWN CUT OR FILL SLOPES:
CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.

MS-9. WATER SEEPAGE FROM A SLOPE FACE:
WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.

MS-10. STORM SEWER INLET PROTECTION:
ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

MS-11. STABILIZATION OF OUTLETS:
BEFORE NEWLY CONSTRUCTED STORM WATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.

MS-12. WORK IN LIVE WATERCOURSES:
WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.

MS-13. CROSSING A LIVE WATERCOURSE:
WHEN A LIVE WATERCOURSE MUST BE CROSSED BY ONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIALS SHALL BE PROVIDED.

MS-14. APPLICABLE REGULATIONS:
ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.

MS-15. STABILIZATION OF BED AND BANKS:
THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.

MS-16. UNDERGROUND UTILITIES:
UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS, IN ADDITION TO OTHER APPLICABLE CRITERIA:
A. NO MORE THAN 500-LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
B. WHERE CONSISTENT WITH SAFETY AND SPACE CONSIDERATIONS, EXCAVATED MATERIAL IS TO BE PLACED ON THE UPHILL SIDE OF TRENCHES, EXCEPT FOR ANY DIVERSION DITCHES.
C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFFSITE PROPERTY.
D. TRENCH BACKFILL MATERIAL SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
F. ALL APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH AT ALL TIMES.

MS-17. CONSTRUCTION ACCESS ROUTES:
WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD, THE ROAD SURFACE SHALL BE CLEANED THROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

MS-18. TEMPORARY E&S CONTROL MEASURE REMOVAL:
ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALLS BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL E&S AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

MS-19. ADEQUACY OF RECEIVING CHANNELS:
PROPERTIES AND WATERWAYS DOWNSTREAM FROM THE DEVELOPMENT SITE SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATES OF STORM WATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION.

VII. SOIL STOCKPILES AND BORROW AREAS
FILL MATERIAL SHALL BE OBTAINED FROM AREAS OF EXCAVATION ON SITE. LOCATIONS OF SOIL STOCKPILES SHALL BE DETERMINED BY THE CONTRACTOR WITH THE APPROVAL OF THE OWNER/DEVELOPER. ALL STOCKPILES SHALL BE LOCATED ON SITE AND PROTECTED WITH SURROUNDING SILT FENCING AND STABILIZED WITH A VEGETATIVE COVER. THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION AND SEDIMENT CONTROL PLAN FOR ALL SOILS INTENTIONALLY TRANSPORTED OFFSITE IF THE TRANSPORTED MATERIAL DISTURBS MORE THAN 1,000 SQUARE FEET IN AREA. ALL APPLICABLE PERMITS SHALL BE OBTAINED.

VIII. CONTACT PARTY FOR E&S IMPLEMENTATION
CONTRACTOR SHALL PROVIDE CERTIFIED E&S RESPONSIBLE LAND DISTURBER.

IX. STORMWATER QUALITY
DISTURBED AREAS WILL BE RETURNED TO PREEXISTING CONDITIONS. THERE WILL BE NO CHANGE TO CONTOURS, DRAINAGE PATTERNS OR GROUND COVER.

EROSION AND SEDIMENT CONTROL LEGEND

3.01	SAFETY FENCE	SAF	SAF
3.05	SILT FENCE	SF	X—X—X
3.07	STORM DRAIN INLET PROTECTION	IP	
3.31	TEMPORARY SEEDING	TS	TS
3.32	PERMANENT SEEDING	PS	PS
3.33	SODDING	SO	SO
3.35	MULCHING	MU	MU

(TS) TEMPORARY SEEDING SCHEDULE

PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPT. 1 - FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CERALE)	50 - 100
FEB 16 - APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60 - 100
MAY 1 - AUG. 31	GERMAN MILLET (SETARIA ITALICA)	50

(PS) PERMANENT SEEDING SCHEDULE

SITE SPECIFIC SEEDING MIXTURES FOR PIEDMONT AREA

	TOTAL POUNDS PER ACRE
HIGH MAINTENANCE LAWN CARE	200-250 LBS
TURF - TYPE TALL FESCUE	100%
GENERAL SLOPE (3:1 OR LESS)	
KENTUCKY 31 FESCUE	128 LBS
INDIAN GRASS	2 LBS
SEASONAL NURSE CROP*	20 LBS
TOTAL	150 LBS
LOW MAINTENANCE SLOPE (STEEPER THAN 3:1)	
KENTUCKY 31 FESCUE	108 LBS
SEASONAL NURSE CROP*	20 LBS
INDIAN GRASS	22 LBS
TOTAL	150 LBS

*USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:

ANNUAL RYE:	FEBRUARY 16TH THROUGH APRIL
FOXTAIL MILLET:	MAY 1ST THROUGH AUGUST 15TH
ANNUAL RYE:	AUGUST 16TH THROUGH OCTOBER
WINTER RYE:	NOVEMBER THROUGH FEBRUARY 15TH

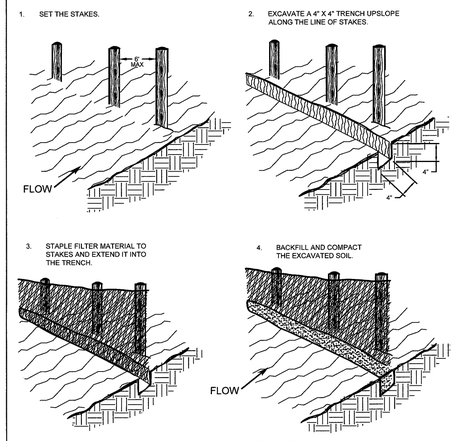
LIME & FERTILIZER SPECIFICATIONS:

A SOILS TEST IS REQUIRED PRIOR TO FINAL SITE STABILIZATION, TO DETERMINE LIME AND FERTILIZER APPLICATION RATES FOR THE ESTABLISHMENT OF GRASS ON SITE. CONTACT VIRGINIA COOPERATIVE EXTENSION OR A GEOTECHNICAL FIRM WITH SOIL TESTING FACILITIES TO OBTAIN A SOILS REPORT FOR NUTRIENT APPLICATION.

INCORPORATION:
LIME AND FERTILIZER SHALL INCORPORATED INT0 THE TOP 4 INCHES OF TOPSOIL BY DISCING OR OTHER MEANS WHENEVER POSSIBLE. FOR EROSION CONTROL, WHEN APPLYING LIME AND FERTILIZER WITH A HYDROSEEDER, APPLY TO A ROUGH, LOOSE SURFACE.

MULCHING:
MULCH WITH STRAW AT A RATE OF 2 TONS/ACRE OR EQUIVALENT.

