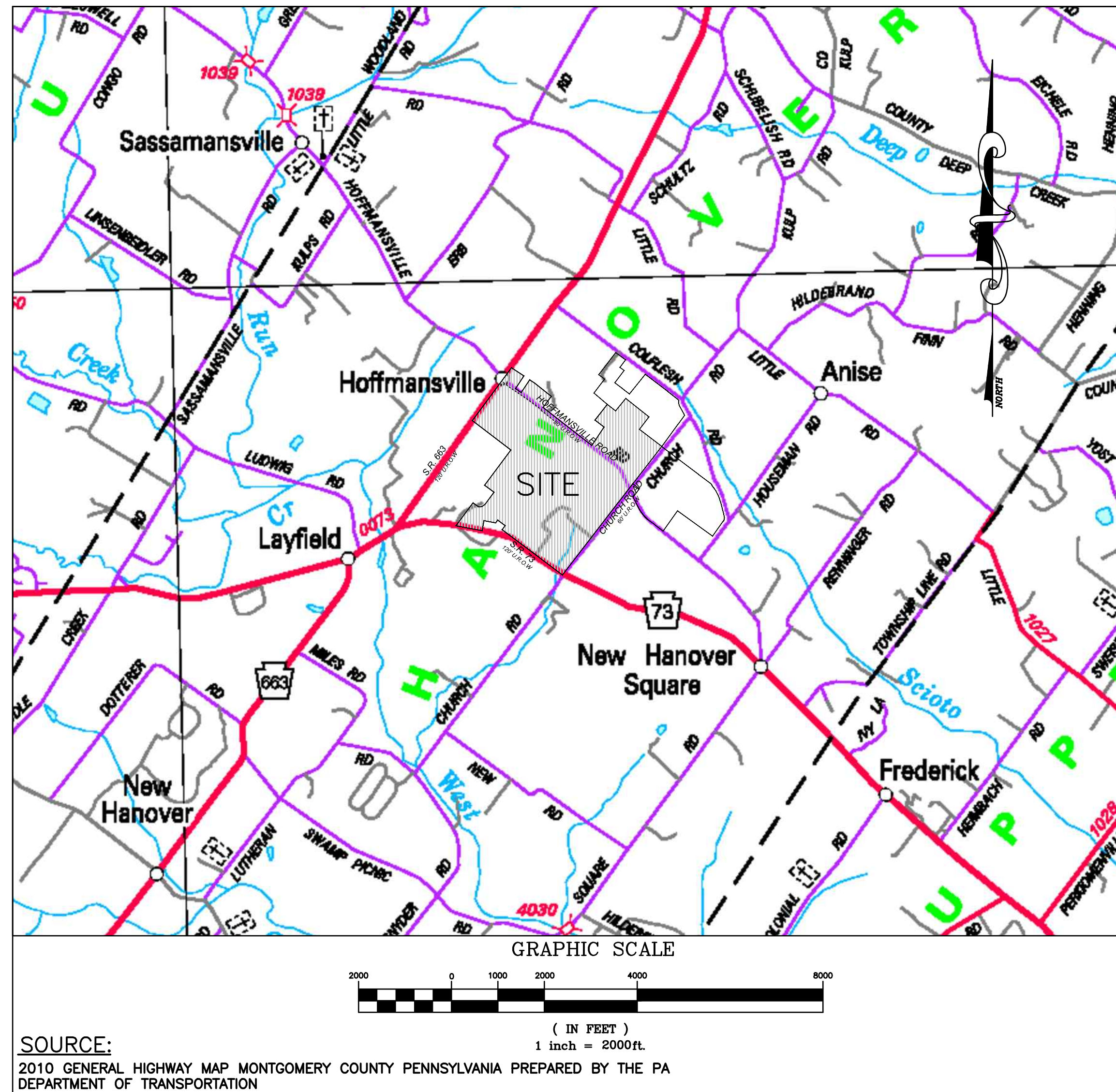


FINAL LAND DEVELOPMENT PLANS FOR GIBRALTAR ROCK QUARRY

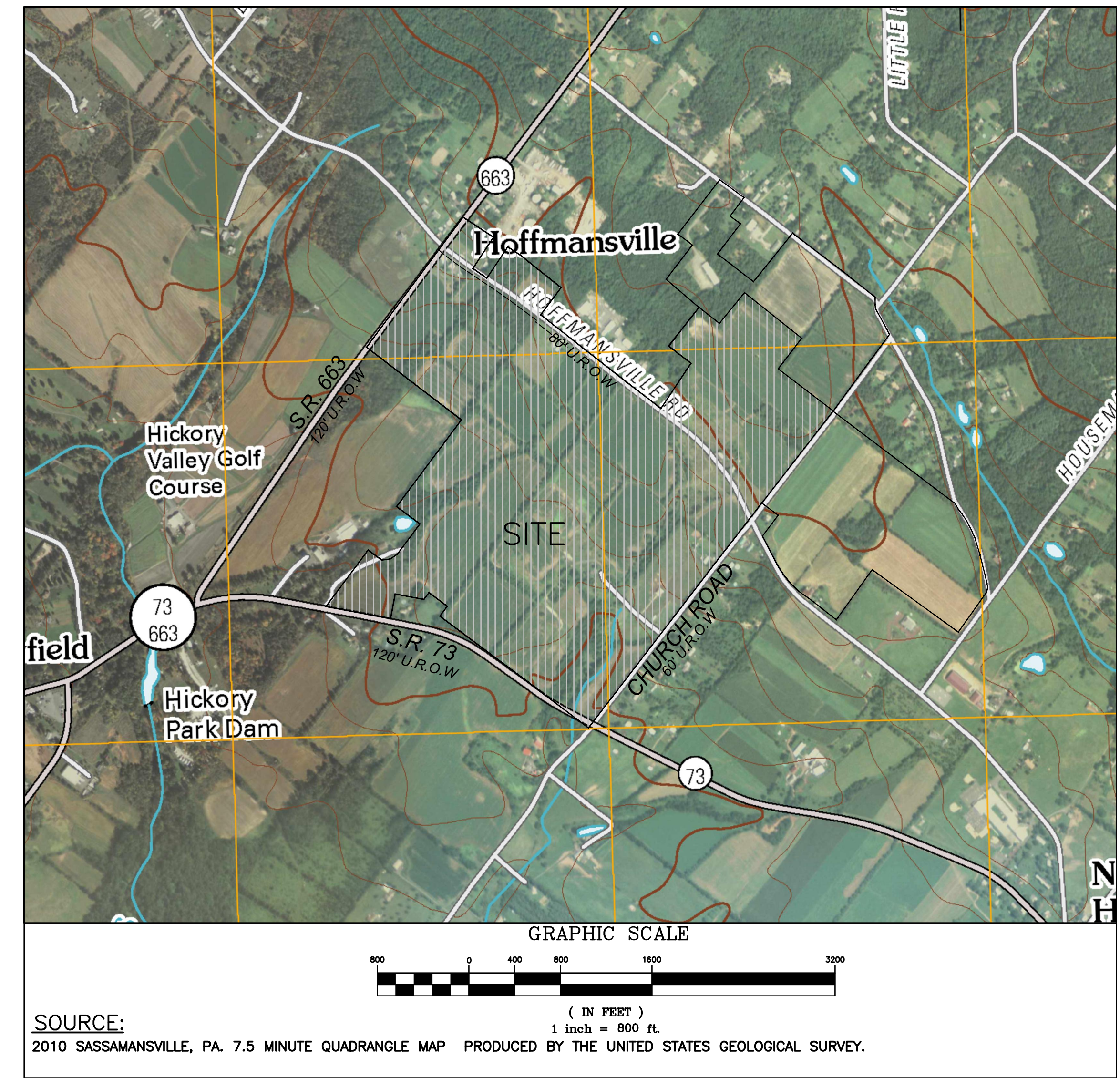
GIBRALTAR ROCK, INC.
NEW HANOVER TOWNSHIP, MONTGOMERY COUNTY
COMMONWEALTH OF PENNSYLVANIA



DRAWING NUMBER	DRAWING NAME
C-1	COVER SHEET (TO BE RECORDED 1 OF 8)*
C-2	GENERAL SITE NOTES (TO BE RECORDED 2 OF 8)*
C-3	OVERALL SITE PLAN (TO BE RECORDED 3 OF 8)*
C-4	SITE PLAN (TO BE RECORDED 4 OF 8)*
C-5	SITE PLAN (TO BE RECORDED 5 OF 8)*
C-6	EXISTING CONDITIONS DEMOLITION PLAN
C-7	EXISTING CONDITIONS DEMOLITION PLAN
C-8	GRADING AND UTILITY PLAN
C-9	GRADING AND UTILITY PLAN
C-10	GRADING AND UTILITY PLAN
C-11	EROSION CONTROL AND SEDIMENT PLAN
C-12	EROSION CONTROL AND SEDIMENT PLAN
C-13	LIGHTING & LANDSCAPING PLAN
C-14	LIGHTING & LANDSCAPING PLAN
C-15	LIGHTING & LANDSCAPING PLAN
C-16	LIGHTING & LANDSCAPING PLAN
C-17	LIGHTING & LANDSCAPING PLAN
C-18	LIGHTING & LANDSCAPING PLAN
C-19	LIGHTING & LANDSCAPING DETAILS
C-20	STORMWATER PROFILES & DETAILS (1 OF 3)
C-21	STORMWATER PROFILES & DETAILS (2 OF 3)
C-22	STORMWATER PROFILES & DETAILS (3 OF 3)
C-23	DETAILS
C-24	DETAILS
C-25	DETAILS
C-26	DETAILS
C-27	EROSION AND SEDIMENT CONTROL DETAILS
C-28	EROSION AND SEDIMENT CONTROL DETAILS
C-29	EROSION AND SEDIMENT CONTROL DETAILS
C-30	EROSION AND SEDIMENT CONTROL DETAILS
C-31	RECLAMATION PLAN
C-32	HOFFMANSVILLE ROAD RIGHT-OF-WAY DEDICATION PLAN (TO BE RECORDED 6 OF 8)*
C-33	CHURCH ROAD RIGHT-OF-WAY DEDICATION PLAN (TO BE RECORDED 7 OF 8)*
C-34	STORMWATER EASEMENTS PLAN (TO BE RECORDED 8 OF 8)*

NOTES:

* - SHEETS INTENDED TO BE RECORDED AT THE MONTGOMERY COUNTY RECORDER OF DEEDS OFFICE.



GENERAL NOTES:

1. OWNERS:

GIBRALTAR ROCK, INC. 355 NEWBOLD ROAD FAIRLESS HILLS, PA 19030 215-295-0777	SAHARA SAND, INC. 355 NEWBOLD ROAD FAIRLESS HILLS, PA 19030 215-295-0777
--	---

APPLICANTS:

GIBRALTAR ROCK, INC.
355 NEWBOLD ROAD
FAIRLESS HILLS, PA 19030
215-295-0777

2. TAX MAP PARCEL AND DEED INFORMATION:

TP: 47-00-00908-00-8 BK.: 5353 PAGE NO. 1956 LOT SIZE: 66.39 AC.	TP: 47-00-002536-00-9 BK.: 5353 PAGE NO. 1963 LOT SIZE: 55.95 AC.
TP: 47-00-00906-00-1 BK.: 5353 PAGE NO. 1956 LOT SIZE: 6.21 AC.	TP: 47-00-02512-006 BK.: 5580 PAGE NO. 02519 LOT SIZE: 33.61 AC.
TP: 47-00-00904-00-3 BK.: 5368 PAGE NO. 2146 LOT SIZE: 1.17 AC.	TP: 47-00-02688-00-1 BK.: 5580 PAGE NO. 02514 LOT SIZE: 4.168 AC.
TP: 47-00-00016-00-9 BK.: 5353 PAGE NO. 1956 LOT SIZE: 34.69 AC.	TP: 47-00-02692-00-6 BK.: 5395 PAGE NO. 1895 LOT SIZE: 15.84 AC.

PREPARED BY:



P.O. Box 468
6912 Old Easton Road
Pipersville, PA 18947 USA

P.O. Box 794
Morgantown, WV 26505

www.earthres.com

PA office 215.766.1211
WV office 304.212.6866
toll free 800.264.4553

DRAWN BY: Date	CHECKED BY: Date	PROJECT NO: 0210222544	DRAWING NUMBER: C-1	NO.	DATE	BY	REVISIONS
COVER SHEET (TO BE RECORDED 1 OF 8)				PROJECT SITE: GIBRALTAR ROCK, INC. GIBRALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA			
				PREPARED FOR: GIBRALTAR ROCK, INC.			
FINAL LAND DEVELOPMENT PLANS FOR GIBRALTAR ROCK QUARRY				P.O. Box 468 6912 Old Easton Road Pipersville, PA 18947 USA P.O. Box 794 Morgantown, WV 26505 www.earthres.com PA office 215.766.1211 WV office 304.212.6866 toll free 800.264.4553			
SHEET 1 OF 34							

F:\PROJECTS\Silva\021022\029 Final Land Development\CAO\DRAWINGS\REV 1\021027.025_CS-Cover_Sheet.dwg Layout: C-1 User: J.Cervantes 08/21/2017 9:06

CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THE PLAN SHOWN AND DESCRIBED HEREON, AS WELL AS ALL DRAWINGS BEARING MY SEAL, ARE TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE NEW HANOVER TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AND WERE PREPARED BY ME OR UNDER MY DIRECTION AND FOR WHICH I ACCEPT FULL RESPONSIBILITY. THE PERIMETER MONUMENTS SHALL BE ACCURATELY PLACED AS REQUIRED BY THE TOWNSHIP.

_____, 20____ SIGNATURE OF ENGINEER

CERTIFICATE OF TOWNSHIP APPROVAL

(A) THE APPROVAL OF THE FINAL PLAN BY NEW HANOVER TOWNSHIP IN WHICH THE SUBDIVISION OR LAND DEVELOPMENT IS LOCATED MUST BE INDICATED ON THE RECORD PLAN IN SUBSTANTIALLY THE FOLLOWING FORM:

AT A MEETING HELD ON _____ THE BOARD OF SUPERVISORS OF NEW HANOVER TOWNSHIP BY RESOLUTION _____ DULY ENACTED AND APPROVED THE SUBDIVISION/LAND DEVELOPMENT PLAN OF THE PROPERTY OF GIBALTAR ROCK, INC. AS SHOWN HEREON.

CHAIRMAN OF THE BOARD OF SUPERVISORS TOWNSHIP SEAL TOWNSHIP SECRETARY

(B) AT A MEETING HELD ON _____ THE NEW HANOVER TOWNSHIP SEWER AUTHORITY APPROVED THE SUBDIVISION/LAND DEVELOPMENT PLAN OF THE PROPERTY OF GIBALTAR ROCK, INC. AS SHOWN HEREON.

CHAIRMAN OF THE SEWER AUTHORITY AUTHORITY SECRETARY

(C) THE RECOMMENDATION OF APPROVAL OF THE FINAL PLAN BY NEW HANOVER TOWNSHIP RECOMMENDED FOR APPROVAL ON _____

CHAIRMAN OF PLANNING COMMISSION

(D) REVIEWED BY THE TOWNSHIP ENGINEER ON THE _____ DAY OF _____

TOWNSHIP ENGINEER

MCPCC No. PROCESSED AND REVIEWED, A REPORT HAS BEEN PREPARED BY THE MONTGOMERY COUNTY PLANNING COMMISSION IN ACCORDANCE WITH THE MUNICIPALITIES PLANNING CODE. Certified this date _____ For the Director MONTGOMERY COUNTY PLANNING COMMISSION

CERTIFICATE OF THE COUNTY RECORDER OF DEEDS

RECORDED IN THE OFFICE OF RECORDER OF DEEDS FOR MONTGOMERY COUNTY AT NORRISTOWN, PENNSYLVANIA, THIS _____ DAY OF _____

BY: RECORDER OF DEEDS

SAHARA SAND, INC. (PARCELS 47-00-02512-00-6 AND 47-00-02688-00-1)

COMMONWEALTH OF PENNSYLVANIA : SS COUNTY OF MONTGOMERY

I, _____ OF SAHARA SAND, INC., HEREBY CERTIFY THAT SAHARA SAND, INC. IS THE OWNER OF THE LANDS HEREIN DESCRIBED AND THAT THERE ARE NO SUITS PENDING AFFECTING THE SAME AND THAT SAHARA SAND, INC. DOES HEREBY ADOPT THIS PLAN AND DESIRES THAT THE SAME TO BE RECORDED. I, _____ ON BEHALF OF SAHARA SAND, INC., ITS SUCCESSORS AND ASSIGNS, DO FURTHER SAVE THE TOWNSHIP HARMLESS AND INDEMNIFY THE TOWNSHIP OF NEW HANOVER AGAINST ANY LIABILITY OF THE LOSS RESULTING FROM THE DEVELOPMENT OF THE PROPERTY FOR WHATEVER REASON, PRESENT OR FUTURE.

(NAME, TITLE)

ON THIS DAY OF 201____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED WHO ACKNOWLEDGED HIMSELF/HERSELF TO BE THE OF SAHARA SAND, INC., BEING AUTHORIZED TO DO SO DEPOSES AND SAYS THAT SAHARA SAND, INC. IS THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE LAND DEVELOPMENT PLAN THEREOF WAS MADE AT ITS DIRECTION, THAT HE/SHE ACKNOWLEDGES THE SAME TO BE ITS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

IN WITNESS WHEREOF; I HERETO SET MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC COMMISSION EXPIRES NOTARY SEAL

GIBALTAR ROCK, INC. (PARCELS 47-00-00908-00-8, 47-00-00906-00-1, 47-00-00904-00-3, 47-00-00016-00-09, 47-00-02692-00-6 AND 47-00-02536-00-9)

COMMONWEALTH OF PENNSYLVANIA : SS COUNTY OF MONTGOMERY

I, _____ OF GIBALTAR ROCK, INC., HEREBY CERTIFY THAT GIBALTAR ROCK, INC. IS THE OWNER OF THE LANDS HEREIN DESCRIBED AND THAT THERE ARE NO SUITS PENDING AFFECTING THE SAME AND THAT GIBALTAR ROCK, INC. DOES HEREBY ADOPT THIS PLAN AND DESIRES THAT THE SAME TO BE RECORDED. I, _____ ON BEHALF OF GIBALTAR ROCK, INC., ITS SUCCESSORS AND ASSIGNS, DO FURTHER SAVE THE TOWNSHIP HARMLESS AND INDEMNIFY THE TOWNSHIP OF NEW HANOVER AGAINST ANY LIABILITY OF THE LOSS RESULTING FROM THE DEVELOPMENT OF THE PROPERTY FOR WHATEVER REASON, PRESENT OR FUTURE.

(NAME, TITLE)

ON THIS DAY OF 201____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED WHO ACKNOWLEDGED HIMSELF/HERSELF TO BE THE OF GIBALTAR ROCK, INC., BEING AUTHORIZED TO DO SO DEPOSES AND SAYS THAT GIBALTAR ROCK, INC. IS THE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, THAT THE LAND DEVELOPMENT PLAN THEREOF WAS MADE AT ITS DIRECTION, THAT HE/SHE ACKNOWLEDGES THE SAME TO BE ITS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW.

IN WITNESS WHEREOF; I HERETO SET MY HAND AND OFFICIAL SEAL.

NOTARY PUBLIC COMMISSION EXPIRES NOTARY SEAL

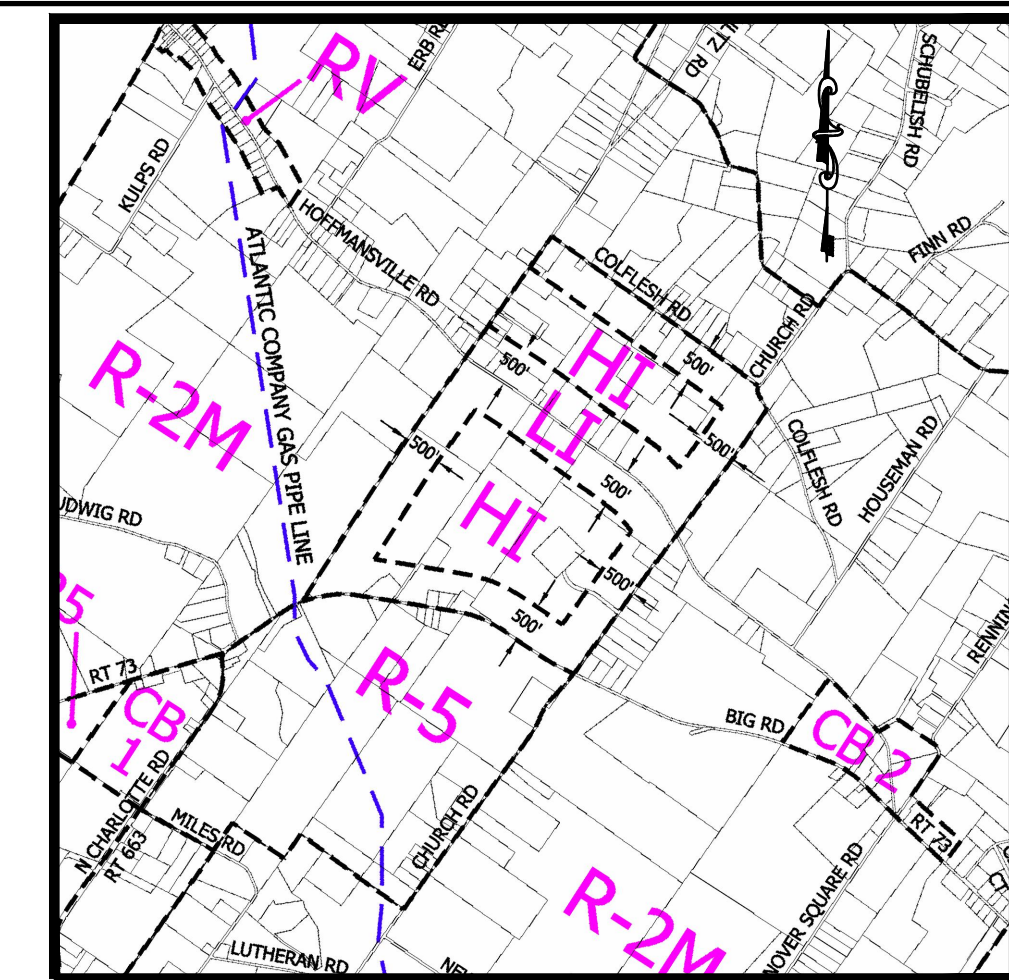
CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THE SUBDIVISION AND BOUNDARIES SHOWN AND DESCRIBED HEREON, AS WELL AS ALL DRAWINGS BEARING MY SEAL, ARE TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, AND WERE PREPARED BY ME OR UNDER MY DIRECTION AND FOR WHICH I ACCEPT FULL RESPONSIBILITY.

PROFESSIONAL LAND SURVEYOR SIGNATURE DATE SEAL

NOTARY PUBLIC COMMISSION EXPIRES NOTARY SEAL

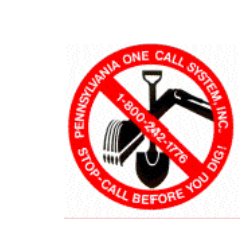
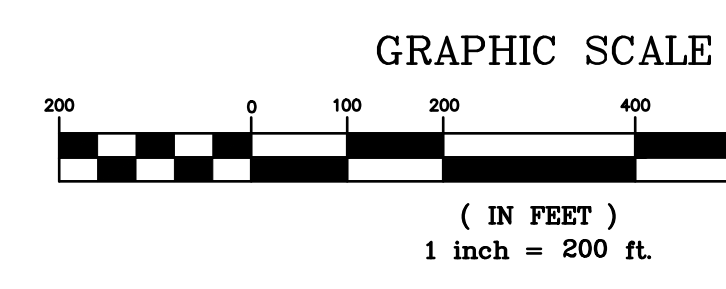
Table with 2 columns: WELL LOCATIONS, GW ELEVATION. Lists various monitoring wells (MW-12A, MW-10A, etc.) and their elevations.



ZONING MAP: SCALE: 1"=2500'

LEGEND

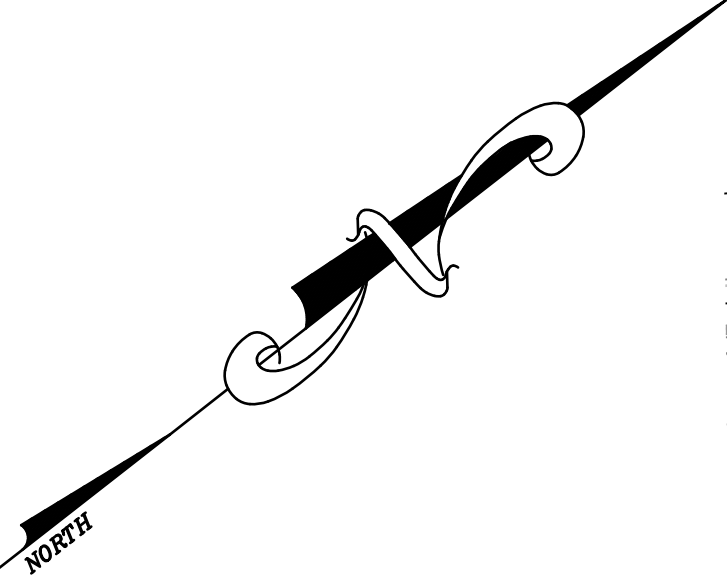
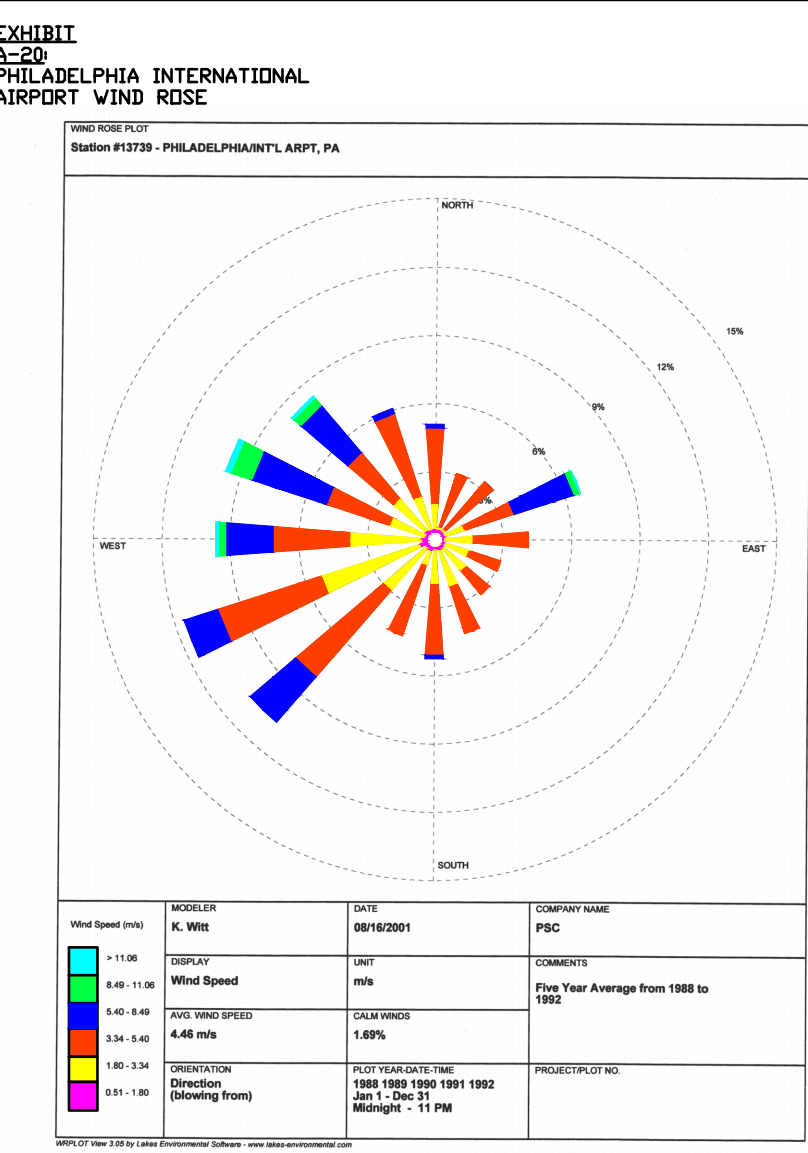
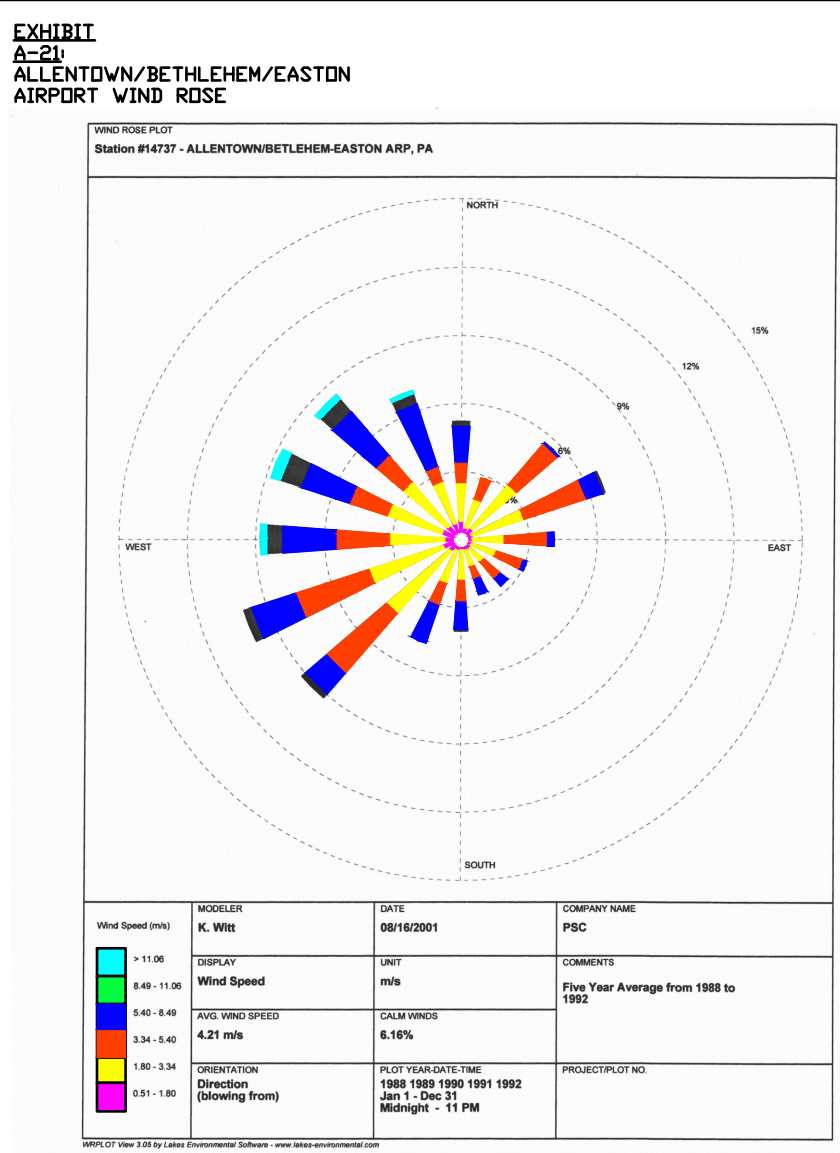
- Legend items: PARCEL LINE, PROPOSED PROPERTY LINE, ULT. RIGHT OF WAY LINE, SETBACK LINE, EXISTING CENTER LINE, EXISTING FENCE LINE, EXISTING TREE LINE, EXISTING WATER, WETLAND BUFFER, PROPOSED UNPAVED SURFACE LINE, PROPOSED CHAIN LINK FENCE LINE (PER DEP), PROPOSED BOARD ON BOARD FENCE LINE, RIPARIAN CORRIDOR ZONE I (25' WIDE), RIPARIAN CORRIDOR ZONE II (50' WIDE), BERM AS-BUILT MINOR, BERM AS-BUILT MAJOR, EXISTING WETLAND AREA, PERIMETER BERM, MINING AREA (20.2 AC.), OPERATION AREA (13.22 AC.), OPERATION AREA OR OVERBURDEN STORAGE, PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK, RESIDENTIAL / AGRICULTURAL BUILDING, COMMERCIAL BUILDING, INDUSTRIAL BUILDING, PROPOSED RIP-RAP APRON, PROPOSED IRON PIN, EXISTING SIGN, PROPOSED SIGN, EXISTING MONITORING WELL, EXISTING IRON POLE, BENCH MARK LOCATION, PROPOSED SAC. SEDIMENT TRAF, VEGETATION MONITORING TRANSECT, STREAM/WETLAND PIEZOMETER TRANSECT, WEIR, PROPOSED CONCRETE MONUMENT, PROPOSED INLET, EXISTING IRON POLE, EXISTING RESIDENTIAL WELING LOCATION.



PENNSYLVANIA ONE-CALL SYSTEM. NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG. 1-800-242-1776. SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554

Project information sidebar including: PROJECT SITE: GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP, MONTGOMERY COUNTY, PA. PREPARED FOR: GIBALTAR ROCK, INC. PREPARED BY: EarthRes ENGINEERING AND SCIENCE. OVERALL SITE PLAN (TO BE RECORDED 3 OF 8). FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY. DRAWN BY: [Name], DATE: 10/19/2015, PROJECT NO: 021022029, DRAWING NUMBER: C-3, SHEET 3 OF 34.

Vertical text on the left margin: F:\PROJECTS\Site\021022029 Final Land Development\CAD\DRAWINGS\REV 1\021022025_0A-Site Plan.dwg Layout: C-3 User: J.Cervantes 08/21/2017 9:11

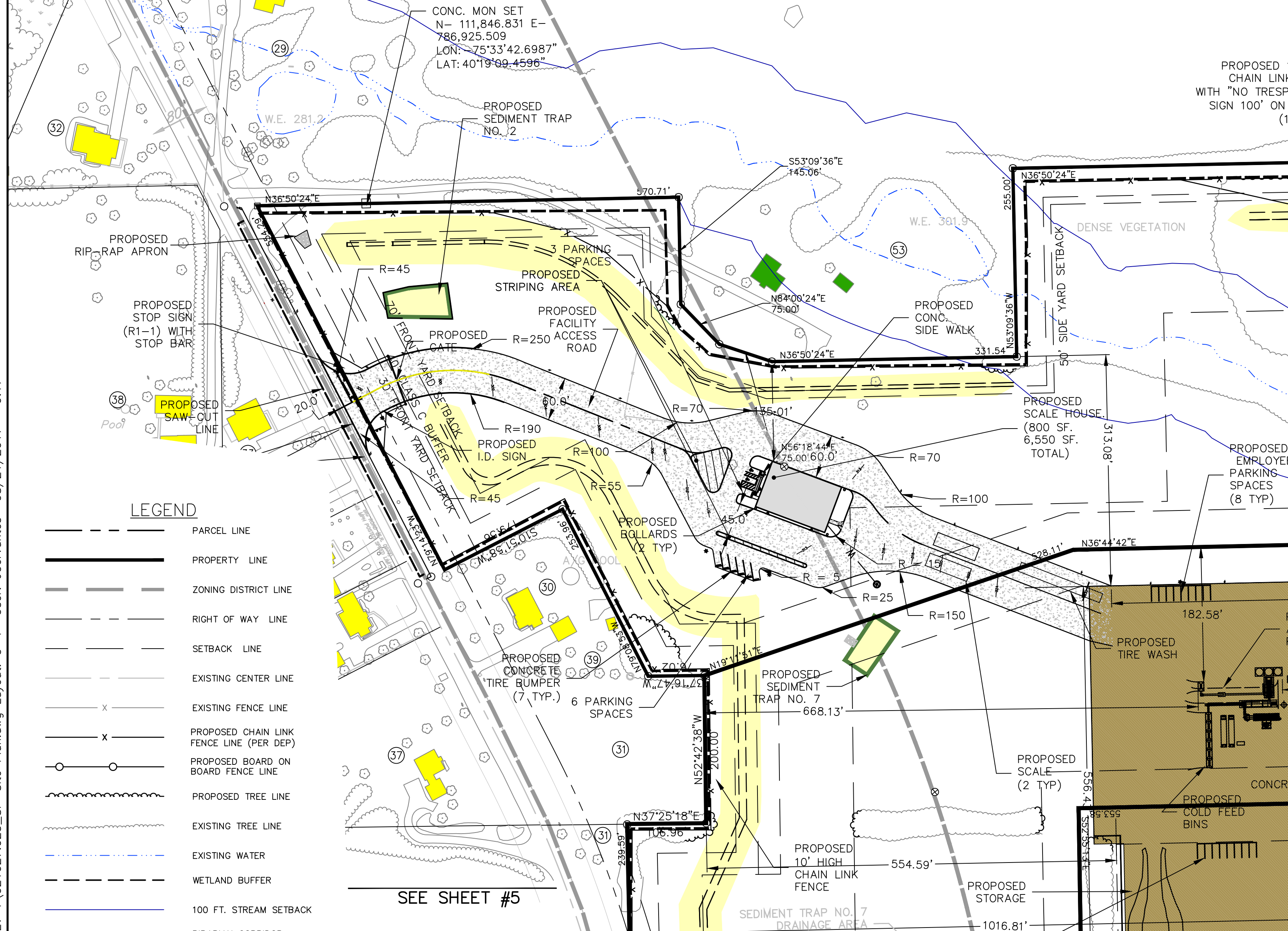


LAYFIELD ROAD
S.R. 663
120' U.R.O.W.
40' LEGAL R.O.W.

RT. 663
(40 WIDE LEGAL RIGHT-OF-WAY)

ZONING INFORMATION BY LOT:

CRITERIA	PROPOSED LOT-#1	PROPOSED LOT-#2	PROPOSED LOT-#3	PARCEL 47-00-02512-00-6	PARCEL 47-00-02688-00-1	PARCEL 47-00-00904-00-3
A. MIN. LOT AREA	111.74 AC (4,867,394 SF. GROSS) 111.10 AC (4,839,684 SF. NET)	14.46 AC (630,853 SF. GROSS) 14.34 AC (624,857 SF. NET)	13.231 AC (576,340 SF. GROSS) 13.11 AC (571,139 SF. NET)	25.93 AC (1,129,553 SF. GROSS) 24.93 AC (1,086,128 SF. NET)	3.87 AC (168,742 SF.)	1.01 AC (44,285 SF.)
B. MIN. LOT WIDTH	1075.58 FT.	342.29 FT.	260.10 FT.	1,001.46 FT.	355.04 FT.	200.28 FT.
C. MAX. BUILDING COVERAGE	0.10% (5,099.28 SF.)	N/A	N/A	4.31% (2,298.52 SF.)	4.31% (2,298.52 SF.)	5.19% (2,298.52 SF.)
D. MAX. IMPERVIOUS SURFACE COVERAGE	26.97% (1,305,407.11 SF.)	27.71% (173,153 SF.)	24.00% (137,121 SF.)	0.41% (4,481.70 SF.)	5.64% (9,533.86 SF.)	7.73% (3,426.33 SF.)
E. MIN. YARDS (BUILDING)	588.73 FT.	1016.81 FT.	63.70 FT.	863.16 FT.	62.03 FT.	51.79 FT.
FRONT (F.Y.S.)	113.94 FT.	51.0 FT.	63.70 FT.	863.16 FT.	62.03 FT.	51.79 FT.
REAR (R.Y.S.)	N/A	274.45 FT.	52.50 FT.	N/A	319.07 FT.	N/A
FRONT (F.Y.S.)	> 200 FT.	N/A	N/A	N/A	N/A	N/A
SIDE (S.Y.S.)	> 200 FT.	N/A	N/A	N/A	N/A	N/A
REAR (R.Y.S.)	> 200 FT.	N/A	N/A	N/A	N/A	N/A
G. MIN. OPEN SPACE:	93.94%	73.15%	76.56%	N/A	N/A	N/A



LEGEND

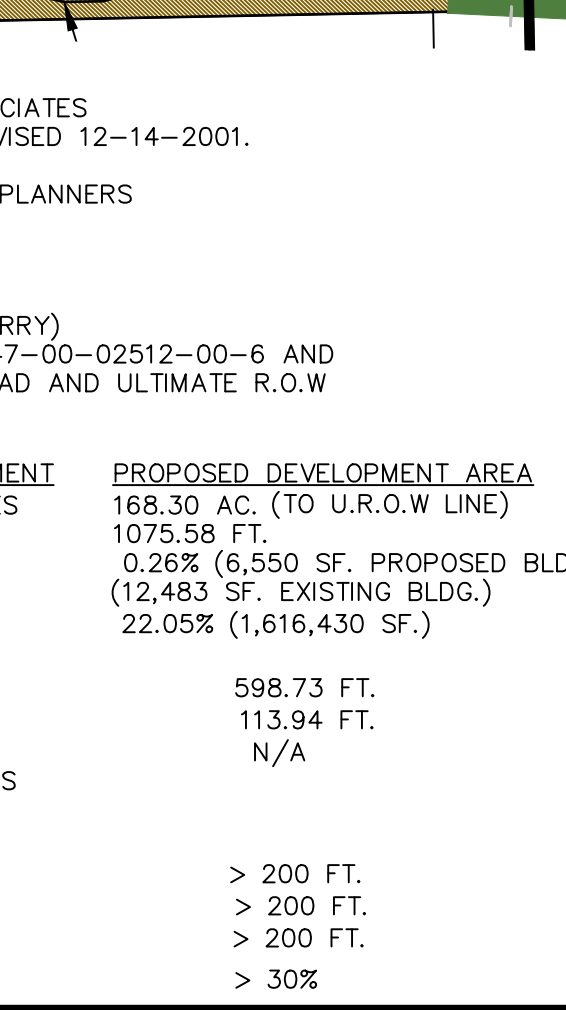
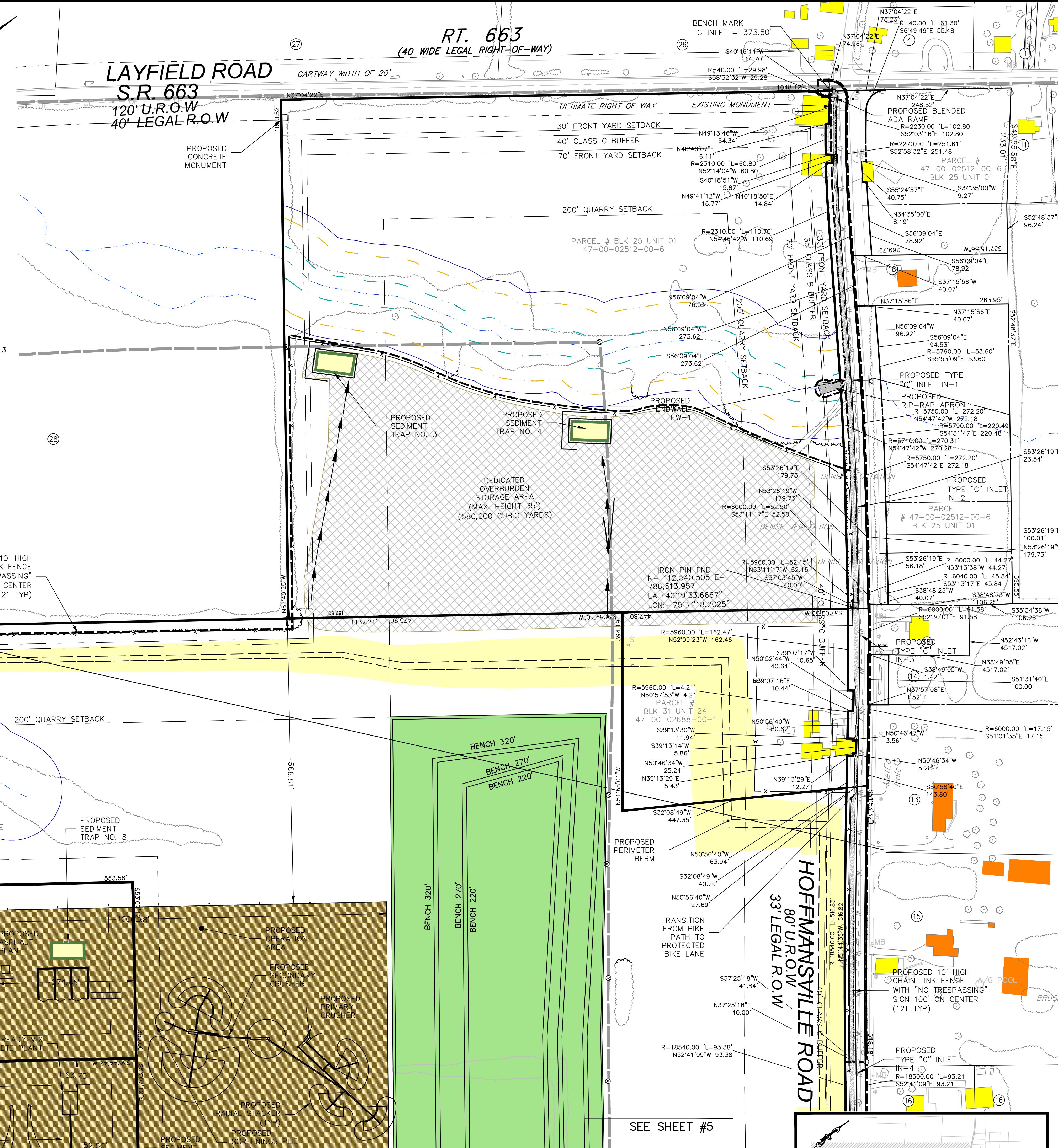
---	PARCEL LINE
---	PROPERTY LINE
---	ZONING DISTRICT LINE
---	RIGHT OF WAY LINE
---	SETBACK LINE
---	EXISTING CENTER LINE
---	EXISTING FENCE LINE
---	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
---	PROPOSED BOARD ON BOARD FENCE LINE
---	PROPOSED TREE LINE
---	EXISTING TREE LINE
---	EXISTING WATER
---	WETLAND BUFFER
---	100 FT. STREAM SETBACK
---	RIPARIAN CORRIDOR ZONE I (25' WIDE)
---	RIPARIAN CORRIDOR ZONE II (50' WIDE)
---	PERMANENT S' BERM SEPARATING PIT AREA FROM STREAM SETBACK
---	WETLAND AREA
---	MINING AREA (20.2 AC)
---	PERIMETER BERM
---	OPERATION AREA (13.22 AC)
---	OVERBURDEN STORAGE
---	RESIDENTIAL/AGRICULTURAL BUILDING
---	COMMERCIAL BUILDING
---	INDUSTRIAL BUILDING
---	PROPOSED IRON PIN
---	EXISTING IRON PIN
---	PROPOSED SIGN
---	PROPOSED CONCRETE MONUMENT
---	EXISTING CONCRETE MONUMENT
---	EXISTING SIGN BLOCK REFERENCE NUMBER
---	PROPOSED UTILITY POLE
---	EXISTING UTILITY POLE
---	PROPOSED POST LIGHT
---	BENCH MARK LOCATION
---	STREAM/WETLAND PERIMETER TRANSECT
---	VEGETATION MONITORING TRANSECT
---	PROPOSED INLET
---	EXISTING RESIDENTIAL WELLS LOCATION
---	PROPOSED WELLMOUNT LIGHT
---	BENCH MARK

ZONING INFORMATION:

- THESE PLAN ARE BASED ON THE PROPERTY SURVEY COMPLETED BY BURSICH ASSOCIATES BOUNDARY & TOPOGRAPHIC SURVEY OF THE SITE, PREPARED 8-3-2001, LAST REVISED 12-14-2001. THE PROJECT SURVEY IS BASED ON THE VERTICAL DATUM NVD 1929.
- THESE PLAN REFERENCED SURVEY PLAN BY PROFESSIONAL LAND SURVEYORS AND PLANNERS COUNTY INC. JOB NO. 8014-2011 DATED 02/22/2011 LAST REVISED 06/10/2011
- ZONING DISTRICT: "HI" - HEAVY INDUSTRIAL & "LI" - LIGHT INDUSTRIAL DISTRICTS
- PROPOSED USE:
HI - MANUFACTURING, (BUILDING) AND HI2 - EXTRACTIVE OPERATION (MINING/QUARRY)
TOTAL SITE AREA IS: 218.86 AC. (TOTAL SITE AREA LESS PORTIONS OF PARCEL # 47-00-02512-00-6 AND PARCEL # 47-00-02536-00-9 NORTH OF HOFFMANVILLE ROAD AND ULTIMATE R.O.W EQUALS A BASE SITE AREA OF 168.30 ACRES)
- AREA AND DIMENSIONAL REQUIREMENTS:

CRITERIA	"HI" REQUIREMENT	"LI" REQUIREMENT	PROPOSED DEVELOPMENT AREA
A. MINIMUM LOT AREA	2.0 ACRES	2.0 ACRES	168.30 AC. (TO U.R.O.W LINE)
B. MINIMUM LOT WIDTH	250 FT.	200 FT.	1075.58 FT.
C. MAXIMUM BUILDING COVERAGE	35%	30%	0.26% (6,550 SF. PROPOSED BLDG.) (12,483 SF. EXISTING BLDG.)
D. MAXIMUM IMPERVIOUS SURFACE COVERAGE	70%	30%	22.05% (1,616,430 SF.)
E. MINIMUM YARDS (BUILDING):			
FRONT (F.Y.S.)	70 FT.*	50 FT.	588.73 FT.
SIDE (S.Y.S.)	50 FT.*	30 FT.	113.94 FT.
REAR (R.Y.S.)	50 FT.*	50 FT.	N/A
* SIDE AND REAR YARDS INCREASED TO 100 FT. WHERE SIDE AND REAR YARDS ABUT A LOT IN RESIDENTIAL USE			
F. MINIMUM YARDS (SPECIFIC TO QUARRY USE):			
FRONT (F.Y.S.)	200 FT.	> 200 FT.	> 200 FT.
SIDE (S.Y.S.)	200 FT.	> 200 FT.	> 200 FT.
REAR (R.Y.S.)	200 FT.	> 200 FT.	> 200 FT.
F. MINIMUM OPEN SPACE:			> 30%
- PARKING REQUIREMENTS:

USE	NUMBER OF EMPLOYEES	REQUIREMENT	SPACES PROVIDED
QUARRY/MINING	15	1 PER EMPLOYEE*	15
PLUS ONE ADDITIONAL PARKING SPACE PER COMPANY VEHICLE STORED ON PREMISES DUE TO THE NATURE OF THE PROPOSED HEAVY EQUIPMENT WORK EQUIPMENT VEHICLES USED WILL BE STAGED WITHIN THE MINING AREA.			25



DAVID A. ALLEN, P.E.
LICENSE NO. 075102

REVISIONS

NO.	DATE	BY	REVISIONS
1	12/15/2015	JSC	REVISED PER TWP COMMENTS & 12/9/15 PDM

PROJECT SITE:
GIBALTAR ROCK, INC.
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA

PREPARED FOR:
GIBALTAR ROCK, INC.