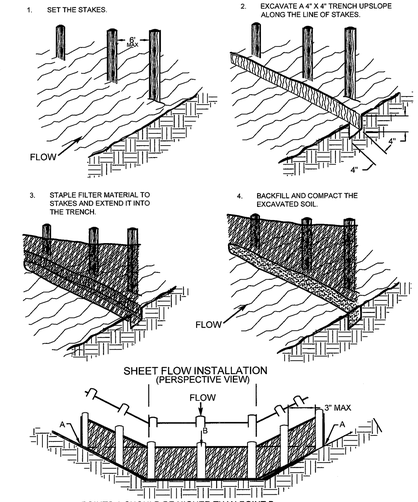
CONSTRUCTION OF A SILT FENCE (WITH WIRE SUPPORT)



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant

PLATE. 3.05-1

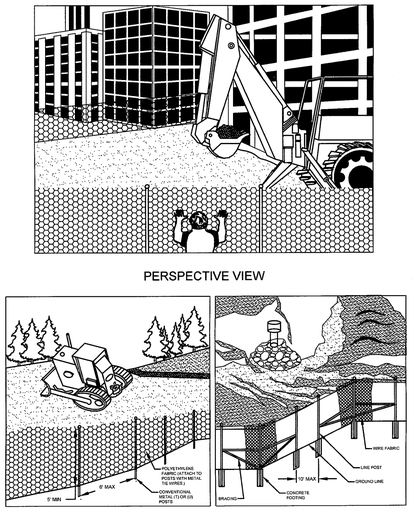
CONSTRUCTION OF A SILT FENCE (WITHOUT WIRE SUPPORT)



SOURCE: Adapted from Installation of Straw and Fabric Filter Barriers for Sediment Control, Sherwood & Wyant

PLATE. 3.05-2

SAFETY FENCE



SOURCE: CONWED PLASTICS AND VDOT ROAD AND BRIDGE STANDARDS

SAFETY FENCE
NOT TO SCALE

PLATE 3.01-1 (SAF)

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7601 | fax 434.947.7601 | web wileywilson.com

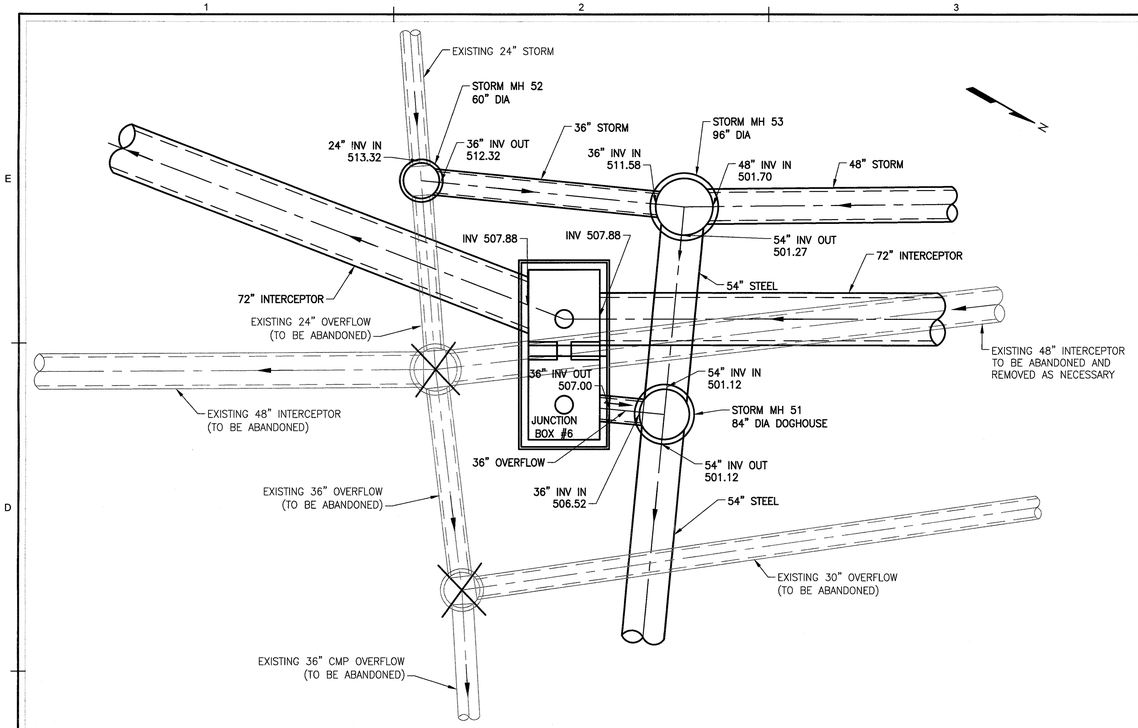
COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 38485
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

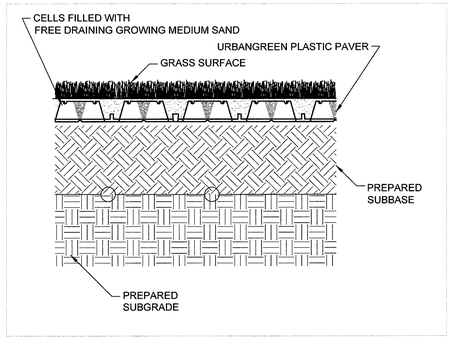
COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	EROSION & SEDIMENT CONTROL NARRATIVE & DETAILS
SHT. NO.	C-501
REV. NO.	0

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Civil \2012\213169C-501.dwg October 11, 2013



JUNCTION BOX #6 LAYOUT (SEE STRUCTURAL DETAILS, S-102 & S-501)

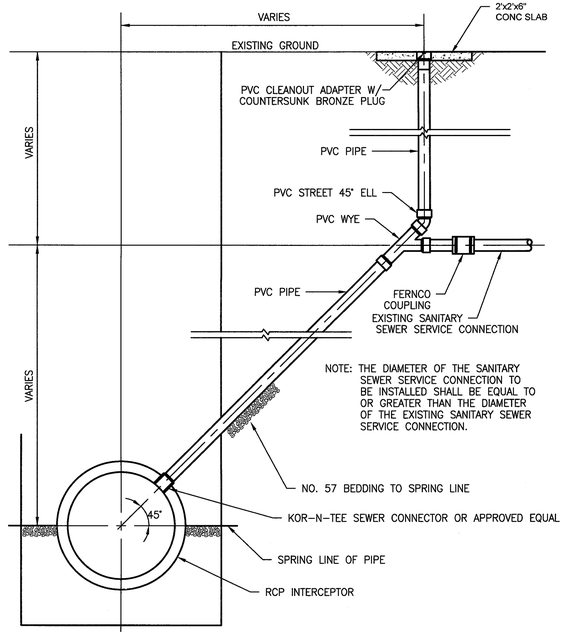
SCALE: 1" = 10'



FILL PAVERS WITH THE SPECIFIED SAND: SOIL ROOTZONE. FILL MATERIAL SHALL BE INSTALLED NO HIGHER THAN 1/4-INCH ABOVE THE TOP OF THE PAVER. ONCE THE FILL MATERIAL IS INSTALLED BRUSH THE TOP OF THE PAVERS WITH A FINISHING BROOM OR USE A LIGHT VIBRATING PLATE TO CONSOLIDATE THE PAVERS AND TO SETTLE THE ROOTZONE INFILL

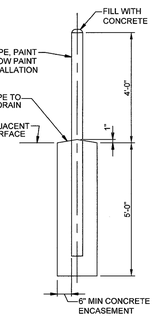
SECTION - GRASS PAVED AREA

NOT TO SCALE



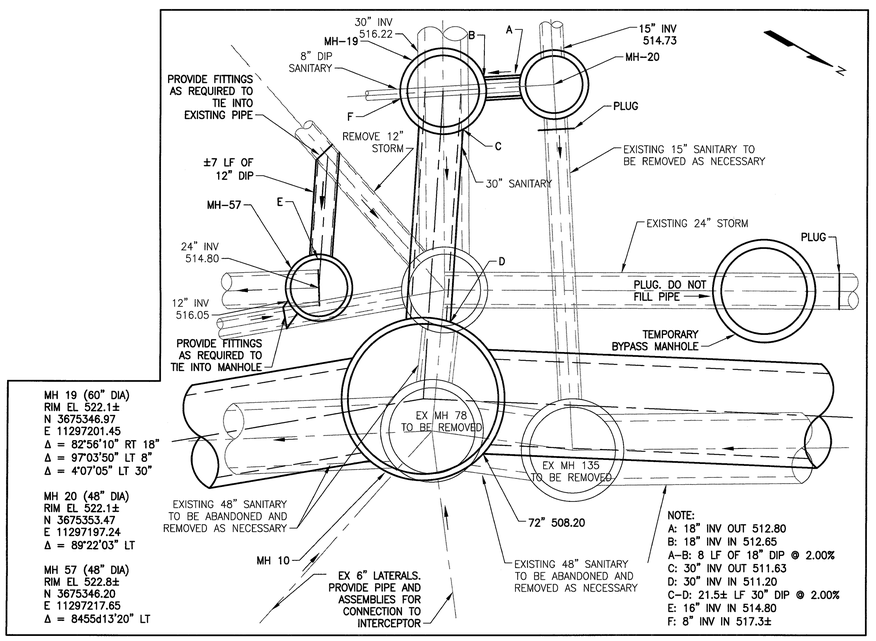
SANITARY SEWER SERVICE CONNECTION TO RCP INTERCEPTOR

NOT TO SCALE



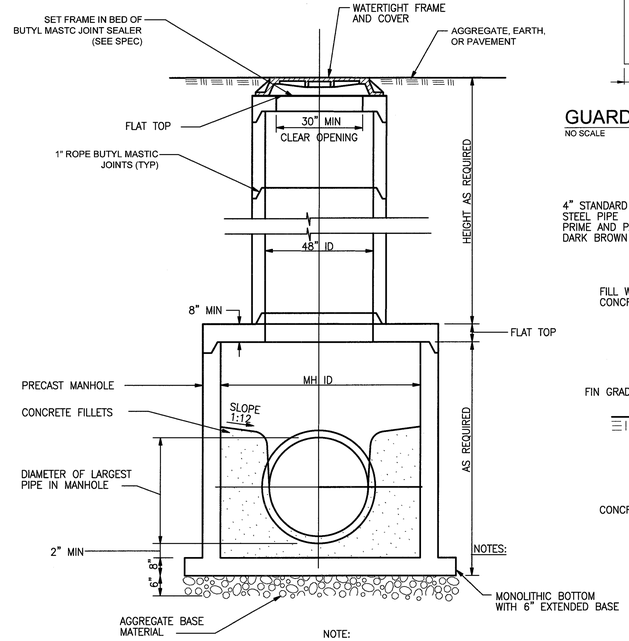
GUARDPOST DETAIL

NO SCALE



10TH STREET CONNECTION

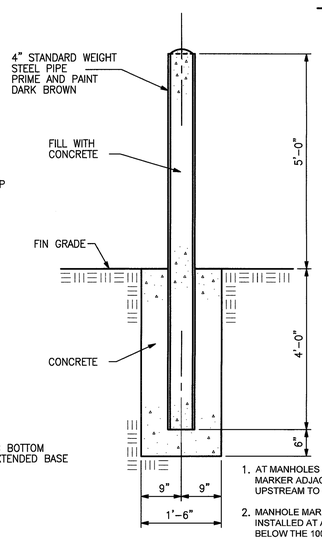
SCALE: 1" = 5'



NOTE:
FOR PIPES 36" DIAMETER AND ABOVE.

STANDARD PRECAST MANHOLE FOR INTERCEPTOR SEWERS

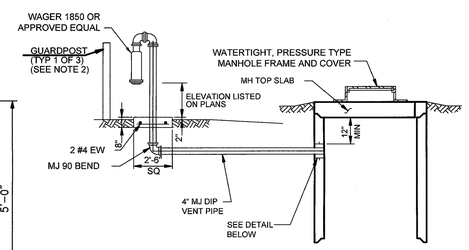
NOT TO SCALE



1. AT MANHOLES WITH VENTS, LOCATE MARKER ADJACENT TO AND UPSTREAM TO VENT PIPE.
2. MANHOLE MARKERS SHALL BE INSTALLED AT ALL MANHOLES LOCATED BELOW THE 100 YEAR FLOOD LEVEL.

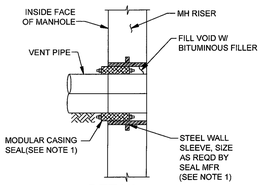
MANHOLE MARKER DETAIL

NOT TO SCALE



SECTION

NO SCALE



DETAIL

NO SCALE

1. STEEL WALL SLEEVE TO BE CUT IN HALF TO FACILITATE WALL JOINT CONSTRUCTION.
2. PLACE THREE GUARDPOSTS IN EQUILATERAL TRIANGULAR LAYOUT OFFSET 3 FEET FROM CENTER OF VENT RISER.

VENT DETAIL

NOT TO SCALE

Wiley|Wilson®
Constant Progress
122 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1901 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
WAYNE R. MASSIE
Lic. No. 36495
10/11/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	OCTOBER 11, 2013
DRAWN: RDL	DESIGN: WRM
CHECK:	WRM
SHEET TITLE	SITE IMPROVEMENTS DETAILS
SHT. NO.	C-502
REV. NO.	0

X:\2013\213169 Lynbg JRI 3B Redesign\CAD\Civil \2012\213169C-502.dwg October 11, 2013

STRUCTURAL GENERAL NOTES:

A. GENERAL

1. THE DESIGN OF THE STRUCTURE COMPLIES WITH THE INTERNATIONAL BUILDING CODE 2009 AND THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE "USBC" (2009 EDITION).

2. REPRODUCTION OF THE STRUCTURAL CONTRACT DOCUMENTS IN ANY FASHION AS STRUCTURAL SHOP DRAWING DOCUMENTS SHALL NOT BE PERMITTED.

3. SCALES NOTED ON THE DRAWINGS ARE FOR GENERAL INFORMATION ONLY. NO DIMENSIONAL INFORMATION SHALL BE OBTAINED BY DIRECT SCALING OF THE DRAWINGS.

4. DETAILS, SECTIONS AND NOTES SHOWN ON THESE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR CONDITIONS ELSEWHERE UNLESS OTHERWISE SHOWN OR NOTED.

5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL RESULTING REVISIONS TO THE STRUCTURAL SYSTEM AS A RESULT OF ACCEPTANCE OF CONTRACTOR PROPOSED ALTERNATIVES OR SUBSTITUTIONS.

6. THE GENERAL CONTRACTOR (OR CONSTRUCTION MANAGER) SHALL SUBMIT SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS FOR APPROVAL. THE STRUCTURAL ENGINEER WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT IF THE GENERAL CONTRACTOR FAILS TO OBTAIN APPROVAL OF THE SHOP DRAWINGS. SHOP DRAWINGS ARE REVIEWED AS A CONVENIENCE TO THE GENERAL CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT. THE GENERAL CONTRACTOR SHALL STATE ON THE SHOP DRAWINGS THAT CONTRACT DOCUMENT REQUIREMENTS HAVE BEEN MET AND THAT ALL DIMENSIONS, CONDITIONS AND QUANTITIES HAVE BEEN REVIEWED AND VERIFIED AS SHOWN AND/OR CORRECTED ON THE SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE STRUCTURAL ENGINEER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING AND SHORING, AS REQUIRED, TO ENSURE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE OR PORTION THEREOF DURING CONSTRUCTION.

8. TEMPORARY BRACING SHALL BE PROVIDED FOR ALL WALLS SUBJECT TO UNBALANCED BACKFILL. BRACE WALL PLUMB UNTIL STABILIZING ELEMENT ABOVE IS IN PLACE AND HAS ACHIEVED AT LEAST 75 PERCENT OF ITS DESIGN STRENGTH.