PREPARED BY:
EarthRes
ENGINEERING AND SCIENCE

P.O. Box 468
6832 Old York Road
Piquette, PA 15867 USA
P.O. Box 704
McIntire, PA 15555
www.earthres.com
PA office: 215.766.0211
PA cell: 215.766.0212
toll free: 800.226.4553

EarthRes
ENGINEERING AND SCIENCE

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

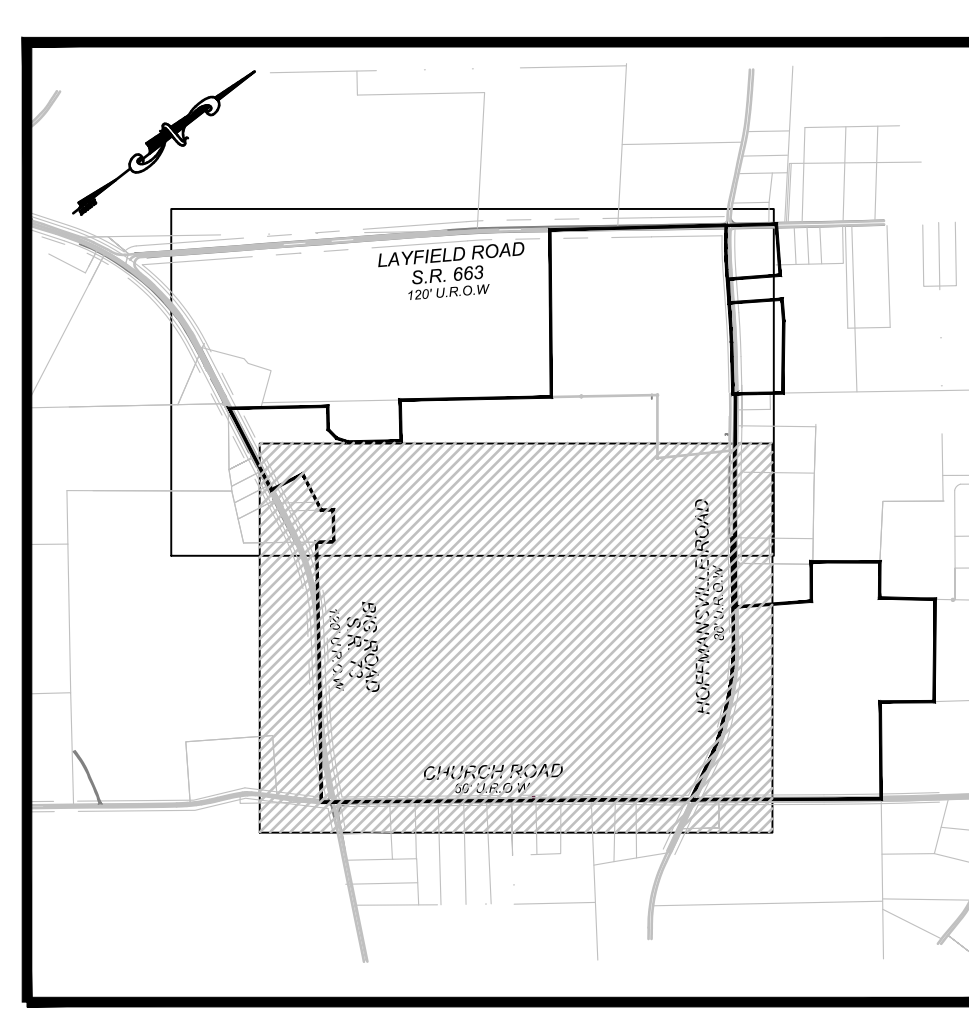
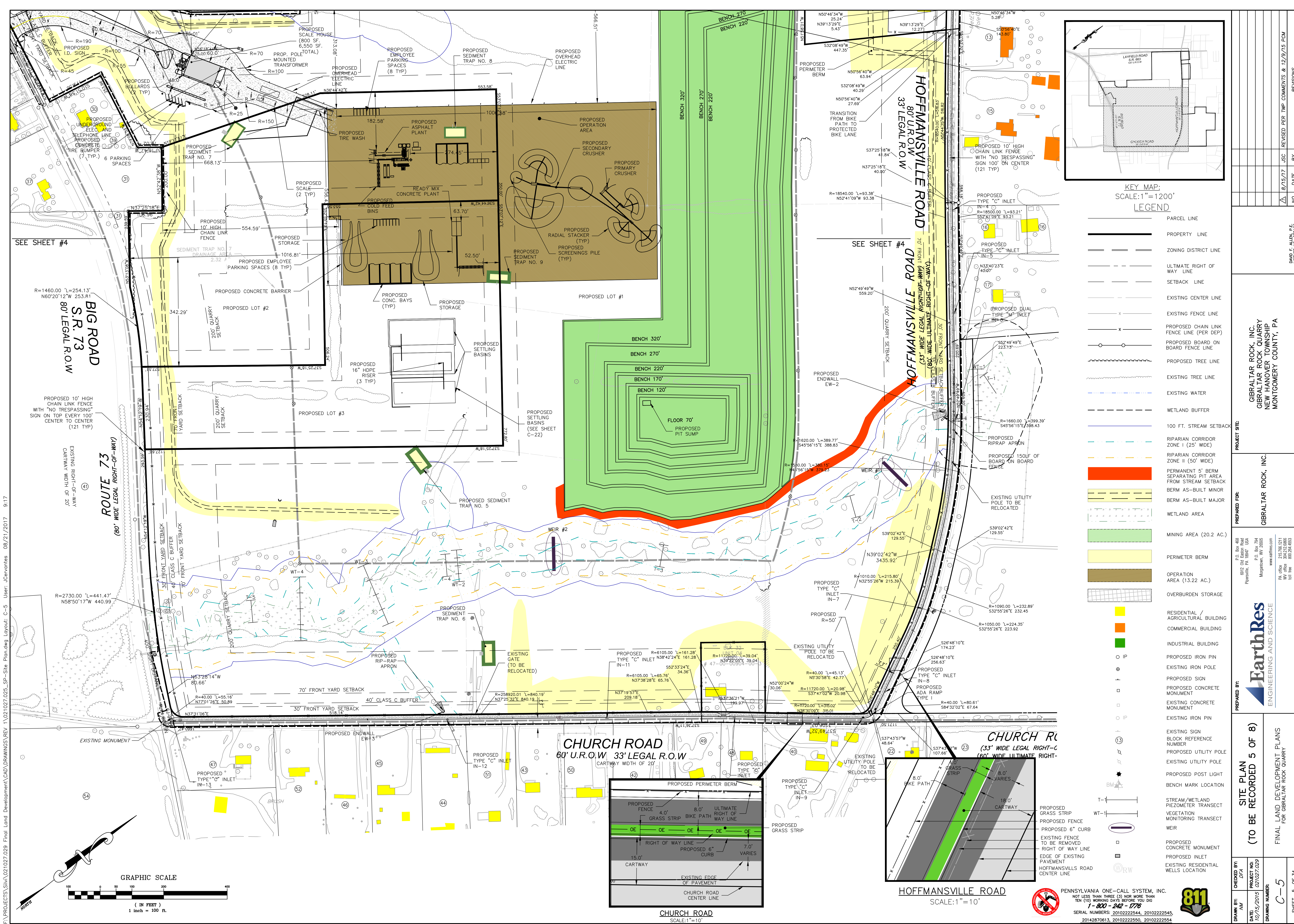
CHECKED BY: JSC
DATE: 12/15/2015
PROJECT NO: 2010222554
DRAWING NUMBER: C-4

SITE PLAN (TO BE RECORDED 4 OF 8)

PENNSYLVANIA ONE-CALL SYSTEM, INC.
NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE 10A DIG
1-800-242-2776
SERIAL NUMBERS: 2010222554, 2010222555, 2010222556, 20142870613, 2010222550, 2010222554

811

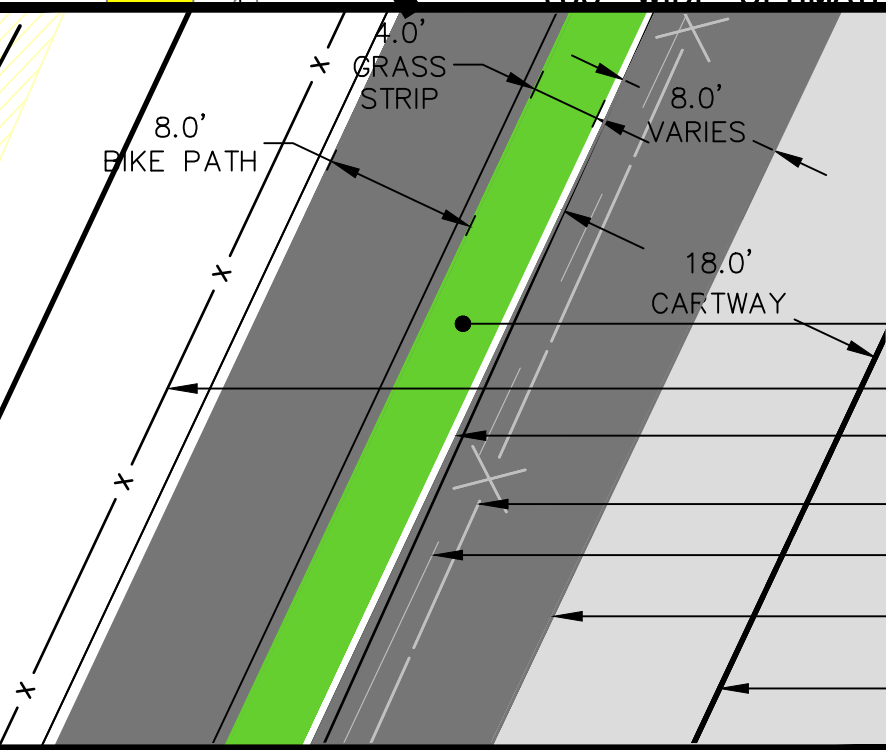
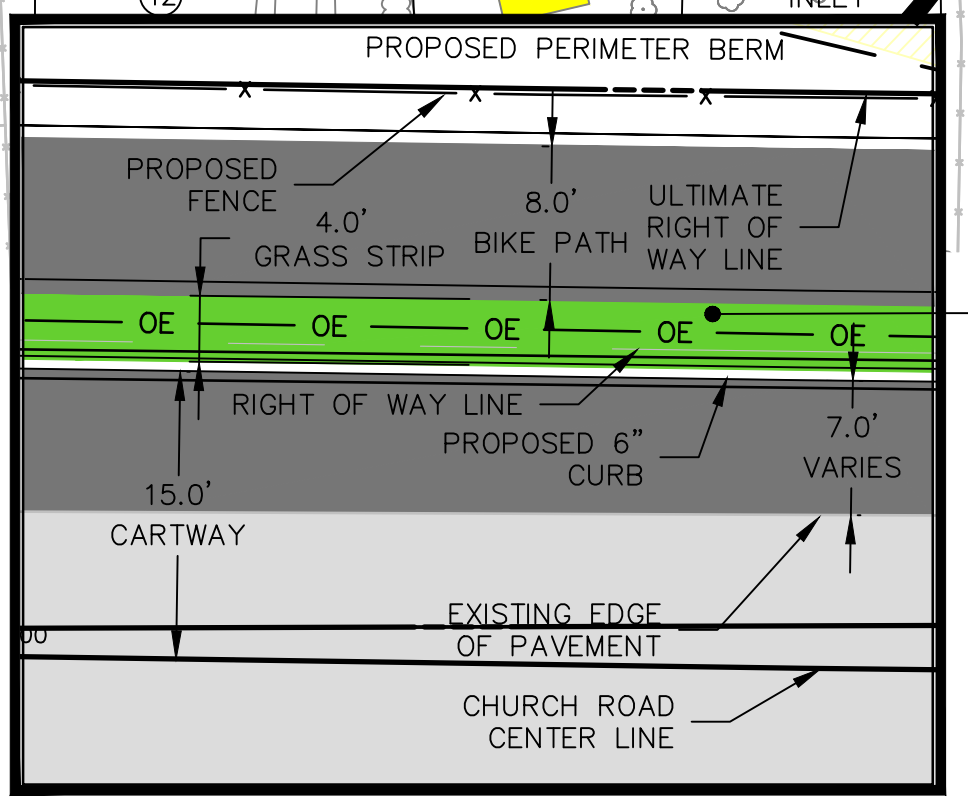
SHEET 4 OF 34



KEY MAP: SCALE: 1"=1200'

LEGEND

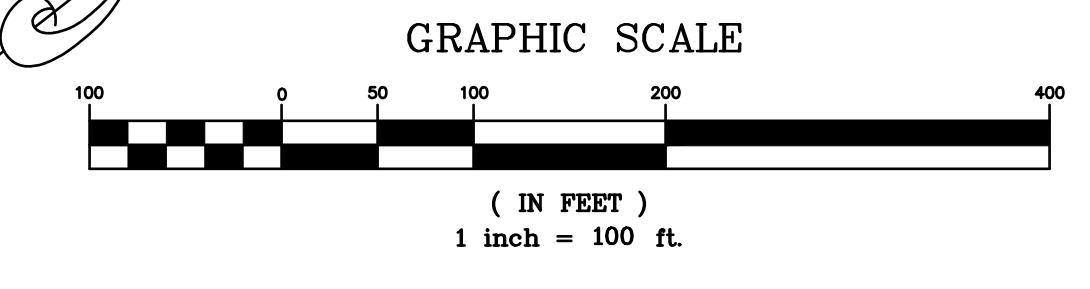
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[Symbol]	PROPERTY LINE
[Symbol]	ZONING DISTRICT LINE
[Symbol]	ULTIMATE RIGHT OF WAY LINE
[Symbol]	SETBACK LINE
[Symbol]	EXISTING CENTER LINE
[Symbol]	EXISTING FENCE LINE
[Symbol]	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
[Symbol]	PROPOSED BOARD ON BOARD FENCE LINE
[Symbol]	PROPOSED TREE LINE
[Symbol]	EXISTING TREE LINE
[Symbol]	EXISTING WATER
[Symbol]	WETLAND BUFFER
[Symbol]	100 FT. STREAM SETBACK
[Symbol]	RIPARIAN CORRIDOR ZONE I (25' WIDE)
[Symbol]	RIPARIAN CORRIDOR ZONE II (50' WIDE)
[Symbol]	PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK
[Symbol]	BERM AS-BUILT MINOR
[Symbol]	BERM AS-BUILT MAJOR
[Symbol]	WETLAND AREA
[Symbol]	MINING AREA (20.2 AC.)
[Symbol]	PERIMETER BERM
[Symbol]	OPERATION AREA (13.22 AC.)
[Symbol]	OVERBURDEN STORAGE
[Symbol]	RESIDENTIAL / AGRICULTURAL BUILDING
[Symbol]	COMMERCIAL BUILDING
[Symbol]	INDUSTRIAL BUILDING
[Symbol]	PROPOSED IRON PIN
[Symbol]	EXISTING IRON PIN
[Symbol]	PROPOSED SIGN
[Symbol]	PROPOSED CONCRETE MONUMENT
[Symbol]	EXISTING CONCRETE MONUMENT
[Symbol]	EXISTING IRON PIN
[Symbol]	EXISTING SIGN
[Symbol]	BLOCK REFERENCE NUMBER
[Symbol]	PROPOSED UTILITY POLE
[Symbol]	EXISTING UTILITY POLE
[Symbol]	PROPOSED POST LIGHT
[Symbol]	BENCH MARK LOCATION
[Symbol]	STREAM/WETLAND PIEZOMETER TRANSECT
[Symbol]	VEGETATION MONITORING TRANSECT
[Symbol]	WEIR
[Symbol]	PROPOSED CONCRETE MONUMENT
[Symbol]	EXISTING INLET
[Symbol]	EXISTING RESIDENTIAL WELLS LOCATION



F:\PROJECTS\Silva\021027.029 Final Land Development\CAD\DRAWINGS\REV 1\021027.025_SP-Site Plan.dwg Layout: C-5 User: JCervantes 08/21/2017 9:17
 PROJECT: Silva\021027.029 Final Land Development\CAD\DRAWINGS\REV 1\021027.025_SP-Site Plan.dwg Layout: C-5 User: JCervantes 08/21/2017 9:17

CHECKED BY: <i>[Signature]</i> DATE: 10/19/2015 PROJECT NO: 021027.029 DRAWING NUMBER: C-5	PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA	PREPARED FOR: GIBALTAR ROCK, INC. 8012 Old York Road Piquette, PA 18847 USA P.O. Box 704 Magnolia, WV 26555 www.earthres.com PA office: 212.962.0211 NJ office: 800.224.8553	PREPARED BY: EarthRes ENGINEERING AND SCIENCE	SITE PLAN (TO BE RECORDED 5 OF 8)	FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY	REVISIONS NO. DATE BY 1 10/19/15 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM
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PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE 10:00 AM
 1-800-242-2776
 SERIAL NUMBERS: 2010222554, 2010222555, 2010222556, 20142870613, 2010222554, 2010222554

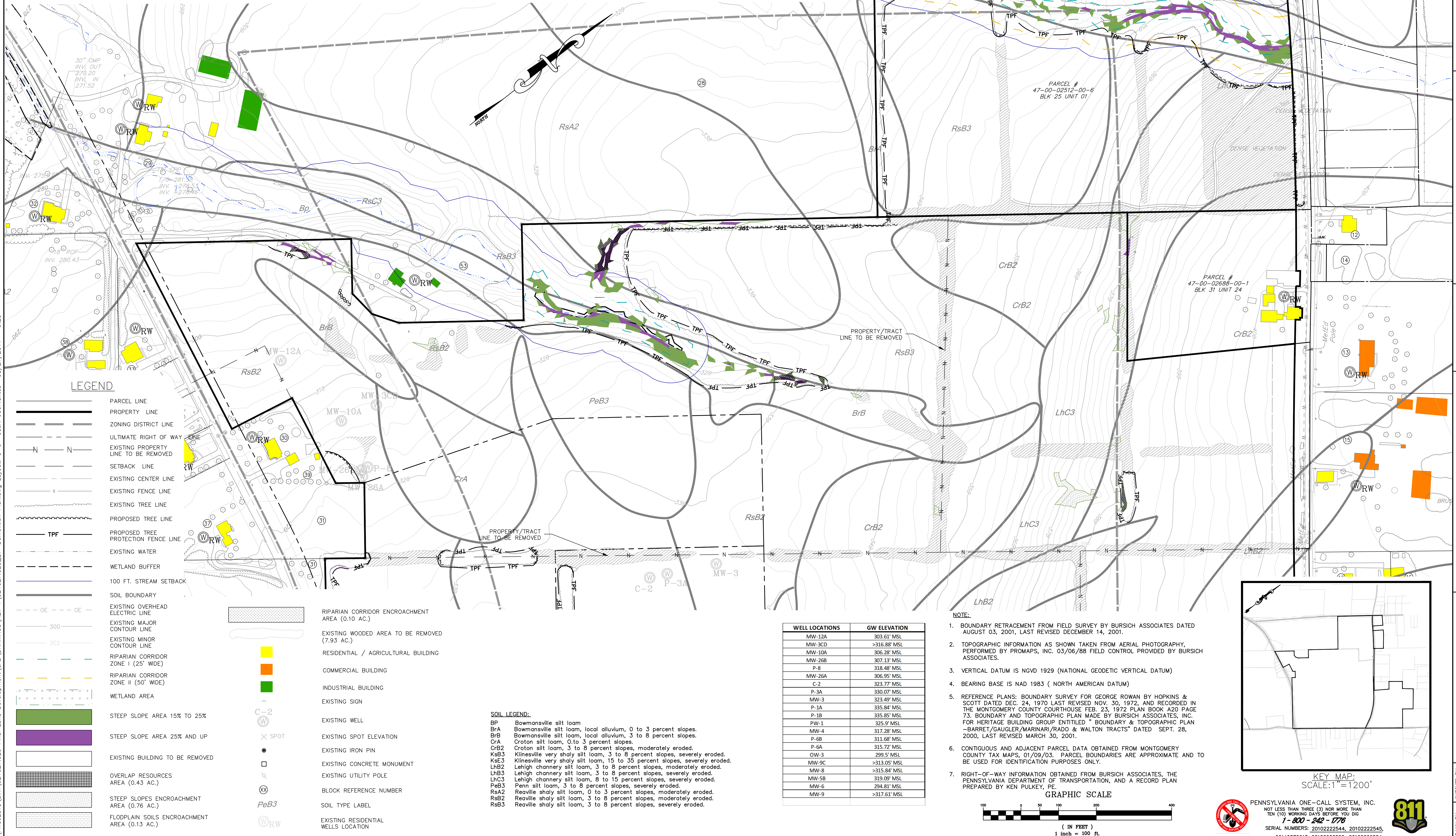


QUARRY OPERATIONS TABLE OF LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND				
RESOURCE	ACRES OF LAND	AREA	RESOURCE PROTECTION LAND	ENCROACHMENT AREA
ACRES WHERE TWO OR MORE RESOURCES OVERLAP	100%	0.54 AC.	0.43 AC.	0
FLOODWAY	100%	0	0	0
FLOOD FRINGE	80%	0	0	0
APPROX. 100 YEAR FLOOD BOUNDARY	100%	0	0	0
FLOODPLAIN SOILS	100%	14.86 AC.	14.86 AC.	0
STEEP SLOPES: 15%-25%	70%	2.84 AC.	1.99 AC.	0.59 AC.
25% OR MORE	80%	1.19 AC.	0.94 AC.	0.15 AC.
WOODLANDS: R-2, R-2A ALL OTHER ZONING DISTRICTS	80%	N/A	N/A	N/A
50%	15.94 AC.	7.97 AC.	6.9 AC.	
WATERCOURSES STREAMS, PONDS	100%	0	0	0
WETLANDS	100%	0.99 AC.	0.99 AC.	0
POND SHORELINE	80%	0	0	0
WETLAND MARGINS	80%	0	0	0
RIPARIAN CORRIDOR	100%	ZONE I:1.27 AC. ZONE II:4.80 AC.	ZONE I:1.27 AC. ZONE II:4.80 AC.	ZONE I:0 ZONE II:0
LAND WITH RESOURCE RESTRICTIONS:		TOTAL:41.68 AC.		
RESOURCE PROTECTION LAND:		TOTAL:33.05 AC.		TOTAL:7.64 AC.

ALL STREAMS ARE INTERMEDIATE STREAMS, AND STREAMS NOTED WITH ZONE I RIPARIAN BUFFERS ONLY HAVE DRAINAGE AREA LESS THAN 75 ACRES. STREAMS NOTED WITH ZONE I AND ZONE II RIPARIAN BUFFERS HAVE DRAINAGE AREAS GREATER THAN OR EQUAL TO 75 ACRES.

ASPHALT PLANT TABLE OF LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND				
RESOURCE	ACRES OF LAND	AREA	RESOURCE PROTECTION LAND	ENCROACHMENT AREA
ACRES WHERE TWO OR MORE RESOURCES OVERLAP	100%	0	0	0
FLOODWAY	100%	0	0	0
FLOOD FRINGE	80%	0	0	0
APPROX. 100 YEAR FLOOD BOUNDARY	100%	0	0	0
FLOODPLAIN SOILS	100%	0	0	0
STEEP SLOPES: 15%-25%	70%	0	0	0
25% OR MORE	80%	0	0	0
WOODLANDS: R-2, R-2A ALL OTHER ZONING DISTRICTS	80%	N/A	N/A	N/A
50%	0.40 AC.	0.2 AC.	0.2 AC.	
WATERCOURSES STREAMS, PONDS	100%	0	0	0
WETLANDS	100%	0	0	0
POND SHORELINE	80%	0	0	0
WETLAND MARGINS	80%	0	0	0
RIPARIAN CORRIDOR	100%	0	0	0
LAND WITH RESOURCE RESTRICTIONS:		TOTAL:0.40 AC.		
RESOURCE PROTECTION LAND:		TOTAL:0.2 AC.		TOTAL:0.2 AC.

CONCRETE PLANT TABLE OF LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND				
RESOURCE	ACRES OF LAND	AREA	RESOURCE PROTECTION LAND	ENCROACHMENT AREA
ACRES WHERE TWO OR MORE RESOURCES OVERLAP	100%	0	0	0
FLOODWAY	100%	0	0	0
FLOOD FRINGE	80%	0	0	0
APPROX. 100 YEAR FLOOD BOUNDARY	100%	0	0	0
FLOODPLAIN SOILS	100%	0	0	0
STEEP SLOPES: 15%-25%	70%	0.060	0.042	0.007
25% OR MORE	80%	0.081	0.065	0.008
WOODLANDS: R-2, R-2A ALL OTHER ZONING DISTRICTS	80%	N/A	N/A	N/A
50%	1.85 AC.	0.83 AC.	0.83 AC.	
WATERCOURSES STREAMS, PONDS	100%	0	0	0
WETLANDS	100%	0	0	0
POND SHORELINE	80%	0	0	0
WETLAND MARGINS	80%	0	0	0
RIPARIAN CORRIDOR	100%	0	0	0
LAND WITH RESOURCE RESTRICTIONS:		TOTAL:1.80 AC.		
RESOURCE PROTECTION LAND:		TOTAL:0.94 AC.		TOTAL:0.83 AC.



LEGEND

	PARCEL LINE		PROPERTY LINE
	ZONING DISTRICT LINE		ULTIMATE RIGHT OF WAY LINE
	EXISTING PROPERTY LINE TO BE REMOVED		SETBACK LINE
	EXISTING CENTER LINE		EXISTING FENCE LINE
	EXISTING TREE LINE		PROPOSED TREE LINE
	PROPOSED TREE PROTECTION FENCE LINE		EXISTING WATER
	WETLAND BUFFER		100 FT. STREAM SETBACK
	SOIL BOUNDARY		EXISTING OVERHEAD ELECTRIC LINE
	EXISTING MAJOR CONTOUR LINE		EXISTING MINOR CONTOUR LINE
	RIPARIAN CORRIDOR ZONE I (25' WIDE)		RIPARIAN CORRIDOR ZONE II (50' WIDE)
	WETLAND AREA		STEEP SLOPE AREA 15% TO 25%
	STEEP SLOPE AREA 25% AND UP		EXISTING BUILDING TO BE REMOVED
	OVERLAP RESOURCES AREA (0.43 AC.)		STEEP SLOPES ENCROACHMENT AREA (0.76 AC.)
	FLOODPLAIN SOILS ENCROACHMENT AREA (0.13 AC.)		

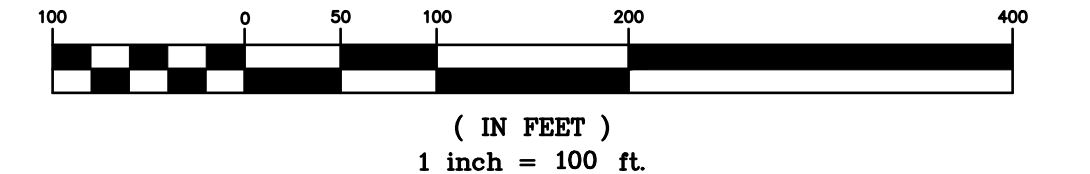
	RESIDENTIAL / AGRICULTURAL BUILDING		INDUSTRIAL BUILDING
	COMMERCIAL BUILDING		EXISTING WELL
	EXISTING SIGN		EXISTING SPOT ELEVATION
	EXISTING IRON PIN		EXISTING CONCRETE MONUMENT
	EXISTING UTILITY POLE		BLOCK REFERENCE NUMBER
	SOIL TYPE LABEL		EXISTING RESIDENTIAL WELLS LOCATION

SOIL LEGEND:

BP	Bowmansville silt loam
Bra	Bowmansville silt loam, local alluvium, 0 to 3 percent slopes.
BrB	Bowmansville silt loam, local alluvium, 3 to 8 percent slopes.
CrA	Croton silt loam, 0 to 3 percent slopes.
CrB2	Croton silt loam, 3 to 8 percent slopes, moderately eroded.
KsB3	Klinesville very shaly silt loam, 3 to 8 percent slopes, severely eroded.
KsE3	Klinesville very shaly silt loam, 15 to 35 percent slopes, severely eroded.
LhB2	Lehigh channery silt loam, 3 to 8 percent slopes, moderately eroded.
LhB3	Lehigh channery silt loam, 3 to 8 percent slopes, severely eroded.
LhC3	Lehigh channery silt loam, 8 to 15 percent slopes, severely eroded.
PeB3	Penn silt loam, 3 to 8 percent slopes, severely eroded.
RsA2	Reaville shaly silt loam, 0 to 3 percent slopes, moderately eroded.
RsB2	Reaville shaly silt loam, 3 to 8 percent slopes, moderately eroded.
RsB3	Reaville shaly silt loam, 3 to 8 percent slopes, severely eroded.

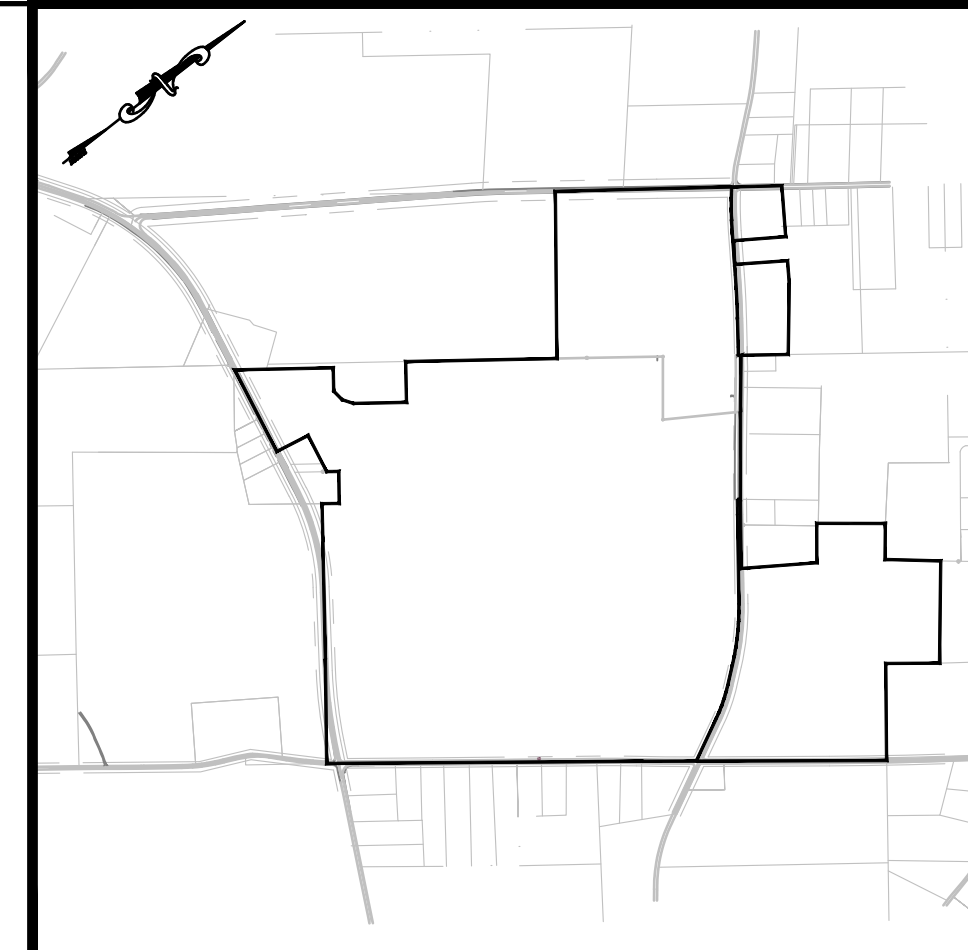
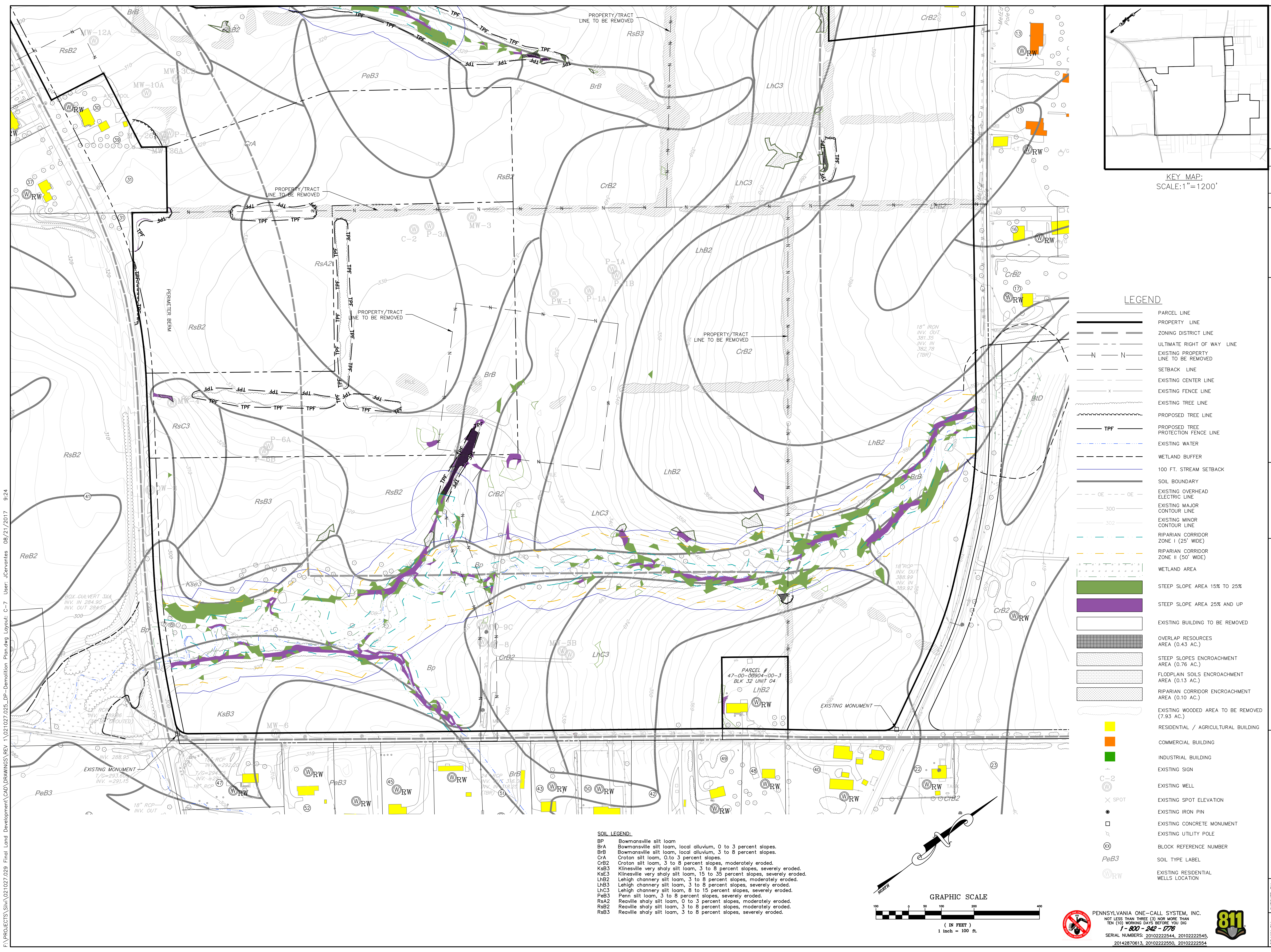
WELL LOCATIONS	GW ELEVATION
MW-12A	303.61' MSL
MW-3C	>316.88' MSL
MW-10A	306.28' MSL
MW-26B	307.13' MSL
P-8	313.48' MSL
MW-26A	306.95' MSL
C-2	323.77' MSL
P-3A	330.07' MSL
MW-3	323.49' MSL
P-1A	335.84' MSL
P-1B	335.85' MSL
PW-1	325.9' MSL
MW-4	317.28' MSL
C-2	311.68' MSL
P-6A	315.72' MSL
OW-3	299.5' MSL
MW-9C	>313.05' MSL
MW-8	>315.84' MSL
MW-5B	319.09' MSL
MW-6	294.81' MSL
MW-9	>317.61' MSL

- NOTE:**
- BOUNDARY RETRACEMENT FROM FIELD SURVEY BY BURSICH ASSOCIATES DATED AUGUST 03, 2001, LAST REVISED DECEMBER 14, 2001.
 - TOPOGRAPHIC INFORMATION AS SHOWN TAKEN FROM AERIAL PHOTOGRAPHY, PERFORMED BY PROMAPS, INC. 03/06/88 FIELD CONTROL PROVIDED BY BURSICH ASSOCIATES.
 - VERTICAL DATUM IS NGVD 1929 (NATIONAL GEODETIC VERTICAL DATUM)
 - BEARING BASE IS NAD 1983 (NORTH AMERICAN DATUM)
 - REFERENCE PLANS: BOUNDARY SURVEY FOR GEORGE ROWAN BY HOPKINS & SCOTT DATED DEC. 24, 1970 LAST REVISED NOV. 30, 1972, AND RECORDED IN THE MONTGOMERY COUNTY COURTHOUSE FEB. 23, 1972 PLAN BOOK 420 PAGE 73. BOUNDARY AND TOPOGRAPHIC PLAN MADE BY BURSICH ASSOCIATES, INC. FOR HERITAGE BUILDING GROUP ENTITLED "BOUNDARY & TOPOGRAPHIC PLAN -BARRETT/GAUGLER/MARINARI/RADO & WALTON TRACTS" DATED SEPT. 28, 2000, LAST REVISED MARCH 30, 2001.
 - CONTIGUOUS AND ADJACENT PARCEL DATA OBTAINED FROM MONTGOMERY COUNTY TAX MAPS, 01/09/03. PARCEL BOUNDARIES ARE APPROXIMATE AND TO BE USED FOR IDENTIFICATION PURPOSES ONLY.
 - RIGHT-OF-WAY INFORMATION OBTAINED FROM BURSICH ASSOCIATES, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, AND A RECORD PLAN PREPARED BY KEN PULKEY, PE.



KEY MAP:
SCALE:1"=1200'

PROJECT SITE:	GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA
PREPARED FOR:	GIBALTAR ROCK, INC.
PREPARED BY:	EarthRes ENGINEERING AND SCIENCE
DATE:	10/19/2015
DRAWING NO.:	C-6
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DRAWING NO.:	C-6

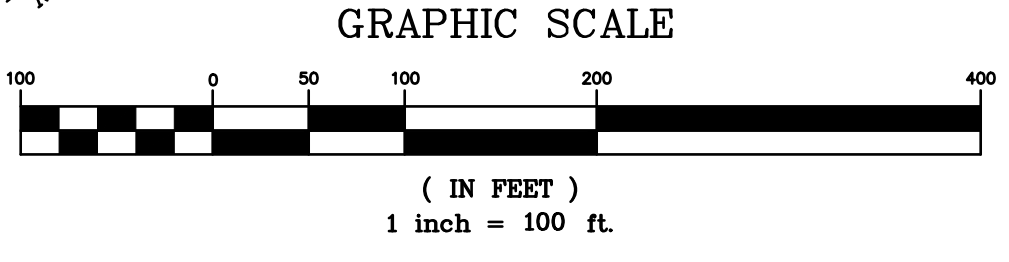


LEGEND

- PARCEL LINE
- PROPERTY LINE
- ZONING DISTRICT LINE
- ULTIMATE RIGHT OF WAY LINE
- EXISTING PROPERTY LINE TO BE REMOVED
- SETBACK LINE
- EXISTING CENTER LINE
- EXISTING FENCE LINE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- PROPOSED TREE PROTECTION FENCE LINE
- EXISTING WATER
- WETLAND BUFFER
- 100 FT. STREAM SETBACK
- SOIL BOUNDARY
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING MAJOR CONTOUR LINE
- EXISTING MINOR CONTOUR LINE
- RIPARIAN CORRIDOR ZONE I (25' WIDE)
- RIPARIAN CORRIDOR ZONE II (50' WIDE)
- WETLAND AREA
- STEEP SLOPE AREA 15% TO 25%
- STEEP SLOPE AREA 25% AND UP
- EXISTING BUILDING TO BE REMOVED
- OVERLAP RESOURCES AREA (0.43 AC.)
- STEEP SLOPES ENCROACHMENT AREA (0.76 AC.)
- FLOODPLAIN SOILS ENCROACHMENT AREA (0.13 AC.)
- RIPARIAN CORRIDOR ENCROACHMENT AREA (0.10 AC.)
- EXISTING WOODED AREA TO BE REMOVED (7.93 AC.)
- RESIDENTIAL / AGRICULTURAL BUILDING
- COMMERCIAL BUILDING
- INDUSTRIAL BUILDING
- EXISTING SIGN
- EXISTING WELL
- EXISTING SPOT ELEVATION
- EXISTING IRON PIN
- EXISTING CONCRETE MONUMENT
- EXISTING UTILITY POLE
- BLOCK REFERENCE NUMBER
- SOIL TYPE LABEL
- EXISTING RESIDENTIAL WELLS LOCATION

SOIL LEGEND:

- Bp Bownsville silt loam
- BrA Bownsville silt loam, local alluvium, 0 to 3 percent slopes.
- BrB Bownsville silt loam, local alluvium, 3 to 8 percent slopes.
- CrA Croton silt loam, 0 to 3 percent slopes.
- CrB2 Croton silt loam, 3 to 8 percent slopes, moderately eroded.
- KsB3 Klinesville very shaly silt loam, 3 to 8 percent slopes, severely eroded.
- KsE3 Klinesville very shaly silt loam, 15 to 35 percent slopes, severely eroded.
- LhB2 Lehigh channery silt loam, 3 to 8 percent slopes, moderately eroded.
- LhB3 Lehigh channery silt loam, 3 to 8 percent slopes, severely eroded.
- LhC3 Lehigh channery silt loam, 8 to 15 percent slopes, severely eroded.
- PeB3 Penn silt loam, 3 to 8 percent slopes, severely eroded.
- RSA2 Reaville shaly silt loam, 0 to 3 percent slopes, moderately eroded.
- RSB2 Reaville shaly silt loam, 3 to 8 percent slopes, moderately eroded.
- RSB3 Reaville shaly silt loam, 3 to 8 percent slopes, severely eroded.



PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG
1-800-248-7776
 SERIAL NUMBERS: 2010222554, 2010222555, 2010222556, 2010222557
811

<p>PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA</p>	<p>PREPARED FOR: GIBALTAR ROCK, INC.</p>	<p>P.L. Box 468 4832 Old York Rd Pottsville, PA 17867 USA</p> <p>P.O. Box 704 Morgantown, WV 26505 www.earthres.com</p> <p>PA office 212.765.1211 MD office 801.224.4533 toll free</p>
<p>PROJECT NO. _____</p> <p>DATE _____</p> <p>BY _____</p> <p>REVISED PER TWP COMMENTS & 12/9/15 PCM</p> <p>NO. _____</p> <p>DATE _____</p> <p>BY _____</p>		
<p>CHECKED BY: _____</p> <p>PROJECT NO: 2010222554</p> <p>DATE: 10/19/2015</p> <p>DRAWING NUMBER: C-7</p>		
<p>EXISTING CONDITIONS DEMOLITION PLAN</p> <p>FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY</p>		
<p>SHEET 7 OF 34</p>		

QUARRY OPERATIONS TABLE OF LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND

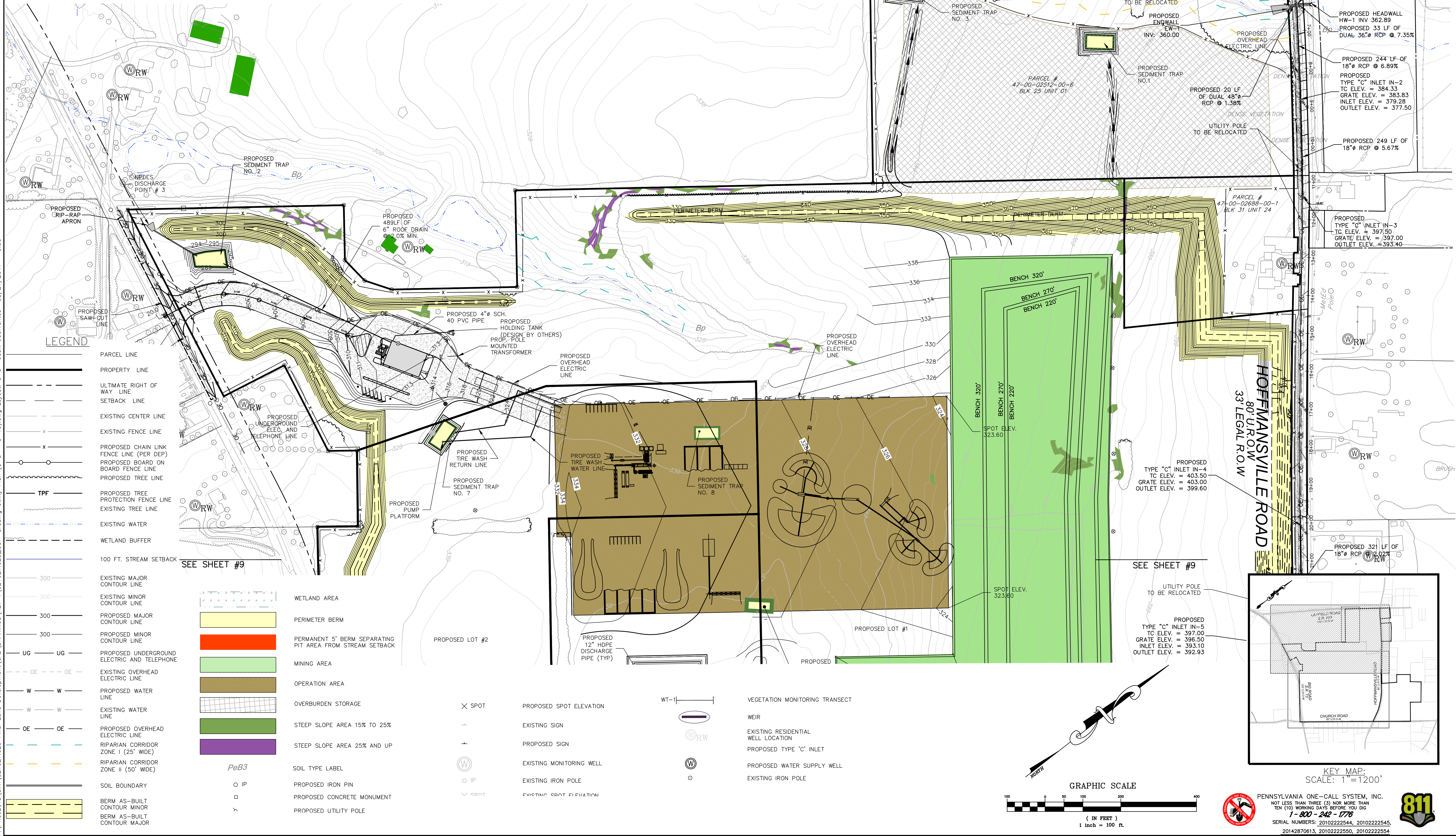
RESOURCE	OPEN SPACE RATIO	ACRES OF LAND IN RESOURCES	RESOURCE PROTECTION LAND	ENCROACHMENT AREA
ACRES WHERE TWO OR MORE RESOURCES OVERLAP	100%	0.54 AC.	0.43 AC.	0
FLOODWAY	100%	0	0	0
FLOOD FRINGE	80%	0	0	0
APPROX. 100 YEAR FLOOD BOUNDARY	100%	0	0	0
FLOODPLAIN SOILS	100%	14.86 AC.	14.86 AC.	0
STEEP SLOPES: 15%-25% OR MORE	70%	2.84 AC.	1.99 AC.	0.59 AC.
25% OR MORE	80%	1.18 AC.	0.94 AC.	0.15 AC.
WETLANDS: R-2, R-3M ALL OTHER ZONING DISTRICTS	80%	N/A	N/A	N/A
50%	15.94 AC.	7.97 AC.	6.9 AC.	
WATERCOURSES STREAMS, PONDS	100%	0	0	0
WETLANDS	100%	0.99 AC.	0.99 AC.	0
POND SHORELINE	80%	0	0	0
WETLAND MARGINS	80%	0	0	0
RIPIARIAN CORRIDOR	100%	ZONE I: 1.27 AC. ZONE II: 4.60 AC.	ZONE I: 1.27 AC. ZONE II: 4.60 AC.	ZONE I: 0 ZONE II: 0
LAND WITH RESOURCE RESTRICTIONS:		TOTAL: 41.68 AC.		
RESOURCE PROTECTION LAND:			TOTAL: 33.05 AC.	TOTAL: 7.84 AC.

ASPHALT PLANT TABLE OF LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND

RESOURCE	OPEN SPACE RATIO	ACRES OF LAND IN RESOURCES	RESOURCE PROTECTION LAND	ENCROACHMENT AREA
ACRES WHERE TWO OR MORE RESOURCES OVERLAP	100%	0	0	0
FLOODWAY	100%	0	0	0
FLOOD FRINGE	80%	0	0	0
APPROX. 100 YEAR FLOOD BOUNDARY	100%	0	0	0
FLOODPLAIN SOILS	100%	0	0	0
STEEP SLOPES: 15%-25% OR MORE	70%	0	0	0
25% OR MORE	80%	0	0	0
WETLANDS: R-2, R-3M ALL OTHER ZONING DISTRICTS	80%	N/A	N/A	N/A
50%	0.40 AC.	0.2 AC.	0.2 AC.	
WATERCOURSES STREAMS, PONDS	100%	0	0	0
WETLANDS	100%	0	0	0
POND SHORELINE	80%	0	0	0
WETLAND MARGINS	80%	0	0	0
RIPIARIAN CORRIDOR	100%	0	0	0
LAND WITH RESOURCE RESTRICTIONS:		TOTAL: 0.40 AC.		
RESOURCE PROTECTION LAND:			TOTAL: 0.2 AC.	TOTAL: 0.2 AC.

CONCRETE PLAN TABLE OF LAND WITH RESOURCE RESTRICTIONS AND RESOURCE PROTECTION LAND

RESOURCE	OPEN SPACE RATIO	ACRES OF LAND IN RESOURCES	RESOURCE PROTECTION LAND	ENCROACHMENT AREA
ACRES WHERE TWO OR MORE RESOURCES OVERLAP	100%	0	0	0
FLOODWAY	100%	0	0	0
FLOOD FRINGE	80%	0	0	0
APPROX. 100 YEAR FLOOD BOUNDARY	100%	0	0	0
FLOODPLAIN SOILS	100%	0	0	0
STEEP SLOPES: 15%-25% OR MORE	70%	0.060	0.042	0.007
25% OR MORE	80%	0.081	0.065	0.008
WETLANDS: R-2, R-3M ALL OTHER ZONING DISTRICTS	80%	N/A	N/A	N/A
50%	1.65 AC.	0.83 AC.	0.83 AC.	
WATERCOURSES STREAMS, PONDS	100%	0	0	0
WETLANDS	100%	0	0	0
POND SHORELINE	80%	0	0	0
WETLAND MARGINS	80%	0	0	0
RIPIARIAN CORRIDOR	100%	0	0	0
LAND WITH RESOURCE RESTRICTIONS:		TOTAL: 1.80 AC.		
RESOURCE PROTECTION LAND:			TOTAL: 0.94 AC.	TOTAL: 0.85 AC.