9. ALL WALLS ARE DESIGNED AS LATERALLY BRACED BY THE FLOOR SYSTEMS. CONTRACTOR SHALL ENSURE THAT WALLS ARE ADEQUATELY BRACED DURING CONSTRUCTION.

10. THE STRUCTURE HAS BEEN DESIGNED FOR THE IN-SERVICE LOADS ONLY. THE METHODS, PROCEDURES, AND SEQUENCES OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUPPORTING FORMWORK FOR THE CONCRETE CONSTRUCTION SHALL NOT BE REMOVED BEFORE THE CONCRETE HAS GAINED SUFFICIENT STRENGTH TO SAFELY SUPPORT THE DEAD AND SUPERIMPOSED LOADS WHICH WOULD BE SUBSEQUENTLY APPLIED. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.

11. INSTALLATION OF POST INSTALLED ANCHORS INCLUDING BUT NOT LIMITED TO ADHESIVE ANCHORS, EXPANSION ANCHORS, AND LOW VELOCITY FASTENERS SHALL FOLLOW ALL MANUFACTURER REQUIREMENTS LISTED IN THE ASSOCIATED CODE EVALUATION REPORTS INCLUDING INSTALLATION INSPECTION REQUIREMENTS.

12. WATERSTOPS WHERE INDICATED ON DRAWINGS SHALL BE AIMCO TYPE 8040, GREENSTREAK STYLE 741, OR APPROVED EQUAL.

B. CONCRETE

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301, ACI 318, ACI 350, AND ACI 302.

2. PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 4,000 PSI AT 28 DAYS AND A MAXIMUM WATER/CEMENT RATIO OF 0.45. USE NORMAL WEIGHT AGGREGATES CONFORMING TO ASTM C33 AND TYPE II PORTLAND CEMENT CONFORMING TO ASTM C150. ALL CONCRETE SHALL BE AIR ENTRAINED.

3. FLY ASH CONFORMING TO ASTM C618, TYPE C OR F MAY BE USED AS TO REPLACE A PORTION OF THE PORTLAND CEMENT IN CONCRETE MIX. THE AMOUNT OF PORTLAND CEMENT CONTENT SHALL NOT BE LESS THAN 75 PERCENT OF THE TOTAL AMOUNT OF CEMENTITIOUS MATERIAL IN THE MIX.

4. GROUND GRANULATED BLAST-FURNACE SLAG CONFORMING TO ASTM C989, MAY BE USED TO REPLACE A PORTION OF THE PORTLAND CEMENT IN THE CONCRETE MIX. THE AMOUNT OF PORTLAND CEMENT CONTENT SHALL NOT BE LESS THAN 70 PERCENT OF THE TOTAL AMOUNT OF CEMENTITIOUS MATERIAL IN THE MIX.

5. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60. REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT UNLESS INDICATED ON THE CONTRACT DOCUMENTS OR APPROVED BY THE STRUCTURAL ENGINEER.

6. DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".

7. MIX, TRANSPORT AND PLACE CONCRETE PER THE RECOMMENDATIONS OF ACI 301.

8. PROVIDE CONCRETE COVER PROTECTION OF REINFORCEMENT PER ACI 350 SECTION 7.7 WITH STANDARD BAR CHAIRS AND SPACERS REQUIRED TO MAINTAIN MINIMUM CONCRETE PROTECTION. COMMON MINIMUM CONCRETE COVERS APPLYING TO THIS PROJECT:

   a. CAST AGAINST AND PERMANENTLY EXPOSED EARTH ..... 3 INCHES
   b. CONCRETE EXPOSED TO EARTH, LIQUID, OR WEATHER..... 2 INCHES

9. REINFORCEMENT DESIGNATED AS "CONTINUOUS" SHALL LAP 36 BAR DIAMETERS AT SPLICES UNLESS NOTED OTHERWISE.

10. HORIZONTAL FOOTING AND HORIZONTAL WALL REINFORCEMENT SHALL BE CONTINUOUS AND SHALL HAVE 90-DEGREE BENDS AND EXTENSIONS, OR CORNER BARS OF EQUIVALENT SIZE LAPPED 36 BAR DIAMETERS, AT CORNERS AND INTERSECTIONS.

11. HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS.

12. PROVIDE HORIZONTAL CONSTRUCTION JOINTS ONLY WHERE SHOWN IN THE CONTRACT DOCUMENTS. AT HORIZONTAL JOINTS, ROUGHEN THE LOWER CONTACT SURFACE WITH ABOUT A ½ INCH AMPLITUDE. REMOVE ANY LAITANCE FROM THE HARDENED CONTACT SURFACE AND MAINTAIN A CLEAN CONTACT SURFACE FOR THE ADJOINING POUR.

13. SHORING UNDER FORMS SHALL NOT BE REMOVED UNTIL THE CONCRETE IT SUPPORTS IS CAPABLE OF SUPPORTING ITS SELF WEIGHT AND ALL SUPERIMPOSED LOADS.

C. STEEL

1. UNLESS NOTED OTHERWISE, ALL NEW STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

   a. ANGLES/CHANNELS/PLATES..... ASTM A276, TYPE 316L (STAINLESS STEEL)

2. BOLTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE HIGH STRENGTH STAINLESS STEEL BOLTS PER THE REQUIREMENTS OF ASTM F593. UNLESS NOTED OTHERWISE, PROVIDE BOLTS DESIGNED AS BEARING TYPE BOLTS AND INSTALL PER THE "SNUG TIGHT" CONDITION, INSTALL A HARDENED STAINLESS STEEL WASHER UNDER THE ELEMENT TO BE TIGHTENED.

3. PERFORM WELDING IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARD D1.6.

C. SHEETING AND SHORING

1. TEMPORARY SHEETING AND SHORING SHALL BE DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER HIRED BY THE CONTRACTOR TO MEET THE REQUIREMENTS OF THE LOCAL GOVERNING JURISDICTION.

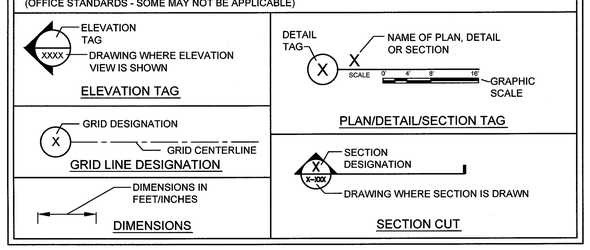
2. SUBMIT SHEETING AND SHORING CALCULATIONS AND SHOP DRAWINGS WITH THE RESPONSIBLE ENGINEER'S SEALED AND SIGNATURE FOR THE STATE WHERE THE CONSTRUCTION TAKES PLACE.

ABBREVIATIONS:

AHR	ANCHOR	REINF.	REINFORCE(MENT)
C-C	CENTER-T0-CENTER	SPCS	SPACES
CLR	CLEAR	SS	STAINLESS STEEL
CONC.	CONCRETE	STD	STANDARD
EA	EACH	T/	TOP OF
EF	EACH FACE	TYP	TYPICAL
EL.	ELEVATION	VERT.	VERTICAL
EQ.	EQUAL	W/	WITH
EW	EACH WAY	&	AND
EXIST.	EXISTING	@	AT
EXT	EXTENSION	℄	CENTER LINE
FB	FLAT BAR	°	DEGREES
HK	HOOK	Ø	DIAMETER
INV.	INVERT	<	LESS THAN
LLH	LONG LEG HORIZONTAL	#	NUMBER
MAX.	MAXIMUM		
MH	MANHOLE		
MIN.	MINIMUM		
O.C.	ON CENTER		
RCP	REINFORCED CONCRETE PIPE		

STRUCTURAL SYMBOLS

(OFFICE STANDARDS - SOME MAY NOT BE APPLICABLE)



Wiley|Wilson® Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434-947-7601 | fax 434-947-1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
SCOTT M. FRANCIS
Lic. No. 039500
9/3/13
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

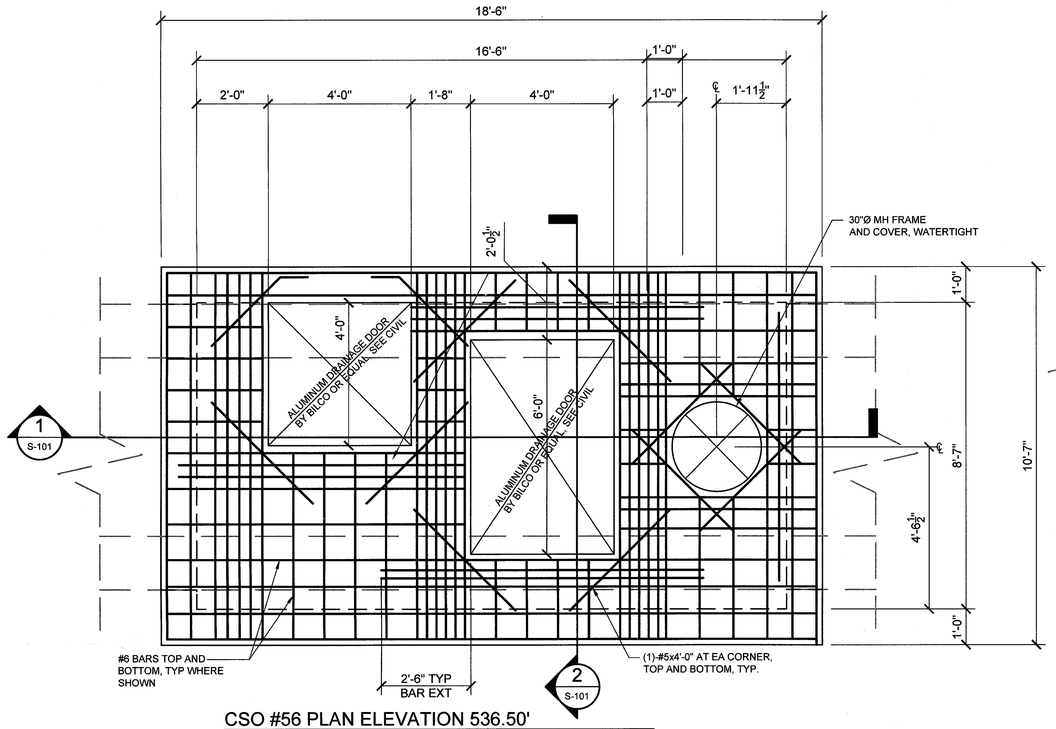
COMM NO:	213169.00
DATE:	SEPTEMBER 3, 2013
DRAWN: NKT	DESIGN: SMF
CHECK: SMF	----

SHEET TITLE

GENERAL NOTES

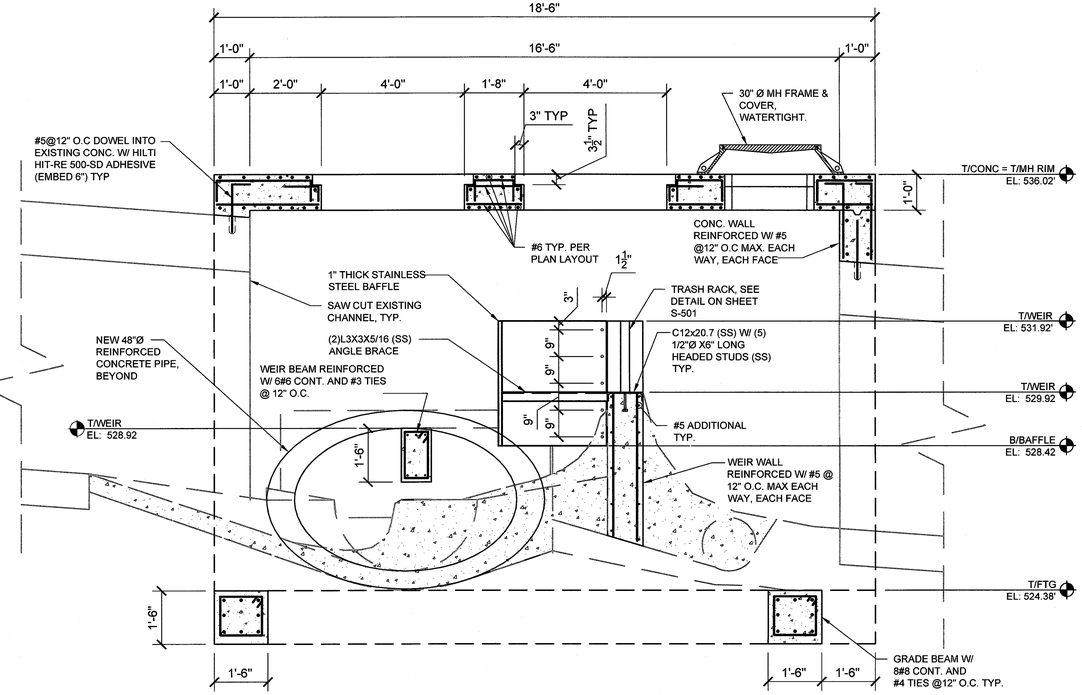
SHT. NO. S-001 | REV. NO. 0

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Struc\213169S-001.dwg September 3, 2013



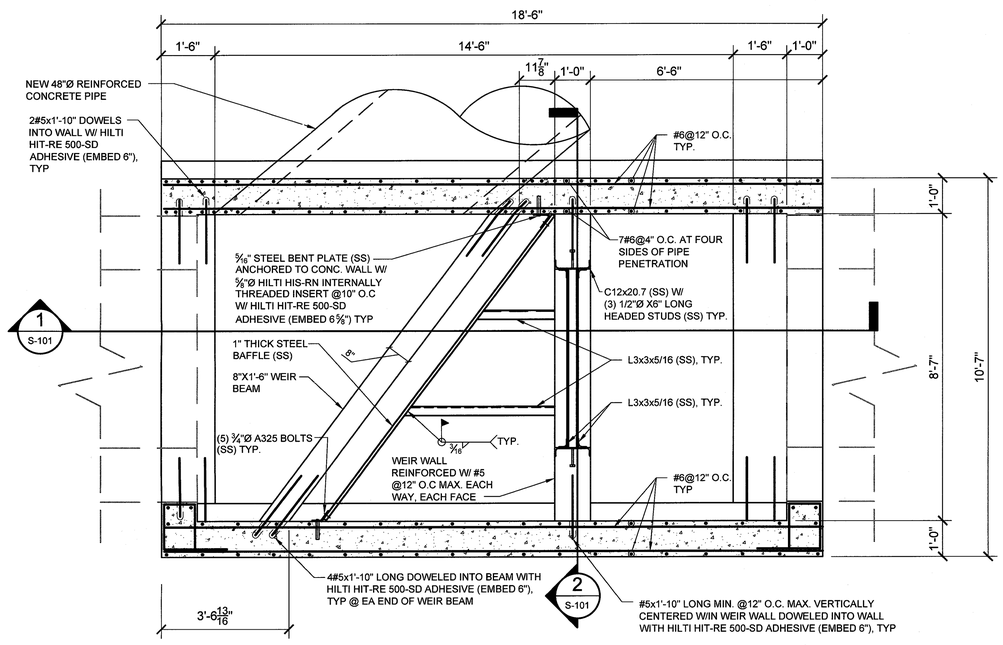
CSO #56 PLAN ELEVATION 536.50'