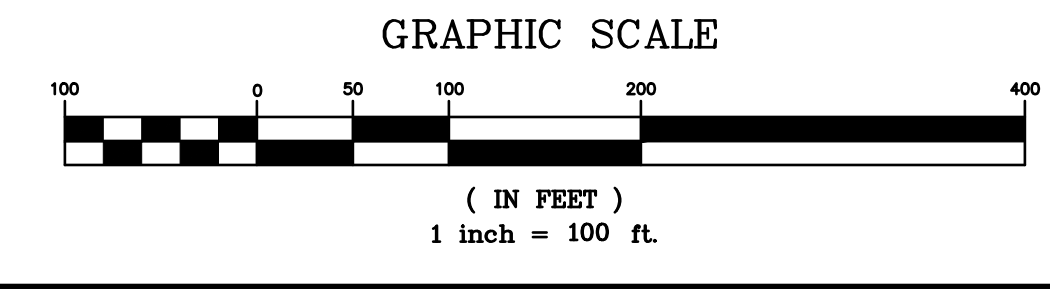
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<p>PROJECT SITE:</p> <p>GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA</p>	<p>PREPARED FOR:</p> <p>GIBALTAR ROCK, INC.</p>	<p>PREPARED BY:</p> <p>EarthRes ENGINEERING AND SCIENCE</p>	<p>GRADING AND UTILITY PLAN</p> <p>FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY</p>								
<p>DAVID F. ALLEN, P.E. LICENSE NO. 075102</p>	<p>DATE: 8/15/17</p>	<p>REVISIONS:</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>REVISIONS</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>8/15/17</td> <td>JSC</td> <td>REVISED PER TWP COMMENTS & 12/9/15 PCM</td> </tr> </tbody> </table>	NO.	DATE	BY	REVISIONS	1	8/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM	<p>CHECKED BY: JCA</p> <p>PROJECT NO: 10/19/2015/021027.029</p> <p>DRAWING NUMBER: C-8</p> <p>SHEET 8 OF 34</p>
NO.	DATE	BY	REVISIONS								
1	8/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM								

P.O. Box 468
 8832 Old York Road
 Piquette, PA 18847 USA
 P.O. Box 794
 Montgomer, PA 17055
 www.earthres.com
 PA office 212.765.1211
 NJ office 801.224.4533
 Toll free

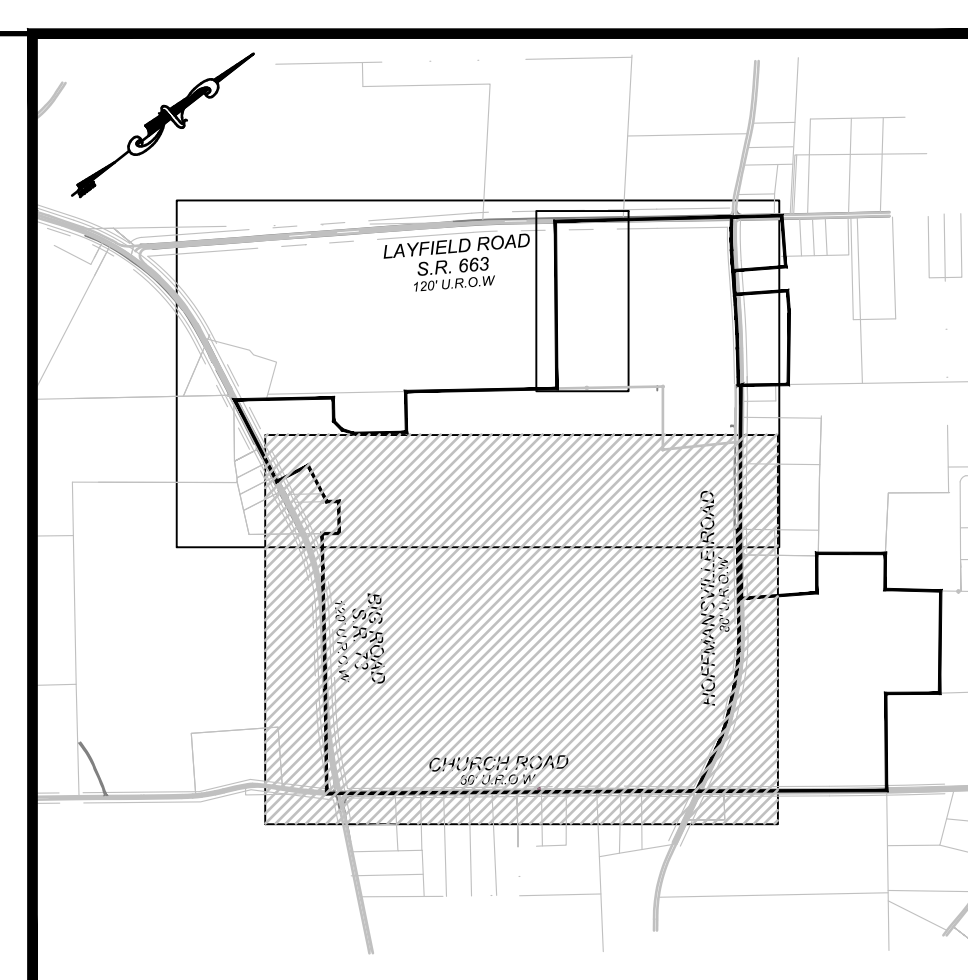
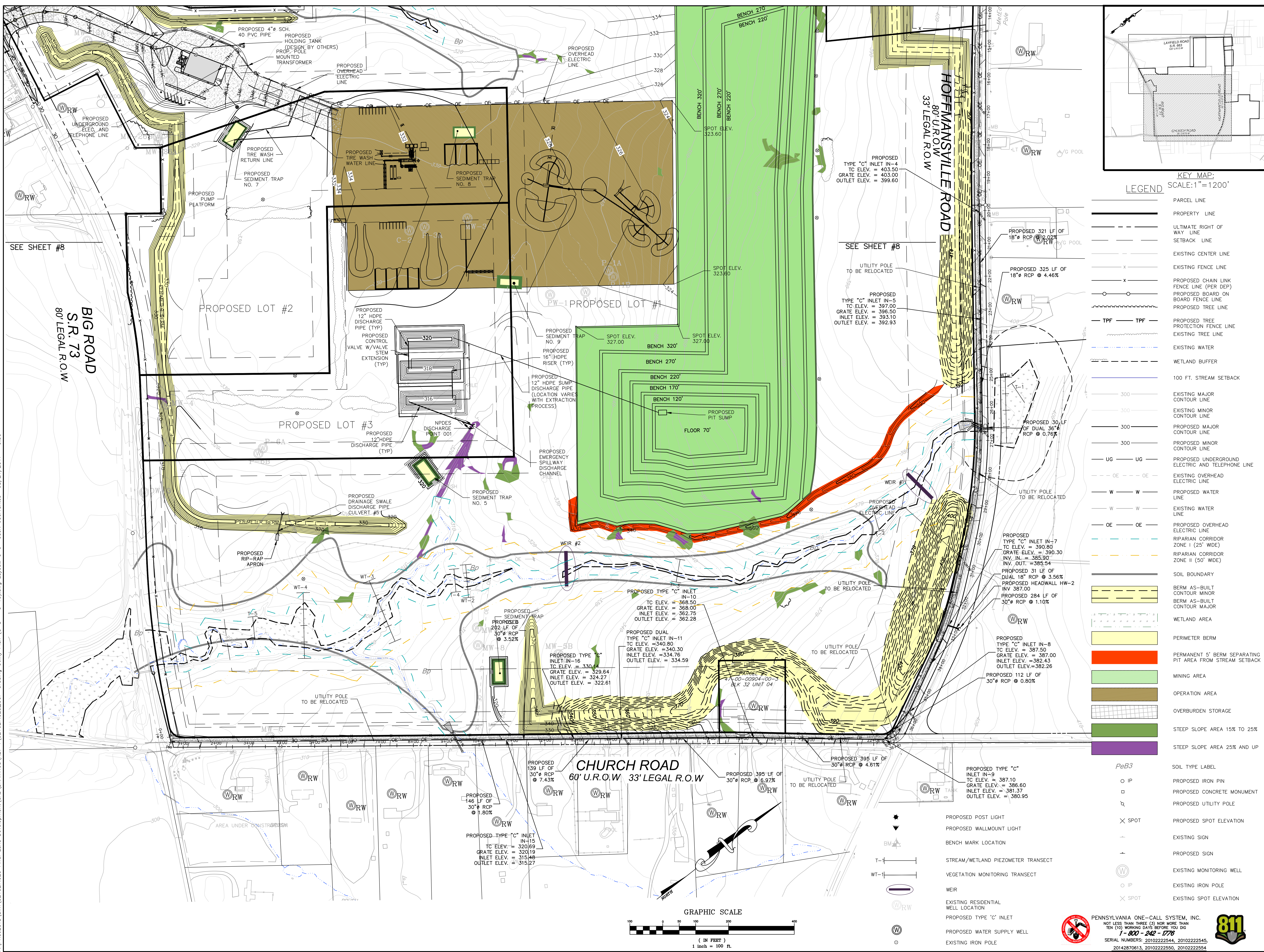
EarthRes
 ENGINEERING AND SCIENCE

PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN
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 1-800-442-2776
 SERIAL NUMBERS: 2010222544, 2010222545,
 20142870613, 2010222550, 2010222554



KEY MAP: SCALE: 1"=1200'

F:\PROJECTS\Silva\021027.029 Final Land Development\CAD\DRAWINGS\REV 1\021027.025_GUP-Grading Utility Plan (C-8 - C-10).dwg Layout: C-9 User: JCervantes 08/21/2017 9:30



LEGEND

(Symbol)	PARCEL LINE
(Symbol)	PROPERTY LINE
(Symbol)	ULTIMATE RIGHT OF WAY LINE
(Symbol)	SETBACK LINE
(Symbol)	EXISTING CENTER LINE
(Symbol)	EXISTING FENCE LINE
(Symbol)	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
(Symbol)	PROPOSED BOARD ON BOARD FENCE LINE
(Symbol)	PROPOSED TREE LINE
(Symbol)	PROPOSED TREE PROTECTION FENCE LINE
(Symbol)	EXISTING TREE LINE
(Symbol)	EXISTING WATER
(Symbol)	WETLAND BUFFER
(Symbol)	100 FT. STREAM SETBACK
(Symbol)	EXISTING MAJOR CONTOUR LINE
(Symbol)	EXISTING MINOR CONTOUR LINE
(Symbol)	PROPOSED MAJOR CONTOUR LINE
(Symbol)	PROPOSED MINOR CONTOUR LINE
(Symbol)	PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE LINE
(Symbol)	EXISTING OVERHEAD ELECTRIC LINE
(Symbol)	PROPOSED WATER LINE
(Symbol)	EXISTING WATER LINE
(Symbol)	PROPOSED OVERHEAD ELECTRIC LINE
(Symbol)	RIPARIAN CORRIDOR ZONE I (25' WIDE)
(Symbol)	RIPARIAN CORRIDOR ZONE II (50' WIDE)
(Symbol)	SOIL BOUNDARY
(Symbol)	BERM AS-BUILT CONTOUR MINOR
(Symbol)	BERM AS-BUILT CONTOUR MAJOR
(Symbol)	WETLAND AREA
(Symbol)	PERIMETER BERM
(Symbol)	PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK
(Symbol)	MINING AREA
(Symbol)	OPERATION AREA
(Symbol)	OVERBURDEN STORAGE
(Symbol)	STEEP SLOPE AREA 15% TO 25%
(Symbol)	STEEP SLOPE AREA 25% AND UP
(Symbol)	SOIL TYPE LABEL
(Symbol)	PROPOSED IRON PIN
(Symbol)	PROPOSED CONCRETE MONUMENT
(Symbol)	PROPOSED UTILITY POLE
(Symbol)	PROPOSED SPOT ELEVATION
(Symbol)	EXISTING SIGN
(Symbol)	PROPOSED SIGN
(Symbol)	EXISTING MONITORING WELL
(Symbol)	EXISTING IRON POLE
(Symbol)	EXISTING SPOT ELEVATION

GRADING AND UTILITY PLAN

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

PROJECT SITE: GIBALTAR ROCK, INC.
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA

PREPARED FOR: GIBALTAR ROCK, INC.

PREPARED BY: EarthRes ENGINEERING AND SCIENCE

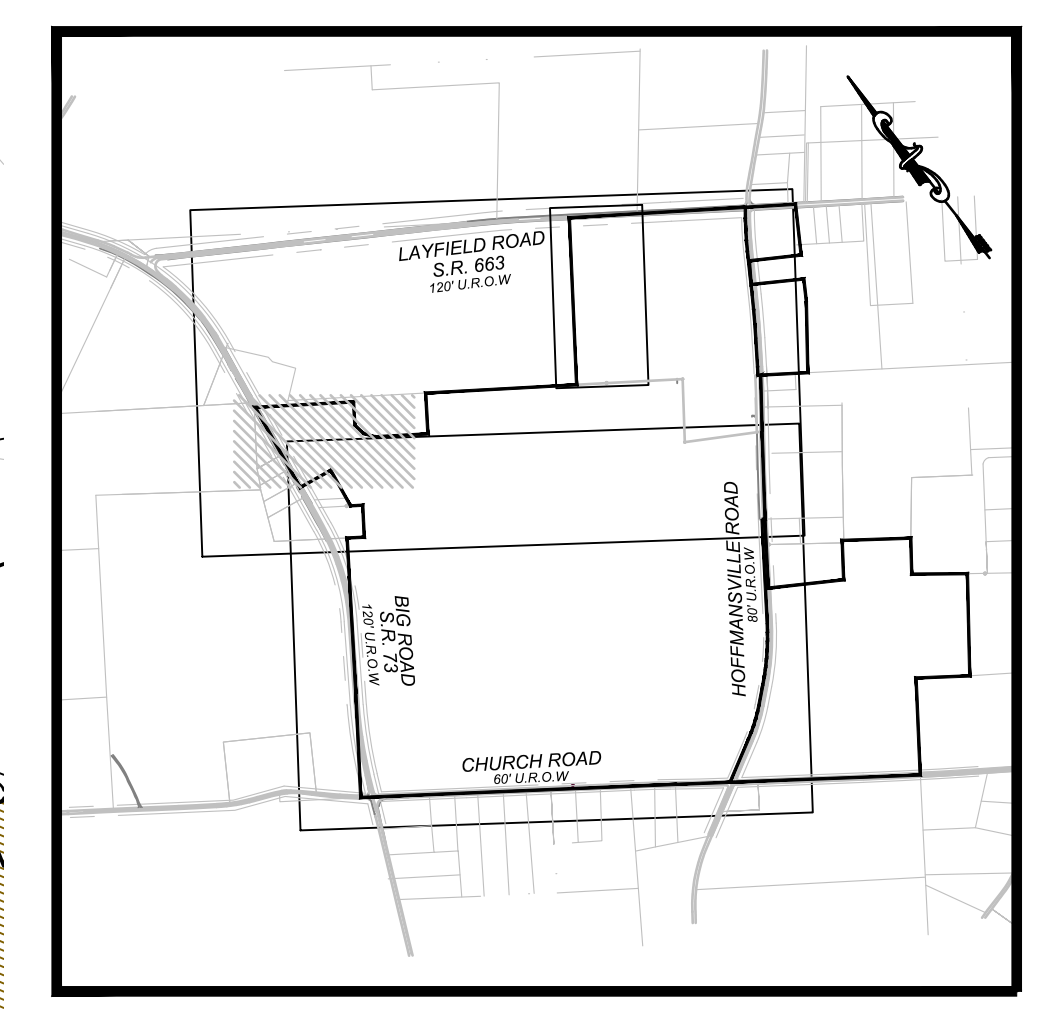
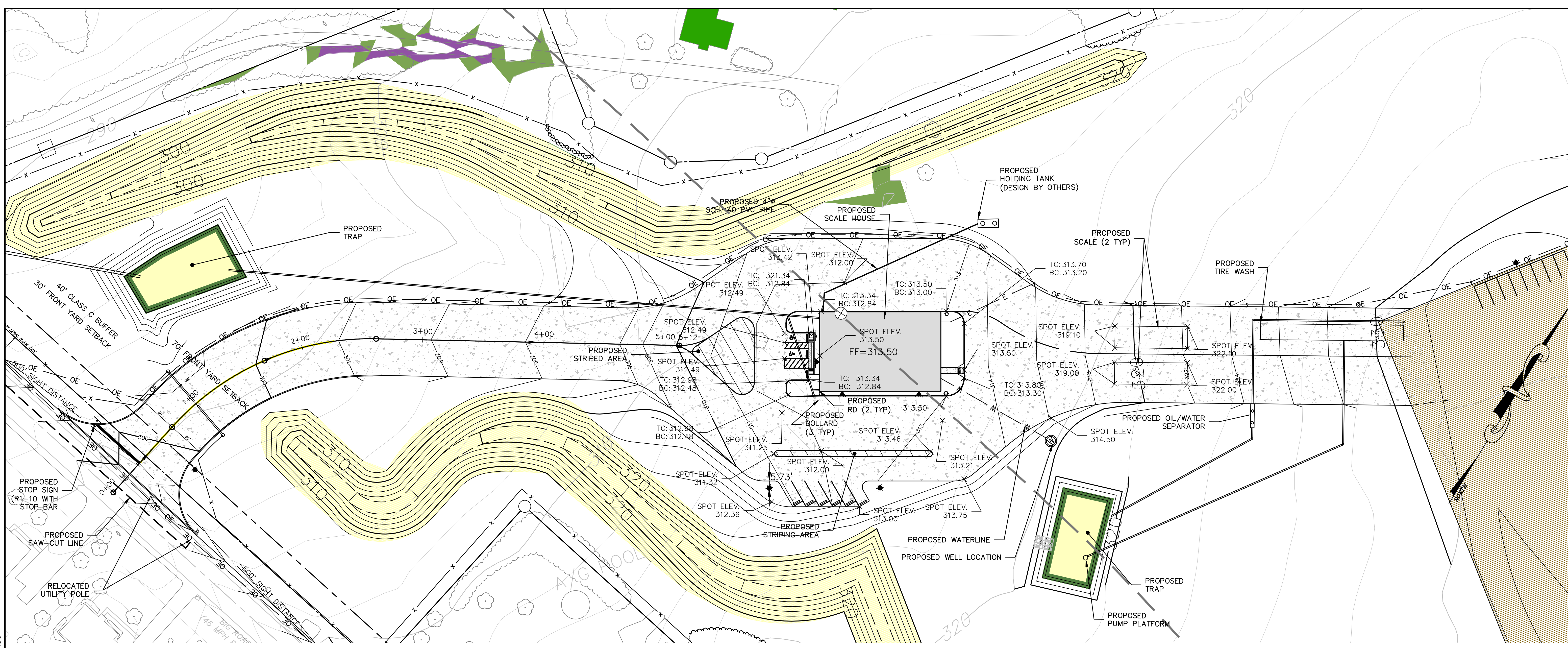
811 PENNSYLVANIA ONE-CALL SYSTEM, INC. NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG 1-800-442-2776 SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554

CHECKED BY: [Signature]
DATE: 10/19/2015
PROJECT NO: 021027.029
DRAWING NUMBER: C-9

DAVID F. ALLEN, P.E.
LICENSE NO. 075102

DATE: 10/15/17
BY: JSC
REVISED PER TWP COMMENTS & 12/9/15 PCM

SHEET 9 OF 34



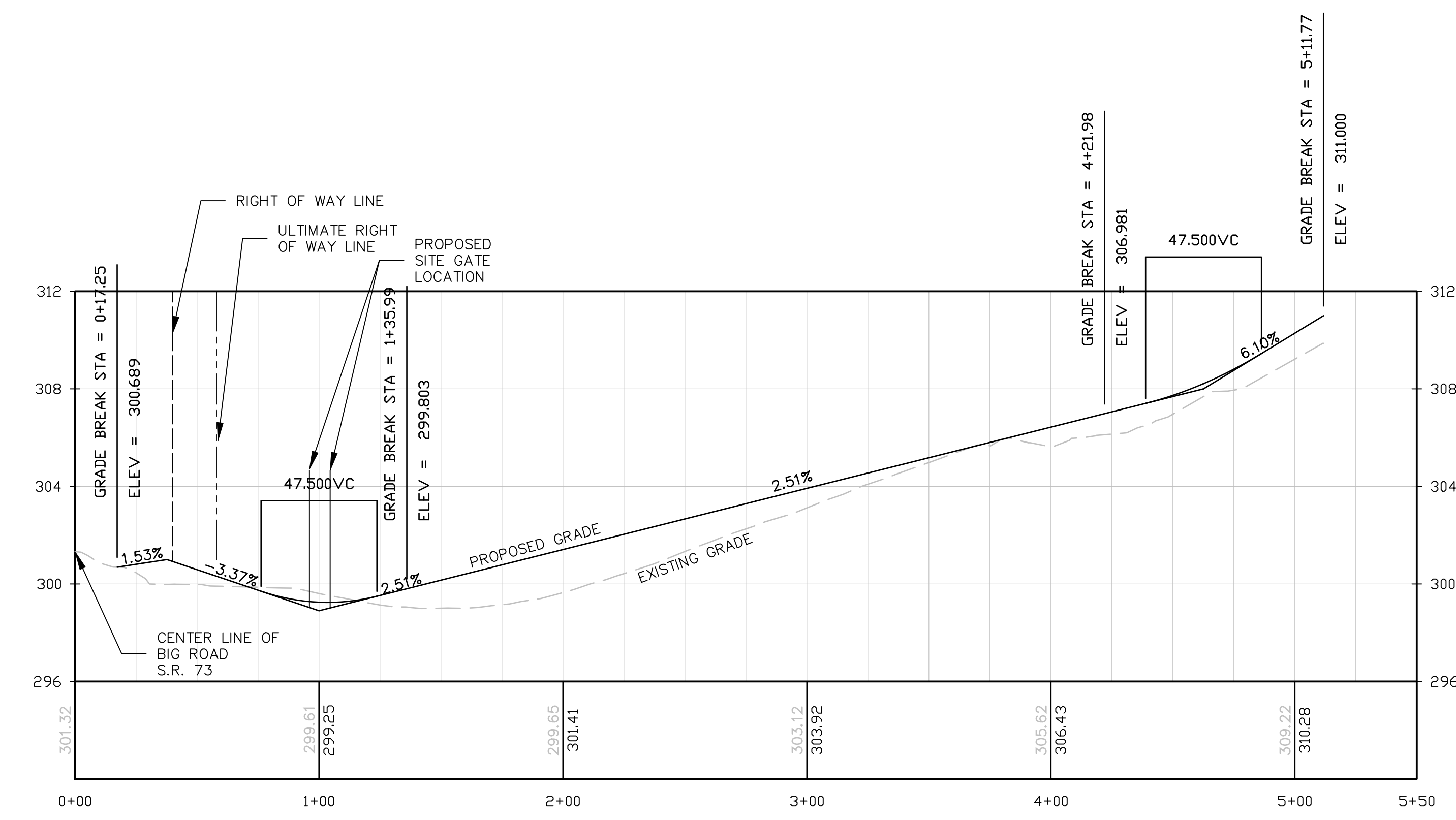
KEY MAP:
SCALE: 1"=1200'

LEGEND

---	PARCEL LINE
---	ZONING LINE
---	ULTIMATE RIGHT OF WAY LINE
---	EXISTING CENTER LINE
-x-x-	EXISTING FENCE LINE
-x-x-	PROPOSED CHAIN LINK FENCE (PER DEP)
---	PROPOSED TREE LINE
---	PROPOSED TREE PROTECTION FENCE LINE
---	PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE LINE
---	EXISTING TREE LINE
---	ASPHALT PLANT
W W	PROPOSED WATER LINE
W W	EXISTING WATER LINE
---	100 FT. STREAM SETBACK
---	EXISTING MAJOR CONTOUR LINE
---	EXISTING MINOR CONTOUR LINE
---	PROPOSED MAJOR CONTOUR LINE
---	PROPOSED MINOR CONTOUR LINE
---	PERIMETER BERM
---	OPERATION AREA
x	PROPOSED SPOT ELEVATION
+	EXISTING SIGN
+	PROPOSED SIGN
o	EXISTING IRON POLE
x	EXISTING SPOT ELEVATION
o	PROPOSED UTILITY POLE
o	EXISTING UTILITY POLE
+	PROPOSED POST LIGHT
+	PROPOSED WALLMOUNT LIGHT
+	EXISTING IRON POLE

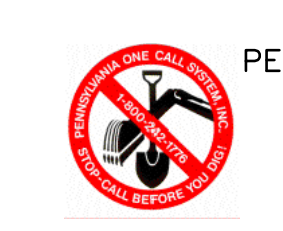
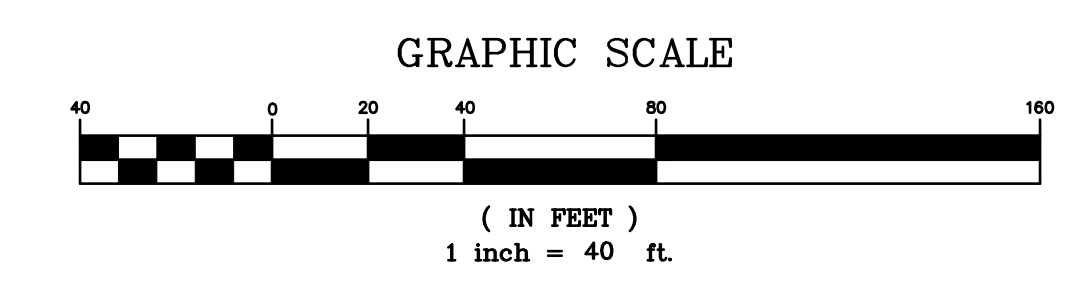
OFFICE/ENTRANCE GRADING AND GENERAL UTILITY NOTES:

- THE LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION.
- SANITARY SEWER AND THE ASSOCIATED HOLDING TANK SYSTEM HAVE BEEN DESIGNED BY OTHERS. THE CONTRACTOR SHALL REFER TO THE HOLDING TANK SYSTEM APPROVED PERMIT DRAWINGS FOR SPECIFIC CONSTRUCTION AND DESIGN CRITERIA. THE HOLDING TANK SYSTEM SHOWN ON THESE PLANS IS FOR REFERENCE PURPOSES ONLY.
- ALL UTILITIES AND SERVICES, INCLUDING BUT NOT LIMITED TO GAS, WATER, ELECTRIC, SANITARY AND STORM SEWER, TELEPHONE, CABLE, FIBER OPTIC CABLE, ETC. WITHIN THE LIMITS OF DISTURBANCE, SHALL BE VERTICALLY AND HORIZONTALLY LOCATED. THE CONTRACTOR SHALL USE AND COMPLY WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY NOTIFICATION SYSTEM TO LOCATE ALL THE UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING UTILITIES DURING CONSTRUCTION, AT NO COST TO THE OWNER.
- DEFINE AND LOCATE VERTICALLY AND HORIZONTALLY ALL ACTIVE UTILITY AND/OR SERVICE SYSTEMS THAT ARE NOT TO REMAIN. THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN ALL ACTIVE SYSTEMS THAT ARE NOT BEING REMOVED/RELOCATED DURING SITE ACTIVITY.
- THE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE APPLICABLE UTILITY SERVICE PROVIDER REQUIREMENTS AND IS RESPONSIBLE FOR ALL COORDINATION REGARDING UTILITY DEMOLITION AS IDENTIFIED OR REQUIRED FOR PROJECT. THE CONTRACTOR SHALL PROVIDE THE OWNER WRITTEN NOTIFICATION THAT THE EXISTING UTILITIES AND SERVICES HAVE BEEN TERMINATED AND ABANDONED IN ACCORDANCE WITH JURISDICTION AND UTILITY COMPANY REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF SITE PLAN DOCUMENTS, EQUIPMENT SHOP DRAWINGS, CUT SHEETS AND ARCHITECTURAL DESIGN FOR EXACT BUILDING AND EQUIPMENT UTILITY CONNECTION LOCATIONS. THE UTILITY SERVICE SIZES ARE TO BE DETERMINED BY ARCHITECT AND EQUIPMENT SUPPLIERS. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES/SERVICES WITH THE INDIVIDUAL EQUIPMENT AND SERVICE POINTS WITH THE OWNER.
- ALL NEW UTILITIES/SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE UTILITY/SERVICE PROVIDER INSTALLATION SPECIFICATIONS AND STANDARDS.
- ALL UTILITIES SHOULD BE KEPT TEN (10) FEET APART (PARALLEL), OR WHEN CROSSING, AT 18 INCHES VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE). PROVIDE 4.0 FEET OF COVER OVER WATER LINES. A MINIMUM OF 18 INCHES SHALL BE MAINTAINED BETWEEN SANITARY SEWER LINES AND STORM LINES OR WATER LINES.
- SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS, SPECIFICATIONS, AND REFERENCED DOCUMENTS. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE BY OWNER OR OWNER'S REPRESENTATIVE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED TO 95% OF THE MAXIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD).
- SEE SPECIFICATIONS FOR BACKFILLING AND COMPACTION REQUIREMENTS ON UTILITY TRENCH. ALL FILL, COMPACTION, AND BACKFILL MATERIALS REQUIRED FOR UTILITY INSTALLATION SHALL BE COORDINATED WITH THE APPLICABLE UTILITY COMPANY SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES, OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE "MEANS AND METHODS" REQUIRED TO MEET THE INTENT AND PERFORMANCE CRITERIA OF OSHA, AS WELL AS ANY OTHER ENTITY THAT HAS JURISDICTION FOR EXCAVATION AND/OR TRENCHING PROCEDURES.
- THE TOPS OF EXISTING MANHOLES AND MONITORING WELL TOPS SHALL BE ADJUSTED, IF REQUIRED, TO MATCH THE GRADING AND UTILITY PLAN(S). THE SANITARY CLEANOUT TOPS SHALL BE RE-INSTALLED IN THE SAME MANNER AS THE ORIGINAL CLEANOUTS.
- PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MINIMUM OF 0.75% GUTTER GRADE ALONG CURB FACE. ENGINEER TO APPROVE FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION.
- REFER TO THE GENERAL SITE NOTES PLAN FOR ADDITIONAL NOTES.
- ALL STORM SEWER AND DETENTION BASIN PIPING SHALL BE CLASS III REINFORCED CONCRETE PIPE WITH O-RING JOINTS WITH THE EXCEPTION OF THE PIPING ASSOCIATED WITH THE PROPOSED SETTLING BASINS.
- PURSUANT TO SECTION 420 OF THE ACT JUNE 1, 1945 (P.L. 1242, NO 428), KNOWN AS THE "STATE HIGHWAY LAW," A HIGHWAY OCCUPANCY PERMIT HAS BEEN SECURED FOR THE PROPOSED DRIVEWAY. ALL WORK WITHIN THE STATE RIGHT-OF-WAY SHALL BE CONDUCTED IN ACCORDANCE WITH THE APPROVED PENNDOT H.O.P. PLANS. ANY DISCREPANCIES BETWEEN THE PLAN SETS THE H.O.P. PLANS SHALL SUPERSEDE.



DRIVEWAY PROFILE

SCALE: VERT.: 1"=5'
HORIZ.: 1"=50'



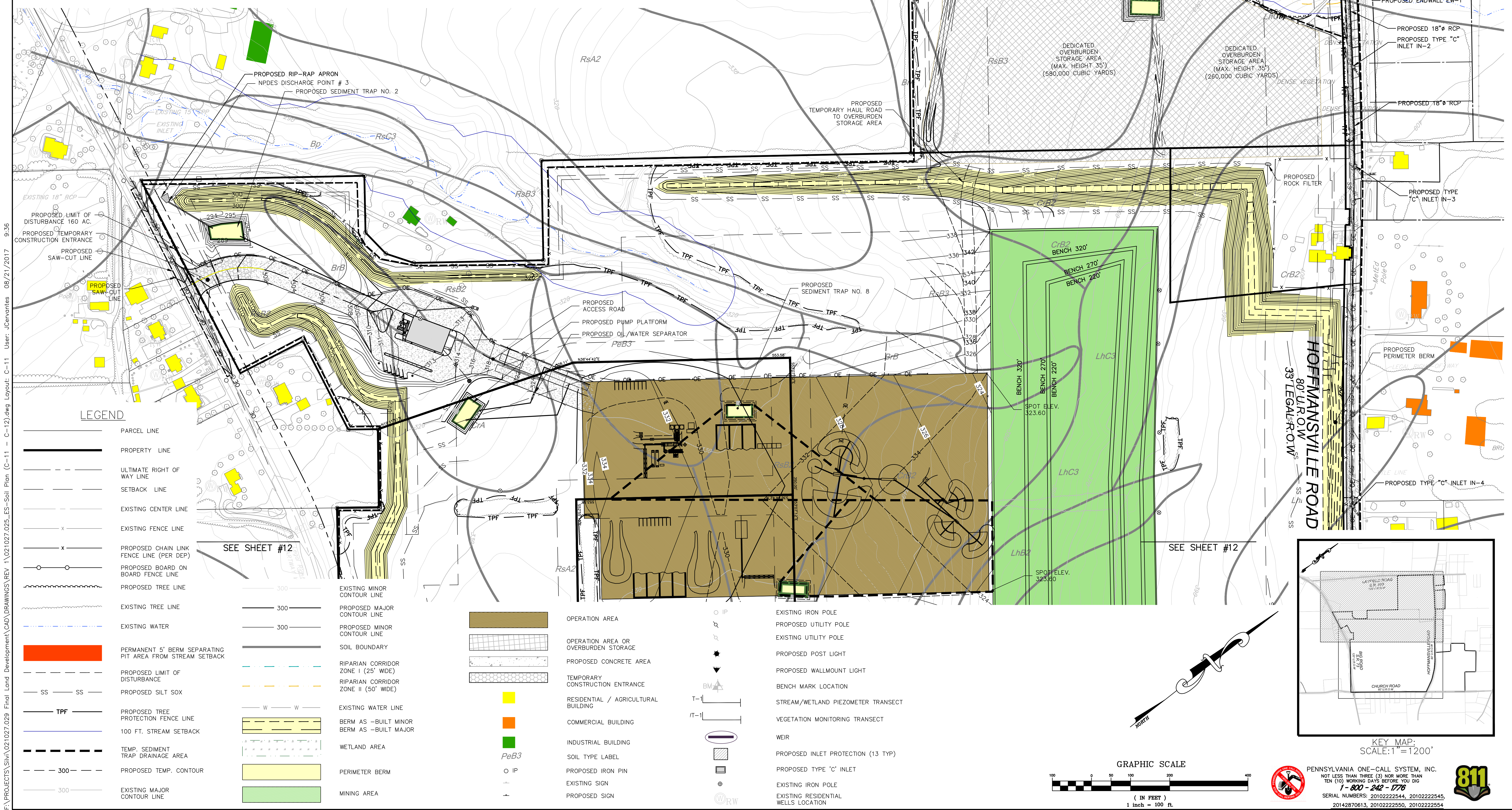
PENNSYLVANIA ONE-CALL SYSTEM, INC.
NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG
1-800-242-2776
SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554



<p>PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP, MONTGOMERY COUNTY, PA</p>	<p>PREPARED FOR: GIBALTAR ROCK, INC.</p>	<p>PREPARED BY: EarthRes ENGINEERING AND SCIENCE</p>	<p>GRADING AND UTILITY PLAN</p>	<p>FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY</p>
<p>DATE: 10/19/2015</p>	<p>CHECKED BY: DCA</p>	<p>DRAWING NO: 021027.029</p>	<p>PROJECT NO: 021027.029</p>	<p>DRAWING NUMBER: C-10</p>
<p>NO. 18/15/17</p>	<p>DATE</p>	<p>BY</p>	<p>REVISIONS</p>	<p>DAVID F. ALLEN, P.E. LICENSE NO. 075102</p>

Map symbol	Soil	Light industrial, commercial, and institutional developments of three stories or less	On-site disposal of effluent from septic tanks	Landscaping and lawns at homesites	Roads and parking lots for subdivisions
B	Bowmansville silt loam	Severe; flooding; high water table.	Severe; flooding; high water table.	Severe; high water table.	Severe; wetness; flooding.
BrA	Bowmansville silt loam, local alluvium, 0 to 3 percent slopes.	Severe; high water table and ponding.	Severe; high water table and ponding.	Severe; wetness.	Severe; wetness.
BrB	Bowmansville silt loam, local alluvium, 3 to 8 percent slopes.	Severe; high water table.	Severe; high water table.	Severe; wetness.	Severe; wetness.
CrA	Croton silt loam, 0 to 3 percent slopes.	Severe; high water table.	Severe; slow permeability and high water table.	Severe; wetness.	Severe; high water table.
CrB2	Croton silt loam, 3 to 8 percent slopes, moderately eroded.	Severe; high water table.	Severe; slow permeability and high water table.	Severe; wetness.	Severe; high water table.
KsB3	Klinesville very shaly silt loam, 3 to 8 percent slopes, severely eroded.	Moderate; slope; shallow to bedrock (rippable).	Severe; shallow to bedrock.	Moderate; slope; shallow to bedrock.	Severe; shallow to bedrock.
KsE3	Klinesville very shaly silt loam, 15 to 35 percent slopes, severely eroded.	Severe; slope.	Severe; slope.	Severe; shallow to bedrock; slope.	Severe; slope.
LhB2	Lehigh channery silt loam, 3 to 8 percent slopes, moderately eroded.	Moderate; seasonal high water table.	Severe; slow permeability; seasonal high water table.	Moderate; shallow to bedrock.	Moderate; shallow to bedrock; slope; seasonal high water table.
LhB3	Lehigh channery silt loam, 3 to 8 percent slopes, severely eroded.	Severe; shallow to bedrock; wetness; seasonal high water table.	Severe; slow permeability; seasonal high water table.	Severe; channery; shallow to bedrock.	Moderate; shallow to bedrock; slope; seasonal high water table.
LhC3	Lehigh channery silt loam, 8 to 15 percent slopes, severely eroded.	Severe; slope; shallow to bedrock; seasonal high water table.	Severe; slow permeability; seasonal high water table.	Severe; channery; shallow to bedrock.	Severe; slope; wetness; shallow to bedrock.
PeB3	Penn silt loam, 3 to 8 percent slopes, severely eroded.	Moderate; shallow to bedrock (rippable).	Severe; shallow to bedrock.	Severe; shallow to bedrock; severe erosion.	Moderate; shallow to bedrock; slope.
RsA2	Reville shaly silt loam, 0 to 3 percent slopes, moderately eroded.	Severe; shallow to bedrock; seasonal high water table.	Severe; slow permeability; shallow to bedrock.	Severe; shallow to bedrock; seasonal high water table.	Moderate; seasonal; high water table.
RsB2	Reville shaly silt loam, 3 to 8 percent slopes, moderately eroded.	Severe; shallow to bedrock; seasonal high water table.	Severe; slow permeability; shallow to bedrock; seasonal high water table.	Severe; shallow to bedrock; seasonal high water table.	Moderate; seasonal; high water table.
RsB3	Reville shaly silt loam, 3 to 8 percent slopes, severely eroded.	Severe; seasonal high water table; shallow to bedrock.	Severe; slow permeability; seasonal high water table.	Severe; shallow to bedrock; seasonal high water table.	Moderate; seasonal; high water table.

SOIL LEGEND:
 BP Bowmansville silt loam
 BrA Bowmansville silt loam, local alluvium, 0 to 3 percent slopes.
 BrB Bowmansville silt loam, local alluvium, 3 to 8 percent slopes.
 CrA Croton silt loam, 0 to 3 percent slopes.
 CrB2 Croton silt loam, 3 to 8 percent slopes, moderately eroded.
 KsB3 Klinesville very shaly silt loam, 3 to 8 percent slopes, severely eroded.
 KsE3 Klinesville very shaly silt loam, 15 to 35 percent slopes, severely eroded.
 LhB2 Lehigh channery silt loam, 3 to 8 percent slopes, moderately eroded.
 LhB3 Lehigh channery silt loam, 3 to 8 percent slopes, severely eroded.
 LhC3 Lehigh channery silt loam, 8 to 15 percent slopes, severely eroded.
 PeB3 Penn silt loam, 3 to 8 percent slopes, severely eroded.
 RsA2 Reville shaly silt loam, 0 to 3 percent slopes, moderately eroded.
 RsB2 Reville shaly silt loam, 3 to 8 percent slopes, moderately eroded.
 RsB3 Reville shaly silt loam, 3 to 8 percent slopes, severely eroded.



F:\PROJECTS\Silva\021027.029 Final Land Development\CAD\DRAWINGS\REV 1\021027.025_ES--Soil Plan (C-11 - C-12).dwg Layout: C-11 User: J.Cervantes 08/21/2017 9:36

LEGEND	
	PARCEL LINE
	PROPERTY LINE
	ULTIMATE RIGHT OF WAY LINE
	SETBACK LINE
	EXISTING CENTER LINE
	EXISTING FENCE LINE
	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
	PROPOSED BOARD ON BOARD FENCE LINE
	PROPOSED TREE LINE
	EXISTING MINOR CONTOUR LINE
	EXISTING MAJOR CONTOUR LINE
	EXISTING WATER
	PROPOSED LIMIT OF DISTURBANCE
	PROPOSED SILT SOX
	PROPOSED TREE PROTECTION FENCE LINE
	100 FT. STREAM SETBACK
	TEMP. SEDIMENT TRAP DRAINAGE AREA
	PROPOSED TEMP. CONTOUR
	EXISTING MAJOR CONTOUR LINE
	OPERATION AREA
	OPERATION AREA OR OVERBURDEN STORAGE
	PROPOSED CONCRETE AREA
	TEMPORARY CONSTRUCTION ENTRANCE
	RESIDENTIAL / AGRICULTURAL BUILDING
	COMMERCIAL BUILDING
	INDUSTRIAL BUILDING
	SOIL TYPE LABEL
	PROPOSED IRON PIN
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING IRON POLE
	PROPOSED UTILITY POLE
	EXISTING UTILITY POLE
	PROPOSED POST LIGHT
	PROPOSED WALLMOUNT LIGHT
	BENCH MARK LOCATION
	STREAM/WETLAND PIEZOMETER TRANSECT
	VEGETATION MONITORING TRANSECT
	WEIR
	PROPOSED INLET PROTECTION (13 TYP)
	PROPOSED TYPE 'C' INLET
	EXISTING IRON POLE
	EXISTING RESIDENTIAL WELLS LOCATION

PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA	PREPARED FOR: GIBALTAR ROCK, INC.	PREPARED BY: EarthRes ENGINEERING AND SCIENCE	SOIL EROSION AND SEDIMENT CONTROL PLAN FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY	CHECKED BY: DATE: 10/19/2015 PROJECT NO.: 021027.029 DRAWING NUMBER: C-11	REVISIONS NO. DATE BY 1 8/15/17 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM 2 10/19/15 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM 3 10/19/15 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM
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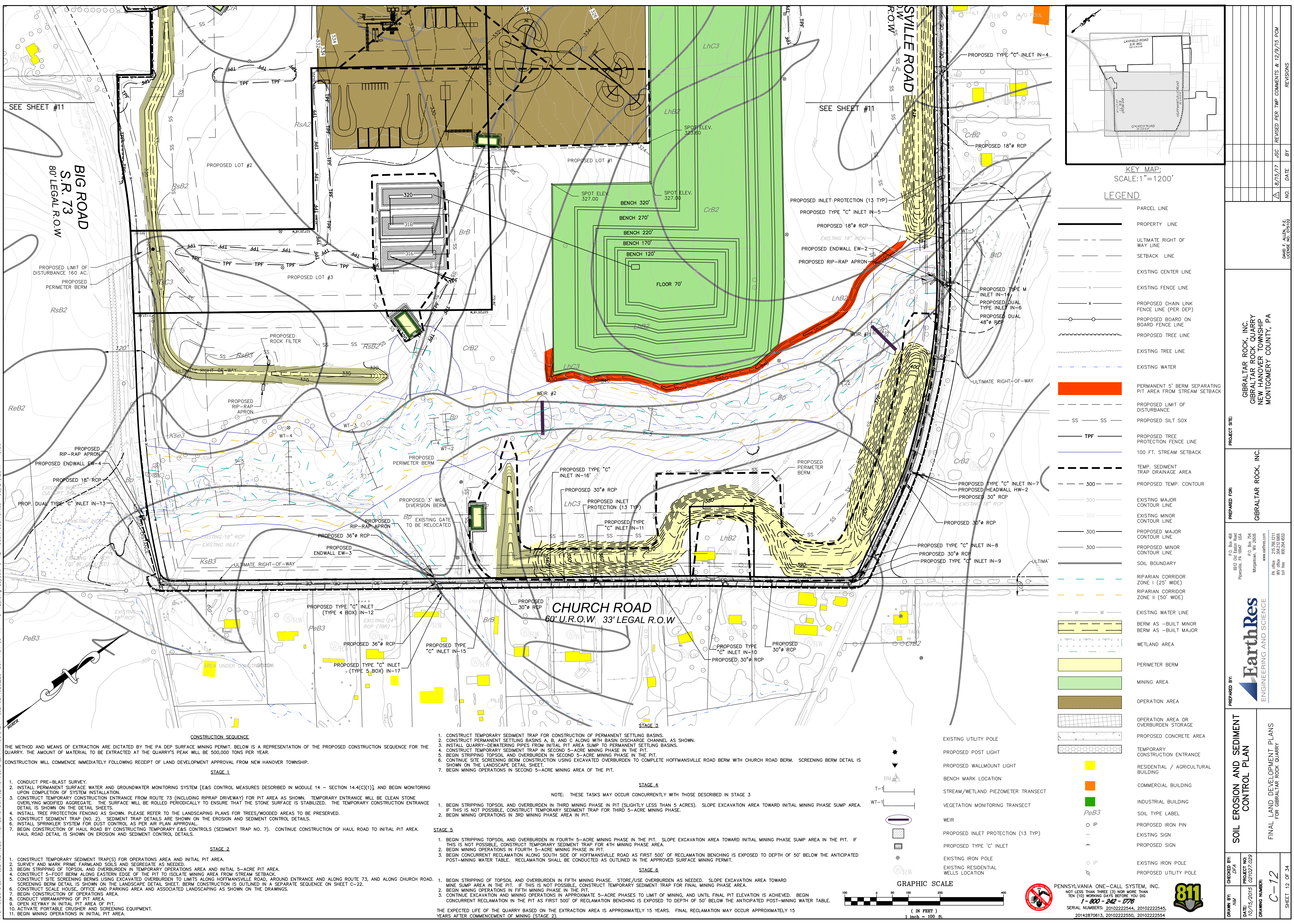
P.O. Box 468
 6812 Old York Road
 Piquette, PA 18847 USA
 P.O. Box 794
 Magnolia, WV 26555
 www.earthres.com
 PA office 212.765.1211
 MD office 800.224.8533
 MD office 410.224.8533

KEY MAP:
 SCALE: 1" = 1200'

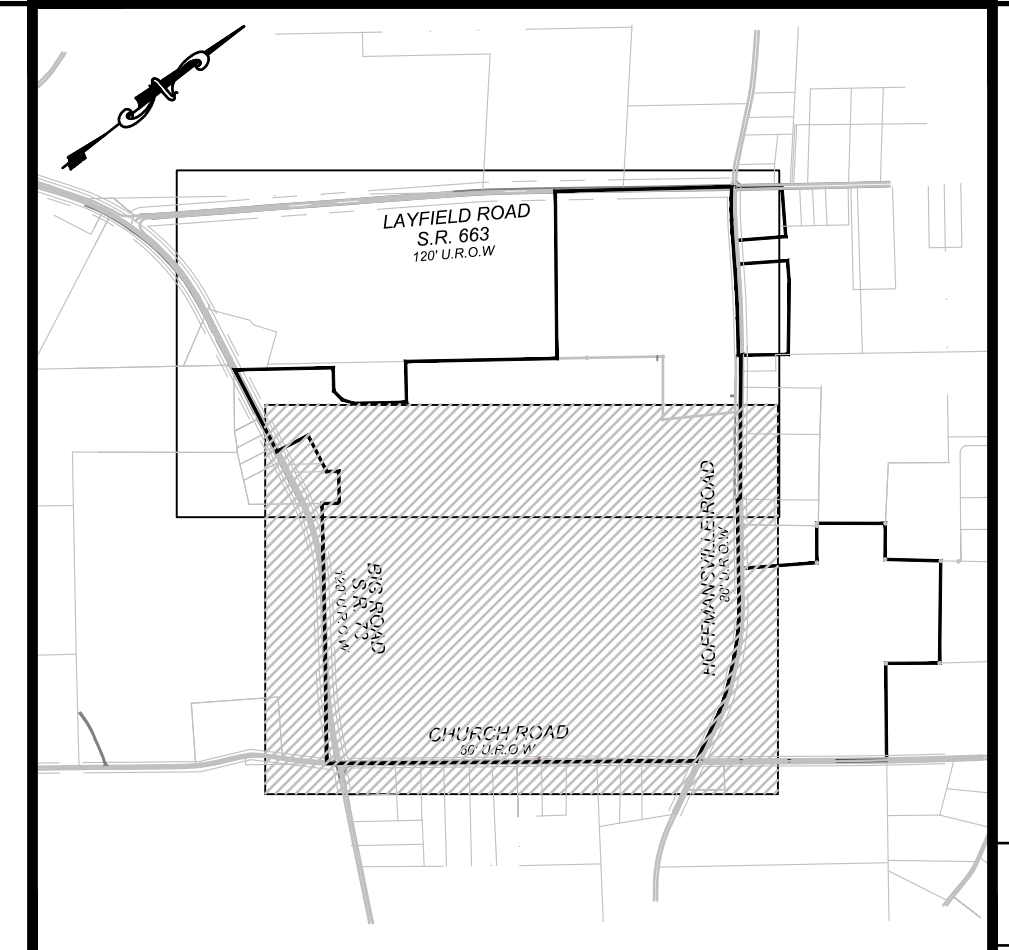
GRAPHIC SCALE
 (IN FEET)
 1 inch = 100 ft.

PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG
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811
 CALL BEFORE YOU DIG



FINAL PROJECT: S:\1021027.025_ES-Soil Plan (C-11 - C-12).dwg Layout: C-12 User: J.Cervantes 06/21/2017 9:36



LEGEND

---	PARCEL LINE
---	PROPERTY LINE
---	ULTIMATE RIGHT OF WAY LINE
---	SETBACK LINE
---	EXISTING CENTER LINE
x	EXISTING FENCE LINE
x	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
o	PROPOSED BOARD ON BOARD FENCE LINE
---	PROPOSED TREE LINE
---	EXISTING TREE LINE
---	EXISTING WATER
---	PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK
---	PROPOSED LIMIT OF DISTURBANCE
SS	PROPOSED SILT SOX
TPF	PROPOSED TREE PROTECTION FENCE LINE
---	100 FT. STREAM SETBACK
---	TEMP. SEDIMENT TRAP DRAINAGE AREA
---	PROPOSED TEMP. CONTOUR
---	EXISTING MAJOR CONTOUR LINE
---	EXISTING MINOR CONTOUR LINE
---	PROPOSED MAJOR CONTOUR LINE
---	PROPOSED MINOR CONTOUR LINE
---	SOIL BOUNDARY
---	RIPARIAN CORRIDOR ZONE I (25' WIDE)
---	RIPARIAN CORRIDOR ZONE II (50' WIDE)
---	EXISTING WATER LINE
---	BERM AS -BUILT MINOR BERM AS -BUILT MAJOR
---	WETLAND AREA
---	PERIMETER BERM
---	MINING AREA
---	OPERATION AREA
---	OPERATION AREA OR OVERBURDEN STORAGE
---	PROPOSED CONCRETE AREA
---	TEMPORARY CONSTRUCTION ENTRANCE
---	EXISTING UTILITY POLE
---	PROPOSED POST LIGHT
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---	BENCH MARK LOCATION
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---	VEGETATION MONITORING TRANSECT
---	WEIR
---	PROPOSED INLET PROTECTION (13 TYP)
---	PROPOSED TYPE 'C' INLET
---	EXISTING IRON POLE
---	EXISTING RESIDENTIAL WELLS LOCATION
---	EXISTING UTILITY POLE

CONSTRUCTION SEQUENCE

THE METHOD AND MEANS OF EXTRACTION ARE DICTATED BY THE PA DEP SURFACE MINING PERMIT. BELOW IS A REPRESENTATION OF THE PROPOSED CONSTRUCTION SEQUENCE FOR THE QUARRY. THE AMOUNT OF MATERIAL TO BE EXTRACTION AT THE QUARRY'S PEAK WILL BE 500,000 TONS PER YEAR.

CONSTRUCTION WILL COMMENCE IMMEDIATELY FOLLOWING RECEIPT OF LAND DEVELOPMENT APPROVAL FROM NEW HANOVER TOWNSHIP.

STAGE 1

1. CONDUCT PRE-BLAST SURVEY.
2. INSTALL PERMANENT SURFACE WATER AND GROUNDWATER MONITORING SYSTEM [E&S CONTROL MEASURES DESCRIBED IN MODULE 14 - SECTION 14.4(C)(1)] AND BEGIN MONITORING UPON COMPLETION OF SYSTEM INSTALLATION.
3. CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE FROM ROUTE 73 (INCLUDING RIPRAP DRIVEWAY) FOR PIT AREA AS SHOWN. TEMPORARY ENTRANCE WILL BE CLEAN STONE OVERLYING MODIFIED AGGREGATE. THE SURFACE WILL BE ROLLED PERIODICALLY TO ENSURE THAT THE STONE SURFACE IS STABILIZED. THE TEMPORARY CONSTRUCTION ENTRANCE DETAIL IS SHOWN ON THE DETAIL SHEETS.
4. INSTALL TREE PROTECTION FENCING AS SHOWN. PLEASE REFER TO THE LANDSCAPING PLANS FOR TREES/WOODED AREAS TO BE PRESERVED.
5. CONSTRUCT SEDIMENT TRAP (NO. 2). SEDIMENT TRAP DETAILS ARE SHOWN ON THE EROSION AND SEDIMENT CONTROL DETAILS.
6. INSTALL SPRINKLER SYSTEM FOR DUST CONTROL AS PER AIR PLAN APPROVAL.
7. BEGIN CONSTRUCTION OF HAUL ROAD BY CONSTRUCTING TEMPORARY E&S CONTROLS (SEDIMENT TRAP NO. 7). CONTINUE CONSTRUCTION OF HAUL ROAD TO INITIAL PIT AREA. HAUL ROAD DETAIL IS SHOWN ON EROSION AND SEDIMENT CONTROL DETAILS.

STAGE 2

1. CONSTRUCT TEMPORARY SEDIMENT TRAP(S) FOR OPERATIONS AREA AND INITIAL PIT AREA.
2. SURVEY AND MARK PRIME FARMLAND SOILS AND SEGREGATE AS NEEDED.
3. BEGIN STRIPPING OF TOPSOIL AND OVERBURDEN IN TEMPORARY OPERATIONS AREA AND INITIAL 5-ACRE PIT AREA.
4. CONSTRUCT 5-FOOT BERM ALONG EASTERN EDGE OF THE PIT TO ISOLATE MINING AREA FROM STREAM SETBACK.
5. CONSTRUCT SITE SCREENING BERMS USING EXCAVATED OVERBURDEN TO LIMITS ALONG HOFFMANSVILLE ROAD, AROUND ENTRANCE AND ALONG ROUTE 73, AND ALONG CHURCH ROAD. SCREENING BERM DETAIL IS SHOWN ON THE LANDSCAPE DETAIL SHEET. BERM CONSTRUCTION IS OUTLINED IN A SEPARATE SEQUENCE ON SHEET C-22.
6. CONSTRUCT SCALE HOUSE, OFFICE AND PARKING AREA AND ASSOCIATED LANDSCAPING AS SHOWN ON THE DRAWINGS.
7. BEGIN CONSTRUCTION OF OPERATIONS AREA.
8. CONDUCT VIBRAMAPPING OF PIT AREA.
9. OPEN KEYWAY IN INITIAL PIT AREA OF PIT.
10. ACTIVATE PORTABLE CRUSHER AND SCREENING EQUIPMENT.
11. BEGIN MINING OPERATIONS IN INITIAL PIT AREA.

STAGE 3

1. CONSTRUCT TEMPORARY SEDIMENT TRAP FOR CONSTRUCTION OF PERMANENT SETTLING BASINS.
2. CONSTRUCT PERMANENT SETTLING BASINS A, B, AND C ALONG WITH BASIN DISCHARGE CHANNEL AS SHOWN.
3. INSTALL QUARRY-DEWATERING PIPES FROM INITIAL PIT AREA SUMP TO PERMANENT SETTLING BASINS.
4. CONSTRUCT TEMPORARY SEDIMENT TRAP IN SECOND 5-ACRE MINING PHASE IN THE PIT.
5. BEGIN STRIPPING TOPSOIL AND OVERBURDEN IN SECOND 5-ACRE MINING PHASE IN THE PIT.
6. CONTINUE SITE SCREENING BERM CONSTRUCTION USING EXCAVATED OVERBURDEN TO COMPLETE HOFFMANSVILLE ROAD BERM WITH CHURCH ROAD BERM. SCREENING BERM DETAIL IS SHOWN ON THE LANDSCAPE DETAIL SHEET.
7. BEGIN MINING OPERATIONS IN SECOND 5-ACRE MINING AREA OF THE PIT.

STAGE 4

NOTE: THESE TASKS MAY OCCUR CONCURRENTLY WITH THOSE DESCRIBED IN STAGE 3

1. BEGIN STRIPPING TOPSOIL AND OVERBURDEN IN THIRD MINING PHASE IN PIT (SLIGHTLY LESS THAN 5 ACRES). SLOPE EXCAVATION AREA TOWARD INITIAL MINING PHASE SUMP AREA. IF THIS IS NOT POSSIBLE, CONSTRUCT TEMPORARY SEDIMENT TRAP FOR THIRD 5-ACRE MINING PHASE.
2. BEGIN MINING OPERATIONS IN 3RD MINING PHASE AREA IN PIT.

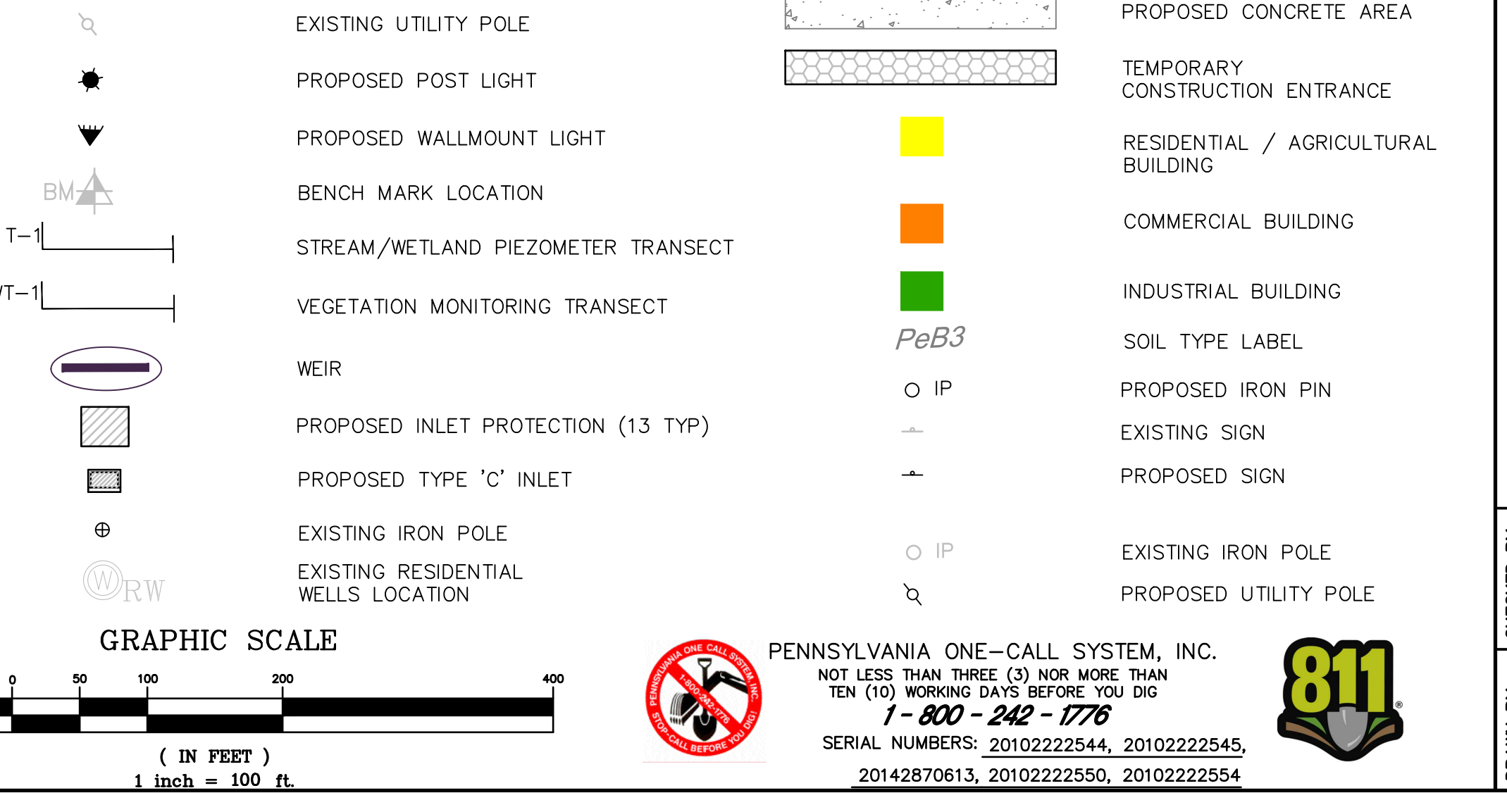
STAGE 5

1. BEGIN STRIPPING TOPSOIL AND OVERBURDEN IN FOURTH 5-ACRE MINING PHASE IN THE PIT. SLOPE EXCAVATION AREA TOWARD INITIAL MINING PHASE SUMP AREA IN THE PIT. IF THIS IS NOT POSSIBLE, CONSTRUCT TEMPORARY SEDIMENT TRAP FOR 4TH MINING PHASE AREA.
2. BEGIN MINING OPERATIONS IN FOURTH 5-ACRE MINING PHASE IN PIT.
3. BEGIN CONCURRENT RECLAMATION ALONG SOUTH SIDE OF HOFFMANSVILLE ROAD AS FIRST 500' OF RECLAMATION BENCHING IS EXPOSED TO DEPTH OF 50' BELOW THE ANTICIPATED POST-MINING WATER TABLE. RECLAMATION SHALL BE CONDUCTED AS OUTLINED IN THE APPROVED SURFACE MINING PERMIT.

STAGE 6

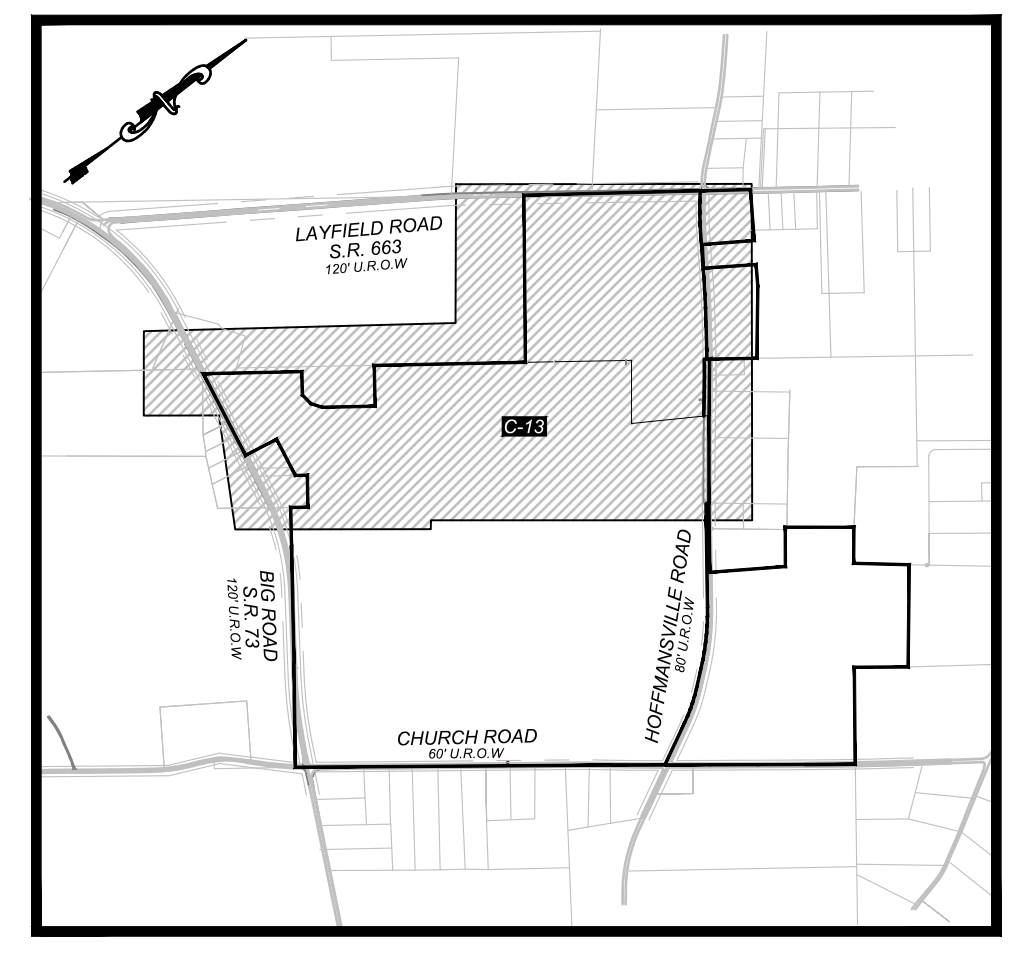
1. BEGIN STRIPPING OF TOPSOIL AND OVERBURDEN IN FIFTH MINING PHASE. STORE/USE OVERBURDEN AS NEEDED. SLOPE EXCAVATION AREA TOWARD MINE SUMP AREA IN THE PIT. IF THIS IS NOT POSSIBLE, CONSTRUCT TEMPORARY SEDIMENT TRAP FOR FIFTH MINING PHASE AREA.
2. BEGIN MINING OPERATIONS IN FIFTH MINING PHASE IN THE PIT.
3. CONTINUE EXCAVATION AND MINING OPERATIONS IN APPROXIMATE 5-ACRE PHASES TO LIMIT OF MINING, AND UNTIL FINAL PIT ELEVATION IS ACHIEVED. BEGIN CONCURRENT RECLAMATION IN THE PIT AS FIRST 500' OF RECLAMATION BENCHING IS EXPOSED TO DEPTH OF 50' BELOW THE ANTICIPATED POST-MINING WATER TABLE.

THE EXPECTED LIFE OF THE QUARRY BASED ON THE EXTRACTION AREA IS APPROXIMATELY 15 YEARS. FINAL RECLAMATION MAY OCCUR APPROXIMATELY 15 YEARS AFTER COMMENCEMENT OF MINING (STAGE 2).



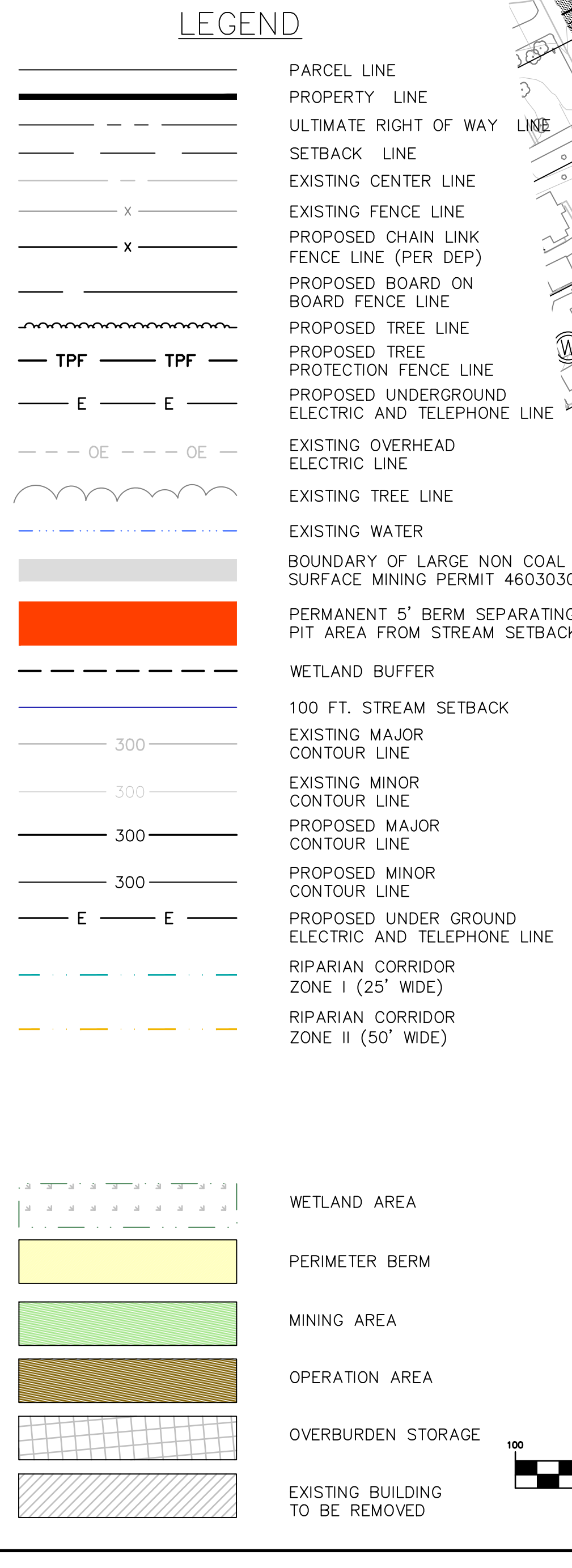
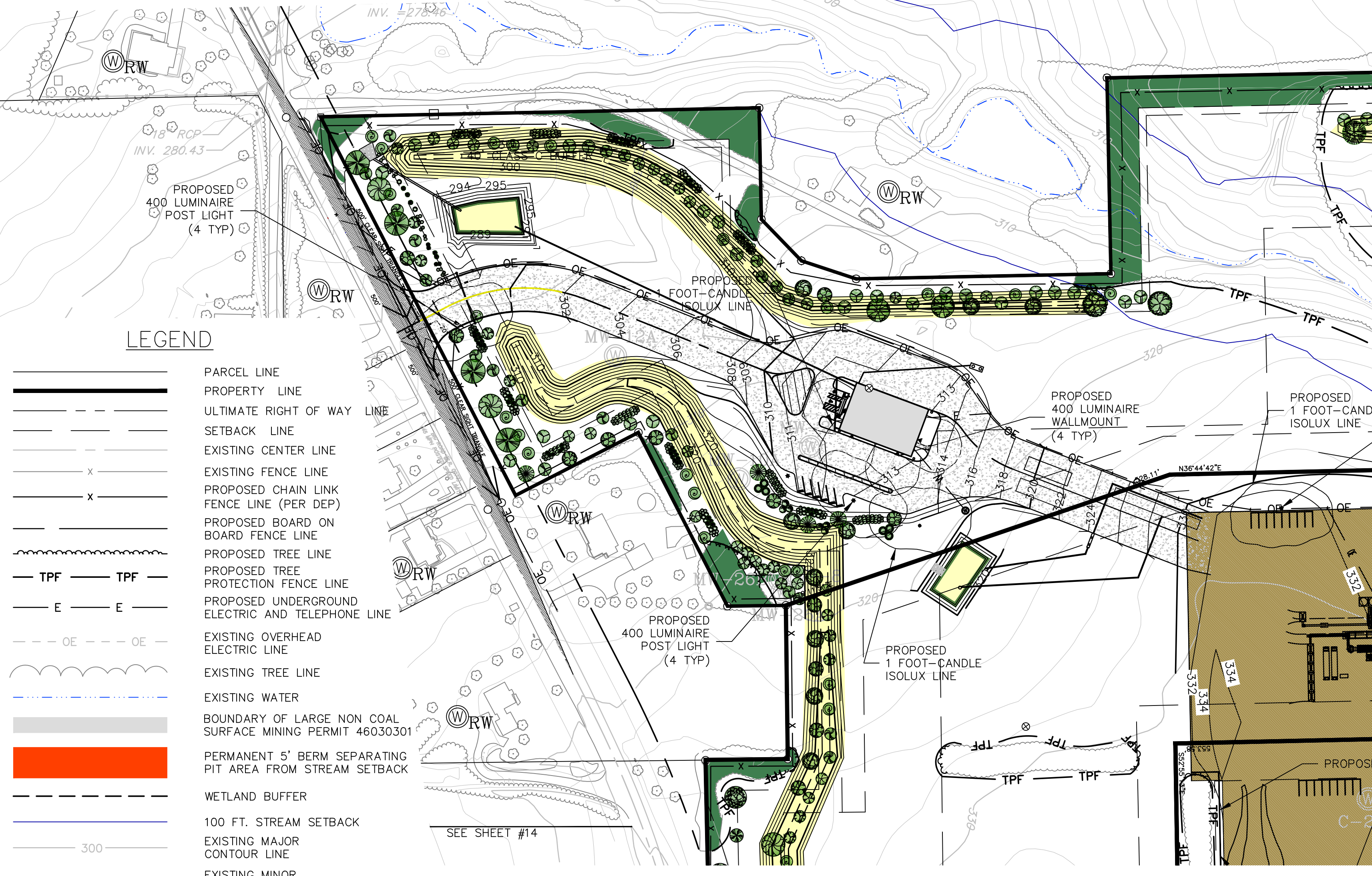
PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA	PREPARED FOR: GIBALTAR ROCK, INC.	P.O. Box 468 6832 Old York Road Piquette, PA 18847 USA P.O. Box 794 Middletown, WV 26055 www.earthres.com PA office: 212.765.0211 MD office: 800.224.8533 MD fax: 800.224.8533	PREPARED BY: ENGINEERING AND SCIENCE	SOIL EROSION AND SEDIMENT CONTROL PLAN	FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY
DATE: 10/19/2015		DATE: 02/02/2025		REVISIONS:	
DATE: 10/19/2015		DATE: 02/02/2025		REVISIONS: JSC REVISED PER TWP COMMENTS & 12/9/15 PCM DATE: 12/9/15 BY: JSC	
PENNSYLVANIA ONE-CALL SYSTEM, INC. NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE 100 DIG 1-800-242-1276 SERIAL NUMBERS: 2010222554, 2010222555, 20142870613, 2010222550, 2010222554					

BUFFER CLASS	LENGTH	OPTION USED	REQUIREMENT	EXISTING	PROVIDED
CLASS A	35 FEET WIDTH	Option 1	1 canopy tree per 40 feet		
CLASS B	35 FEET WIDTH	Option 1 Option 2 Option 3	1 canopy tree per 40 feet plus 1 flower tree per 60 feet plus 1 evergreen per 60 feet 1 canopy tree per 40 feet plus 1 hedge on boundary (3 foot centers), 1 canopy tree per 40 feet plus 1 evergreen per 30 feet		
CLASS C	40 FEET WIDTH	Option 1 Option 2 Option 3 Option 4	1 evergreen per 30 feet plus 1 hedge on boundary (3 foot centers) 1 evergreen per 25 feet plus 1 berm 4 feet high 1 evergreen per 25 feet plus 1 shrub group 1 per 8 feet 1 evergreen per 20 feet Plus 1 shrub group 2 per 4 feet		
BIG ROAD (SOUTHERN PROPERTY LINE)	LINEAR FEET	OPTION USED	Requirement	EXISTING	PROVIDED
BUFFER CLASS	2757				
Segment 1 (E+13)	514	Option 3	14 shrubs, 21 evergreen trees		14 shrubs, 21 evergreen trees
Segment 2	397	Option 1	132 shrubs, 33 evergreen trees	Hedge along entire segment	0 shrubs, 33 evergreen trees
Segment 3	1828	Option 2	120 shrubs, 45 evergreen trees		120 shrubs, 45 evergreen trees
Segment 4	257	Option 3	32 shrubs, 30 evergreen trees		32 shrubs, 30 evergreen trees
CHURCH ROAD (EASTERN PROPERTY LINE)	LINEAR FEET	OPTION USED		EXISTING	PROVIDED
BUFFER CLASS	2633				
Segment 1	1575	Option 2	0 shrubs, 43 evergreen trees		0 shrubs, 43 evergreen trees
Segment 2	1060	Option 3	133 shrubs, 42 evergreen trees		133 shrubs, 42 evergreen trees
HOFFMANVILLE ROAD (NORTHERN PROPERTY LINE)	LINEAR FEET	OPTION USED		EXISTING	PROVIDED
BUFFER CLASS	2000				
Segment 1 (E+13)	773	Option 3	19 canopy trees, 0 shrubs, 25 evergreen trees	4 canopy trees	13 canopy trees, 43 shrubs, 25 evergreen trees
Segment 2	1227	Option 3	31 canopy trees, 0 shrubs, 41 evergreen trees		31 canopy trees, 0 shrubs, 41 evergreen trees
CLASS C BUFFER	1674	Option 2	0 shrubs, 67 evergreen trees		14 shrubs, 67 evergreen trees
Segment 2	1674				
LAYFIELD ROAD (WESTERN PROPERTY LINE)	LINEAR FEET	OPTION USED		EXISTING	PROVIDED
BUFFER CLASS	1080				
Segment 1	1080	Option 1	160 shrubs, 36 evergreen trees	Hedge along segment. Provided shrubs fill gap	160 shrubs, 36 evergreen trees
WESTERN PROPERTY LINE	LINEAR FEET	OPTION USED		EXISTING	PROVIDED
BUFFER CLASS	2415				
Segment 1	1214	Option 2	0 shrubs, 49 evergreen trees		106 shrubs, 49 evergreen trees
Segment 2	649	Option 1	216 shrubs, 22 evergreen trees	Hedge along entire segment	0 shrubs, 22 evergreen trees
Segment 3	552	Option 1	184 shrubs, 18 evergreen trees	Hedge along entire segment	90 shrubs, 22 evergreen trees
STREET FRONTAGE	LINEAR FEET	1 STREET TREE PER 50'			260 street trees
	10493				



KEY MAP:
SCALE: 1"=1200'

CORNER SIGHT DISTANCE (CLEAR SIGHT TRIANGLE)
AS SPECIFIED ON THE PLAN THE APPLICANT SHALL PROVIDE A MINIMUM CORNER SIGHT DISTANCE OF 500' ALONG THE PHYSICAL CENTERLINE OF BIG ROAD (S.R. 73) AS MEASURED FROM 20' FROM THE EDGE OF THE PAVED SHOULDER OF BIG ROAD. THE ENTIRE AREA OF THE CLEAR SIGHT TRIANGLE AS SHOWN IS DESIGNED TO PROVIDE AN UNOBSTRUCTED VIEW ACROSS IT 3-1/2 FEET ABOVE THE CARTWAY.



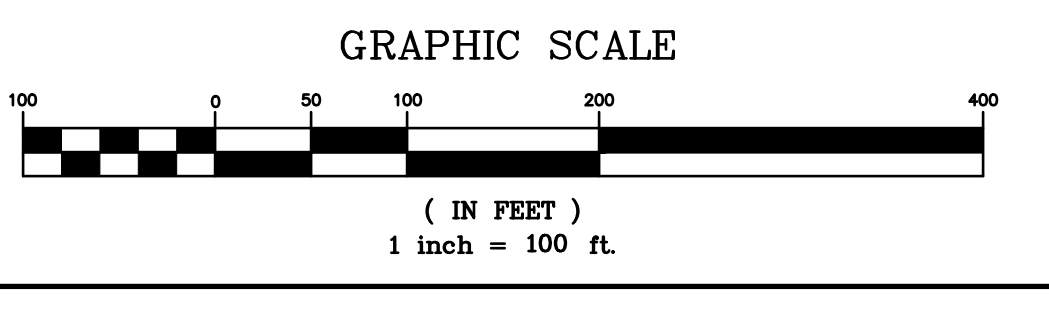
PLANTING SCHEDULE (ENTIRE SITE)

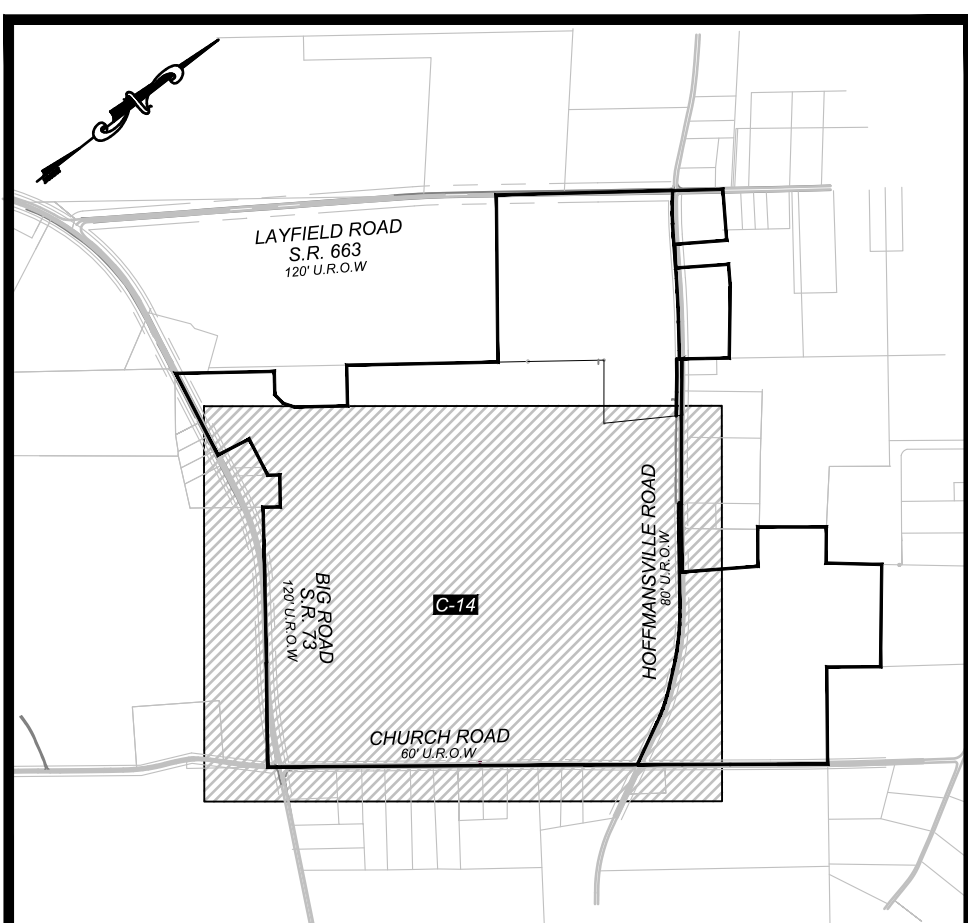
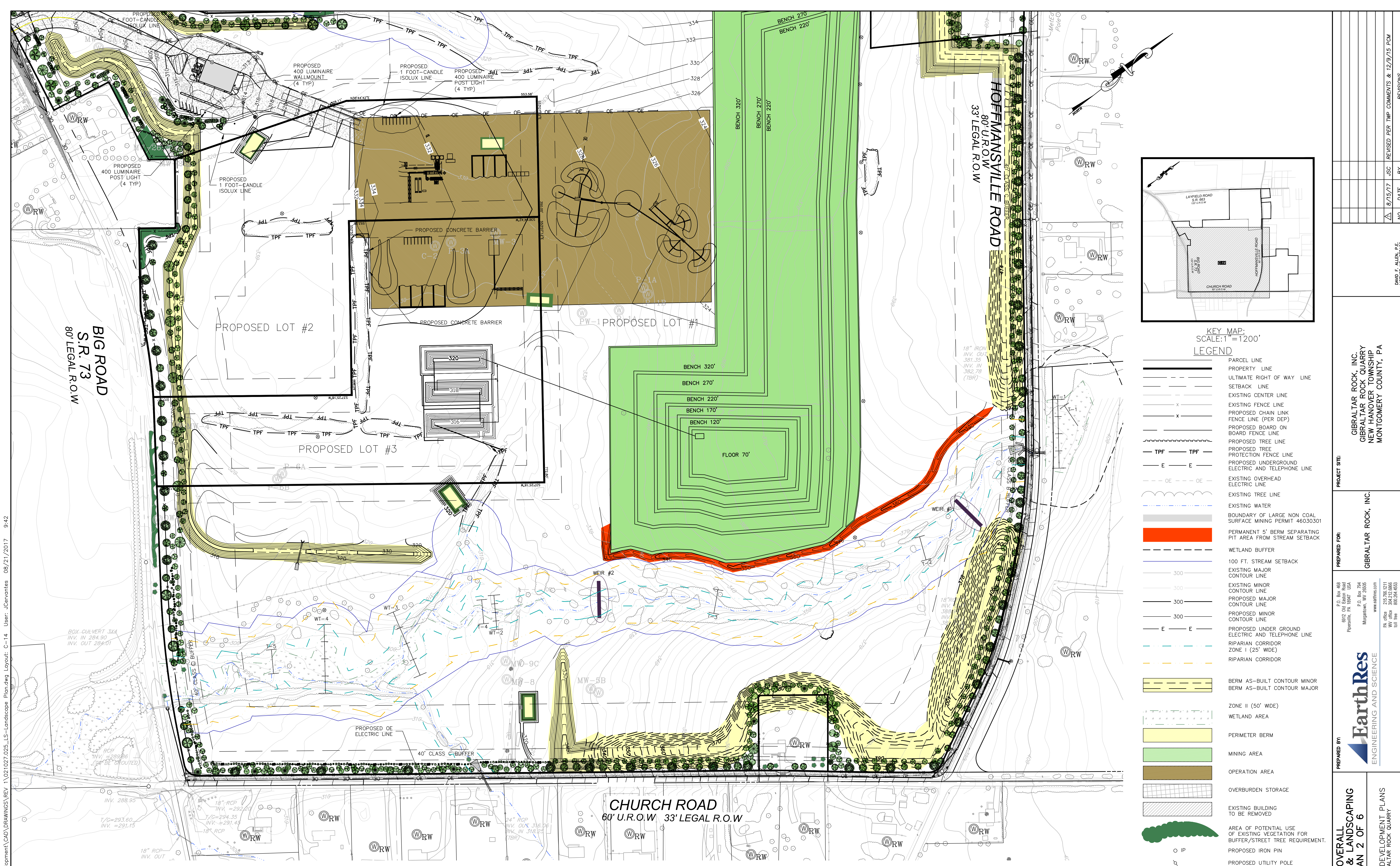
COMMON NAME	CODE	QUANTITY	HEIGHT
ACER RUBRUM	RMP	59	5'-6"
ACER SACCHARUM	SMP	32	5'-6"
AESCULUS HIPPOCASTANUM	HCH	2	5'-6"
CERCIS CANADENSIS	ERB	12	5'-6"
CRATAEGUS CRUSGALLI INERMIS	HAW	8	5'-6"
CRATAEGUS VIRIDIS WINTER KING INERMIS	KNG	11	5'-6"
GLEDISIA TRIACANTHOS INERMIS	HNY	18	5'-6"
LIQUIDAMBAR STYRACIFLUA	SG	13	5'-6"
LIRIODENDRON TULIPIFERA	TLP	2	5'-6"
MAGNOLIA VIRGINIANA	SBM	5	5'-6"
MAGNOLIA X SOULANGIANA	SCM	5	5'-6"
CARPINUS CAROLINIANA	IW	2	5'-6"
JUGLANS NIGRA	BW	4	5'-6"
OSTRYA VIRGINIANA	HH	6	5'-6"
OXYDENDRUM ARBOREUM	SD	5	5'-6"
PRUNUS SEROTINA	PC	3	5'-6"
QUERCUS ACUTISSIMA	STO	2	5'-6"
QUERCUS BICOLORE	SWO	12	5'-6"
QUERCUS COCCINEA	SCO	4	5'-6"
QUERCUS PALustris	PNO	5	5'-6"
QUERCUS RUBRA	NRO	2	5'-6"
RHUS TYPHINA	STA	3	5'-6"
SASSAFRAS ALBIDUM	SAS	2	5'-6"
ALNUS AMERICANA 'VALLEY FORGE'	VFE	10	5'-6"
ZELKOVA SERRATA	JZ	42	5'-6"

COMMON NAME	CODE	QUANTITY	HEIGHT
ILEX OPACA (FEMALE)	FH	33	5'-6"
ILEX OPACA (MALE)	MH	33	5'-6"
PICEA ABIES	NS	81	5'-6"
PINUS NIGRA	AP	85	5'-6"
PINUS STROBUS	WP	90	5'-6"
PINUS VIRGINIANA	VP	69	5'-6"
PSUEDOTSUGA MENZIESII	DF	89	5'-6"

COMMON NAME	CODE	QUANTITY	HEIGHT
AEOLUS PARVIFLORA	BB	33	3' SPR.
CORNUS SERICEA	DW	40	2.5' SPR.
CORNUS SP.	SP	6	3' HT.
HAMAMELIS VERNIS	VV	1	3' HT.
HAMAMELIS VIRGINIANA	CW	1	5' HT.
HAMAMELIS X INTERMEDIA 'ARNOLD'S PROMISE'	AW	4	4' HT.
HYDRANGEA QUERCIFOLIA	OL	51	2' SPR.
HYDRANGEA QUERCIFOLIA 'SNOW QUEEN'	SQ	39	2' SPR.
ILEX VERTICILLATA	WB	43	36" HT.
ILEX VERTICILLATA 'SPARKLEBERRY'	SP	79	36" HT.
LYRICA PENNSYLVANICA	SP	6	2.5' HT.
RHUS TYPHINA	SS	17	3 GAL.
SAMBUCUS CANADENSIS	AE	34	15" SPR.
TAXUS MEDIA 'HICKSI'	HY	94	3' HT.
VACCINIUM CORYMBOSUM	HB	5	3' HT.
VIBURNUM ACERIFOLIUM	MV	67	3' HT.
VIBURNUM DENTATUM	AR	56	4' HT.
VIBURNUM PRINIFOLIUM	BR	44	3' HT.
VIBURNUM PHYTODOPHYLLUM	LV	62	3' HT.
VIBURNUM X RHYTIDOPHYLLOIDES 'ALLEGHENY'	AV	55	3' HT.

- ### PLANTING SPECIFICATIONS:
- TREES AND SHRUBS SHALL BE PLANTED AS INDICATED ON PLAN UNLESS THE TOWNSHIP ENGINEER OR TOWNSHIP PLANNER PERMITS ALTERNATE PLANTING TYPES, SPECIES, SIZES OR LOCATIONS.
 - ALL SHRUBS AND EVERGREEN TREES SHALL CONFORM TO THE STANDARDS OF THE AMERICAN LANDSCAPE AND NURSERY ASSOCIATION AND SHALL HAVE PASSED INSPECTIONS UNDER STATE REGULATIONS.
 - TREES PERMITTED SHALL BE OF SYMMETRICAL GROWTH, FREE OF INSECT PESTS AND DISEASE, AND DURABLE UNDER THE MAINTENANCE CONTEMPLATED.
 - PLANT MATERIALS SHALL BE PERMANENTLY MAINTAINED AND ANY PLANT MATERIAL WHICH DOES NOT LIVE SHALL BE REPLACED WITHIN ONE (1) YEAR OF INSTALLATION.
 - STAKEOUT PLANT MATERIAL LOCATIONS AT THE SITE BEFORE INSTALLATION. MARKERS SHALL BE WOOD STAKES, MINIMUM 2"x2"x4".
 - FOR BALLED AND BURLAPPED TREES APPLY SOIL ADDITIVES IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDED RATES AND PROCEDURES.
 - BACKFILL AROUND ROOT BALLS OF TREES WITH A 1 COMPOSTED HUMUS, 1 TOPSOIL, WITH MICORRHIZAE, HYDROGEL, AND SLOW RELEASE FERTILIZER APPLIED AS RECOMMENDED BY THE MANUFACTURERS.
 - SUPPLY AND SPREAD SOIL ADDITIVES PLUS 3" DEPTH OF WELL-ROTTED COMPOST OVER ALL BED AREAS.
 - APPLY PRE-EMERGENCE HERBICIDE TO PLANTING BEDS ACCORDING TO MANUFACTURER'S RECOMMENDATION BEFORE PLACING MULCH. INCLUDE A SECOND APPLICATION OF PRE-EMERGENCE HERBICIDE AS A PART OF THIS WORK.
 - THE PLANTING PERIOD SHALL BE WITHIN MAY 1 THRU OCTOBER 15.
 - TREES AND SHRUBS SHALL BE WATERED BY HAND IMMEDIATELY AFTER PLANTING TO SATURATE. REPLACE BACKFILL TO GRADE AS NEEDED.
 - TREES AND SHRUBS SHALL BE WATERED AS NECESSARY TO MAINTAIN HEALTH AND VIGOR OF THE PLANT UP TO OCTOBER 15. WATERING SHALL BE CONDUCTED BY HAND USING SPRAY OR HOSE METHODS. VEHICLES MAY NOT TRAVEL PLANTED OR SEEDED AREAS. CARE SHALL BE TAKEN NOT TO DISLODGE SOIL OR MULCH DURING WATERING PROCESS. WATERING BAGS MAY BE USED IN LIEU OF HAND WATERING.
 - MULCH SHALL CONSIST OF A DYED BLACK SHREDDED WOOD MATERIAL (OR EQUAL) DISPERSED THROUGHOUT THE ENTIRE PLANTING AREAS AT A MINIMUM DEPTH OF 3 INCHES.
 - WEEDING OF THE PLANTING AREA SHALL BE PERFORMED AT LEAST TWICE DURING THE GROWING SEASON FOR THE FULL GUARANTEE PERIOD OF A MINIMUM OF TWO FULL GROWING SEASONS.



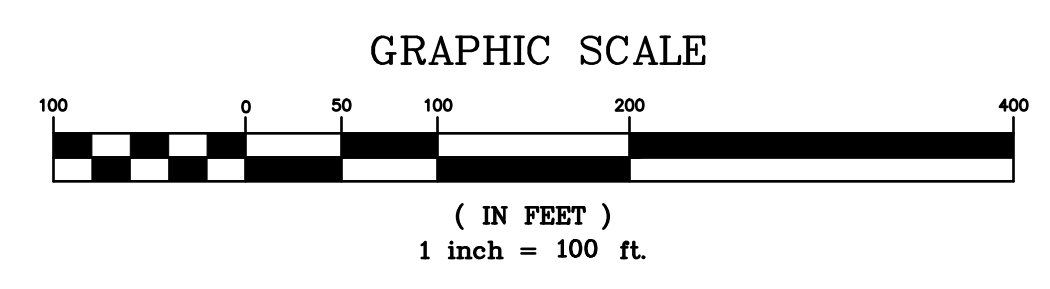


KEY MAP:
SCALE: 1" = 1200'

LEGEND	
	PARCEL LINE
	PROPERTY LINE
	ULTIMATE RIGHT OF WAY LINE
	SETBACK LINE
	EXISTING CENTER LINE
	EXISTING FENCE LINE
	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
	PROPOSED BOARD ON BOARD FENCE LINE
	PROPOSED TREE LINE
	PROPOSED PROTECTION FENCE LINE
	PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE LINE
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING TREE LINE
	EXISTING WATER
	BOUNDARY OF LARGE NON COAL SURFACE MINING PERMIT 46030301
	PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK
	WETLAND BUFFER
	100 FT. STREAM SETBACK
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED MAJOR CONTOUR LINE
	PROPOSED MINOR CONTOUR LINE
	PROPOSED UNDER GROUND ELECTRIC AND TELEPHONE LINE
	RIPARIAN CORRIDOR ZONE I (25' WIDE)
	RIPARIAN CORRIDOR
	BERM AS-BUILT CONTOUR MINOR
	BERM AS-BUILT CONTOUR MAJOR
	ZONE II (50' WIDE)
	WETLAND AREA
	PERIMETER BERM
	MINING AREA
	OPERATION AREA
	OVERBURDEN STORAGE
	EXISTING BUILDING TO BE REMOVED
	AREA OF POTENTIAL USE OF EXISTING VEGETATION FOR BUFFER/STREET TREE REQUIREMENT.
	PROPOSED IRON PIN
	PROPOSED UTILITY POLE
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING IRON POLE
	EXISTING SPOT ELEVATION
	PROPOSED POST LIGHT
	PROPOSED WALLMOUNT LIGHT
	EXISTING RESIDENTIAL WELL LOCATION

REFER TO PLANS C-15 THRU C-18 FOR SPECIFIC TREE AND SHRUB LEGEND / SYMBOLS

- EXISTING BUFFER.**
- IT IS THE INTENTION OF THE APPLICANT TO UTILIZE THE EXISTING VEGETATION AND TREES WITHIN THE REQUIRED BUFFER YARDS, WHERE POSSIBLE.
 - AS REFERENCED FROM THE NEW HANOVER TOWNSHIP SALDO WHICH STATES, "ALL EXISTING DECIDUOUS AND CONIFEROUS TREES LARGER THAN 2 INCHES IN CALIPER AND/OR 6 FEET IN HEIGHT MAY BE CONSIDERED TO CONTRIBUTE TO THE DEFINITION OF AN EXISTING BUFFER ON THE PROPERTY. IF THE AMOUNT OF EXISTING PLANT MATERIAL THAT SIZE OR GREATER EQUALS ANY OF THE PLANTING REQUIREMENTS FOR REDUCING BUFFER YARD SIZES, THE EQUIVALENT REDUCTION MAY BE TAKEN WITHOUT ADDITIONAL PLANT MATERIAL BEING REQUIRED. IN ALL CASES, EXISTING PLANT MATERIAL OF THE ABOVE CALIPER AND HEIGHT SHALL BE PRESERVED IN ANY BUFFER YARD EXCEPT WHERE CLEARANCE IS REQUIRED TO INSURE ADEQUATE SIGHT DISTANCE. ANY REMOVAL SHALL, WHERE FEASIBLE, INVOLVE RELOCATION RATHER THAN CLEARING".
 - ALL BUFFER YARDS SHALL BE MAINTAINED AND KEPT CLEAN OF ALL DEBRIS, RUBBISH, WEEDS AND TALL GRASS.
 - NO STRUCTURE, MANUFACTURING OR PROCESSING ACTIVITY, OR PARKING OR STORAGE OF MATERIALS SHALL BE PERMITTED IN THE BUFFER AREA.