SCALE: ½"= 1'-0"



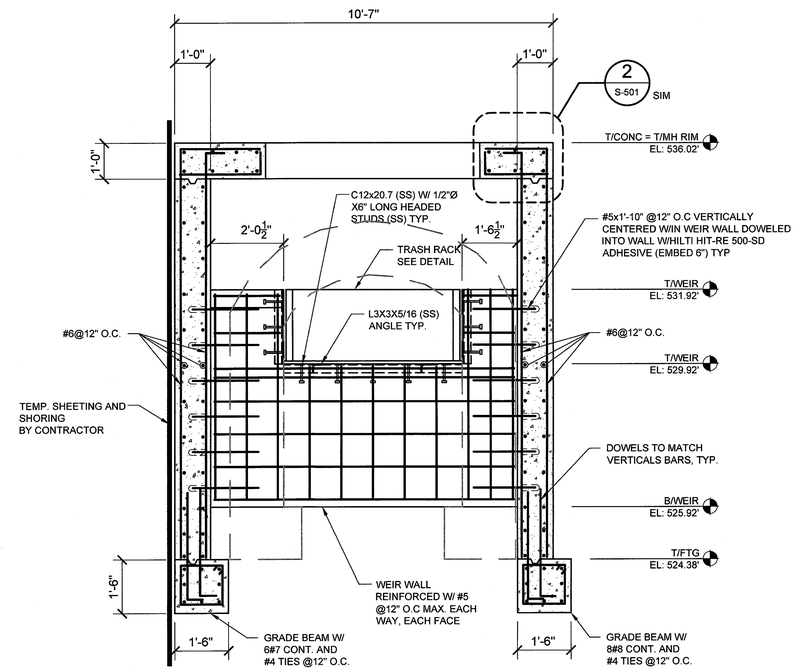
SECTION

SCALE: ½"= 1'-0"



CSO #56 PLAN ELEVATION 533.00'

SCALE: ½"= 1'-0"



SECTION

SCALE: ½"= 1'-0"

1' 0 1' 2' 3' 4' 5'

SCALE: 1/2" = 1'-0

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1801 | fax 434.947.1801 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
SCOTT M. FRANCIS
Lic. No. 039500
9/5/2013
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

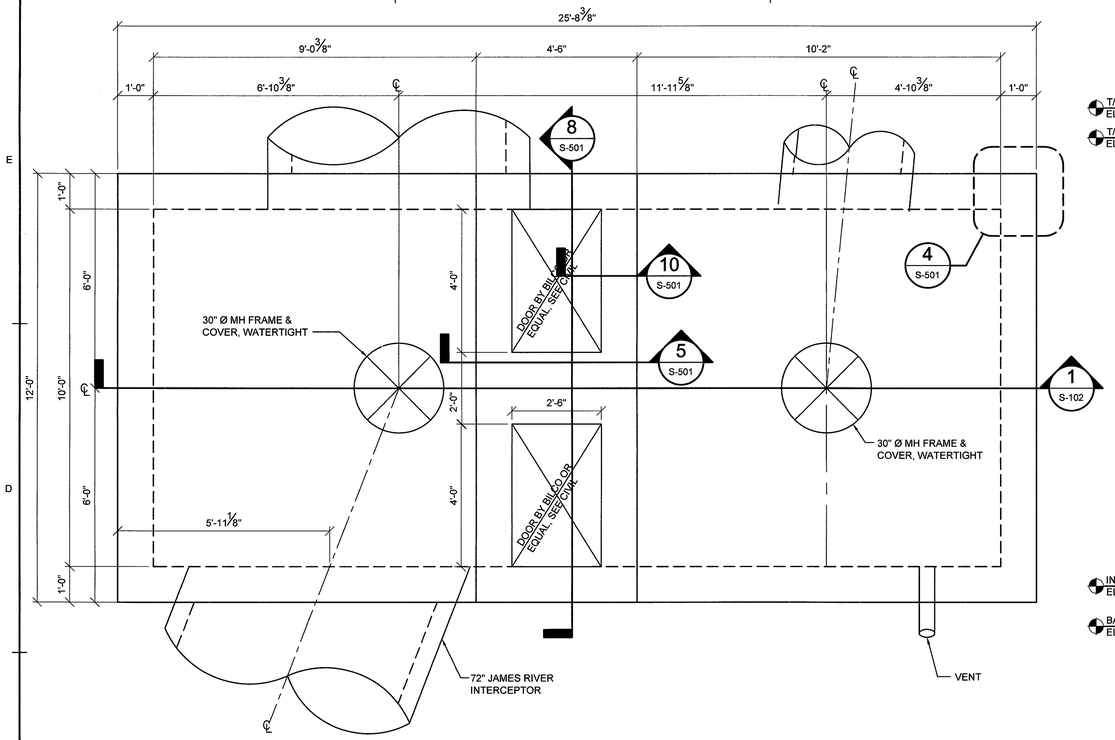
COMM NO:	213169.00
DATE:	SEPTEMBER 3, 2013
DRAWN: NKT	DESIGN: SMF
CHECK: SMF	-----

SHEET TITLE

CSO #56 NEW VAULT PLAN & SECTION VIEWS

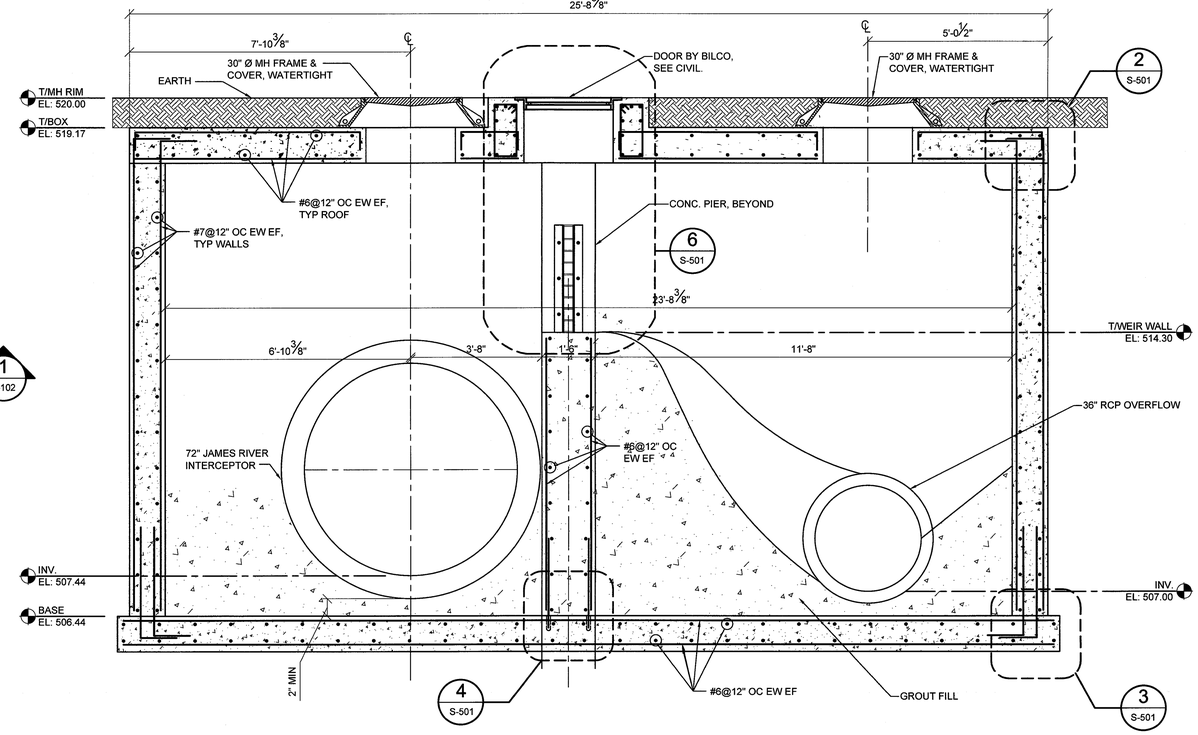
SHT. NO. **S-101** REV. NO. **0**

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Struc\213169_101.dwg September 3, 2013



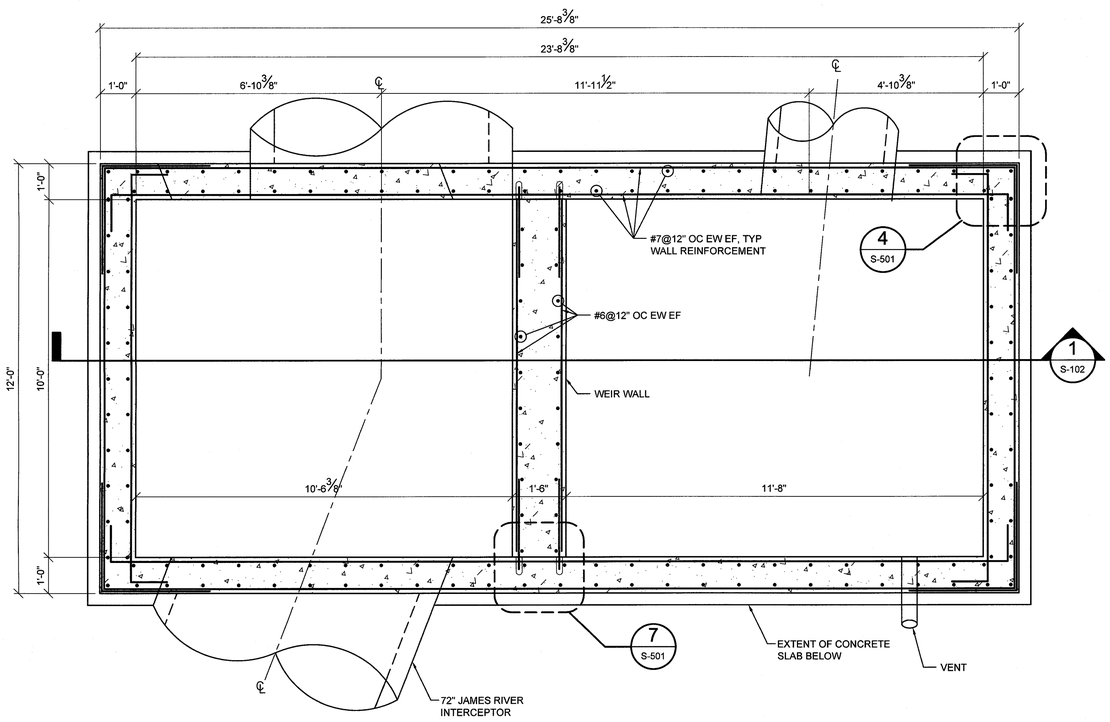
JUNCTION BOX #6 PLAN ELEVATION 519.20'

SCALE: ½"= 1'-0"



1 JUNCTION BOX #6 SECTION

S-102 SCALE: ½"= 1'-0"



JUNCTION BOX #6 PLAN ELEVATION 506.50'

SCALE: ½"= 1'-0"

1' 0 1' 2' 3' 4' 5'

SCALE: 1/2" = 1'-0

Wiley|Wilson®
Constant Progress
127 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.1001 | fax 434.947.1601 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
SCOTT M. FRANCIS
Lic. No. 039500
9/6/2013
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES

JAMES RIVER INTERCEPTOR
DIVISION 3B

LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

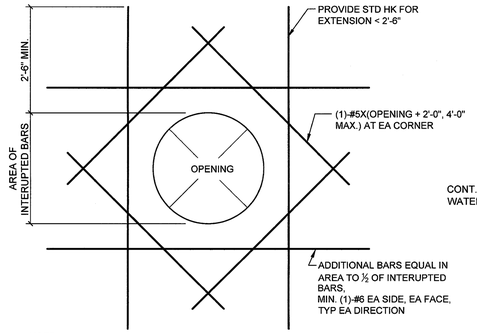
COMM NO:	213169.00
DATE:	SEPTEMBER 3, 2013
DRAWN: NKT	DESIGN: SMF
CHECK: SMF	
SHEET TITLE	

JUNCTION BOX #6 PLAN & SECTION VIEWS

SHT. NO. **S-102** REV. NO. **0**

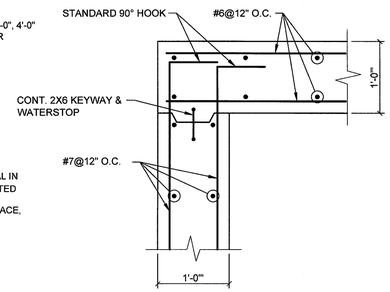
X:\2013\213169 Lybg JRI 3B Redesign\CAD\Struc\213169S-102.dwg September 3, 2013

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Struc\213169S-102.dwg September 3, 2013

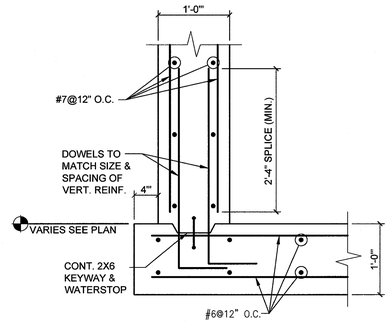


NOTE:
BARS INDICATED ARE NOT REQUIRED AT OPENINGS OF 10" OR LESS.

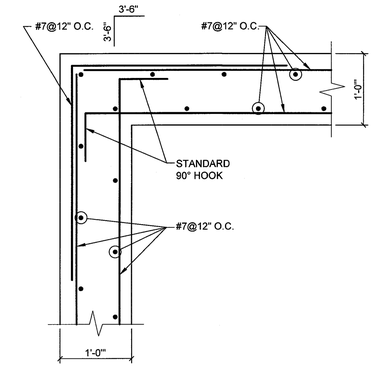
TYPICAL WALL & SLAB OPENING DETAIL — 1
SCALE: 1"= 1'-0"
S-101, S-102



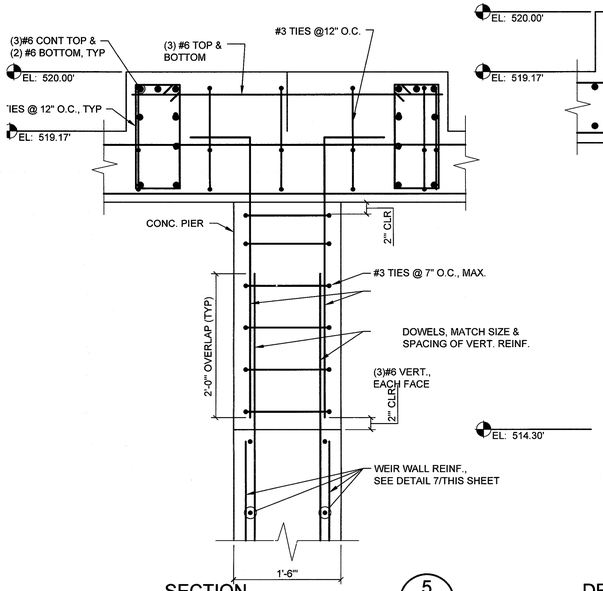
SECTION AT TOP — 2
SCALE: 1"= 1'-0"
S-101, S-102