PREPARED BY: EarthRes ENGINEERING AND SCIENCE	PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA						
	PREPARED FOR: GIBALTAR ROCK, INC.						
P.O. Box 468 6832 Oak Hill Rd Piquette, PA 16847 USA P.O. Box 794 Middletown, WV 26055 www.earthres.com PA office: 212.766.1211 MD office: 800.224.6533	REVISIONS <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> </tr> <tr> <td>1</td> <td>10/15/17</td> <td>JSC</td> </tr> </table>	NO.	DATE	BY	1	10/15/17	JSC
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1	10/15/17	JSC					
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SHEET 14 OF 34	REVISIONS NO. DATE BY 1 10/15/17 JSC 2 10/15/17 JSC 3 10/15/17 JSC 4 10/15/17 JSC 5 10/15/17 JSC 6 10/15/17 JSC 7 10/15/17 JSC 8 10/15/17 JSC 9 10/15/17 JSC 10 10/15/17 JSC 11 10/15/17 JSC 12 10/15/17 JSC 13 10/15/17 JSC 14 10/15/17 JSC 15 10/15/17 JSC 16 10/15/17 JSC 17 10/15/17 JSC 18 10/15/17 JSC 19 10/15/17 JSC 20 10/15/17 JSC 21 10/15/17 JSC 22 10/15/17 JSC 23 10/15/17 JSC 24 10/15/17 JSC 25 10/15/17 JSC 26 10/15/17 JSC 27 10/15/17 JSC 28 10/15/17 JSC 29 10/15/17 JSC 30 10/15/17 JSC 31 10/15/17 JSC 32 10/15/17 JSC 33 10/15/17 JSC 34 10/15/17 JSC 35 10/15/17 JSC 36 10/15/17 JSC 37 10/15/17 JSC 38 10/15/17 JSC 39 10/15/17 JSC 40 10/15/17 JSC 41 10/15/17 JSC 42 10/15/17 JSC 43 10/15/17 JSC 44 10/15/17 JSC 45 10/15/17 JSC 46 10/15/17 JSC 47 10/15/17 JSC 48 10/15/17 JSC 49 10/15/17 JSC 50 10/15/17 JSC 51 10/15/17 JSC 52 10/15/17 JSC 53 10/15/17 JSC 54 10/15/17 JSC 55 10/15/17 JSC 56 10/15/17 JSC 57 10/15/17 JSC 58 10/15/17 JSC 59 10/15/17 JSC 60 10/15/17 JSC 61 10/15/17 JSC 62 10/15/17 JSC 63 10/15/17 JSC 64 10/15/17 JSC 65 10/15/17 JSC 66 10/15/17 JSC 67 10/15/17 JSC 68 10/15/17 JSC 69 10/15/17 JSC 70 10/15/17 JSC 71 10/15/17 JSC 72 10/15/17 JSC 73 10/15/17 JSC 74 10/15/17 JSC 75 10/15/17 JSC 76 10/15/17 JSC 77 10/15/17 JSC 78 10/15/17 JSC 79 10/15/17 JSC 80 10/15/17 JSC 81 10/15/17 JSC 82 10/15/17 JSC 83 10/15/17 JSC 84 10/15/17 JSC 85 10/15/17 JSC 86 10/15/17 JSC 87 10/15/17 JSC 88 10/15/17 JSC 89 10/15/17 JSC 90 10/15/17 JSC 91 10/15/17 JSC 92 10/15/17 JSC 93 10/15/17 JSC 94 10/15/17 JSC 95 10/15/17 JSC 96 10/15/17 JSC 97 10/15/17 JSC 98 10/15/17 JSC 99 10/15/17 JSC 100 10/15/17 JSC						

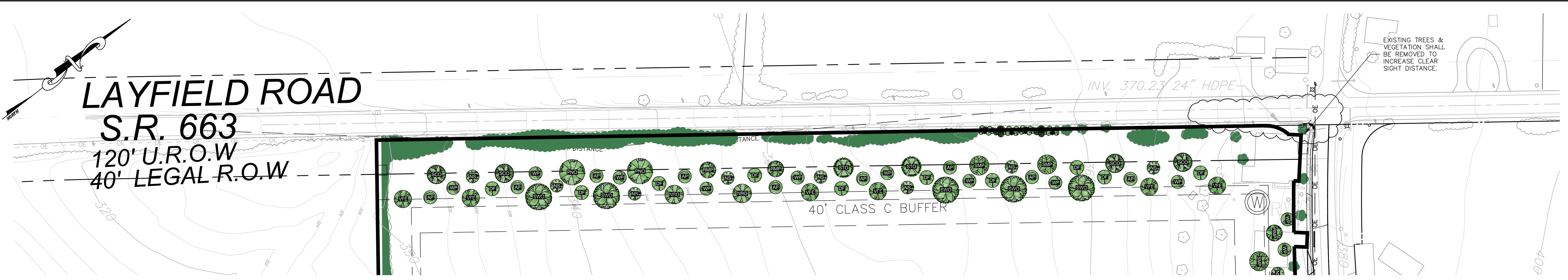
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LAYFIELD ROAD

S.R. 663

120' U.R.O.W

40' LEGAL R.O.W



LEGEND

	PARCEL LINE
	PROPERTY LINE
	RIGHT OF WAY LINE
	SETBACK LINE
	EXISTING CENTER LINE
	EXISTING FENCE LINE
	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
	PROPOSED BOARD ON BOARD FENCE LINE
	PROPOSED TREE LINE
	PROPOSED TREE PROTECTION FENCE LINE
	PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE LINE
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING TREE LINE
	EXISTING WATER
	BOUNDARY OF LARGE NON COAL SURFACE MINING PERMIT 46030301
	PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK
	WETLAND BUFFER
	100 FT. STREAM SETBACK
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED MAJOR CONTOUR LINE
	PROPOSED MINOR CONTOUR LINE

LEGEND

	PROPOSED UNDER GROUND ELECTRIC AND TELEPHONE LINE
	RIPIARIAN CORRIDOR ZONE I (25' WIDE)
	RIPIARIAN CORRIDOR ZONE II (50' WIDE)
	WETLAND AREA
	PERIMETER BERM
	MINING AREA
	OPERATION AREA
	OVERBURDEN STORAGE
	EXISTING BUILDING TO BE REMOVED
	PROPOSED IRON PIN
	PROPOSED UTILITY POLE
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING IRON POLE
	EXISTING SPOT ELEVATION
	PROPOSED POST LIGHT
	PROPOSED WALLMOUNT LIGHT
	EXISTING RESIDENTIAL WELL LOCATION
	IP
	SPOT
	R/W

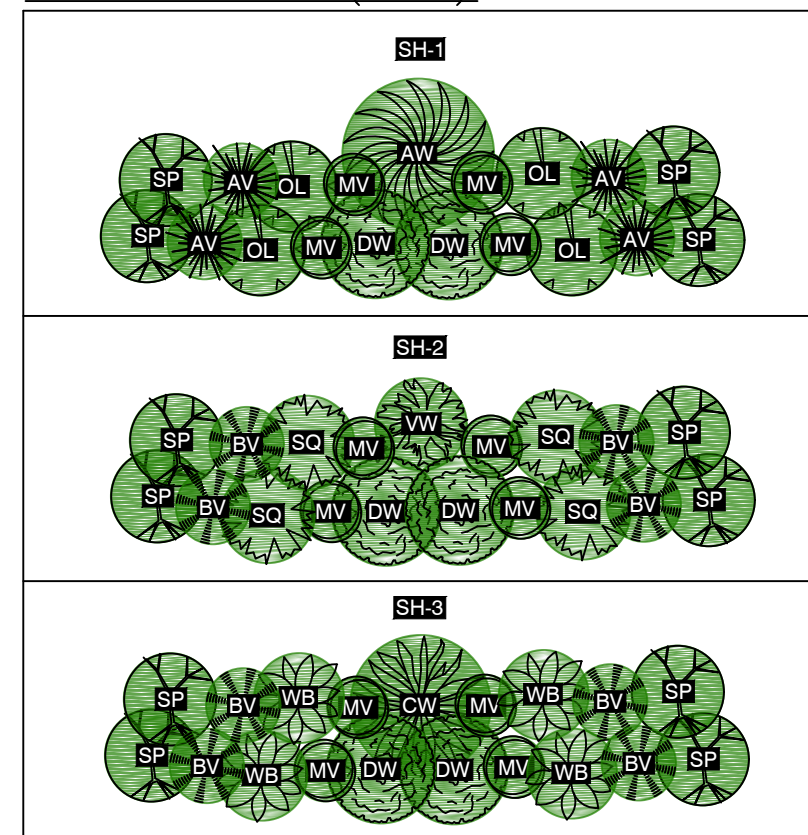
DECIDUOUS TREES

	RED MAPLE		TULIP POPLAR		SCARLET OAK
	SUGAR MAPLE		SWEETBAY MAGNOLIA		NORTHERN RED OAK
	HORSE CHESTNUT		SAUCER MAGNOLIA		AMERICAN HOPHORNBEAM
	EASTERN REDBUD		IRONWOOD		SOURWOOD
	COCKSPUR HAWTHORN		BLACK WALNUT		PIN CHERRY
	WINTERKING HAWTHORN		SAWTOOTH OAK		SASSAFRAS
	HONEYLOCUST		SWAMP WHITE OAK		VALLEY FORGE AMERICAN ELM
	SWEETGUM		PIN OAK		STAGHORN SUMAC

EVERGREEN TREES

	DOUGLAS FIR
	NORWAY SPRUCE
	AUSTRIAN PINE
	WESTERN WHITE PINE
	VIRGINIA PINE
	AMERICAN HOLLY (FEMALE)
	AMERICAN HOLLY (MALE)

SHRUB SETS (NTS)



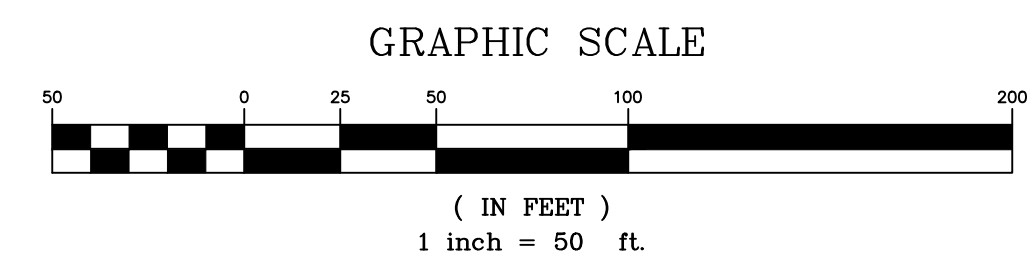
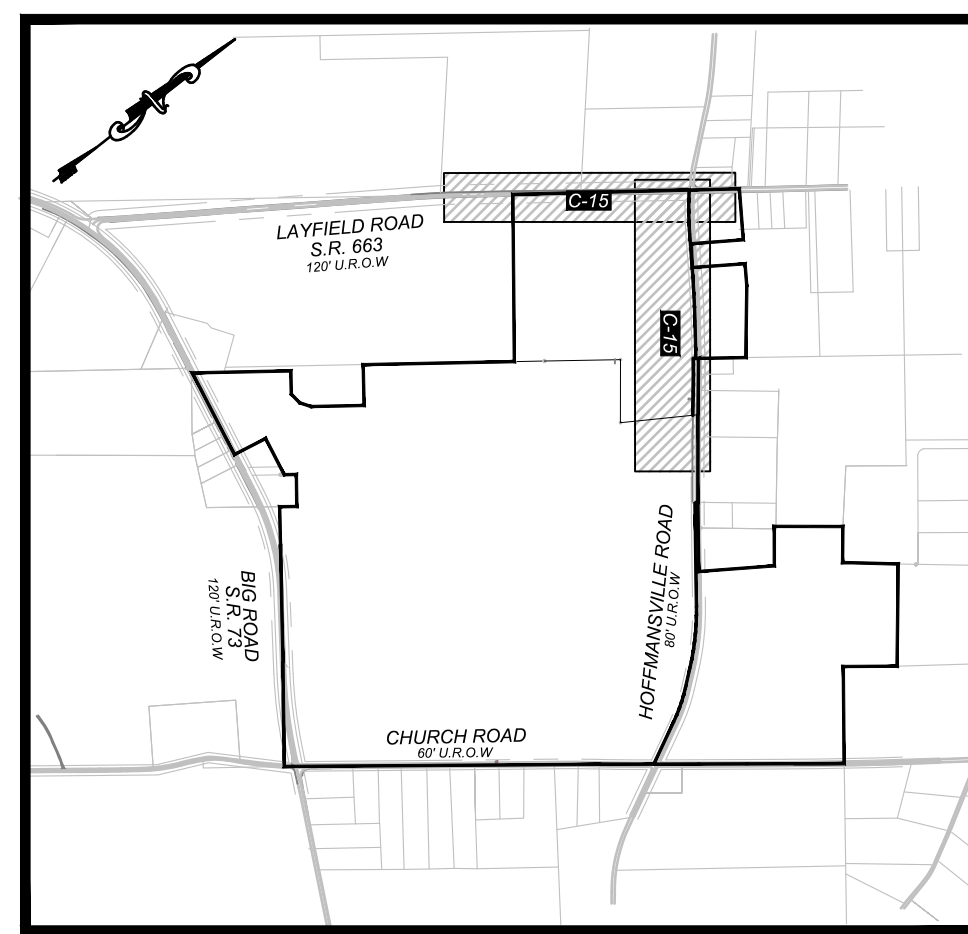
PLANTING LIST & SYMBOLS

COMMON NAME	SYMBOL	HEIGHT
RED MAPLE	RMP B & B	FULL, HIGH BRANCHED 5'-6'
SUGAR MAPLE	SMP B & B	FULL, HIGH BRANCHED 5'-6'
HORSE CHESTNUT	HCH	5'-6'
EASTERN REDBUD	ERB B & B	FULL, MULTISTEM 5'-6'
COCKSPUR HAWTHORN	HAW B & B	FULL, MULTISTEM 5'-6'
WINTER KING HAWTHORN	KNG B & B	HIGH BRANCHED TREE FORM 5'-6'
HONEYLOCUST	HL	5'-6'
SWEET GUM	SG B & B	FULL 5'-6'
TULIP POPLAR	TLP B & B	FULL 5'-6'
SWEETBAY MAGNOLIA	SBM B & B	MULTI-STEM SPECIMEN 5'-6'
SAUCER MAGNOLIA	SCM B & B	MULTI-STEM SPECIMEN 5'-6'
IRONWOOD	IW B & B	FULL, MULTISTEM 5'-6'
BLACK WALNUT	BW	5'-6'
AMERICAN HOPHORNBEAM	HH B & B	HIGH BRANCHED TREE FORM 5'-6'
SOURWOOD	SD B & B	HIGH BRANCHED TREE FORM 5'-6'
PIN CHERRY	PC B & B	HIGH BRANCHED TREE FORM 5'-6'
SAWTOOTH OAK	STO B & B	FULL, HIGH BRANCHED 5'-6'
SWAMP WHITE OAK	SWO B & B	FULL, HIGH BRANCHED 5'-6'
SCARLET OAK	SCO B & B	FULL, HIGH BRANCHED 5'-6'
PIN OAK	PNO B & B	FULL, HIGH BRANCHED 5'-6'
NORTHERN RED OAK	NRO B & B	FULL, HIGH BRANCHED 5'-6'
STAGHORN SUMAC	STA B & B	CLUMPS 5'-6'
SASSAFRAS	SAS B & B	FULL, HIGH BRANCHED 5'-6'
VALLEY FORGE AMERICAN ELM	VFE B & B	FULL, HIGH BRANCHED 5'-6'
JAPANESE ZELKOVA	JZ B & B	FULL, HIGH BRANCHED 5'-6'

COMMON NAME	SYMBOL	HEIGHT
FEMALE AMERICAN HOLLY	FH B & B	FULL 5'-6'
MALE AMERICAN HOLLY	MH B & B	FULL 5'-6'
NORWAY SPRUCE	NS B & B	FULL, UNSHEARED 5'-6'
AUSTRIAN PINE	AP B & B	FULL, UNSHEARED 5'-6'
EASTERN WHITE PINE	WP B & B	FULL, UNSHEARED 5'-6'
VIRGINIA PINE	VP B & B	FULL, UNSHEARED 5'-6'
DOUGLAS FIR	DF B & B	FULL, UNSHEARED 5'-6'

SHRUBS

COMMON NAME	SYMBOL	HEIGHT
BOTTLEBRUSH BUCKEYE	BB	3' SPR.
REDOSBAR DOGWOOD	DW	2.5' SPR.
SHOWY BORDER FORSYTHIA	SY	3' HT.
VERNAL WITCHHAZEL	VW	4' HT.
COMMON WITCHHAZEL	CW	5' HT.
ARNOLD'S PROMISE WITCHHAZEL	AW	4' HT.
OAKLEAF HYDRANGEA	OL	2' SPR.
SNOW QUEEN HYDRANGEA	SQ	2' SPR.
WINTERBERRY	WB	36" HT.
SPARKLEBERRY HOLLY	SP	36" HT.
NORTHERN BAYBERRY	NB	2.5' HT.
STAGHORN SUMAC	SS	3 GALL.
AMERICAN ELDER	AE	15' SPR.
HICKS UPRIGHT ANGLIO-JAP YEW	HY	3' HT.
HIGHBUSH BLUEBERRY	HB	3' HT.
MAPLELEAF VIBURNUM	MV	3' HT.
ARROWWOOD VIBURNUM	AR	4' HT.
BLACK HAW VIBURNUM	BV	3' HT.
LEATHERLEAF VIBURNUM	LV	3' HT.
ALLEGHENY VIBURNUM	AV	3' HT.



DRAWN BY: *[Signature]*
 CHECKED BY: *[Signature]*
 DATE: 10/19/2015
 PROJECT NO: 021027.029
 DRAWING NUMBER: C-15
 SHEET 15 OF 34

PREPARED BY: EarthRes ENGINEERING AND SCIENCE
 PROJECT SITE: GIBALTAR ROCK, INC.
 PREPARED FOR: GIBALTAR ROCK, INC.
 GIBALTAR ROCK QUARRY
 NEW HANOVER TOWNSHIP
 MONTGOMERY COUNTY, PA

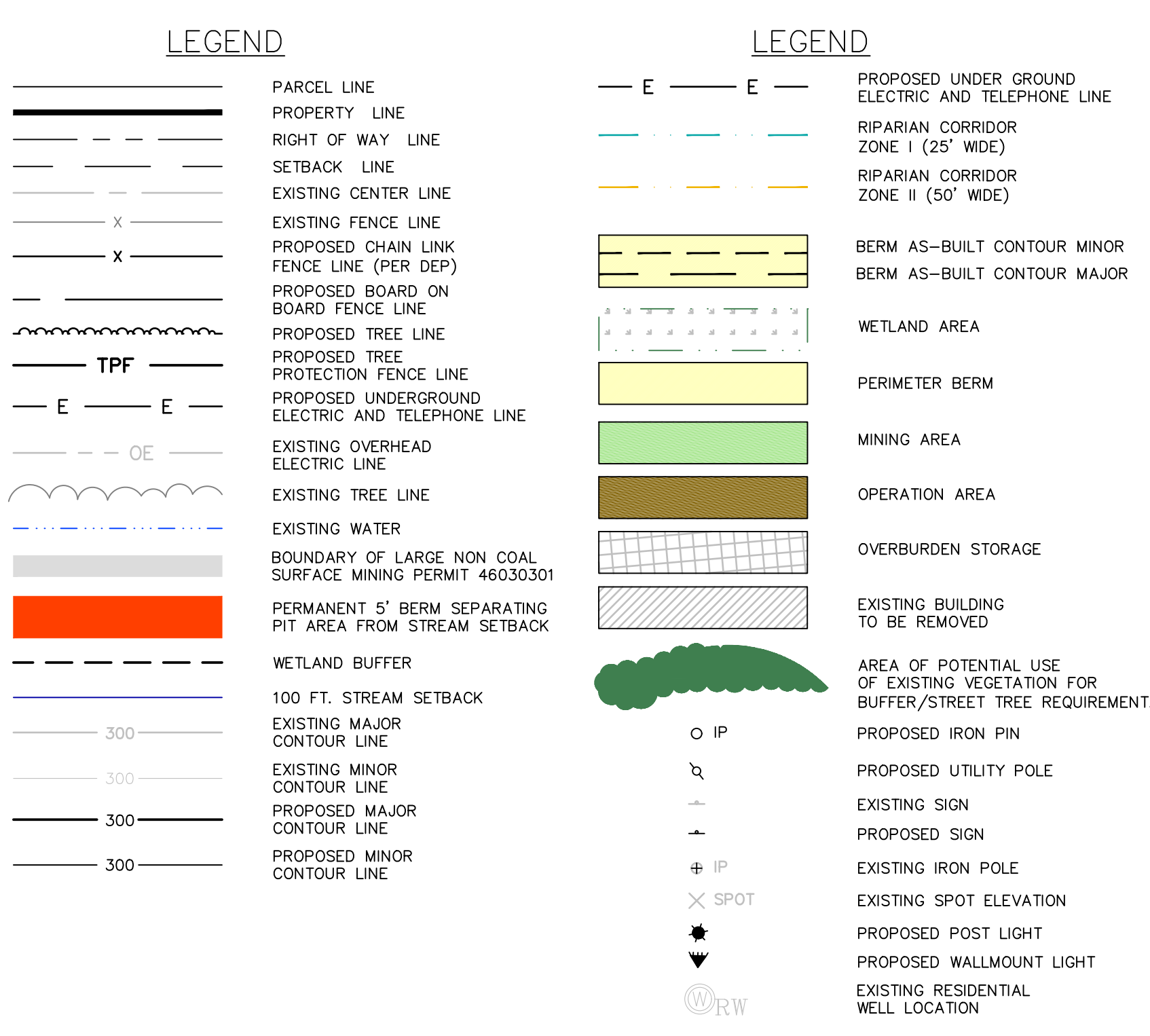
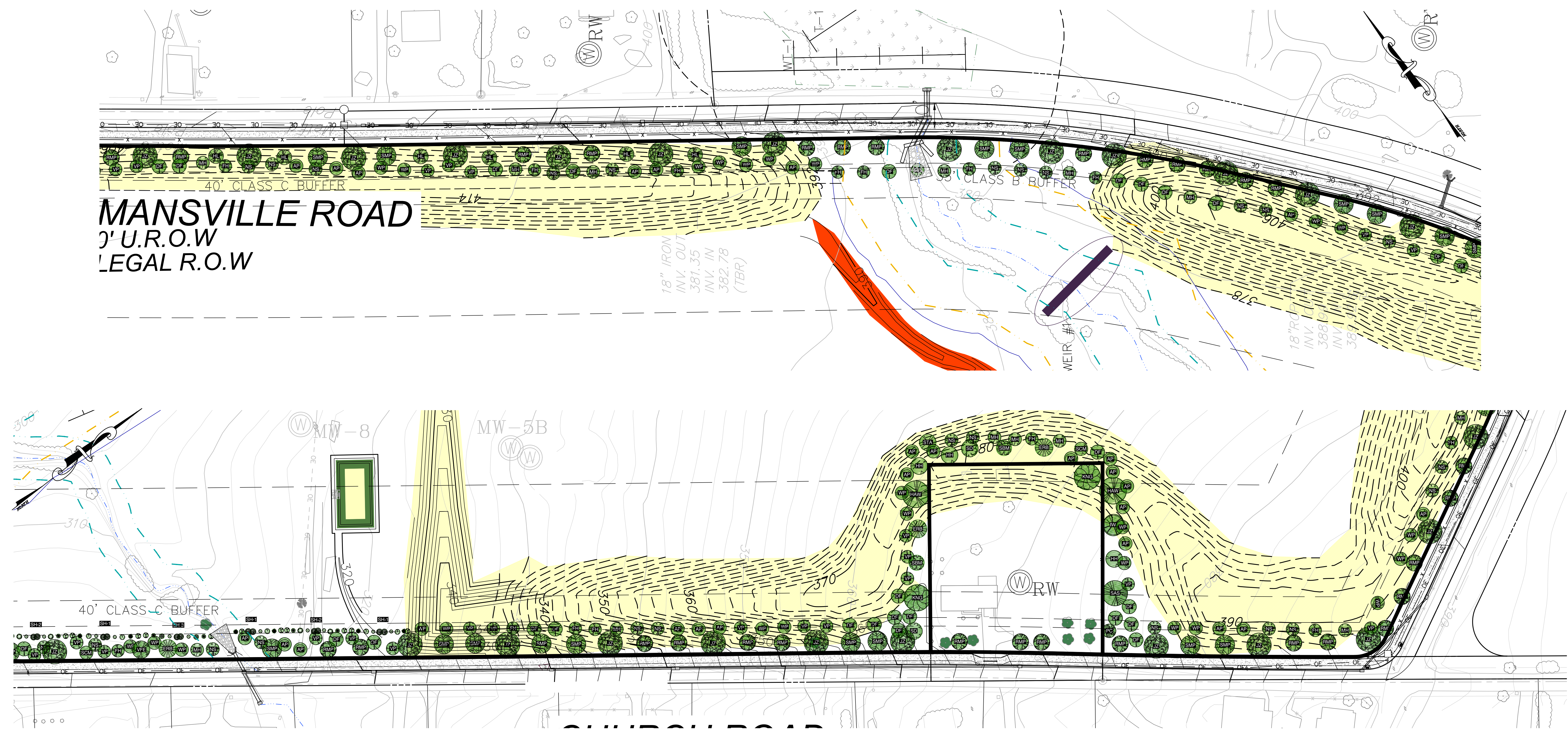
P.O. Box 468
 6832 Old 189th USA
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 P.O. Box 704
 Magnolia, WV 26555
 www.earthres.com
 PA office 212.766.1211
 MD office 410.326.8553
 WV office 801.224.6553

REVISIONS
 NO. DATE BY
 1 8/15/17 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM

DAVID F. ALLEN, P.E.
 LICENSE NO. 075102

MANSVILLE ROAD

3' U.R.O.W
LEGAL R.O.W

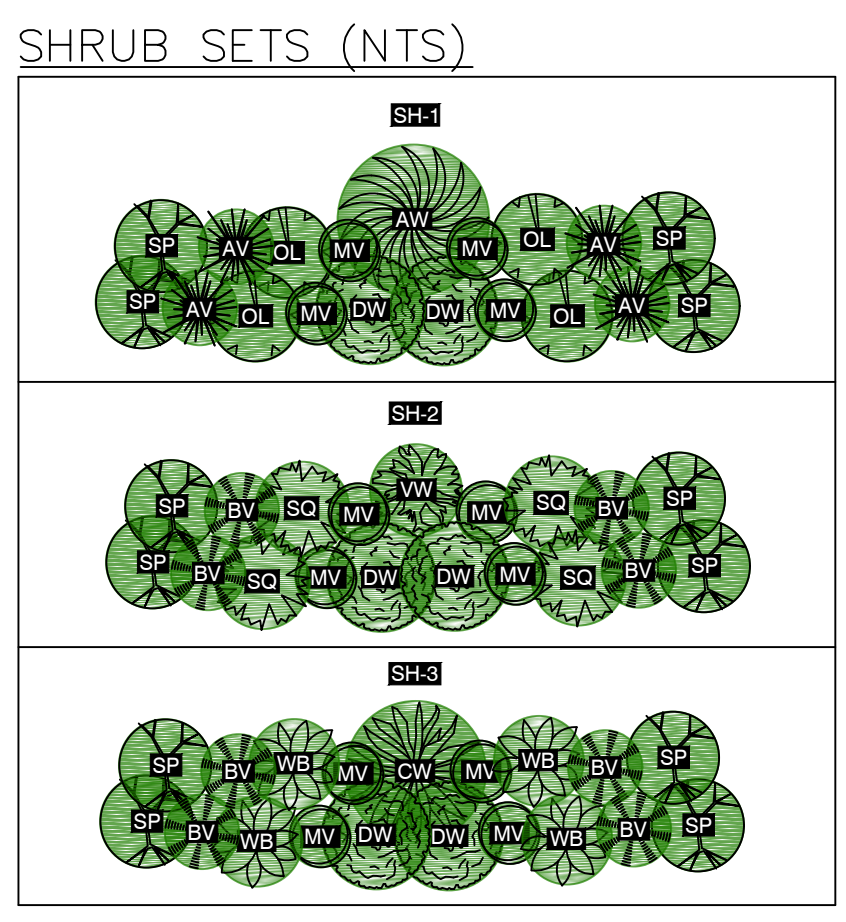


DECIDUOUS TREES

RED MAPLE	SUGAR MAPLE	TULIP POPLAR	SAUCER MAGNOLIA	SCARLET OAK	NORTHERN RED OAK
HORSE CHESTNUT	EASTERN REDBUD	IRONWOOD	BLACK WALNUT	AMERICAN HOPHORNBEAM	SOURWOOD
HAWTHORN	WINTERKING HAWTHORN	SAWTOOTH OAK	SWAMP WHITE OAK	PIN CHERRY	SASSAFRAS
HONEYLOCUST	SWEETGUM	PIN OAK		VALLEY FORGE AMERICAN ELM	STAGHORN SUMAC

EVERGREEN TREES

DOUGLAS FIR	NORWAY SPRUCE	AUSTRIAN PINE	EASTERN WHITE PINE	VIRGINIA PINE	AMERICAN HOLLY (FEMALE)	AMERICAN HOLLY (MALE)
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PLANTING LIST & SYMBOLS

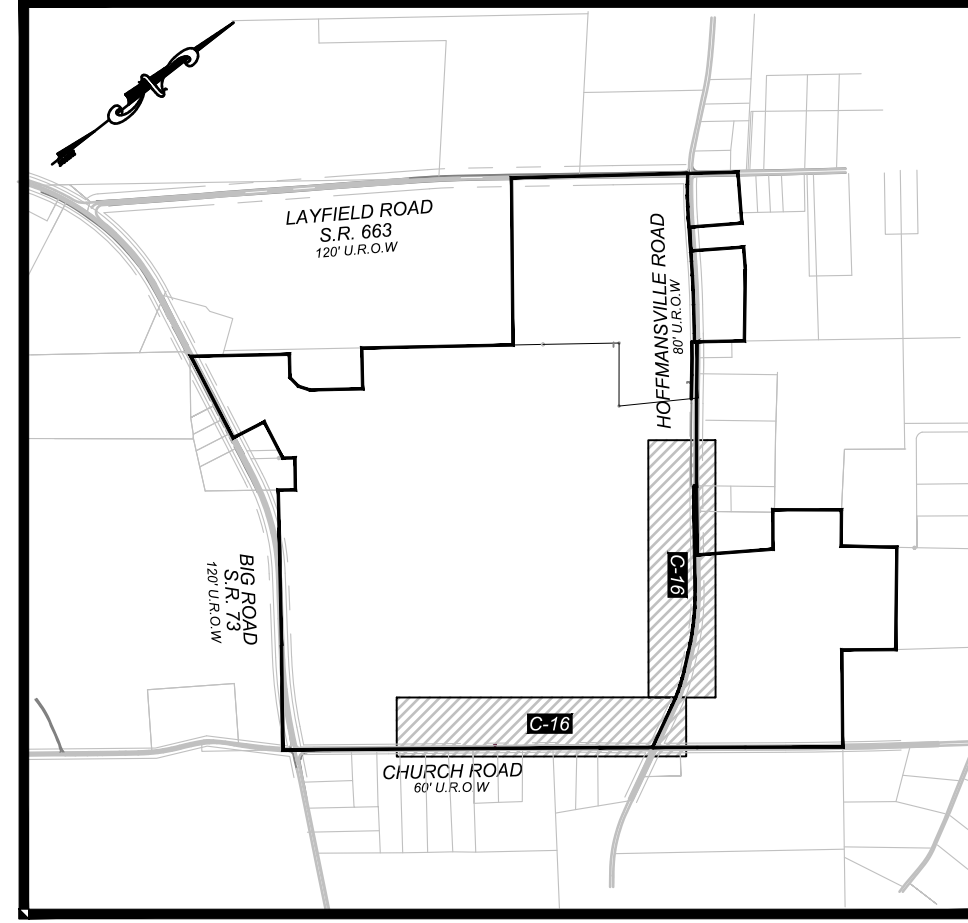
COMMON NAME	SYMBOL	DECIDUOUS TREES	HEIGHT
RED MAPLE	RMP	B & B	FULL, HIGH BRANCHED 5'-6'
SUGAR MAPLE	SMP	B & B	FULL, HIGH BRANCHED 5'-6'
HORSE CHESTNUT	HCH		5'-6'
EASTERN REDBUD	ERB	B & B	FULL, MULTISTEM 5'-6'
COCKSPUR HAWTHORN	HAW	B & B	FULL, MULTISTEM 5'-6'
WINTERKING HAWTHORN	KNG	B & B	HIGH BRANCHED TREE FORM 5'-6'
HONEYLOCUST	HL		5'-6'
SWEET GUM	SG	B & B	FULL 5'-6'
TULIP POPLAR	TLP	B & B	FULL 5'-6'
SWEETBAY MAGNOLIA	SBM	B & B	MULTI-STEM SPECIMEN 5'-6'
SAUCER MAGNOLIA	SCM	B & B	MULTI-STEM SPECIMEN 5'-6'
IRONWOOD	IW	B & B	FULL, MULTISTEM 5'-6'
BLACK WALNUT	BW		5'-6'
AMERICAN HOPHORNBEAM	HH	B & B	HIGH BRANCHED TREE FORM 5'-6'
SOURWOOD	SD	B & B	HIGH BRANCHED TREE FORM 5'-6'
PIN CHERRY	PC	B & B	HIGH BRANCHED TREE FORM 5'-6'
SAWTOOTH OAK	STO	B & B	FULL, HIGH BRANCHED 5'-6'
SWAMP WHITE OAK	SWO	B & B	FULL, HIGH BRANCHED 5'-6'
SCARLET OAK	SCO	B & B	FULL, HIGH BRANCHED 5'-6'
PIN OAK	PNO	B & B	FULL, HIGH BRANCHED 5'-6'
NORTHERN RED OAK	NRO	B & B	FULL, HIGH BRANCHED 5'-6'
STAGHORN SUMAC	STA	B & B	CLUMPS 5'-6'
SASSAFRAS	SAS	B & B	FULL, HIGH BRANCHED 5'-6'
VALLEY FORGE AMERICAN ELM	VFE	B & B	FULL, HIGH BRANCHED 5'-6'
JAPANESE ZELKOVA	JZ	B & B	FULL, HIGH BRANCHED 5'-6'

EVERGREEN TREES

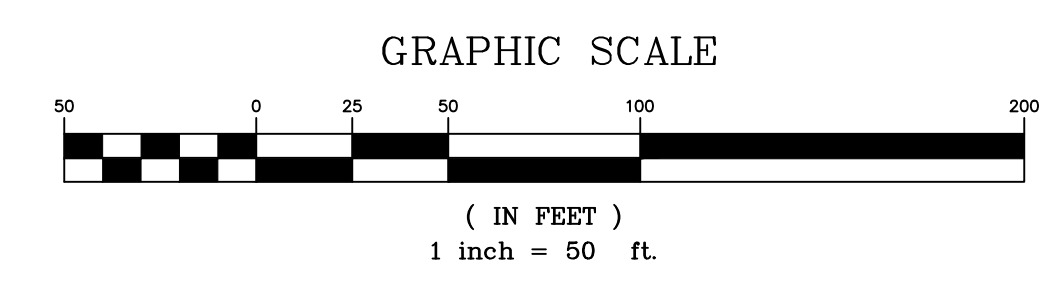
COMMON NAME	SYMBOL	EVERGREEN TREES	HEIGHT
FEMALE AMERICAN HOLLY	FH	B & B	FULL 5'-6'
MALE AMERICAN HOLLY	MH	B & B	FULL 5'-6'
NORWAY SPRUCE	NS	B & B	FULL, UNSHEARED 5'-6'
AUSTRIAN PINE	AP	B & B	FULL, UNSHEARED 5'-6'
EASTERN WHITE PINE	WP	B & B	FULL, UNSHEARED 5'-6'
VIRGINIA PINE	VP	B & B	FULL, UNSHEARED 5'-6'
DOUGLAS FIR	DF	B & B	FULL, UNSHEARED 5'-6'

SHRUBS

COMMON NAME	SYMBOL	SHRUBS	HEIGHT
BOTTLEBRUSH BUCKEYE	BB	3' SPR.	
REDOSIER DOGWOOD	DW	2.5' SPR.	
SHOWY BORDER FORSYTHIA	SY	3' HT.	
VERNAL WITCHHAZEL	VW	4' HT.	
COMMON WITCHHAZEL	CW	5' HT.	
ARNOLD'S PROMISE WITCHHAZEL	AW	4' HT.	
OAKLEAF HYDRANGEA	OL	2' SPR.	
SNOW QUEEN HYDRANGEA	SQ	2' SPR.	
WINTERBERRY	WB	36" HT.	
SPARKLEBERRY HOLLY	SP	36" HT.	
NORTHERN BAYBERRY	NB	2.5' HT.	
STAGHORN SUMAC	SS	3 GAL.	
AMERICAN ELDER	AE	15' SPR.	
HICKS UPRIGHT ANGIO-JAP YEW	HY	3' HT.	
HIGHBUSH BLUEBERRY	HB	3' HT.	
MAPLELEAF VIBURNUM	MV	3' HT.	
ARROWWOOD VIBURNUM	AR	4' HT.	
BLACK HAW VIBURNUM	BV	3' HT.	
LEATHERLEAF VIBURNUM	LV	3' HT.	
ALLEGHENY VIBURNUM	AV	3' HT.	

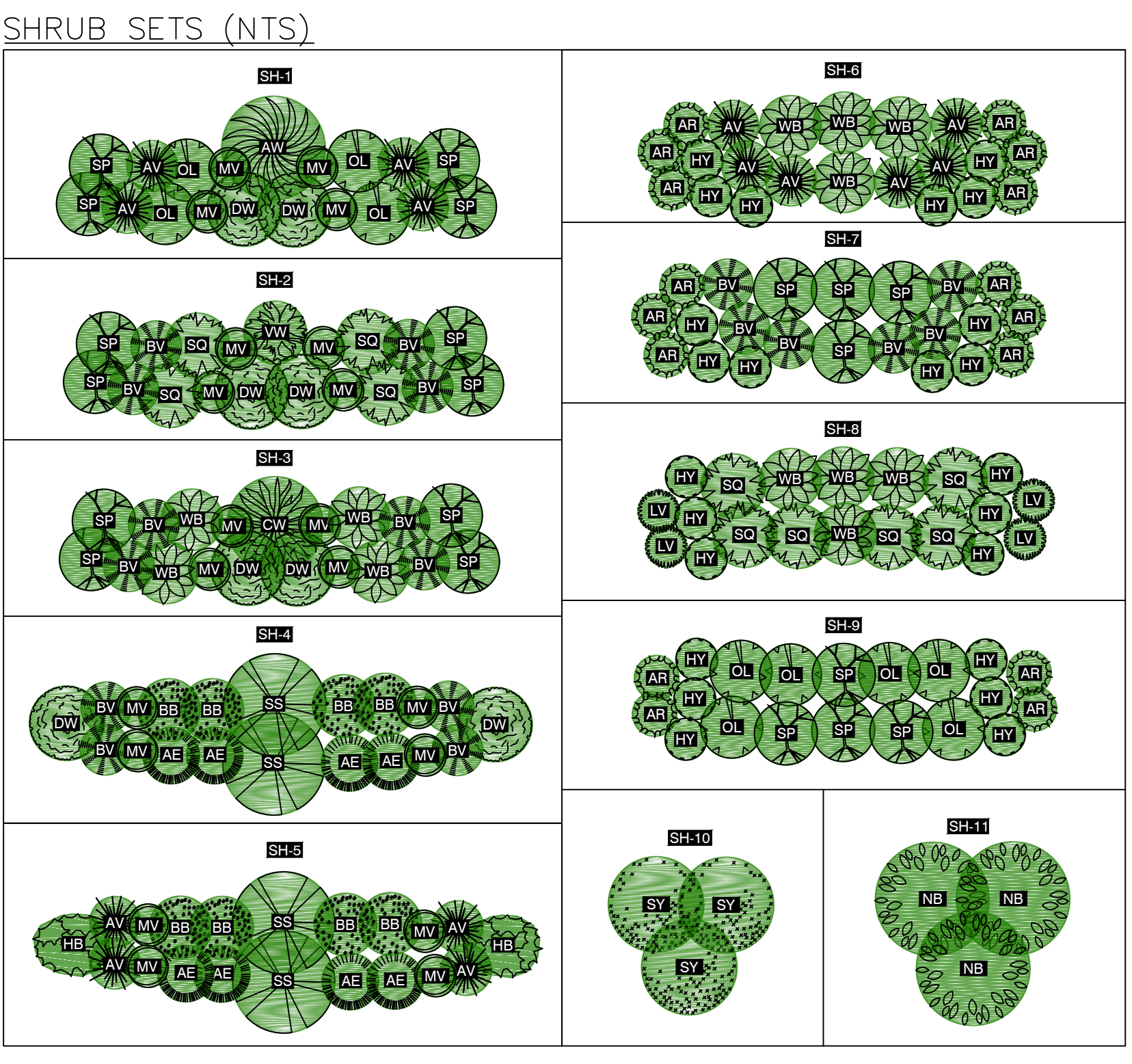
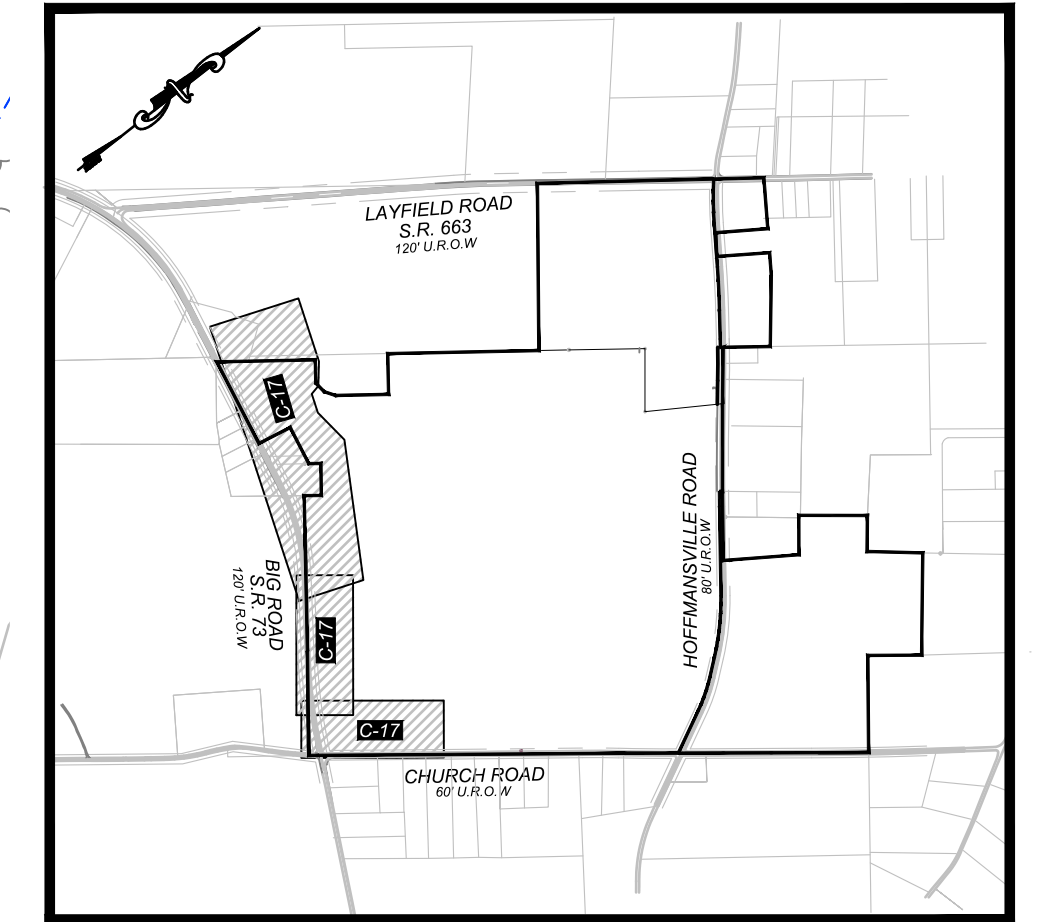
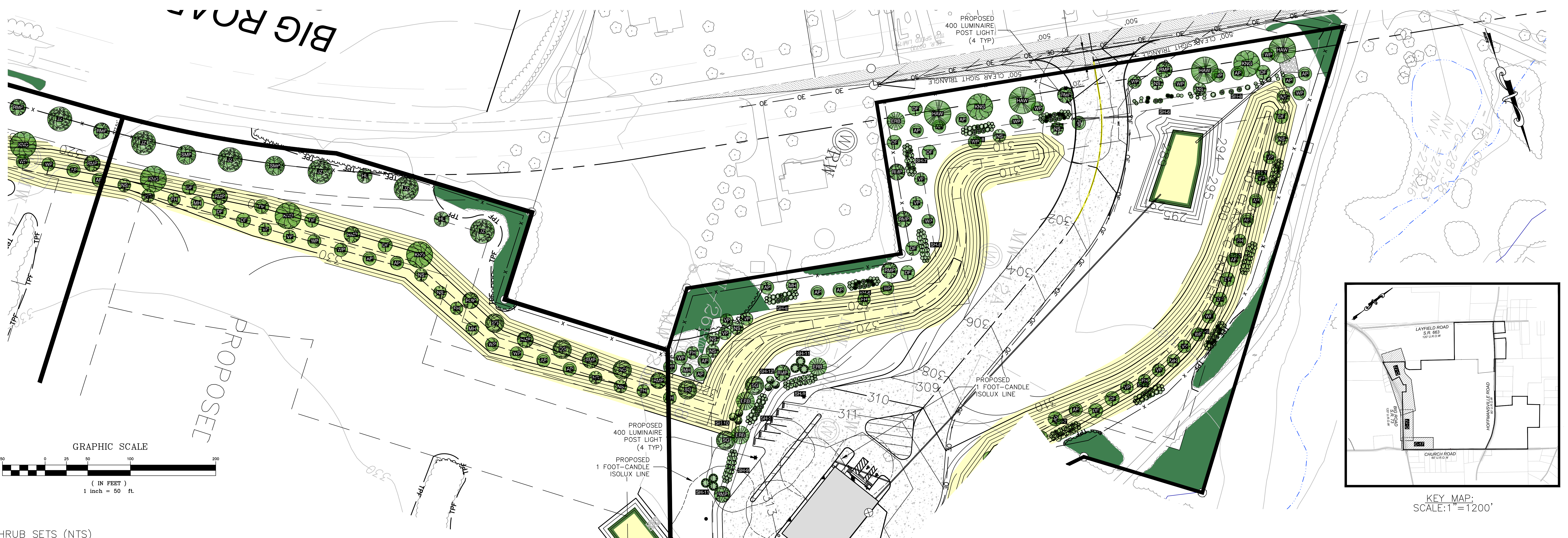
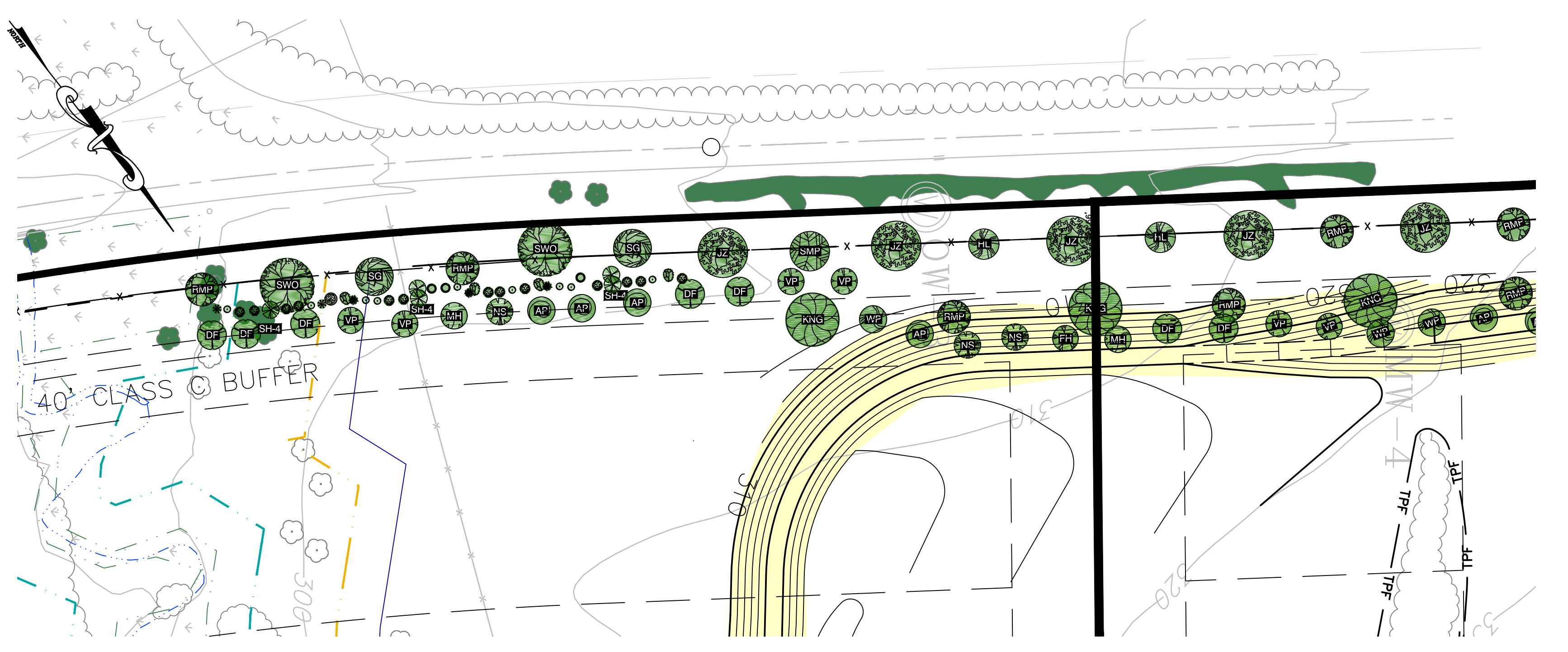
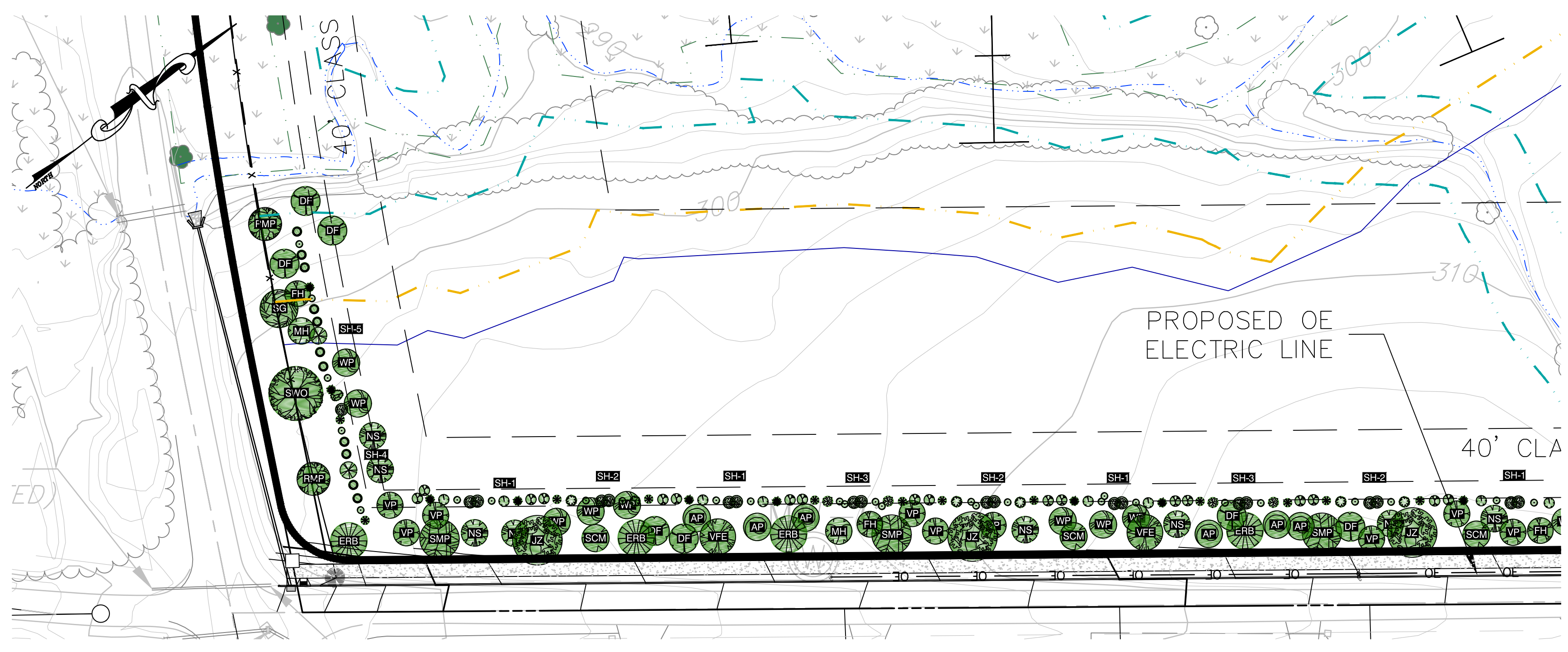


KEY MAP
SCALE: 1" = 1200'



DRAWN BY: [Name] CHECKED BY: [Name]
 DATE: 10/19/2015 PROJECT NO: 021027.029
 DRAWING NUMBER: C-16 SHEET 16 OF 34
 PREPARED FOR: GIBALTAR ROCK, INC.
 PROJECT SITE: GIBALTAR ROCK QUARRY, NEW HANOVER TOWNSHIP, MONTGOMERY COUNTY, PA
 PREPARED BY: EarthRes ENGINEERING AND SCIENCE
 P.O. Box 468, 6832 Old York Road, Piquette, PA 16847 USA
 P.O. Box 704, Magnolia, WV 26555
 www.earthres.com
 PA office: 212.766.1211
 WV office: 801.224.4533
 REVISIONS: 18/15/17 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM

F:\PROJECTS\Shim\021027.029 Final Land Development\CAD\DRAWINGS\REV 1\021027.025_LS_Landscape Plan.dwg Layout: C-17 User: J_Cervantes 06/21/2017 9:43



DECIDUOUS TREES			EVERGREEN TREES		
RED MAPLE	TULIP POPLAR	SCARLET OAK	DOUGLAS FIR	NORWAY SPRUCE	
SUGAR MAPLE	SWEETBAY MAGNOLIA	NORTHERN RED OAK	AUSTRIAN PINE		
HORSE CHESTNUT	SAUCER MAGNOLIA	AMERICAN HOPHORNBEAM	EASTERN WHITE PINE		
EASTERN REDBUD	IRONWOOD	SOURWOOD	VIRGINIA PINE		
COCKSPUR HAWTHORN	BLACK WALNUT	PIN CHERRY	AMERICAN HOLLY (FEMALE)		
WINTER KING HAWTHORN	SAWTOOTH OAK	SASSAFRAS	AMERICAN HOLLY (MALE)		
HONEYLOCUST	SWAMP WHITE OAK	VALLEY FORGE AMERICAN ELM			
SWEETGUM	PIN OAK	JAPANESE ZELKOVA			

PLANTING LIST & SYMBOLS				
DECIDUOUS TREES				
COMMON NAME	SYMBOL	B & B	FORM	HEIGHT
RED MAPLE	RMP	B & B	FULL, HIGH BRANCHED	5'-6'
SUGAR MAPLE	SMP	B & B	FULL, HIGH BRANCHED	5'-6'
HORSE CHESTNUT	HCN	B & B	FULL, HIGH BRANCHED	5'-6'
EASTERN REDBUD	ERB	B & B	FULL, MULTISTEM	5'-6'
COCKSPUR HAWTHORN	HAW	B & B	FULL, MULTISTEM	5'-6'
WINTER KING HAWTHORN	KNG	B & B	HIGH BRANCHED TREE FORM	5'-6'
HONEYLOCUST	HLC	B & B	FULL	5'-6'
SWEET GUM	SG	B & B	FULL	5'-6'
TULIP POPLAR	TLP	B & B	FULL	5'-6'
SWEETBAY MAGNOLIA	SBM	B & B	MULTI-STEM SPECIMEN	5'-6'
SAUCER MAGNOLIA	SCM	B & B	MULTI-STEM SPECIMEN	5'-6'
IRONWOOD	IW	B & B	FULL, MULTISTEM	5'-6'
BLACK WALNUT	BW	B & B	FULL	5'-6'
AMERICAN HOPHORNBEAM	HH	B & B	HIGH BRANCHED TREE FORM	5'-6'
SOURWOOD	SD	B & B	HIGH BRANCHED TREE FORM	5'-6'
PIN CHERRY	PC	B & B	HIGH BRANCHED TREE FORM	5'-6'
SAWTOOTH OAK	STO	B & B	FULL, HIGH BRANCHED	5'-6'
SWAMP WHITE OAK	SWO	B & B	FULL, HIGH BRANCHED	5'-6'
SCARLET OAK	SCO	B & B	FULL, HIGH BRANCHED	5'-6'
PIN OAK	PNO	B & B	FULL, HIGH BRANCHED	5'-6'
NORTHERN RED OAK	NRO	B & B	FULL, HIGH BRANCHED	5'-6'
STAGHORN SUMAC	STA	B & B	CLUMPS	5'-6'
SASSAFRAS	SAS	B & B	FULL, HIGH BRANCHED	5'-6'
VALLEY FORGE AMERICAN ELM	VFA	B & B	FULL, HIGH BRANCHED	5'-6'
JAPANESE ZELKOVA	JZ	B & B	FULL, HIGH BRANCHED	5'-6'

EVERGREEN TREES				
COMMON NAME	SYMBOL	B & B	FORM	HEIGHT
FEMALE AMERICAN HOLLY	FH	B & B	FULL	5'-6'
MALE AMERICAN HOLLY	MH	B & B	FULL	5'-6'
NORWAY SPRUCE	NS	B & B	FULL UNSHEARED	5'-6'
AUSTRIAN PINE	AP	B & B	FULL UNSHEARED	5'-6'
EASTERN WHITE PINE	WP	B & B	FULL UNSHEARED	5'-6'
VIRGINIA PINE	VP	B & B	FULL UNSHEARED	5'-6'
DOUGLAS FIR	DF	B & B	FULL UNSHEARED	5'-6'

SHRUBS				
COMMON NAME	SYMBOL	HEIGHT		
BOTTLEBRUSH BUCKEYE	BB	3' SPR.		
REDOsier DOGWOOD	DW	2.5' SPR.		
SHOWY BORDER FORTSYTHIA	SY	3' HT.		
VERNAL WITCHHAZEL	VW	4' HT.		
COMMON WITCHHAZEL	CW	5' HT.		
ARNOLDS PROMISE WITCHHAZEL	AW	4' HT.		
OAKLEAF HYDRANGEA	OL	2' SPR.		
SNOW QUEEN HYDRANGEA	SO	2' SPR.		
WINTERBERRY	WB	36" HT.		
SPARKLEBERRY HOLLY	SP	36" HT.		
NORTHERN BAYBERRY	NB	2.5' HT.		
STAGHORN SUMAC	SS	3 GAL.		
AMERICAN ELDER	AE	15" SPR.		
HICKS UPRIGHT ANGLO-JAP YEW	HY	3' HT.		
HIGHBUSH BLUEBERRY	HB	3' HT.		
MAPLELEAF VIBURNUM	MV	3' HT.		
ARROWWOOD VIBURNUM	AR	4' HT.		
BLACK HAW VIBURNUM	BV	3' HT.		
LEATHERLEAF VIBURNUM	LV	3' HT.		
ALLEGHENY VIBURNUM	AV	3' HT.		

EarthRes
ENGINEERING AND SCIENCE

PROJECT SITE: GIBALTAR ROCK, INC.
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA

PREPARED FOR: GIBALTAR ROCK, INC.

PREPARED BY: F.D. Box 468
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Plymouth, PA 18947 USA
P.O. Box 704
Morgantown, WV 26505
www.earthres.com
PA office: 212.765.1211
Toll free: 801.224.4533

DATE: 10/19/2015
PROJECT NO: 021027.029
DRAWING NO: C-17

REVISIONS

NO.	DATE	BY
1	10/15/17	JSC

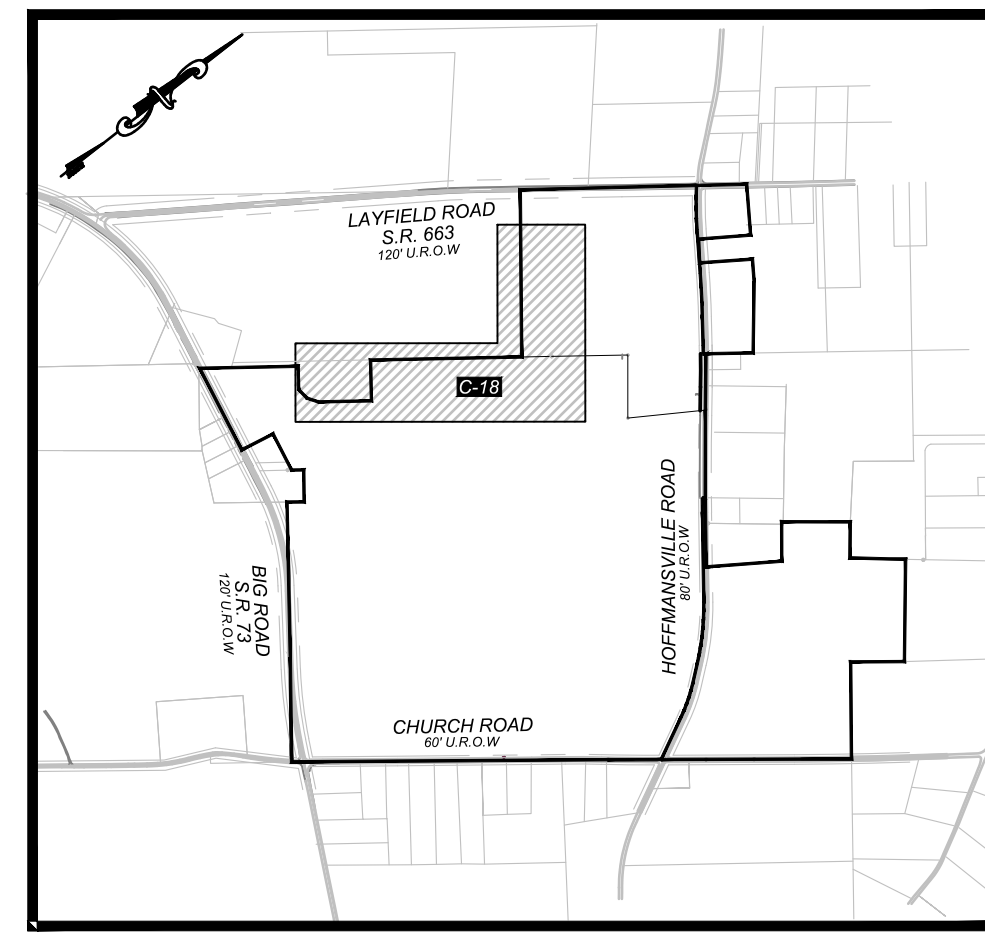
REVISIONS PER TWP COMMENTS & 12/9/15 PCM

DAVID F. ALLEN, P.E.
LICENSE NO. 075102

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

LIGHTING & LANDSCAPING PLAN 5 OF 6

SHEET 17 OF 34



KEY MAP:
SCALE: 1" = 1200'

LEGEND

	PARCEL LINE
	PROPERTY LINE
	RIGHT OF WAY LINE
	SETBACK LINE
	EXISTING CENTER LINE
	EXISTING FENCE LINE
	PROPOSED CHAIN LINK FENCE LINE (PER DEP)
	PROPOSED BOARD ON BOARD FENCE LINE
	PROPOSED TREE LINE
	PROPOSED TREE PROTECTION FENCE LINE
	PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE LINE
	EXISTING OVERHEAD ELECTRIC LINE
	EXISTING TREE LINE
	EXISTING WATER
	BOUNDARY OF LARGE NON COAL SURFACE MINING PERMIT 46030301
	PERMANENT 5' BERM SEPARATING PIT AREA FROM STREAM SETBACK
	WETLAND BUFFER
	100 FT. STREAM SETBACK
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED MAJOR CONTOUR LINE
	PROPOSED MINOR CONTOUR LINE
	PROPOSED UNDER GROUND ELECTRIC AND TELEPHONE LINE
	RIPIARIAN CORRIDOR ZONE I (25' WIDE)
	RIPIARIAN CORRIDOR ZONE II (50' WIDE)
	WETLAND AREA
	PERIMETER BERM
	MINING AREA
	OPERATION AREA
	OVERBURDEN STORAGE
	EXISTING BUILDING TO BE REMOVED
	AREA OF POTENTIAL USE OF EXISTING VEGETATION FOR BUFFER/STREET TREE REQUIREMENT.
	PROPOSED IRON PIN
	PROPOSED UTILITY POLE
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING IRON POLE
	EXISTING SPOT ELEVATION
	PROPOSED POST LIGHT
	PROPOSED WALLMOUNT LIGHT
	EXISTING RESIDENTIAL WELL LOCATION

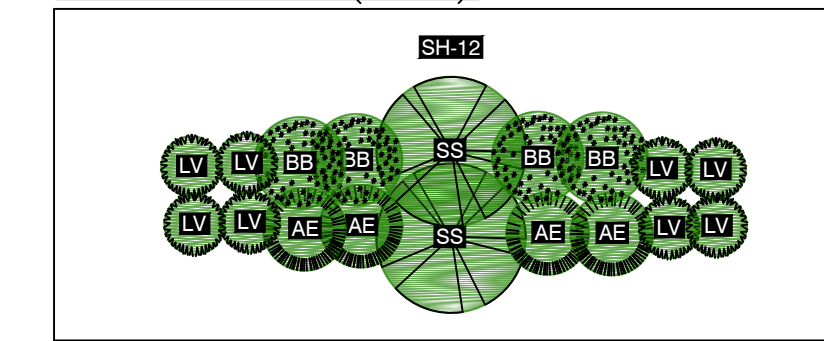
DECIDUOUS TREES

	RED MAPLE		TULIP POPLAR		SCARLET OAK
	SUGAR MAPLE		SWEETBAY MAGNOLIA		NORTHERN RED OAK
	HORSE CHESTNUT		SAUCER MAGNOLIA		AMERICAN HOPHORNBEAM
	EASTERN REDBUD		IRONWOOD		SOURWOOD
	COCKSPUR HAWTHORN		BLACK WALNUT		PIN CHERRY
	WINTER KING HAWTHORN		SAWTOOTH OAK		SASSAFRAS
	HONEYLOCUST		SWAMP WHITE OAK		VALLEY FORGE AMERICAN ELM
	SWEET GUM		PIN OAK		STAGHORN SUMAC

EVERGREEN TREES

	DOUGLAS FIR
	NORWAY SPRUCE
	AUSTRIAN PINE
	EASTERN WHITE PINE
	VIRGINIA PINE
	AMERICAN HOLLY (FEMALE)
	AMERICAN HOLLY (MALE)

SHRUB SET (NTS)

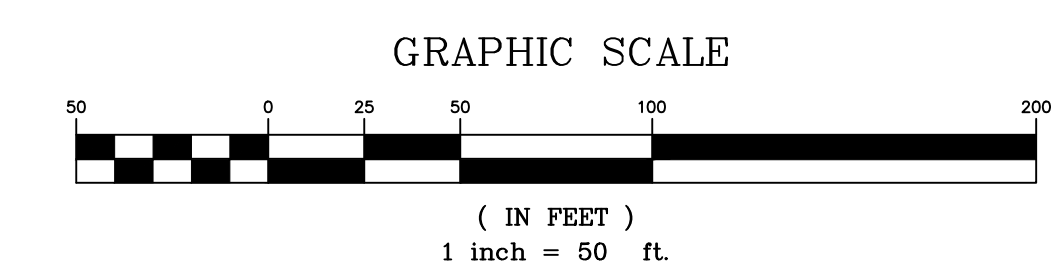
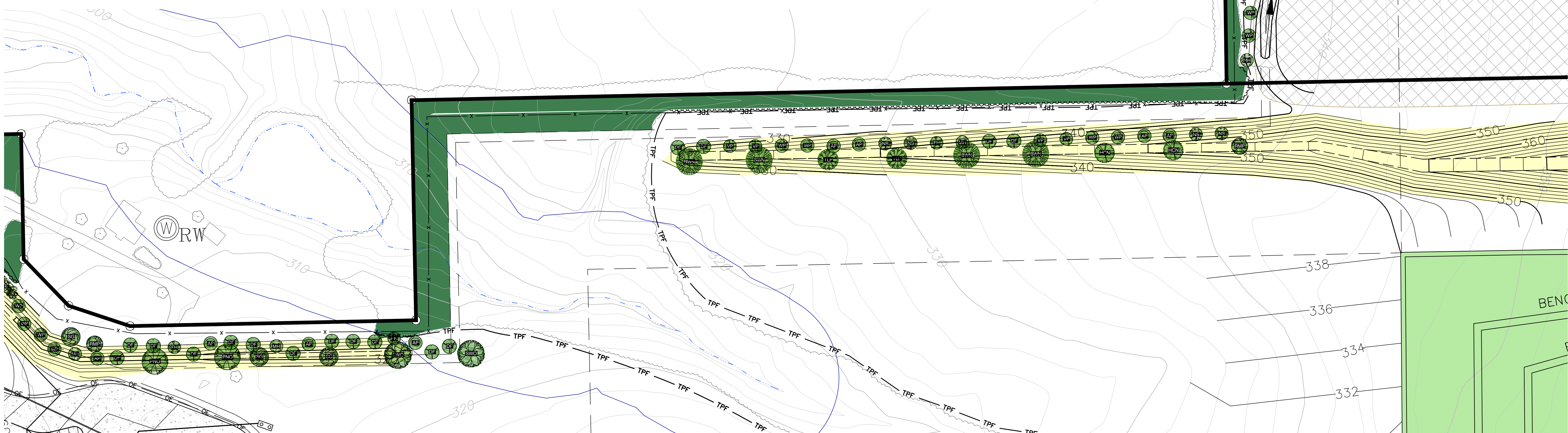


PLANTING LIST & SYMBOLS

COMMON NAME	SYMBOL	B & B	HEIGHT
RED MAPLE	RMP	B & B	5'-6"
SUGAR MAPLE	SMP	B & B	5'-6"
HORSE CHESTNUT	HCN	B & B	5'-6"
EASTERN REDBUD	ERB	B & B	5'-6"
COCKSPUR HAWTHORN	HAW	B & B	5'-6"
WINTER KING HAWTHORN	KNG	B & B	5'-6"
HONEYLOCUST	HL	B & B	5'-6"
SWEET GUM	SG	B & B	5'-6"
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SWEETBAY MAGNOLIA	SBM	B & B	5'-6"
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STAGHORN SUMAC	STA	B & B	5'-6"
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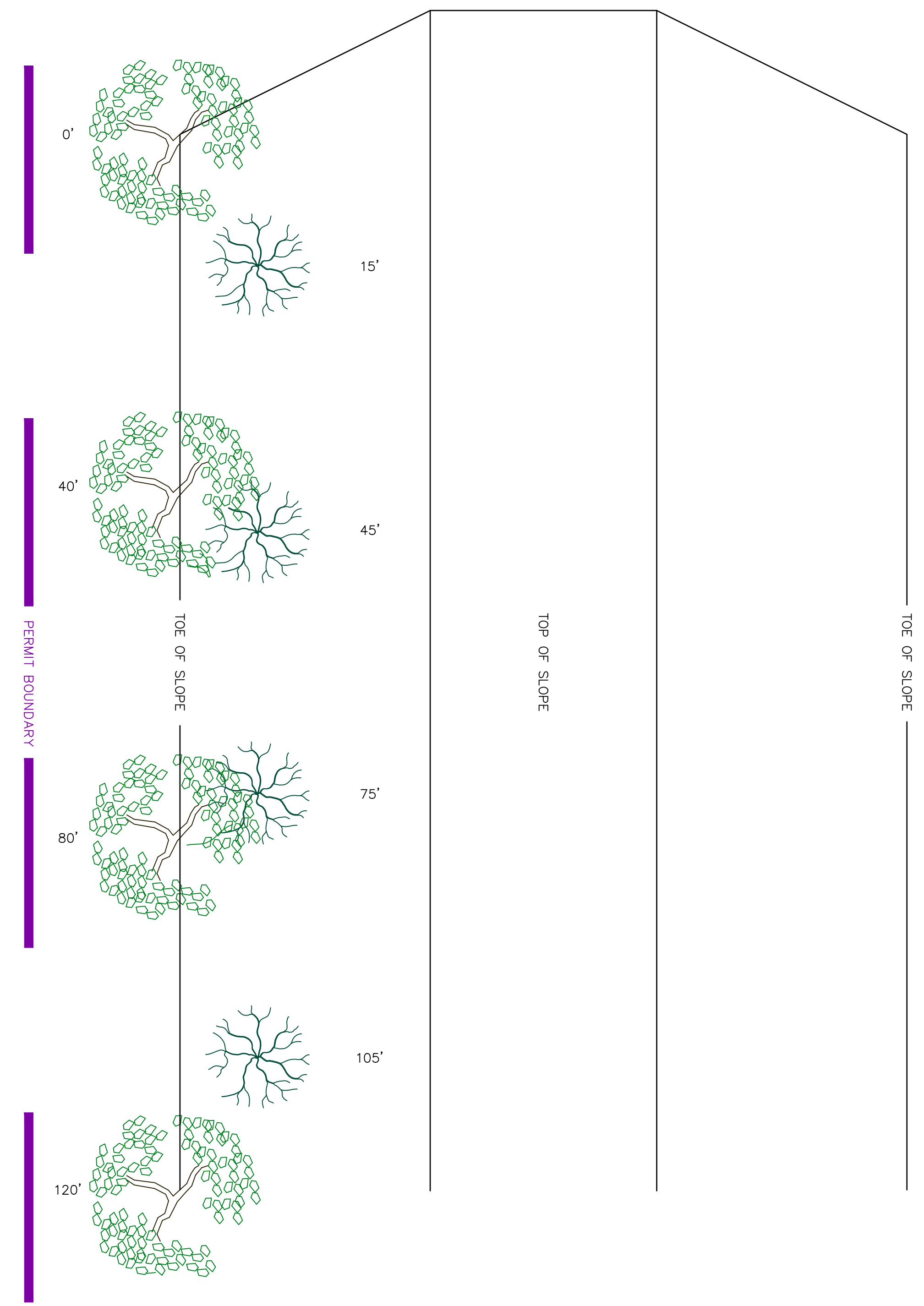


DRAWN BY: JAE	CHECKED BY: DPA	PROJECT NO: 10/29/2016/021027.029	DATE: 10/29/2016	PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA	PREPARED FOR: GIBALTAR ROCK, INC.	REVISIONS
	DRAWING NUMBER: C-18					
FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY				DAVID F. ALLEN, P.E. LICENSE NO. 075102		
LIGHTING & LANDSCAPING PLAN 6 OF 6				SHEET 18 OF 34		

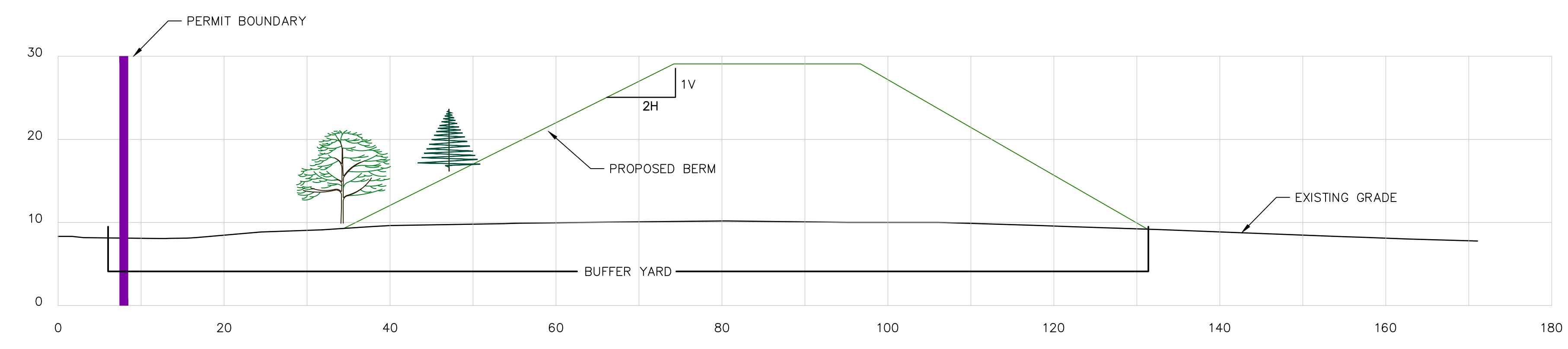
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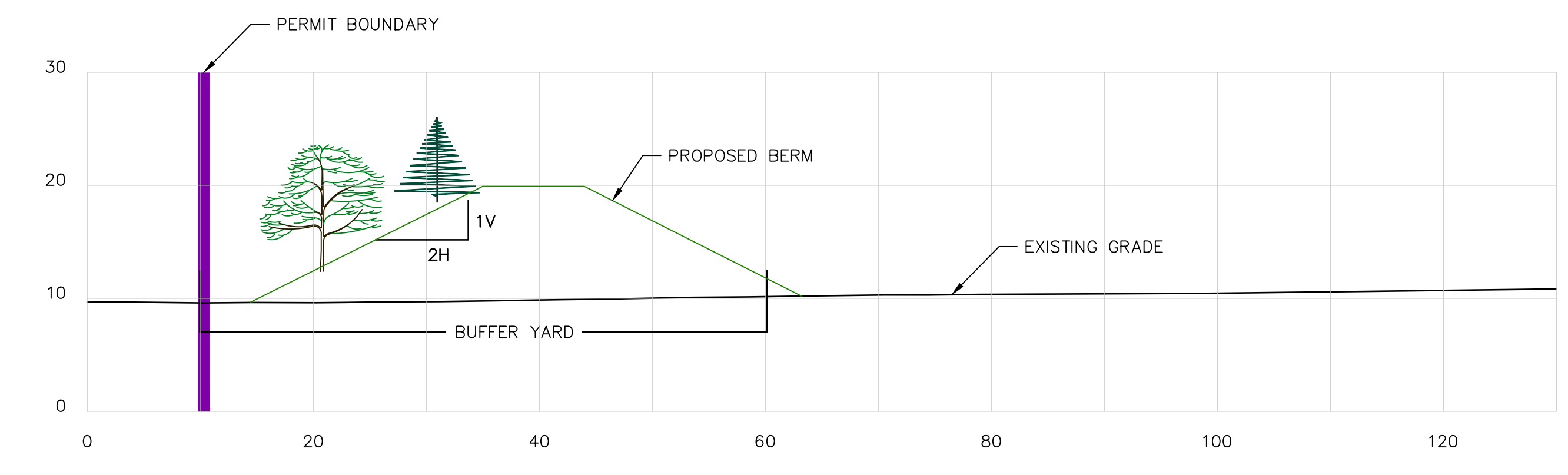
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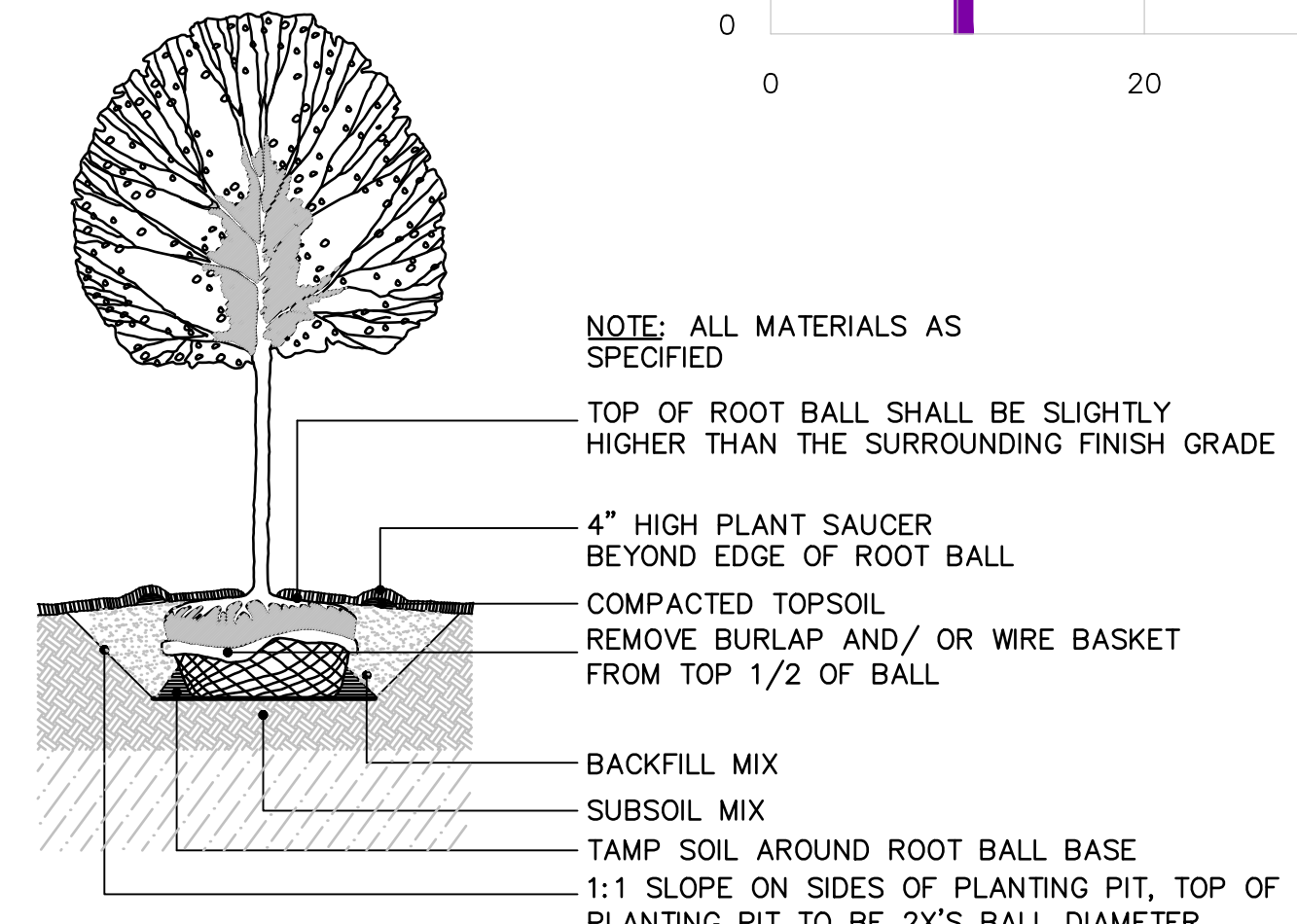
TYPICAL PERIMETER BERM PLANTING DETAIL PLAN VIEW
NOT TO SCALE



TYPICAL PERIMETER BERM A PLANTING DETAIL PROFILE VIEW
NOT TO SCALE

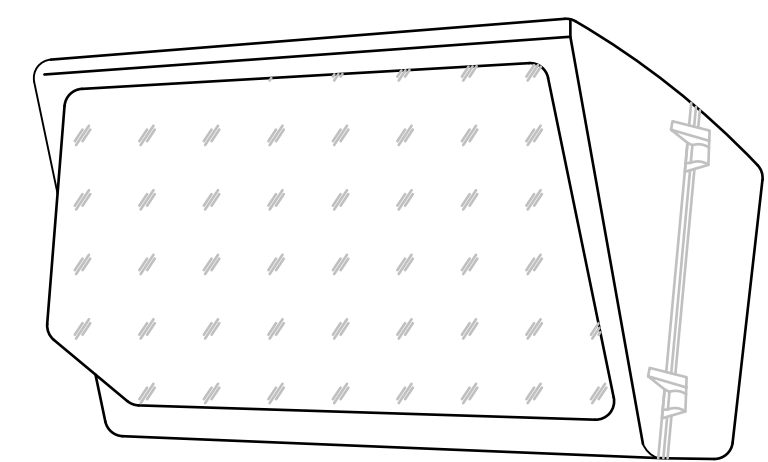


TYPICAL PERIMETER BERM B PLANTING DETAIL PROFILE VIEW
NOT TO SCALE

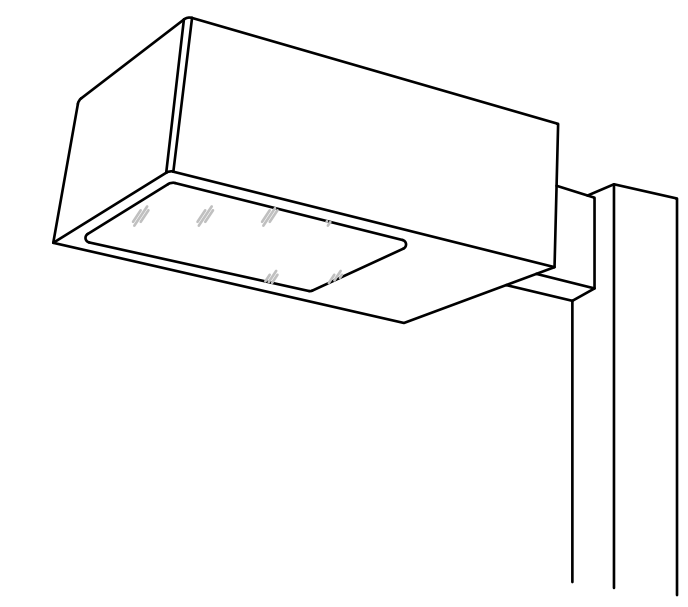


TYPICAL DECIDUOUS TREE & SHRUB PLANTING DETAIL
NOT TO SCALE

NOTE:
1. TREE STAKING AND GUYING IS NOT REQUIRED; HOWEVER, THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ASSURING THAT TREES ARE MAINTAINED STRAIGHT AND UPRIGHT THROUGHOUT THE GUARANTEE PERIOD. IF TREE STAKES OR GUYS ARE USED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE STAKES AND GUYS INCLUDING WIRES AFTER ONE YEAR. IT IS ALSO THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN WARNING DEVICES ON EACH GUY WIRE AND STAKE.
2. TREE TRUNKS SHALL NOT BE WRAPPED.

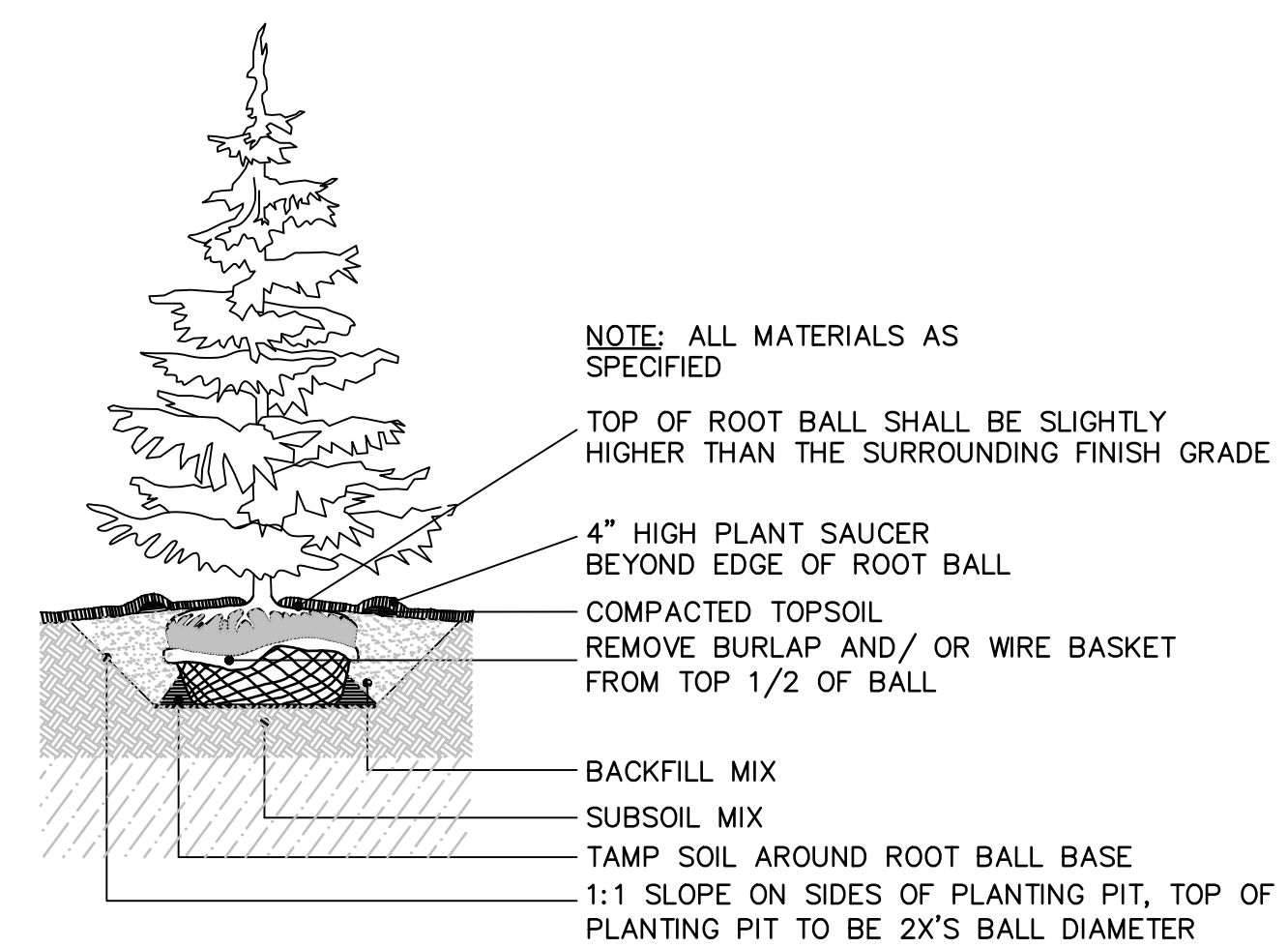


WALLMOUNT 400 LUMINAIRE LIGHT DETAIL
NOT TO SCALE



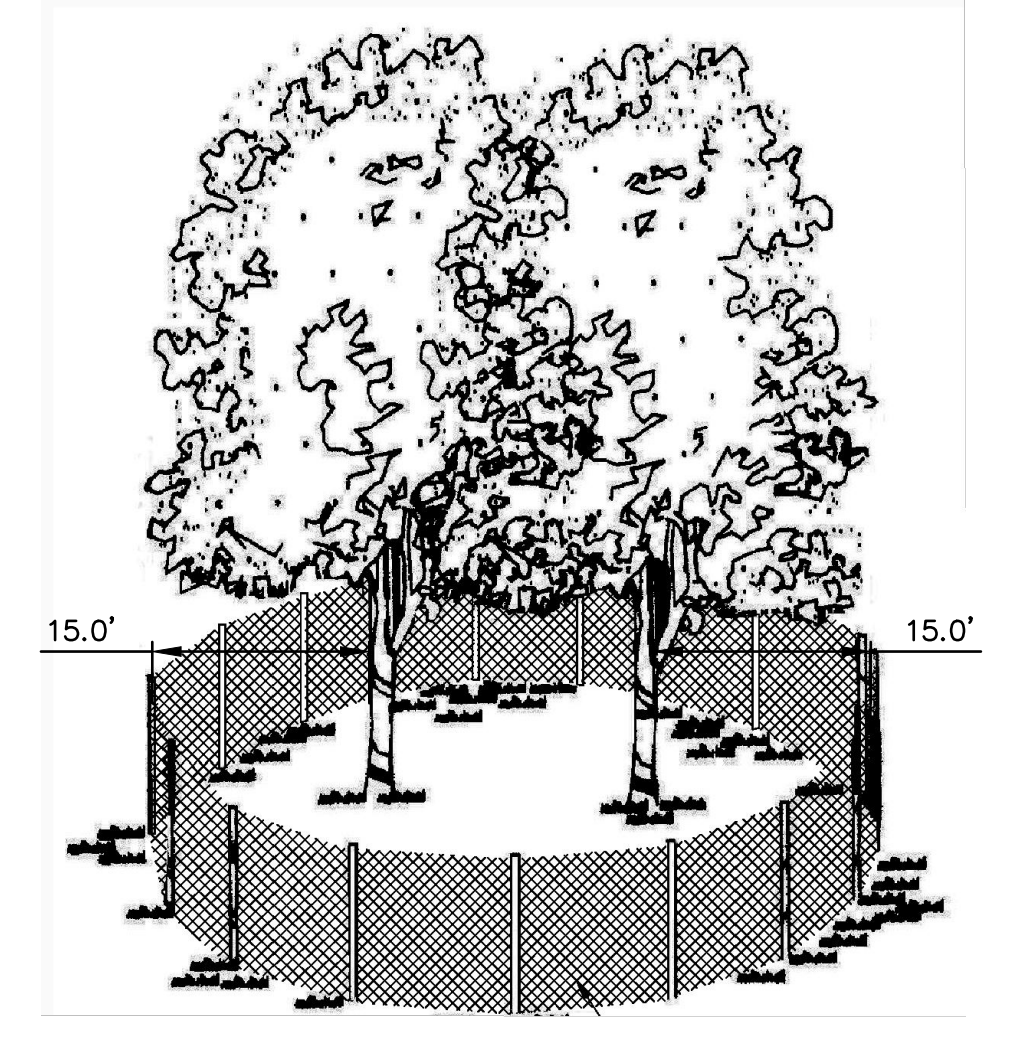
DECASHIELD 400 LUMINAIRE POST LIGHT DETAIL
NOT TO SCALE

4 TYPE PROPOSED POLE LIGHTING SHALL BE GENERAL ELECTRIC DECASHIELD III LUMINAIRE, 400 WATT HPS, FORWARD THROW, 24' MOUNTING HEIGHT, AS MANUFACTURED BY GE LIGHTING SYSTEMS, OR APPROVED EQUAL.
4 TYPE PROPOSED WALL LIGHTING SHALL BE GENERAL ELECTRIC WALLMOUNT 400 LUMINAIRE, 400 WATT HPS, 14' MOUNTING HEIGHT, AS MANUFACTURED BY GE LIGHTING SYSTEM, OR APPROVED EQUAL.



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

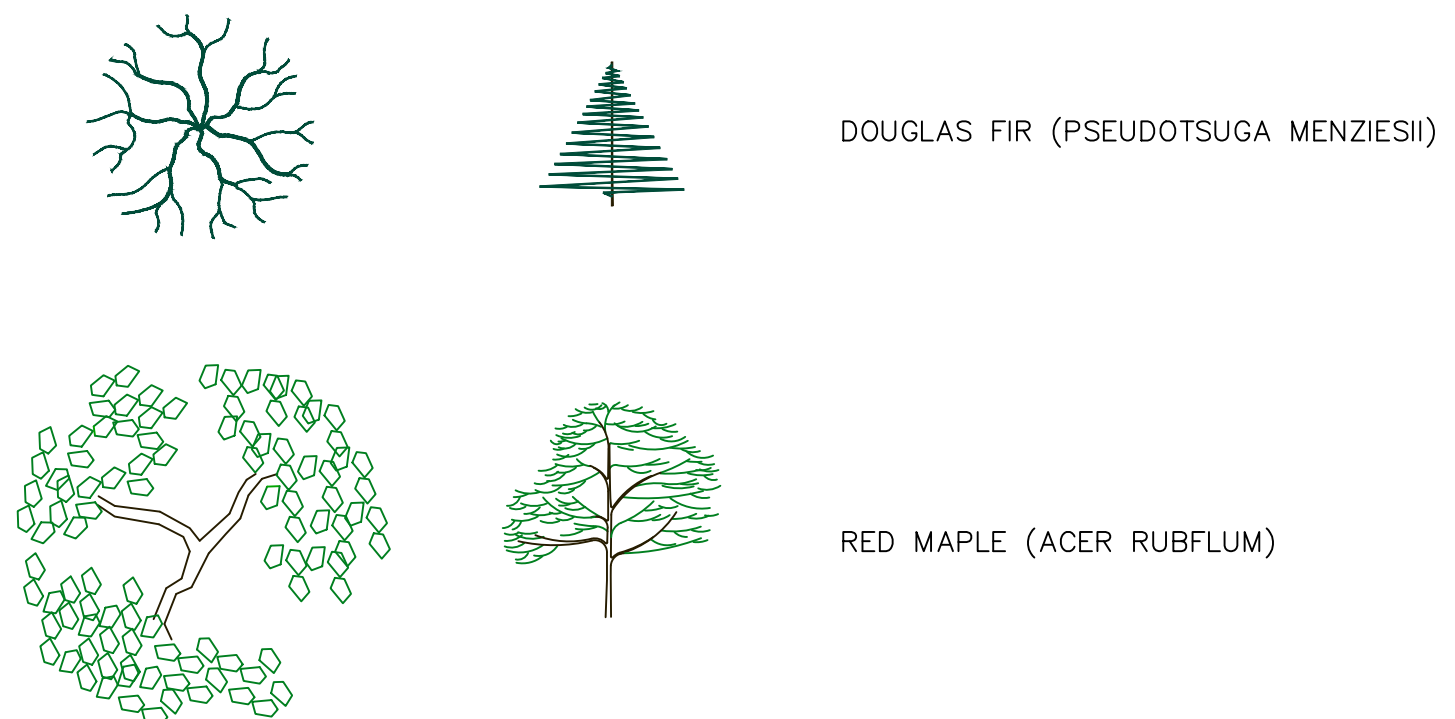
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2. TREE TRUNKS SHALL NOT BE WRAPPED.



TREE PROTECTION FENCE DETAIL
NOT TO SCALE

NOTES:

- GRADE CHANGES AND EXCAVATIONS SHALL NOT ENCRUCH UPON THE TREE PROTECTION AREA.
- NO TOXIC MATERIALS SHALL BE STORED WITHIN 100 FEET OF A TREE PROTECTION ZONE, INCLUDING PETROLEUM BASED AND/OR DERIVED PRODUCTS.
- NO MATERIALS BE STORED THERE EITHER TEMPORARILY OR PERMANENTLY. VEHICLES AND EQUIPMENT SHALL NOT BE PARKED IN THE TREE PROTECTION AREA.
- TREE ROOTS WHICH MUST BE SEVERED SHALL BE CUT BY A BACK HOE OR SIMILAR EQUIPMENT ALIGNED RADIALY TO THE TREE. THIS METHOD REDUCES THE LATERAL MOVEMENT OF THE ROOTS DURING EXCAVATION, WHICH IF DONE BY OTHER METHODS COULD DAMAGE THE INTERTWINED ROOTS OF ADJACENT TREES.
- WITHIN FOUR HOURS OF ANY SEVERANCE OF ROOTS, ALL TREE ROOTS THAT HAVE BEEN EXPOSED AND/OR DAMAGED SHALL BE TRIMMED CLEANLY AND COVERED TEMPORARILY WITH MOIST PEAT MOSS, MOIST BURLAP OR OTHER MOIST BIODEGRADABLE MATERIAL TO KEEP THEM FROM DRYING OUT UNTIL PERMANENT COVER CAN BE INSTALLED. SEDIMENT, RETENTION AND DETENTION BASINS SHALL NOT DISCHARGE INTO THE TREE PROTECTION AREA.
- SEDIMENT, RETENTION AND DETENTION BASINS SHALL NOT BE LOCATED WITHIN THE TREE PROTECTION AREA.
- PRIOR TO CONSTRUCTION, ALL TREES SCHEDULED TO REMAIN SHALL BE MARKED; WHERE GROUPS OF TREES EXIST, ONLY THE TREES ON THE EDGE NEED TO BE MARKED.
- A 48 INCH HIGH WOODEN SNOW FENCE MOUNTED ON STEEL POSTS, LOCATED 8 FEET ON CENTER, SHALL BE PLACED ALONG THE BOUNDARY OF THE TREE PROTECTION AREA.
- WHEN THE WOODEN SNOW FENCE HAS BEEN INSTALLED, IT SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO COMMENCING CLEARING AND FURTHER CONSTRUCTION. THE FENCING ALONG THE TREE PROTECTION AREA SHALL BE MAINTAINED UNTIL ALL WORK/CONSTRUCTION HAS BEEN COMPLETED; ANY DAMAGE TO THE PROTECTIVE FENCING SHALL BE REPLACED AND REPAIRED BEFORE FURTHER CONSTRUCTION SHALL BEGIN.
- TREES BEING REMOVED SHALL NOT BE FELLED, PUSHED OR PULLED INTO A TREE PROTECTION AREA OR INTO TREES THAT ARE TO BE RETAINED.