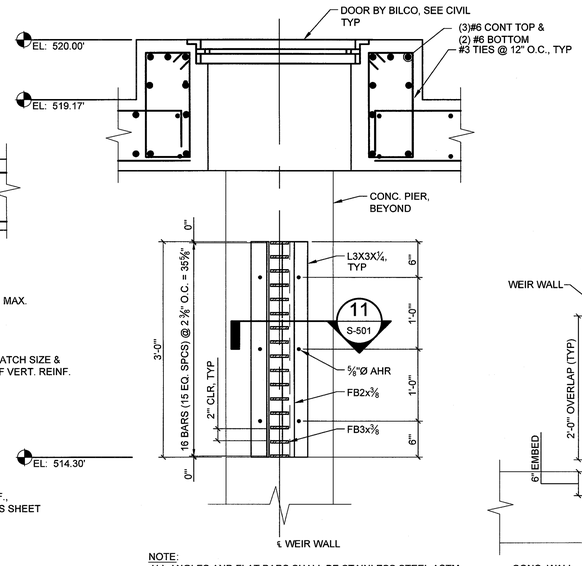
SECTION AT BASE — 3
SCALE: 1"= 1'-0"
S-102



TYPICAL CORNER DETAIL — 4
SCALE: 1"= 1'-0"
S-101

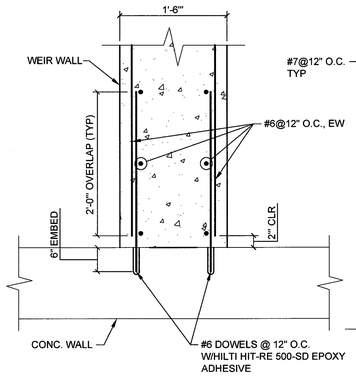


SECTION — 5
SCALE: 1"= 1'-0"
S-102

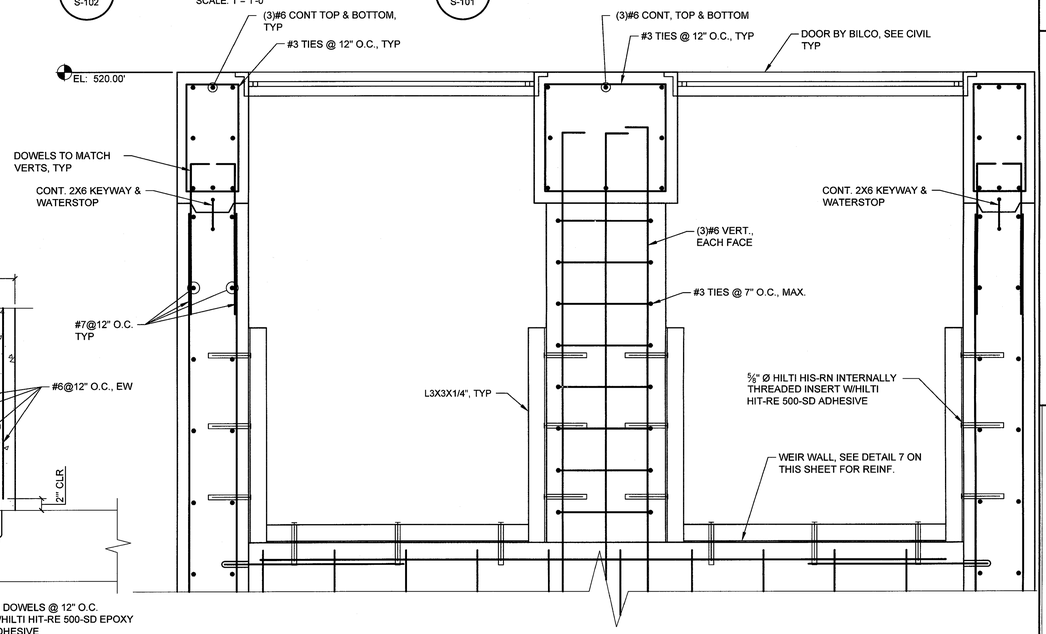


NOTE:
ALL ANGLES AND FLAT BARS SHALL BE STAINLESS STEEL ASTM A276 TYPE 316L.

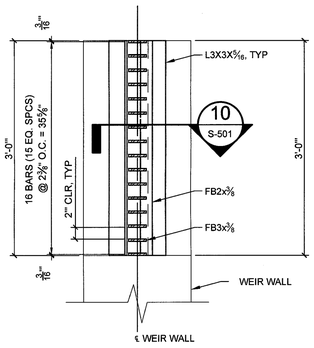
DETAIL — 6
SCALE: 1"= 1'-0"
S-102



DETAIL — 7
SCALE: 1"= 1'-0"
S-102

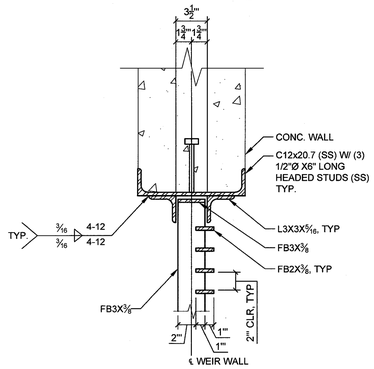


SECTION — 8
SCALE: 1/2"= 1'-0"
S-102



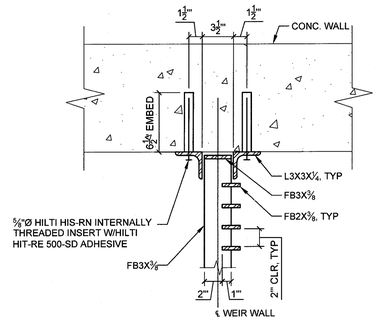
NOTE:
ALL ANGLES AND FLAT BARS SHALL BE STAINLESS STEEL ASTM A276 TYPE 316L.

TRASH RACK SUPPORT DETAIL — 9
SCALE: 1"= 1'-0"
S-102



NOTE:
ALL ANGLES, CHANNELS, FLAT BARS, AND HEADED STUDS SHALL BE STAINLESS STEEL ASTM A276 TYPE 316L.

SECTION — 10
SCALE: 1-1/2"= 1'-0"
S-501



SECTION — 11
SCALE: 1-1/2"= 1'-0"
S-501

Wiley|Wilson®
Constant Progress
327 Nationwide Drive, Lynchburg, Virginia 24502-4272
phone 434.947.7801 | fax 434.947.7801 | web wileywilson.com

COMMONWEALTH OF VIRGINIA
SCOTT M. FRANCIS
Lic. No. 039500
9/5/2013
PROFESSIONAL ENGINEER

DEPARTMENT OF WATER RESOURCES
JAMES RIVER INTERCEPTOR
DIVISION 3B
LYNCHBURG, VIRGINIA

MRK	DATE	REVISION DESCRIPTION

COMM NO:	213169.00
DATE:	SEPTEMBER 3, 2013
DRAWN: NKT	DESIGN: SMF
CHECK: SMF	
SHEET TITLE	DETAILS
SHT. NO. S-501	REV. NO. 0

X:\2013\213169 Lybg JRI 3B Redesign\CAD\Struc\213169S-501.dwg September 3, 2013
X:\2013\213169 Lybg JRI 3B Redesign\CAD\Struc\213169S-501.dwg September 3, 2013