TREE SPECIES LEGEND

PROJECT SITE:	GIBRALTAR ROCK, INC. GIBRALTAR ROCK QUARRY NEW HANOVER TOWNSHIP, MONTGOMERY COUNTY, PA
PREPARED FOR:	GIBRALTAR ROCK, INC.
PROJECT NO.:	021027.029
DATE:	10/19/2015
DRAWING NO.:	C-19
DATE:	10/15/17
BY:	JSC
NO.:	1
REVISIONS:	REVISED PER TWP COMMENTS & 12/9/15 PCM
DAVID F. ALLEN, P.E.	LICENSE NO. 075102

ENGINEERING AND SCIENCE

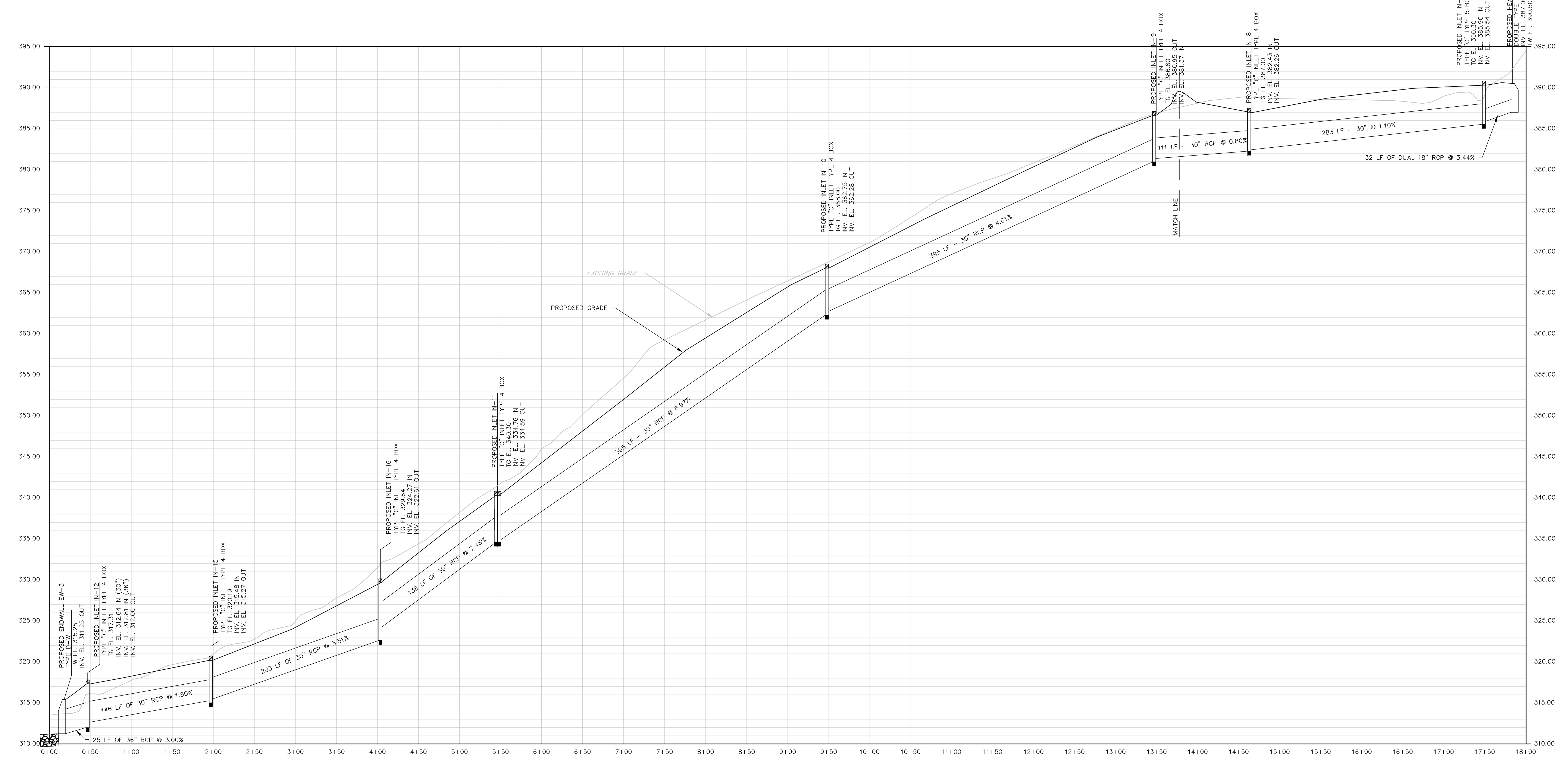
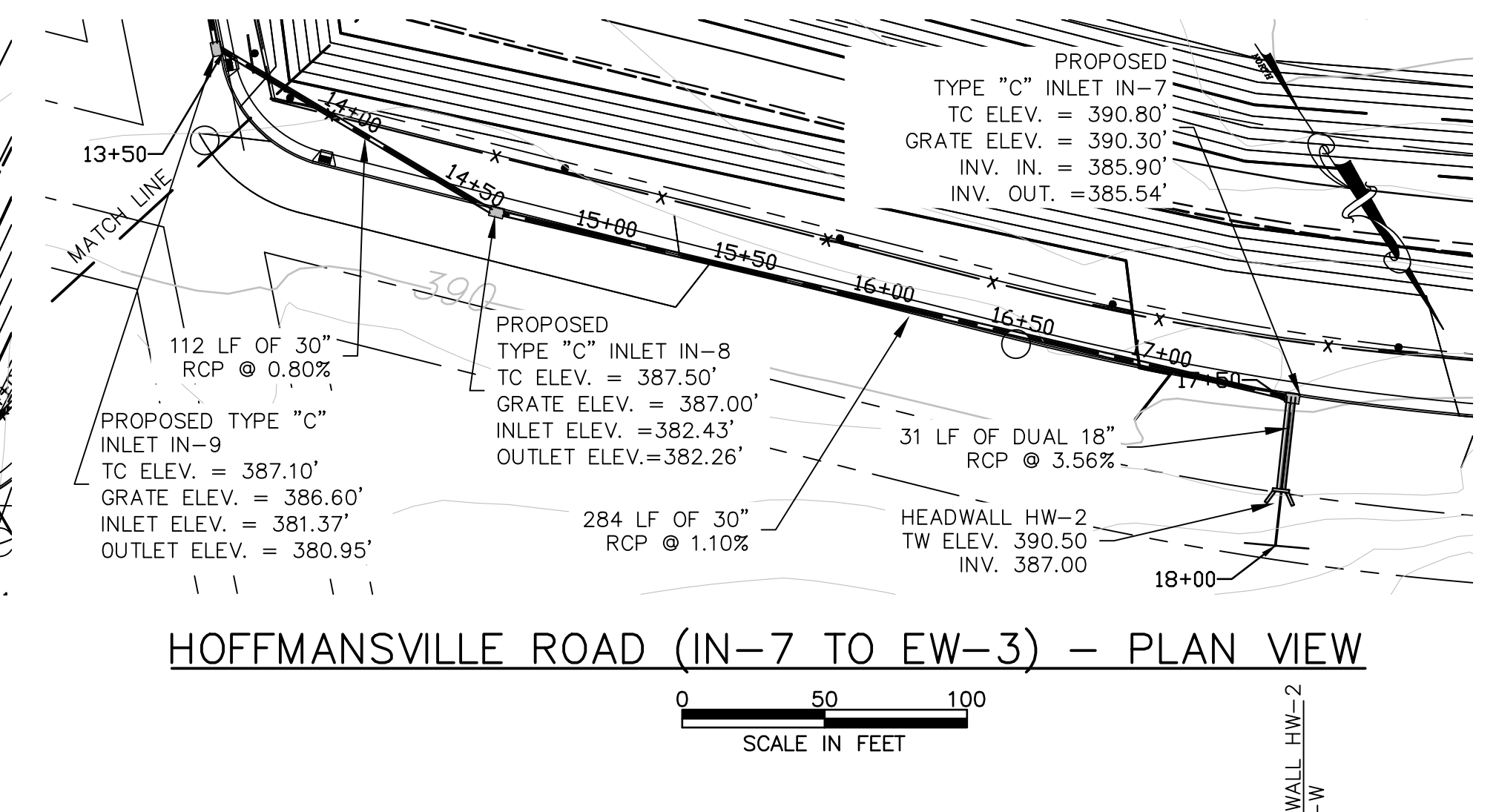
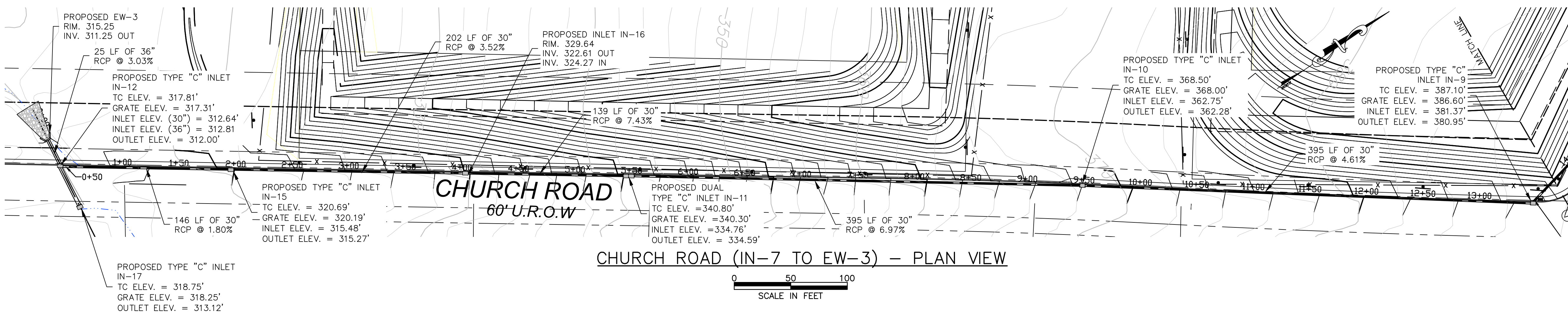
PENNSYLVANIA ONE-CALL SYSTEM, INC.

 NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG

 1-800-242-1776

 SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554

F:\PROJECTS\1021027\025_Stormwater Profiles (C-20) - C-22.dwg Layout: C-20 User: JCervantes 08/21/2017 9:48



GENERAL NOTES:

- ALL STORM SEWER PIPING SHALL BE CLASS III REINFORCED CONCRETE PIPE WITH O-RING JOINTS WITH THE EXCEPTION OF THE PIPING ASSOCIATED WITH THE PROPOSED SETTLING BASINS.
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SCALE:
H: 1" = 50'
V: 1" = 5'

STORMWATER PROFILE (SHEET 1 OF 3)

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

EarthRes ENGINEERING AND SCIENCE

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Toll Free: 800.224.4533

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PENNSYLVANIA ONE-CALL SYSTEM, INC.
NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG
1-800-442-1776
SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554

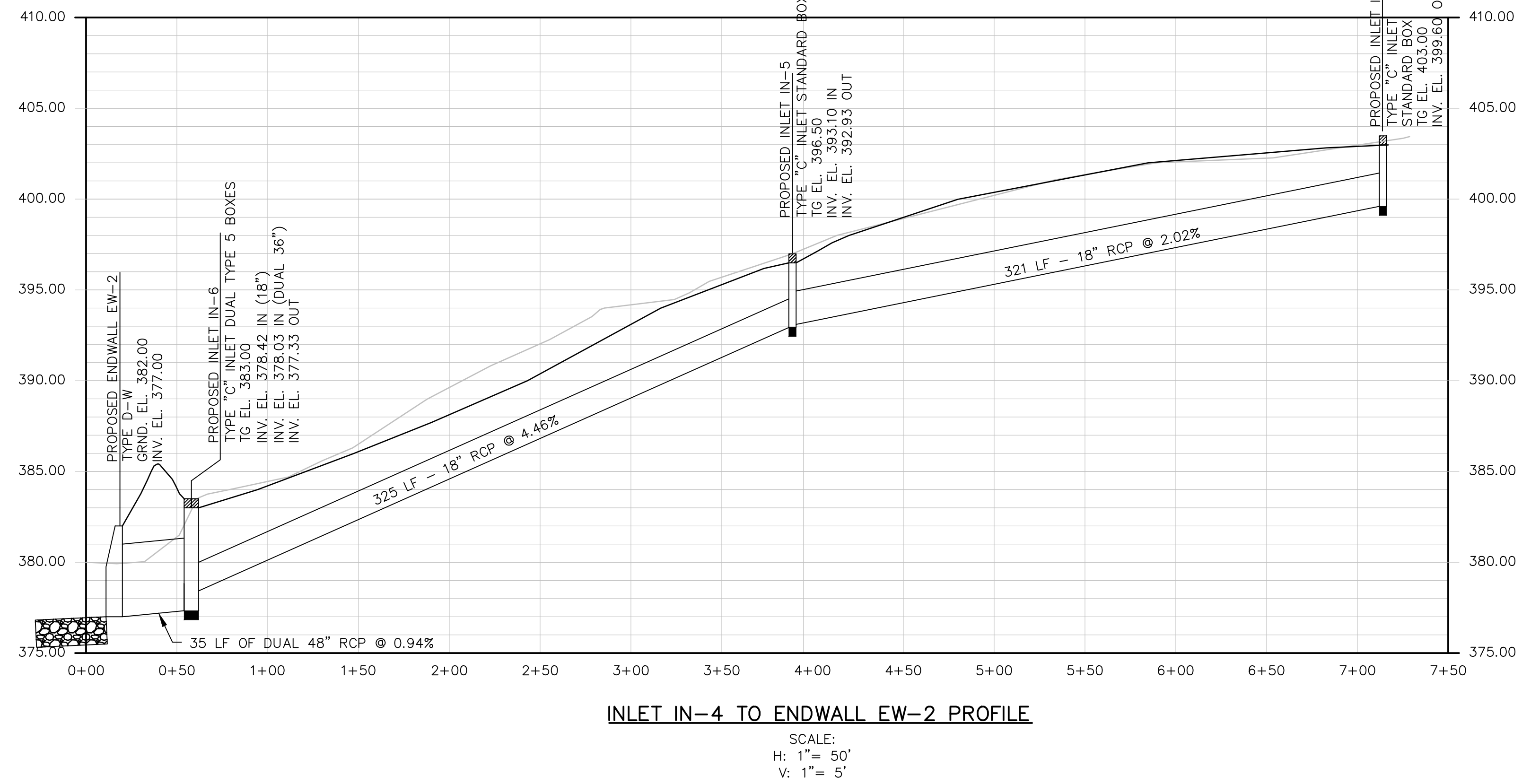
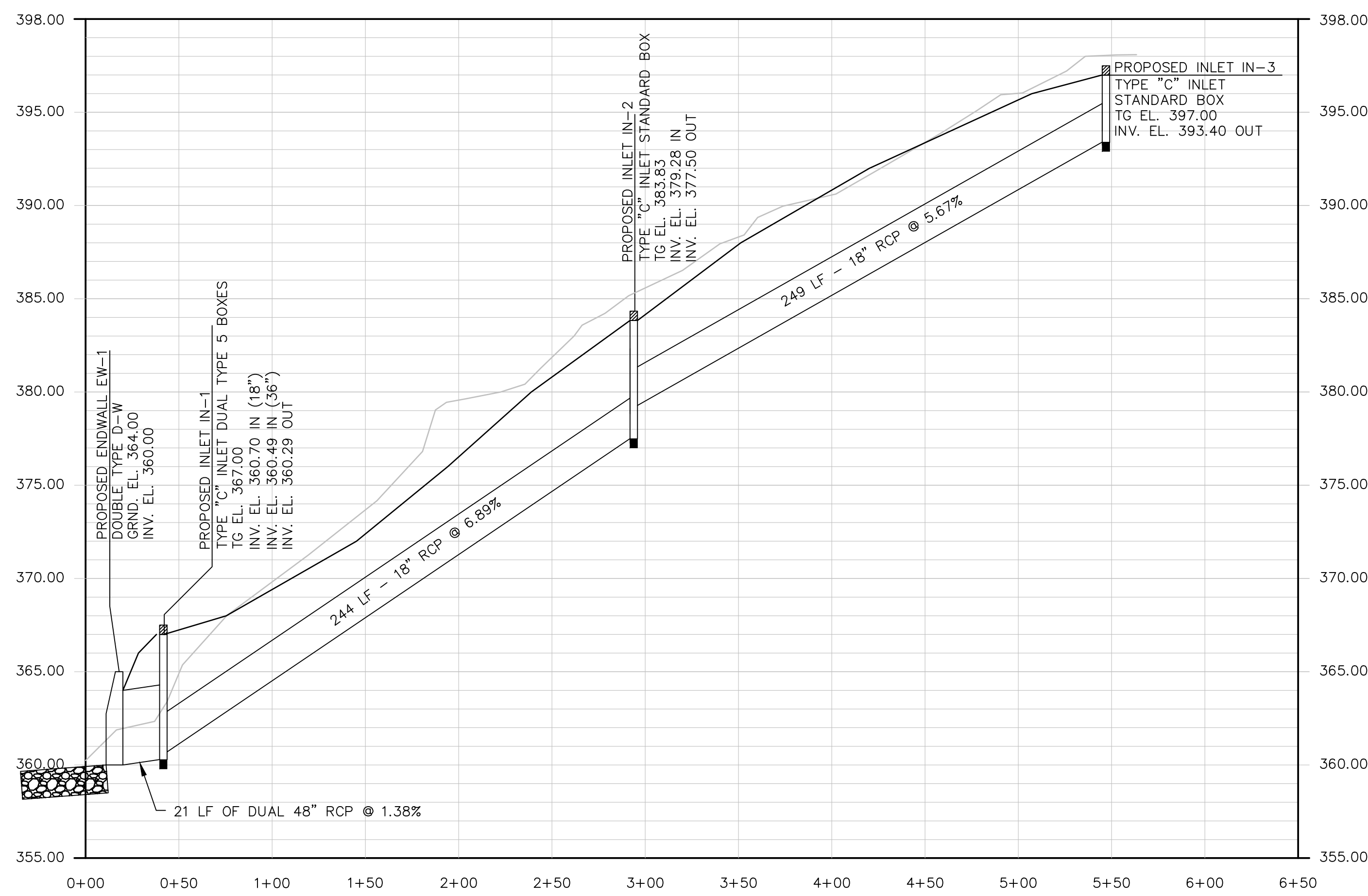
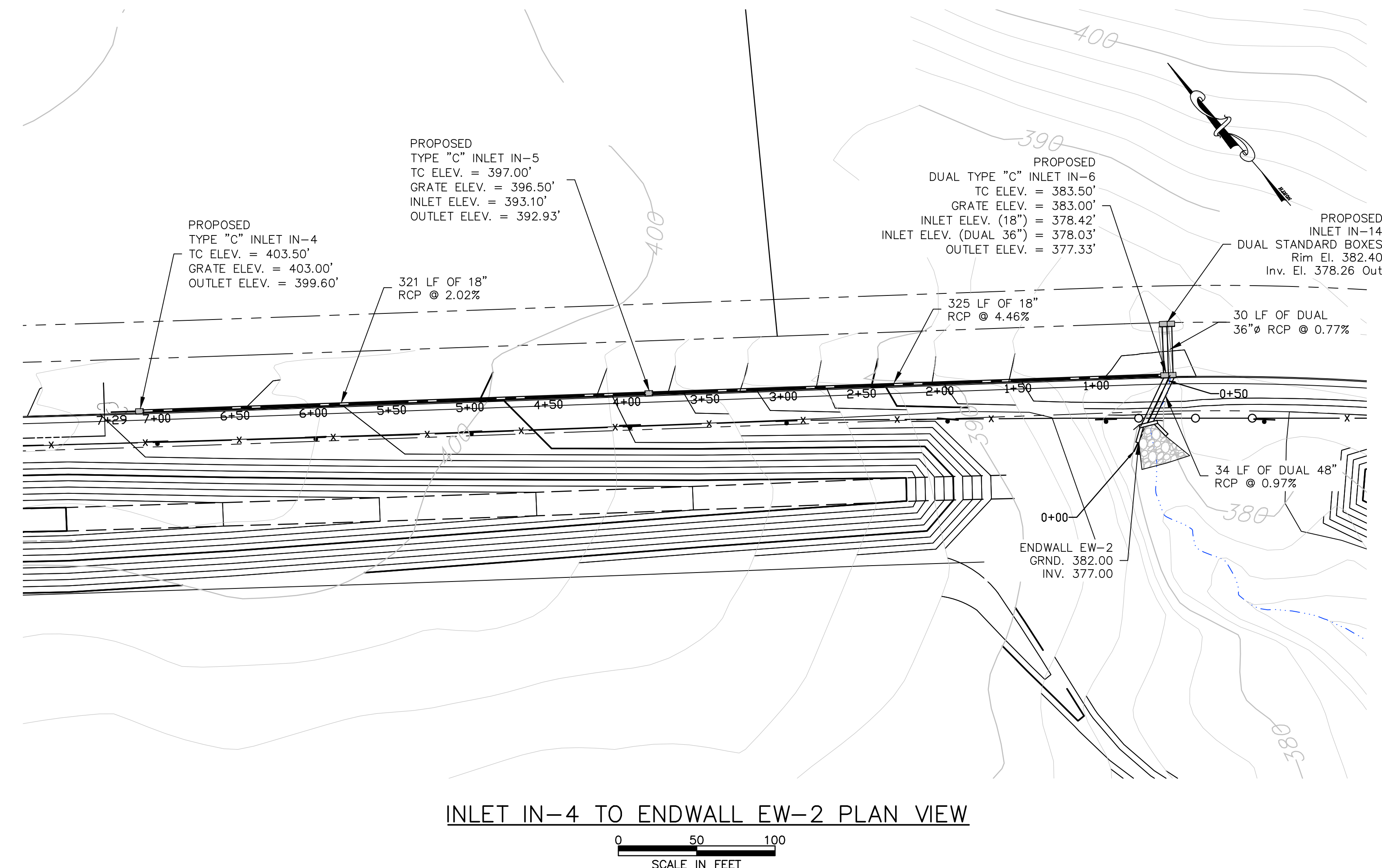
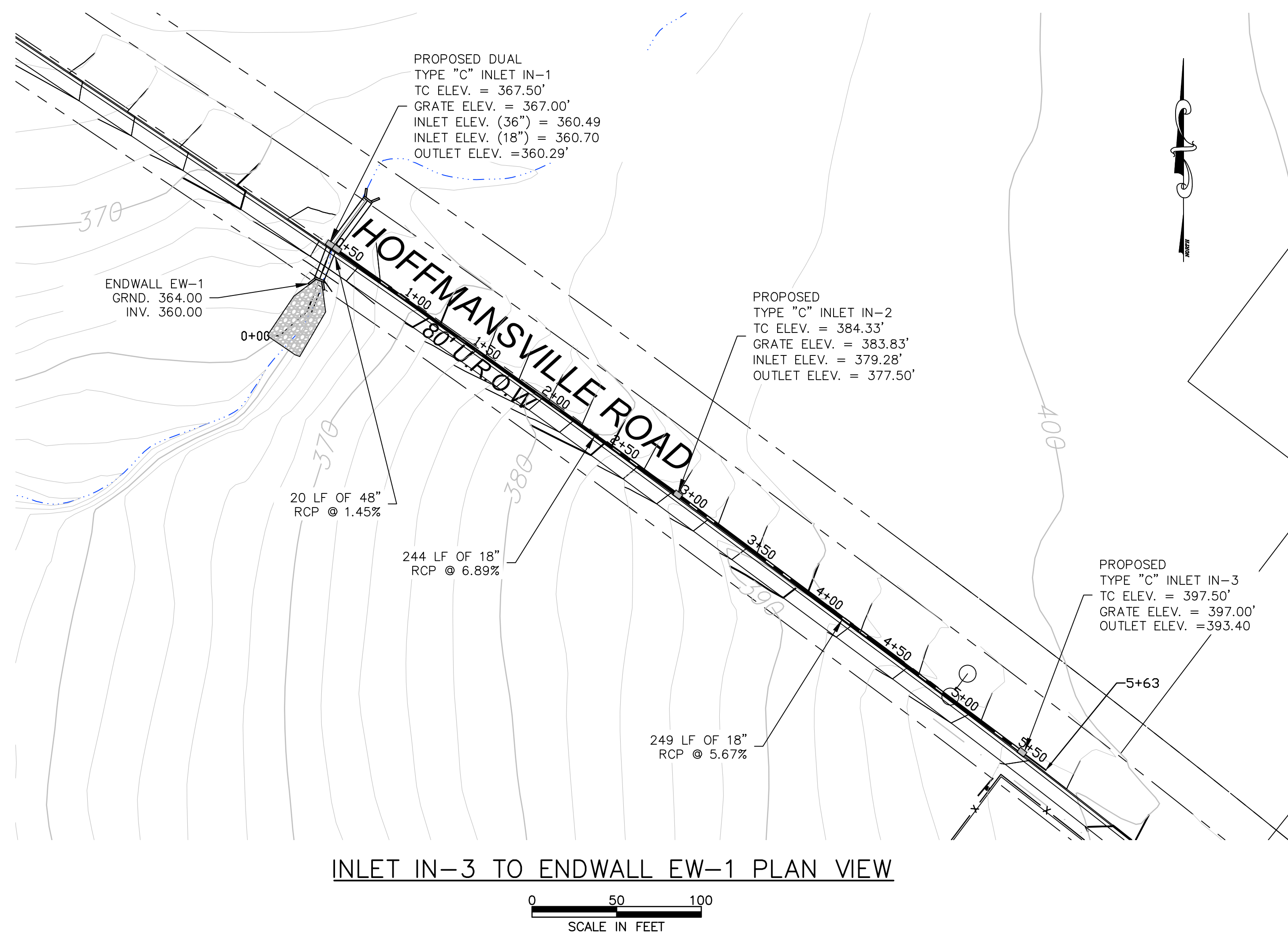
REVISIONS:

NO.	DATE	BY	REVISIONS
1	10/15/15	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM

DAVID F. ALLEN, P.E.
LICENSE NO. 075102

DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 10/15/2015
PROJECT NO: 021027.025
DRAWING NUMBER: C-20

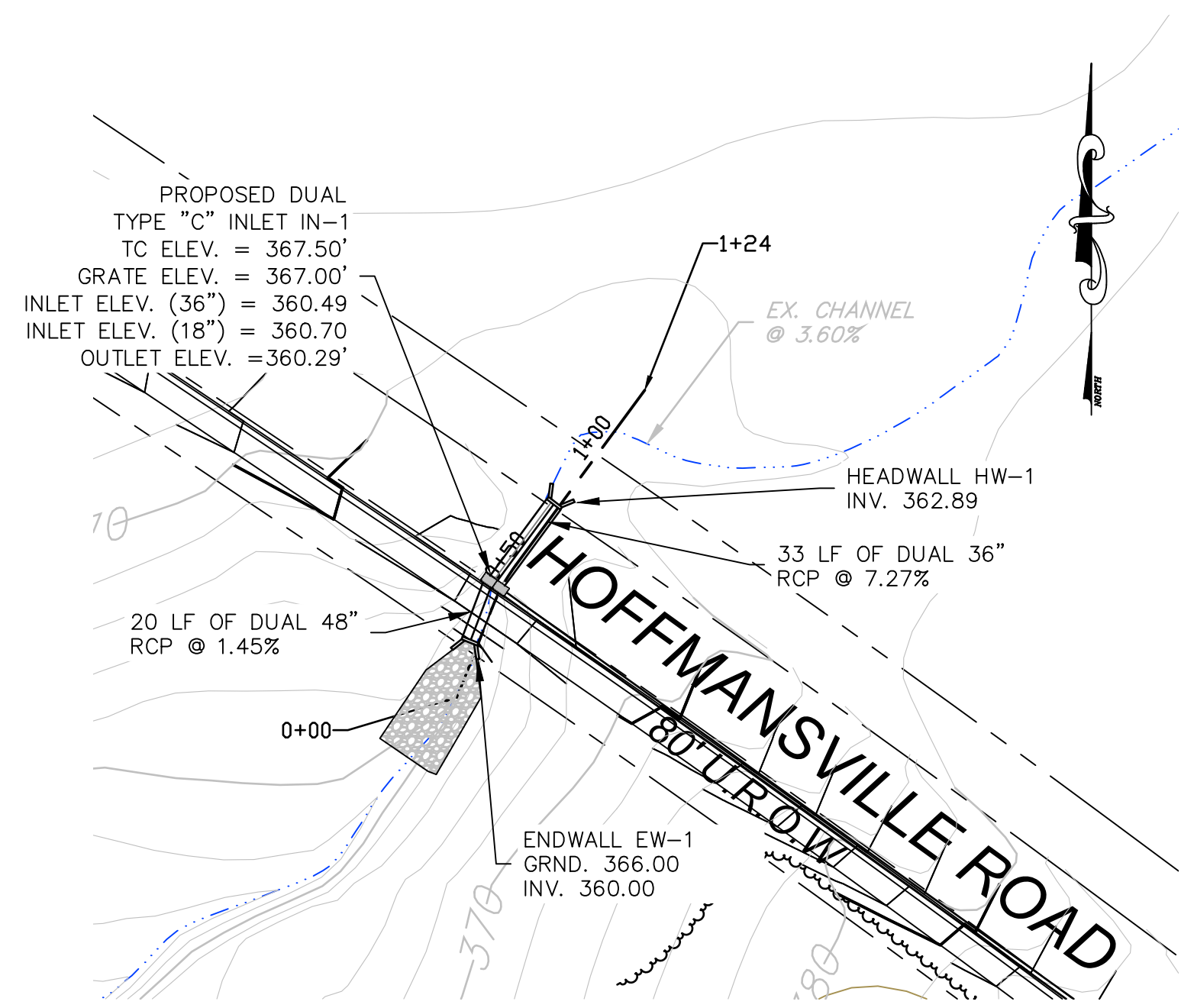
SHEET 20 OF 34



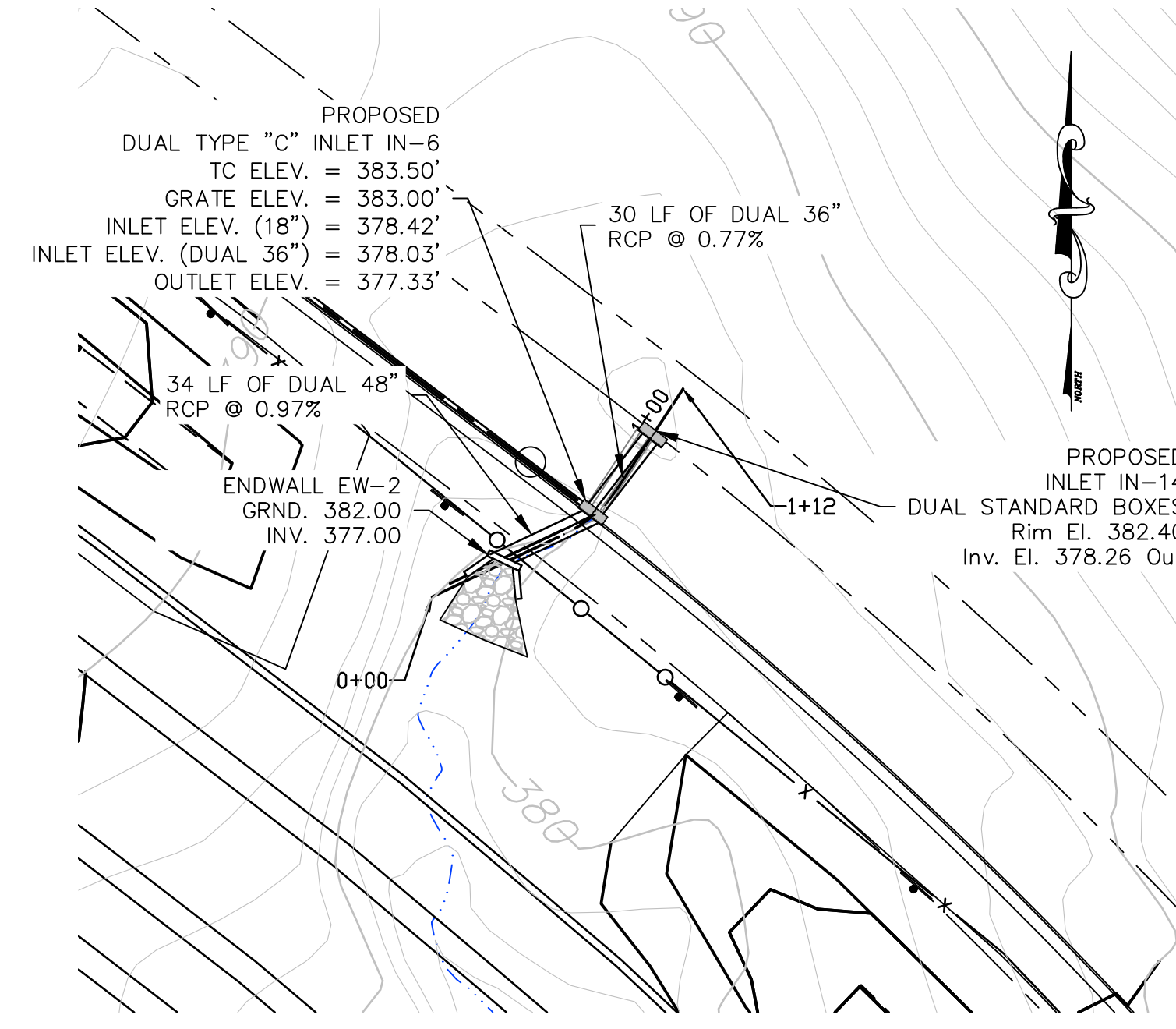
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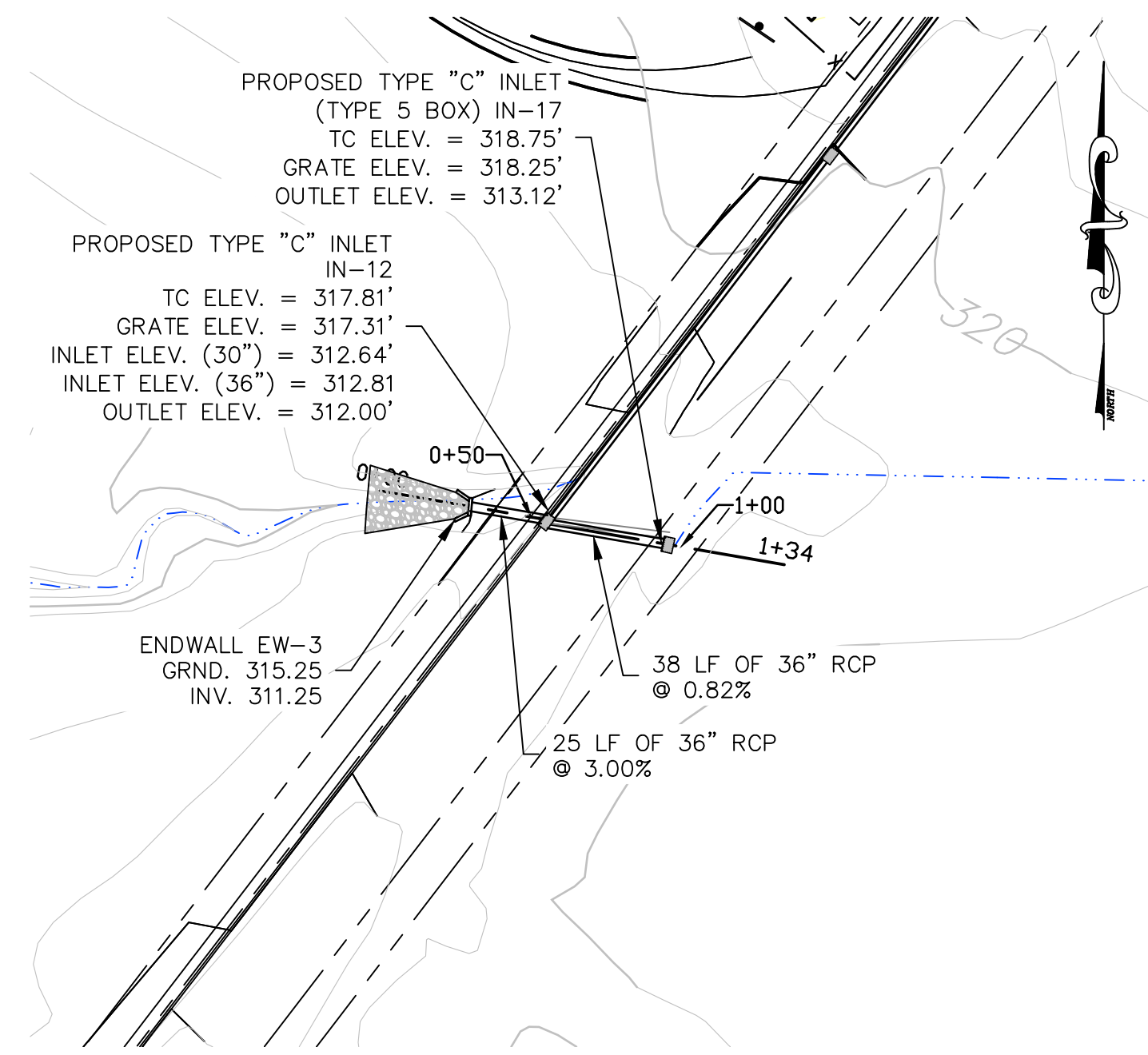
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	NO.									DATE
PENNSYLVANIA ONE-CALL SYSTEM, INC. NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG 1-800-442-7776 SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554 811										



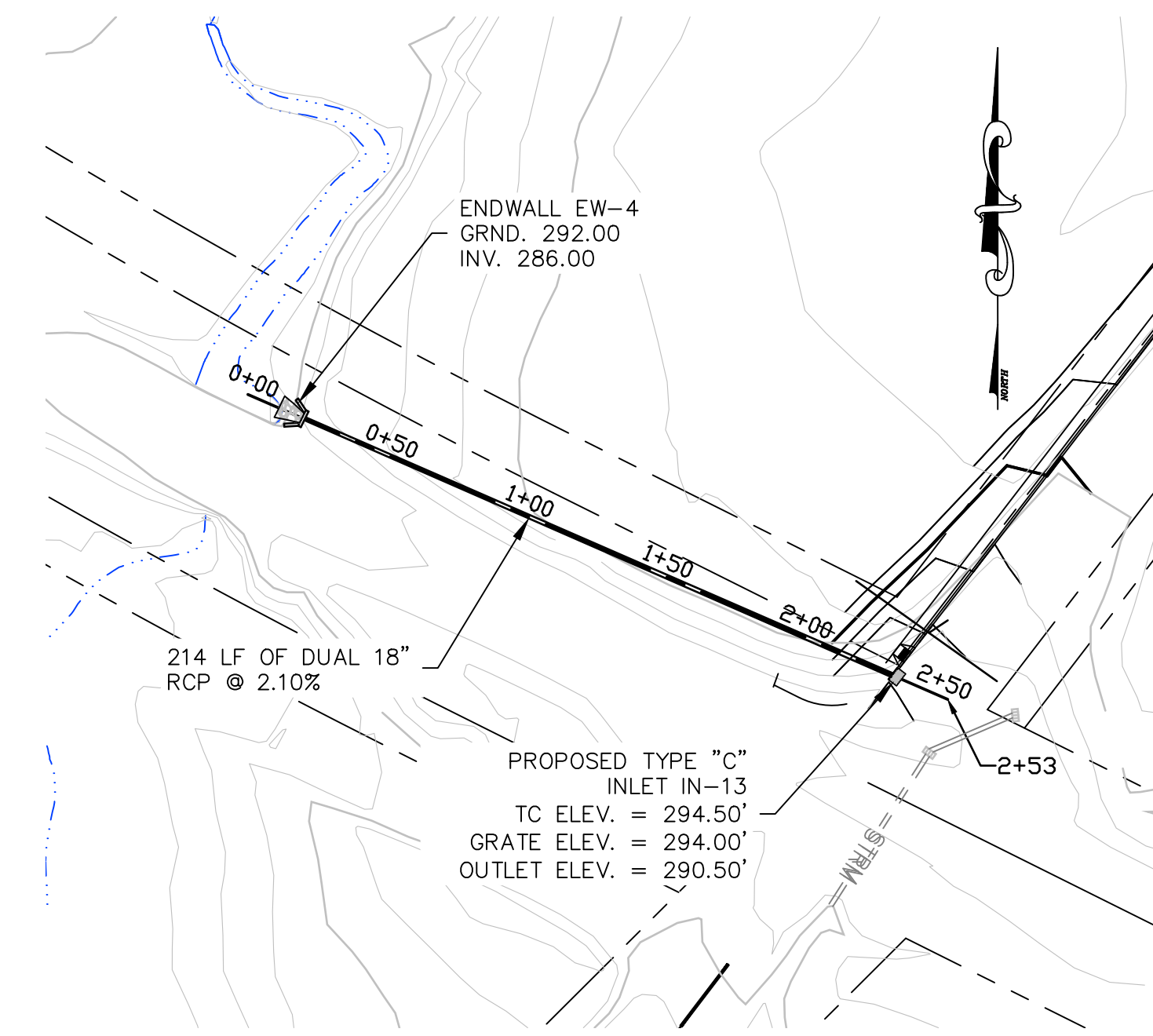
HEADWALL HW-1 TO ENDWALL EW-1 PLAN VIEW



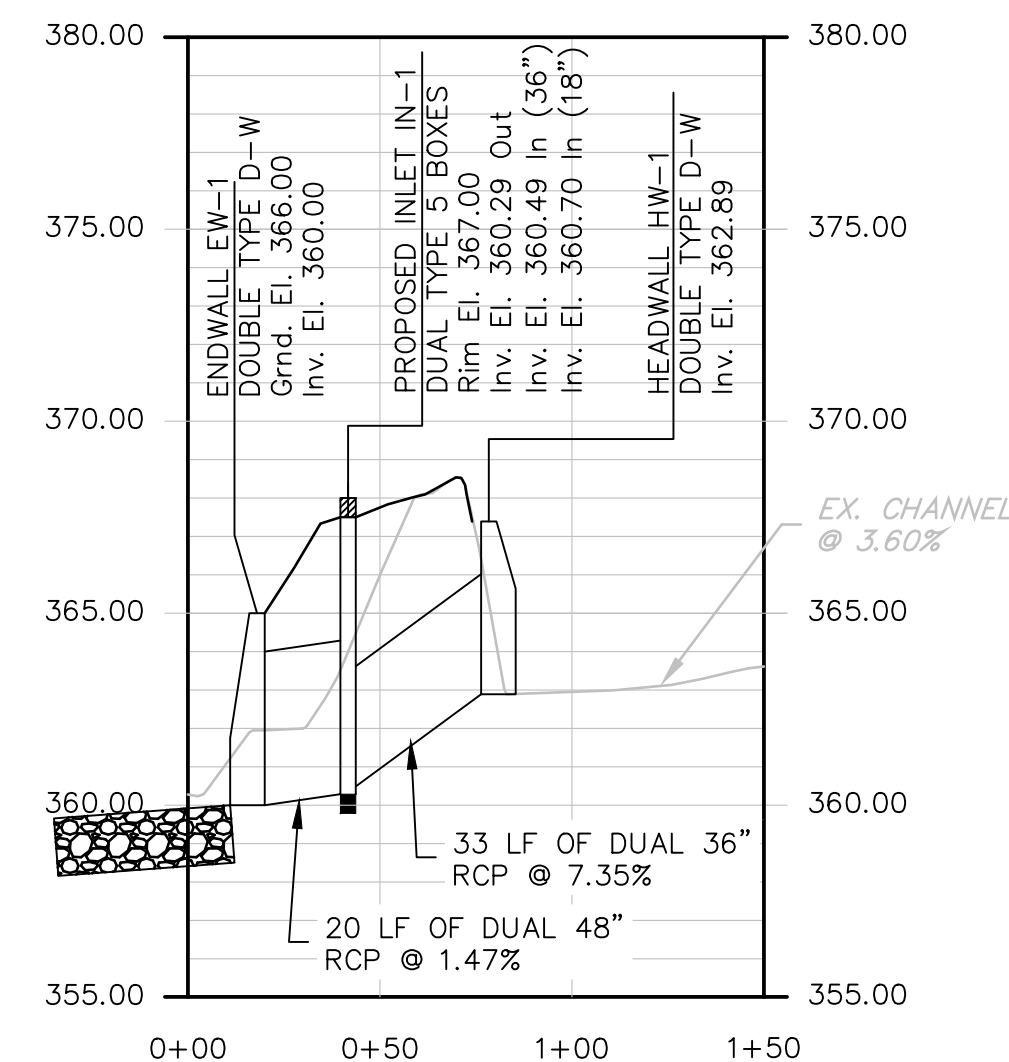
INLET IN-14 TO ENDWALL EW-2 PLAN VIEW



INLET IN-17 TO ENDWALL EW-3 PLAN VIEW

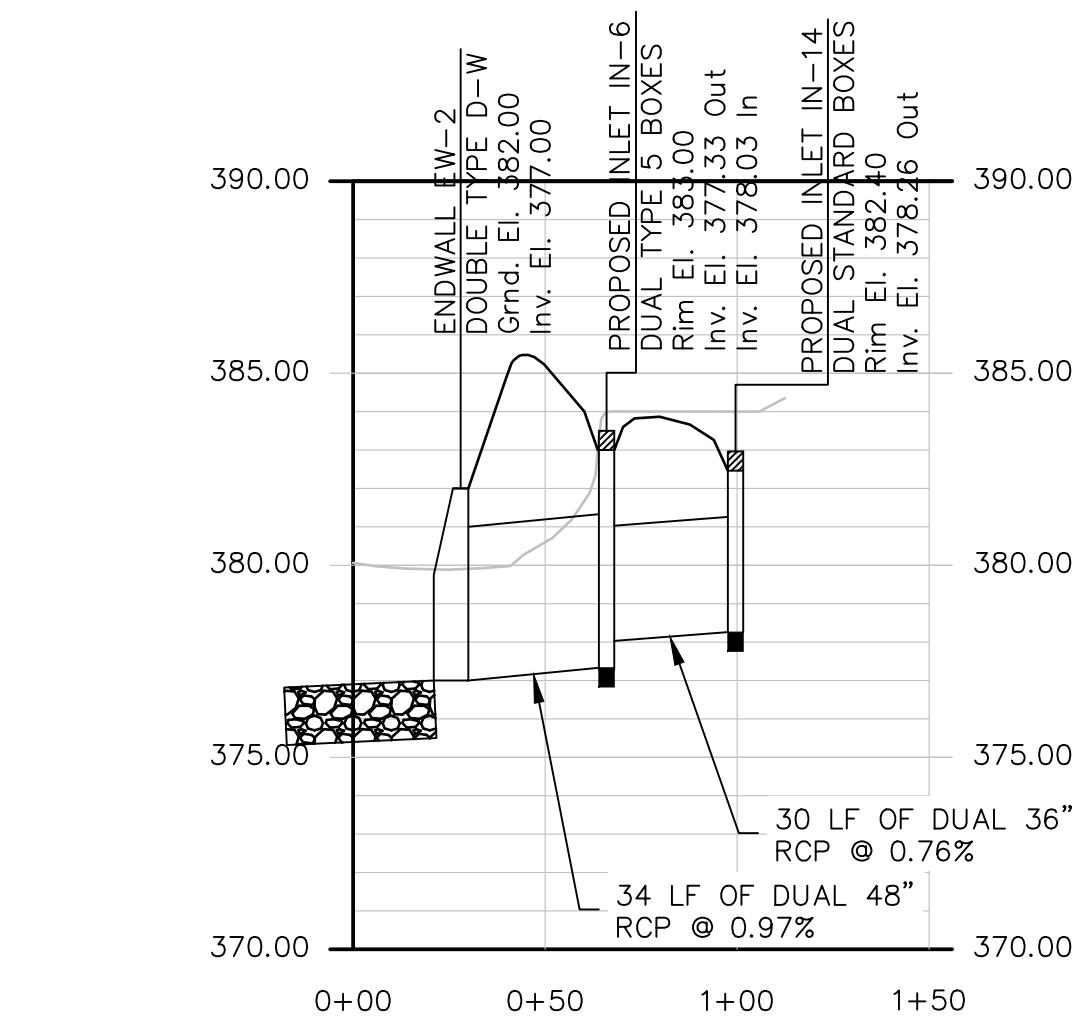


INLET IN-13 TO ENDWALL EW-4 PLAN VIEW



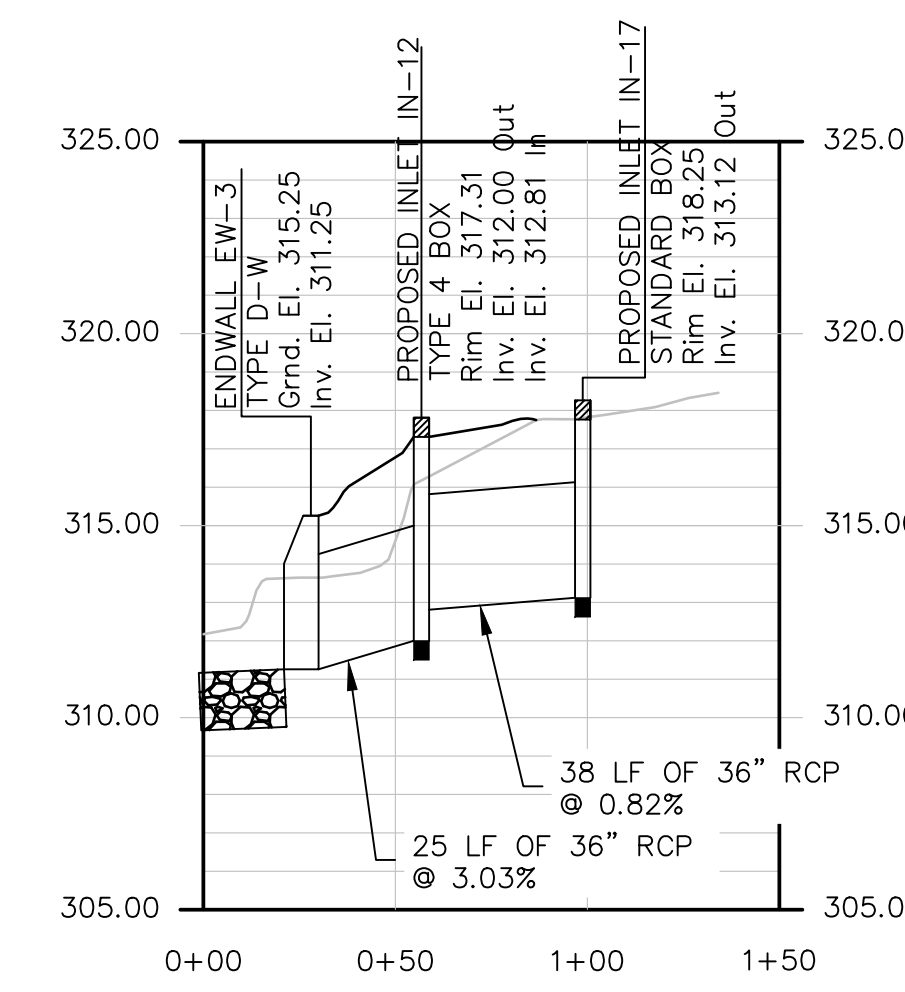
HEADWALL HW-1 TO ENDWALL EW-1 PROFILE

SCALE:
H: 1" = 50'
V: 1" = 5'



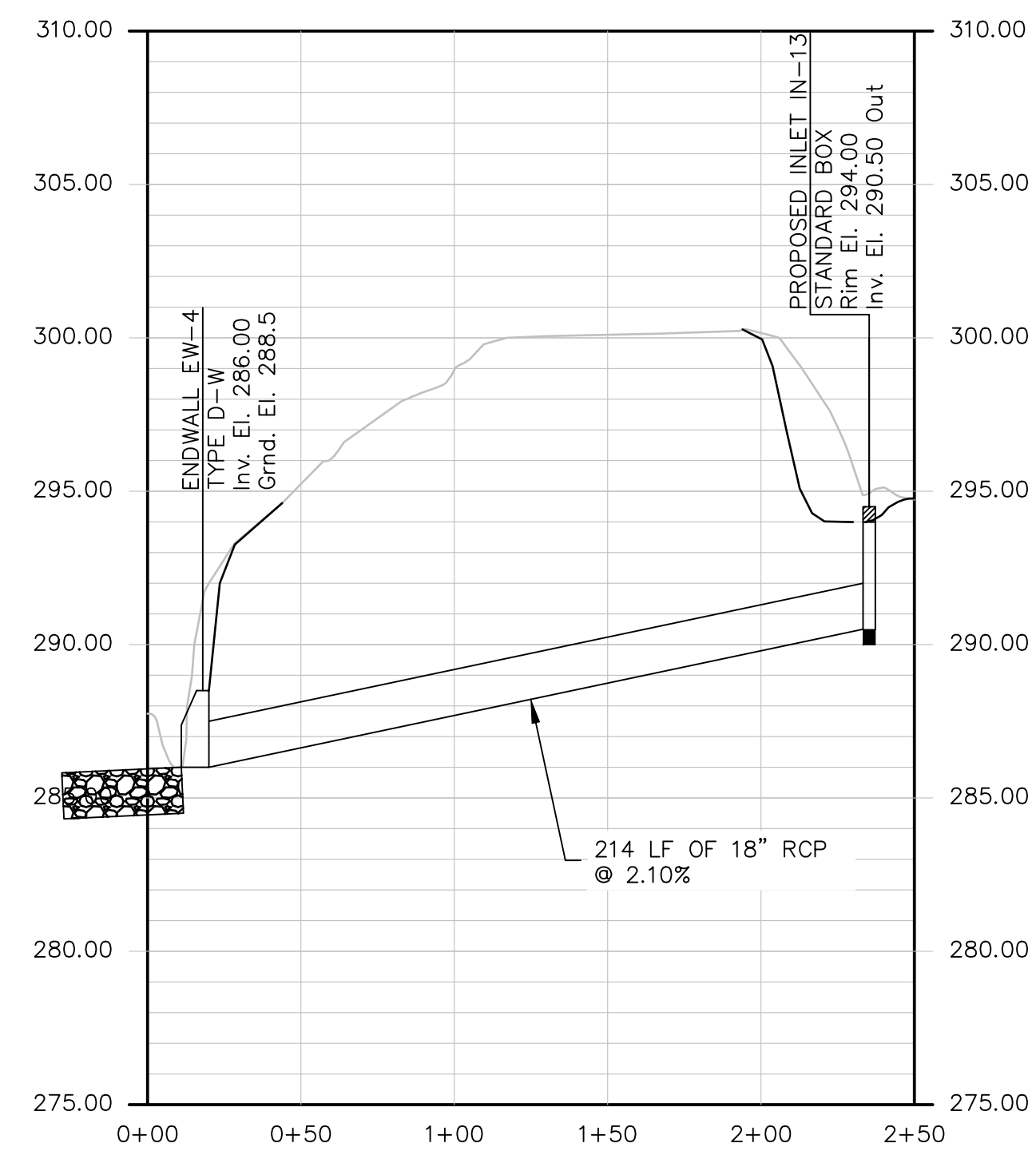
INLET IN-14 TO ENDWALL EW-2 PROFILE

SCALE:
H: 1" = 50'
V: 1" = 5'



INLET IN-17 TO ENDWALL EW-3 PROFILE

SCALE:
H: 1" = 50'
V: 1" = 5'



INLET IN-13 TO ENDWALL EW-4 PROFILE

SCALE:
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V: 1" = 5'

GENERAL NOTES:

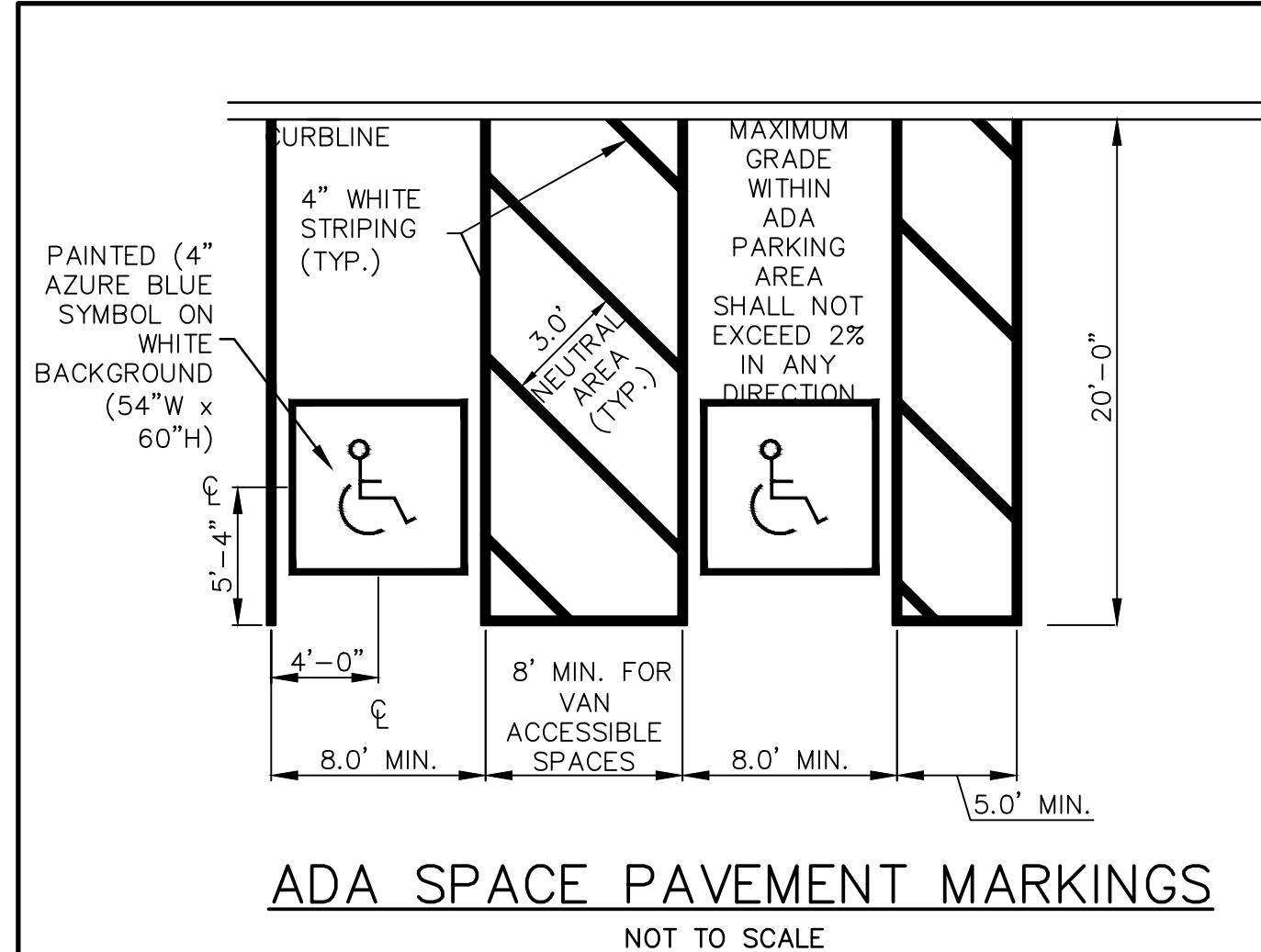
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PREPARED FOR:	GIBALTAR ROCK, INC.	
PREPARED BY:	EarthRes ENGINEERING AND SCIENCE	
CHECKED BY:	DATE:	PROJECT NO.:
DATE:	10/19/2015	021027.029
DRAWING NUMBER:	C-22	
BY:	DATE:	REVISIONS:
DAVID F. ALLEN, P.E.	10/15/17	JSC REVISED PER TWP COMMENTS & 12/9/15 PCM
LICENSE NO. 075102		
STORMWATER PROFILE (SHEET 3 OF 3)	FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY	
DRAWN BY:	DATE:	PROJECT NO.:
		021027.029
DRAWING NUMBER:	C-22	
SHEET	22	OF 34



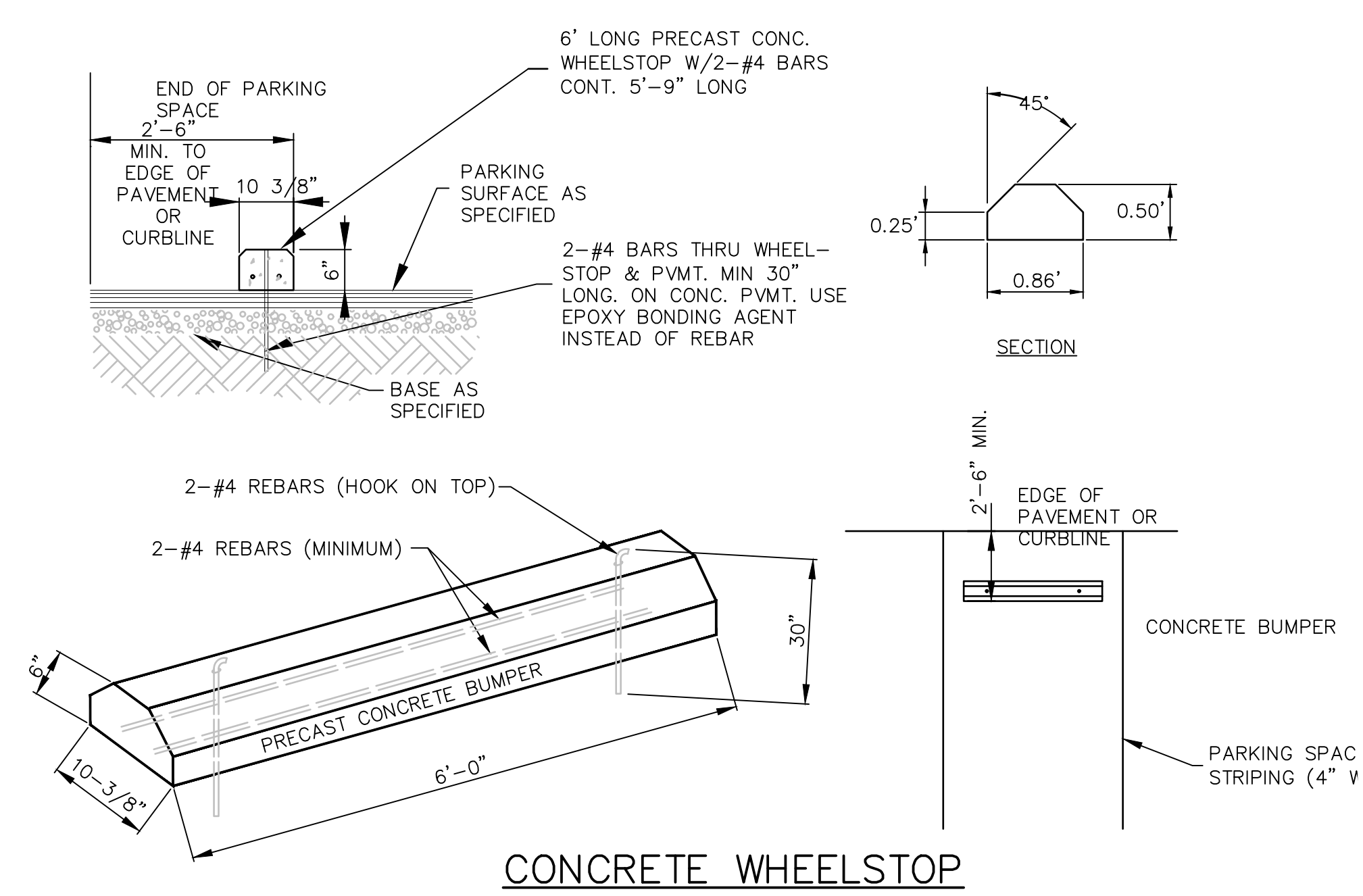
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1-800-242-1776
SERIAL NUMBERS: 20102222544, 20102222545,
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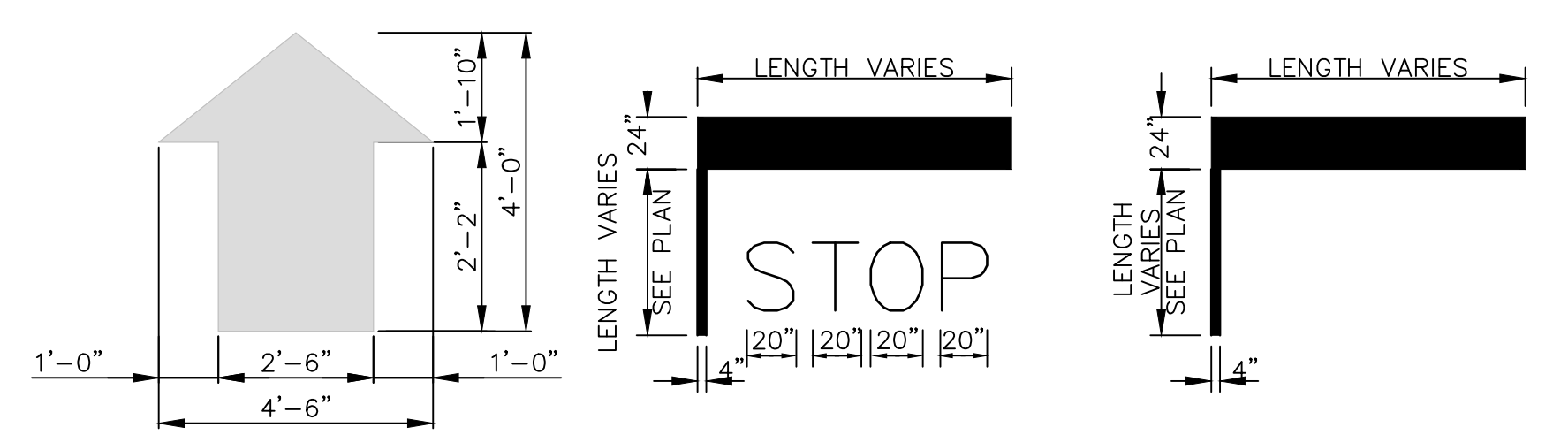
ADA SPACE PAVEMENT MARKINGS
NOT TO SCALE

- NOTES:**
- CURB RAMP MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.
 - CURB RAMP, PAVEMENT MARKINGS, & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

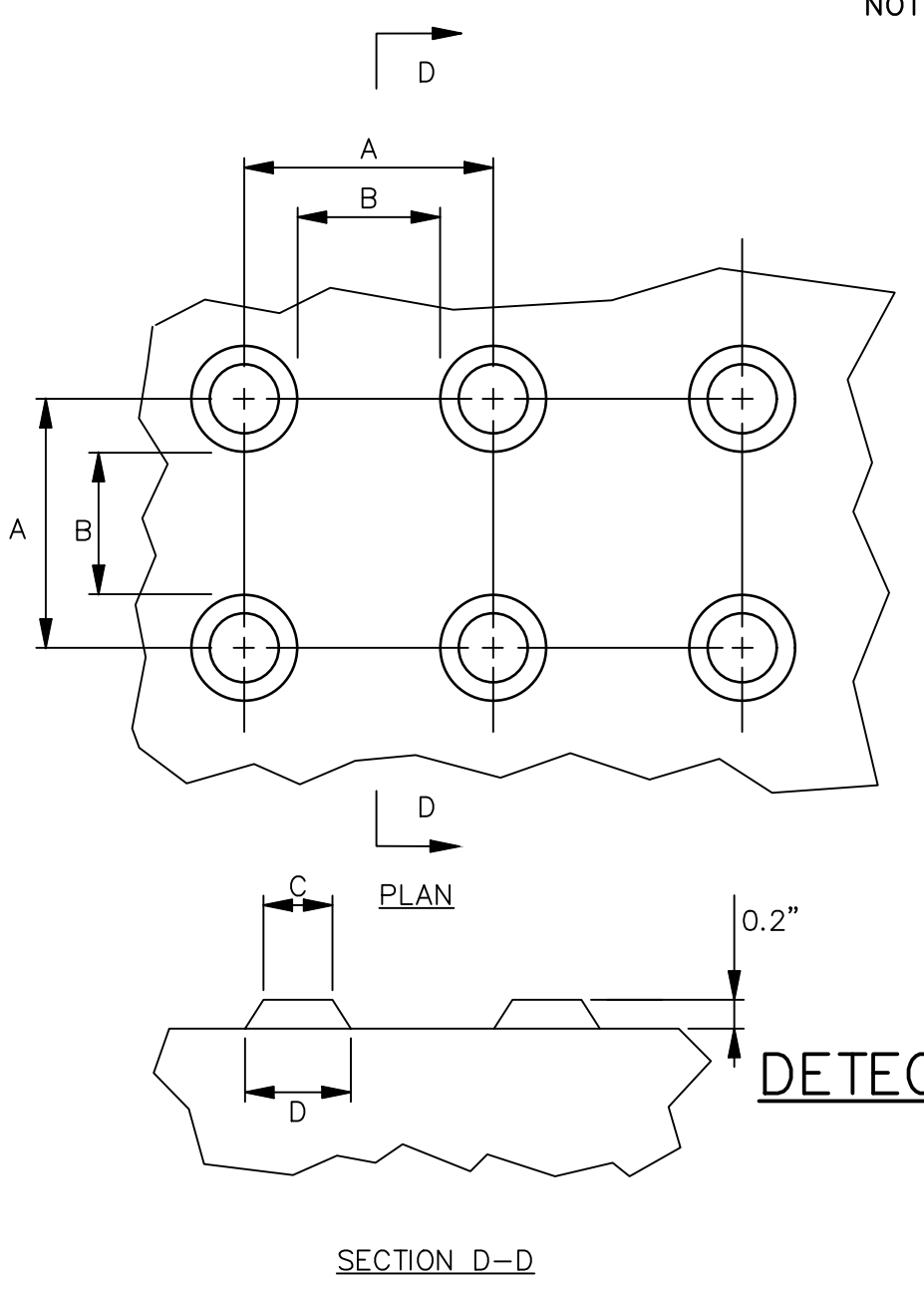


CONCRETE WHEELSTOP
NOT TO SCALE

- NOTES:**
- REFER TO PLAN SET FOR LOCATIONS OF PROPOSED WHEELSTOPS.
 - CONCRETE WHEELSTOPS SHALL BE PAINTED/COLORIZED SO AS TO CONTRAST WITH PAVEMENT SURFACE.



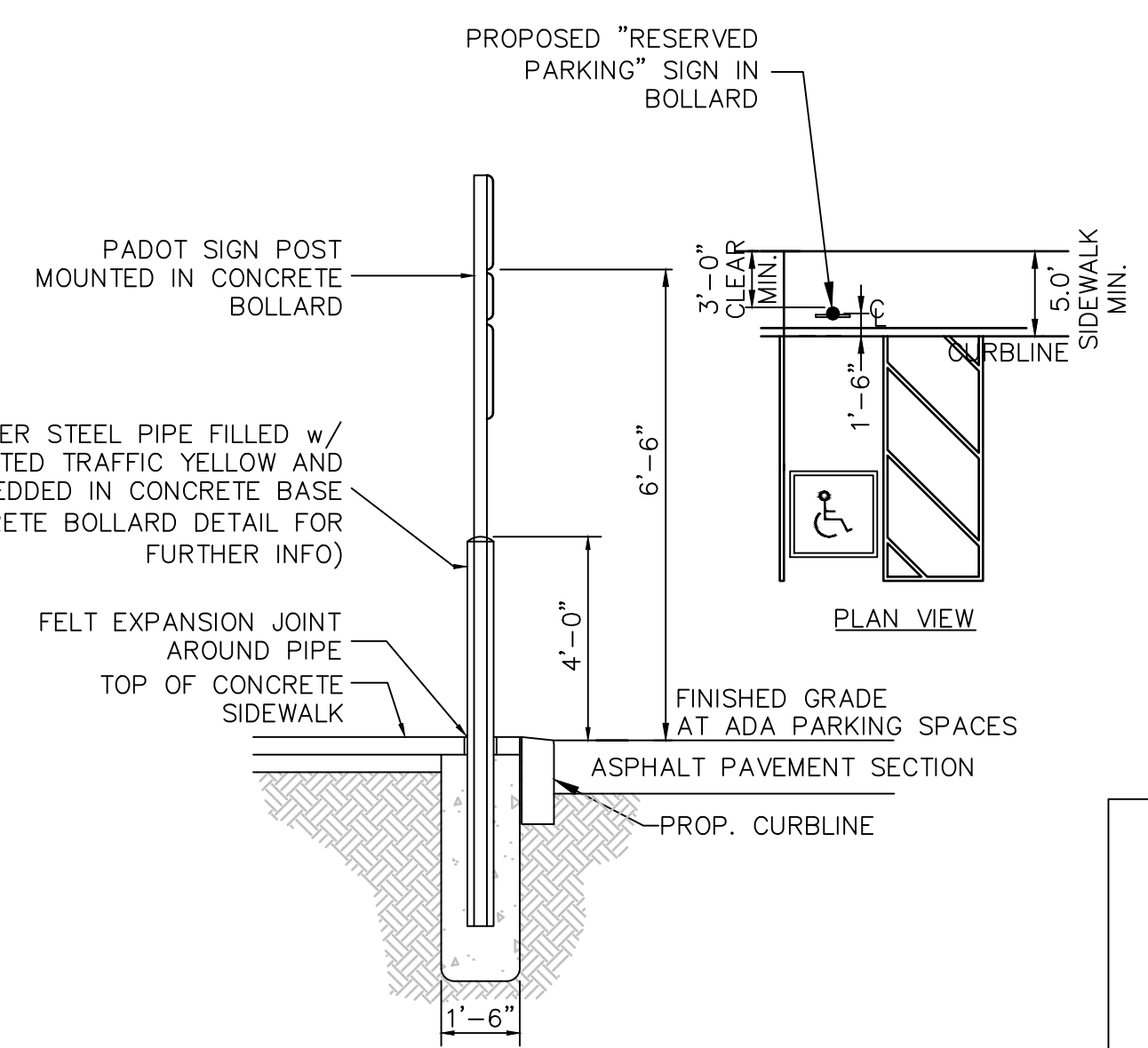
STANDARD PAVEMENT MARKINGS
NOT TO SCALE



DETECTABLE WARNING SURFACE (D.W.S.) TRUNCATED DOME DETAILS
NOT TO SCALE

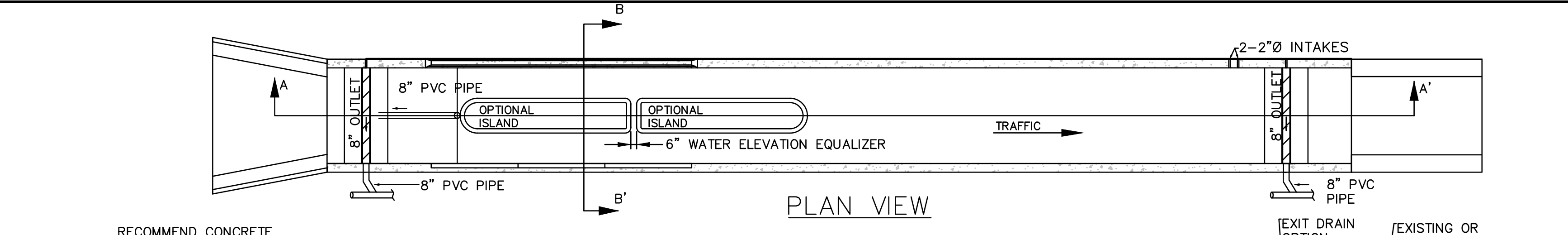
TRUNCATED DOME DIMENSIONS		
DIM	MIN INCH	MAX INCH
A	1.6"	2.4"
B	0.65"	1.5"
C	(1)	(1)
D	0.9"	1.4"

(1) THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

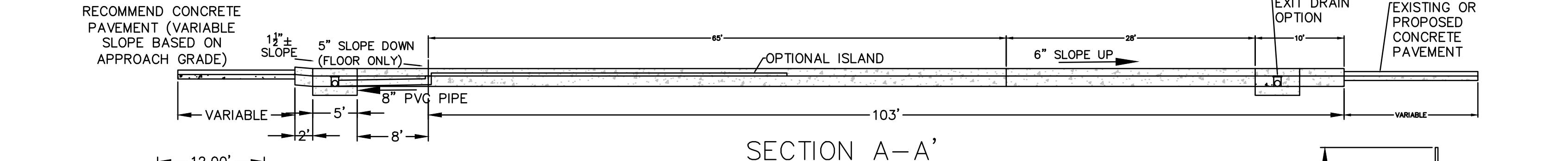


RESERVED PARKING SIGNS
NOT TO SCALE

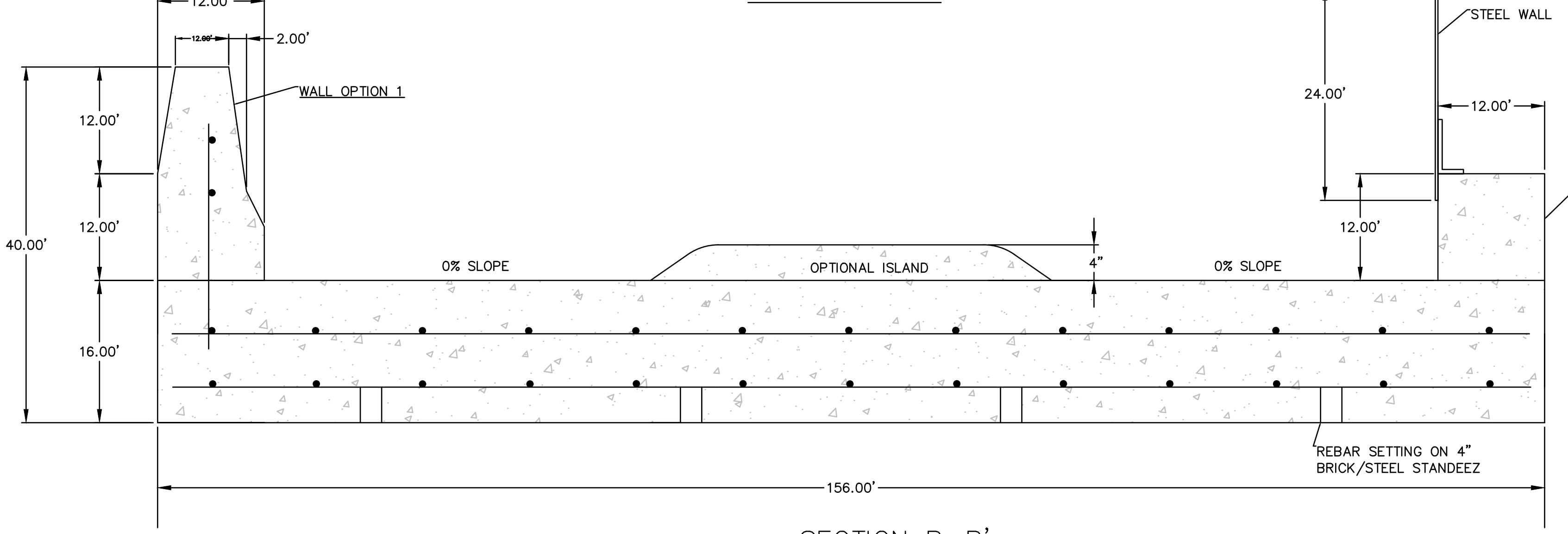
- NOTES:**
- REFER TO PLAN SET FOR LOCATIONS OF PROPOSED BOLLARDS.
 - BOLLARDS SHALL BE PAINTED TRAFFIC YELLOW AND MUST BE PERPETUALLY MAINTAINED / REPAINTED BY PROPERTY OWNER OR PARTY RESPONSIBLE FOR SITE MAINTENANCE.



PLAN VIEW



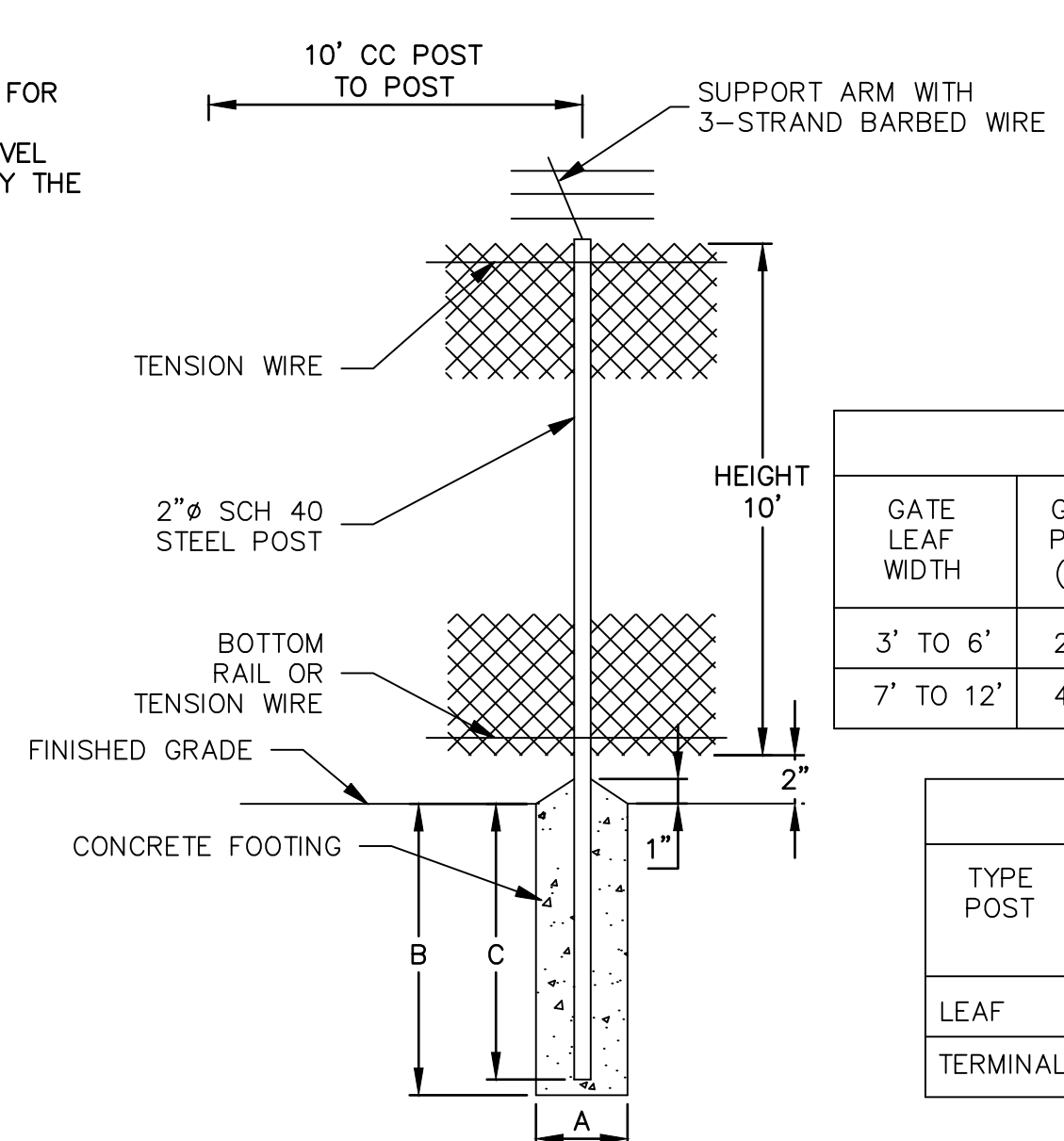
SECTION A-A'



SECTION B-B'

PROPOSED TIRE WASH DETAIL
NOT TO SCALE

- NOTES:**
- WHEELWASH LAYOUT IS FOR REFERENCE ONLY. SHOP DRAWINGS FOR PREVIOUS INSTALLATION WERE UTILIZED FOR THE ABOVE DETAILS.
 - WATERSTOPS, REINFORCEMENT, CONCRETE AND CONSTRUCTION LEVEL DETAILS WILL BE PROVIDED ON SHOP DRAWINGS AS SUPPLIED BY THE FACILITY OWNER.
 - OWNER RESERVES RIGHT TO USE ALTERNATE (OR EQUIVALENT) MANUFACTURERS. DESIGNS MAY VARY.

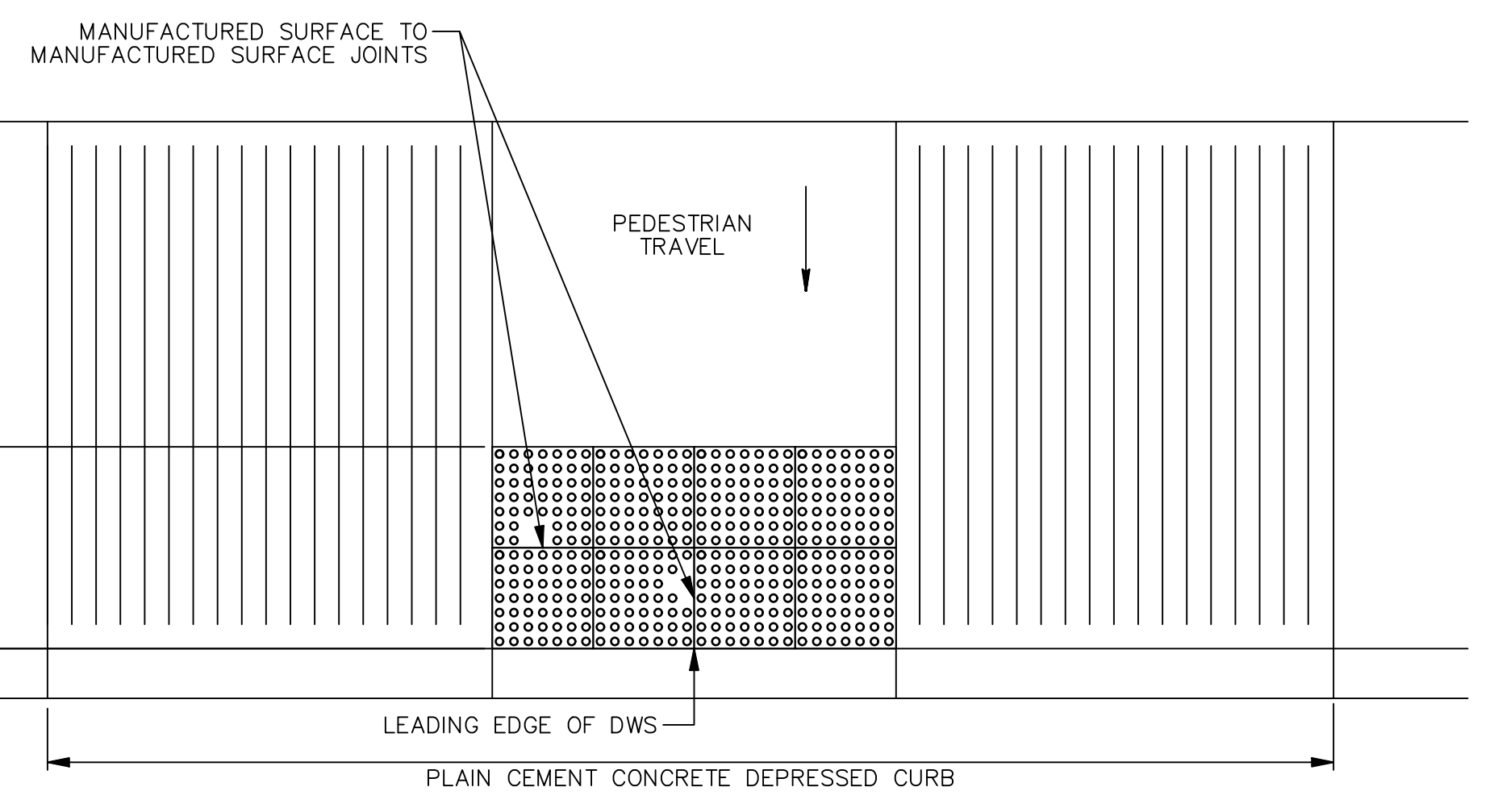


CHAIN LINK FENCE FOUNDATION
NOT TO SCALE

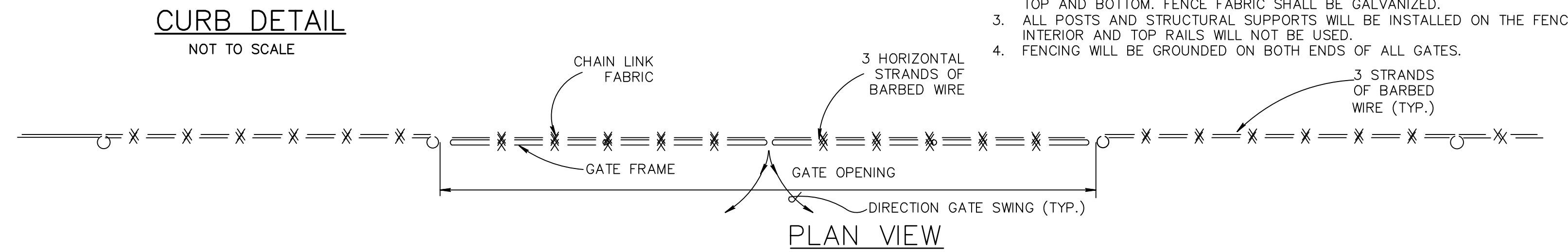
GATE POST				
GATE LEAF WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIAM	"B" DEPTH
3' TO 6'	2.785"	6' TO 9'	14"	42"
7' TO 12'	4.000"	6' TO 9'	16"	42"

LINE AND TERMINAL POSTS				
TYPE POST	FABRIC HEIGHT	"A" DIAM	"B" DEPTH	"C" POST EMBED.
LEAF	6' TO 9'	12"	38"	36"
TERMINAL	6' TO 9'	12"	38"	36"

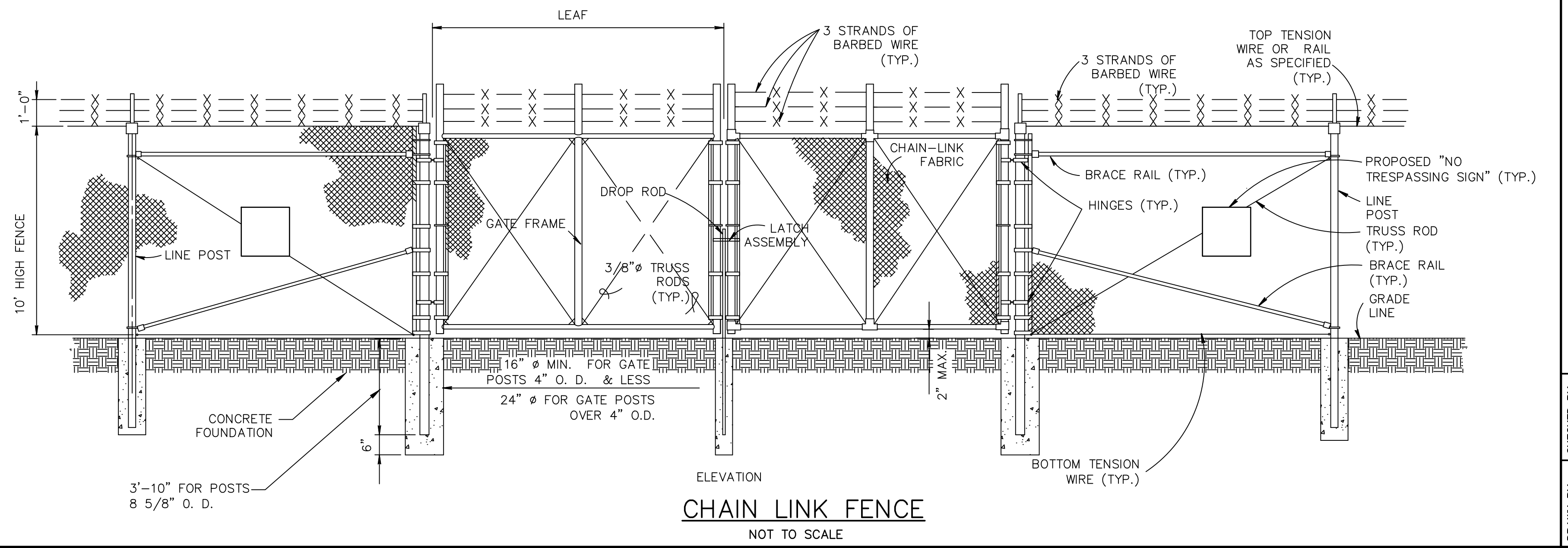
- NOTES:**
- TERMINAL POSTS INCLUDE END, CORNER AND PULL POSTS.
 - THE FENCE WILL BE CONSTRUCTED WITH TWISTED AND BARBED SELVAGES AT TOP AND BOTTOM. FENCE FABRIC SHALL BE GALVANIZED.
 - ALL POSTS AND STRUCTURAL SUPPORTS WILL BE INSTALLED ON THE FENCE INTERIOR AND TOP RAILS WILL NOT BE USED.
 - FENCING WILL BE GROUNDED ON BOTH ENDS OF ALL GATES.



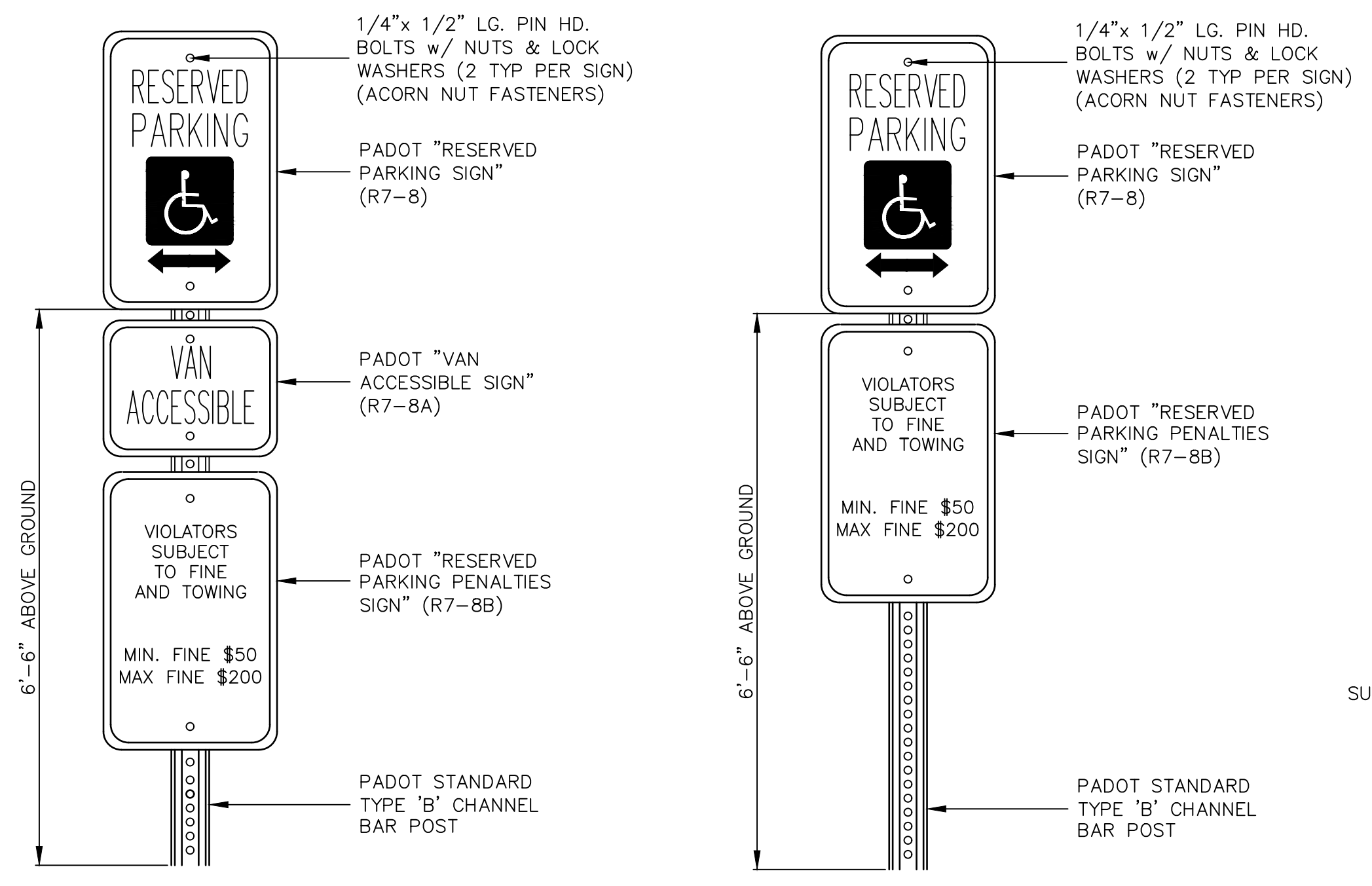
DETECTABLE WARNING SURFACE CURB DETAIL
NOT TO SCALE



PLAN VIEW

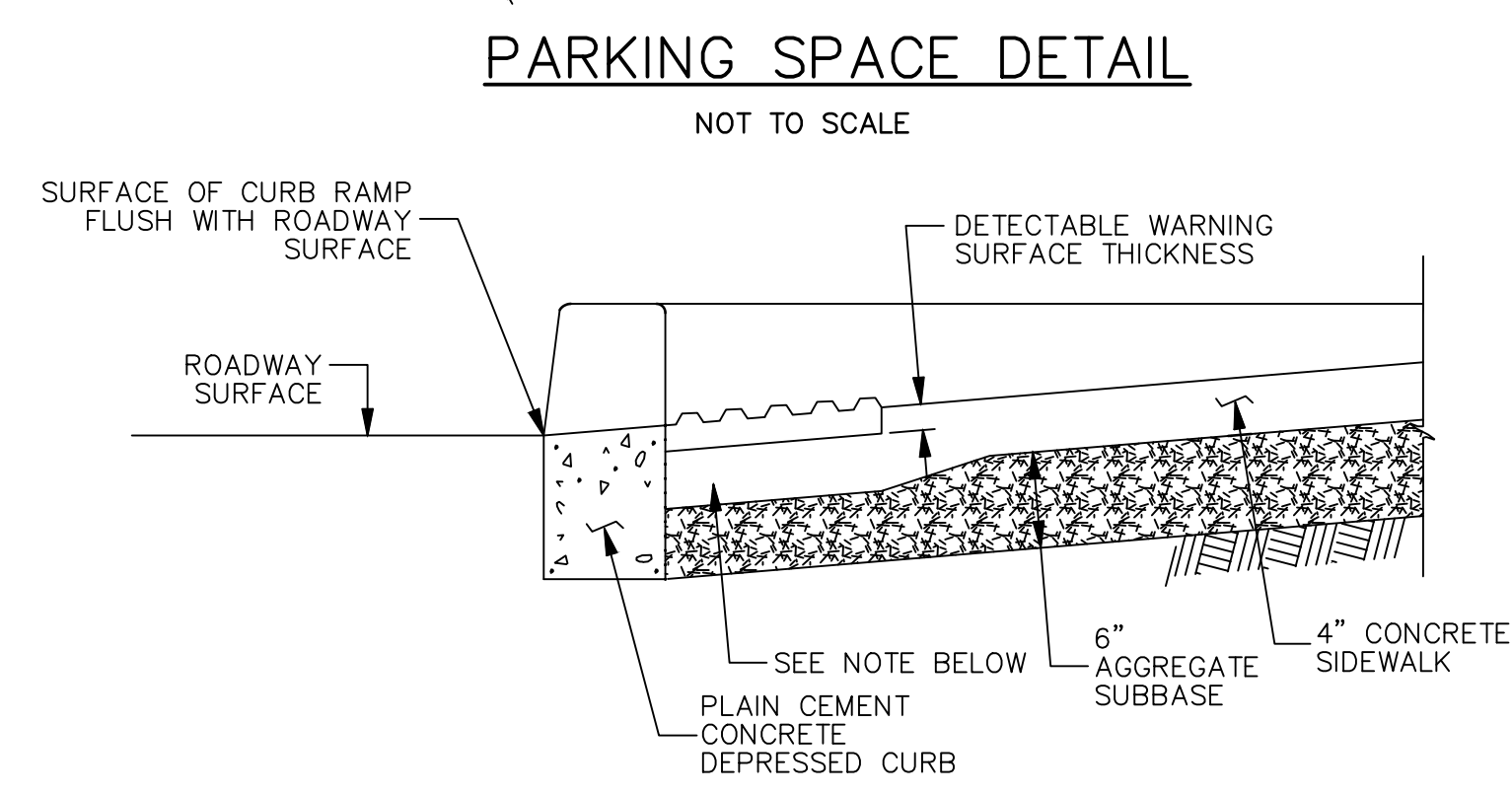


CHAIN LINK FENCE
NOT TO SCALE



RESERVED PARKING SPACE SIGNS
NOT TO SCALE

- NOTES:**
- POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B SHEET 8 THRU 11 OF 11. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN.
 - SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B SHEETS 8 THRU 11 OF 11, AS AMENDED.
 - SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES) SIGNS SHALL CONFORM TO THE PADOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.
 - SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.
 - RESERVED PARKING SPACE SIGNS SHALL CONFORM TO DEPARTMENT OF JUSTICE "ADA STANDARDS FOR ACCESSIBLE DESIGN" AS AMENDED.
 - ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.



DETECTABLE WARNING SURFACE EMBEDDING DETAIL
NOT TO SCALE

- NOTE:**
- CONSTRUCT NOTCH AS SHOWN TO PROVIDE FULL THICKNESS SIDEWALK UNDER DETECTABLE WARNING SURFACE.

REVISIONS

NO.	DATE	BY	REVISIONS
1	12/15/17	JSC	REVISED PER TWP COMMENTS & 12/19/15 PCM

PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP, PA

PREPARED FOR: GIBALTAR ROCK, INC.

PREPARED BY: EarthRes ENGINEERING AND SCIENCE

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

CHECKED BY: [Signature]

DATE: 10/19/2015

DRAWING NUMBER: C-23

SHEET 23 OF 34

PIPE INSTALLATION PROCEDURES

CONSTRUCTION DETAILS BELOW COVER THE FOLLOWING CONDITIONS:

(A) PIPE LYING ON TOP OF THE NATURAL GROUND, ROCK OR COMPACTED (97% SPD) FILL.

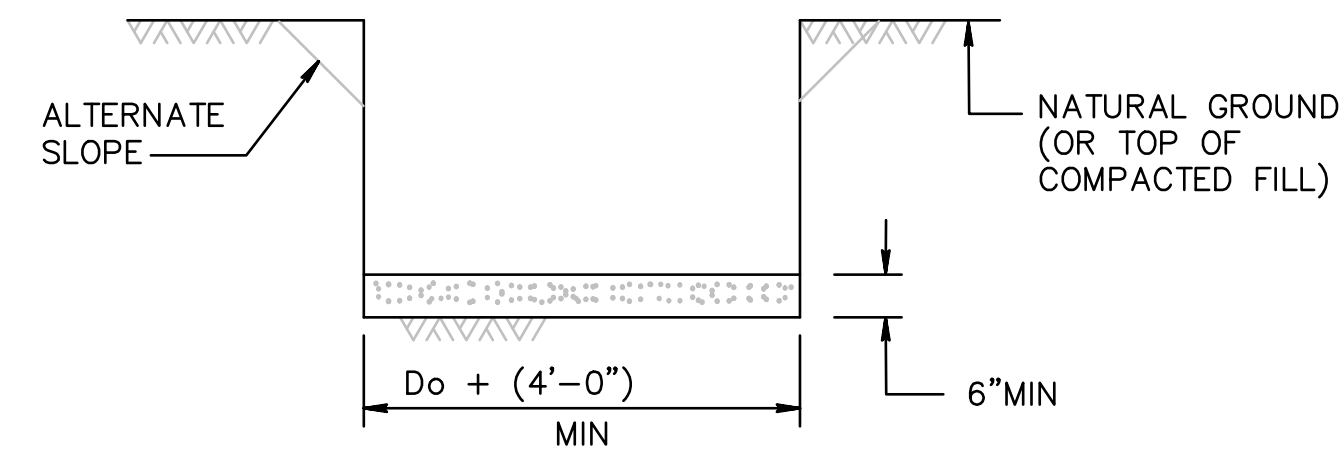
(B) THE EXISTING GROUND IS BETWEEN THE TOP AND THE BOTTOM OF THE PROPOSED PIPE AND THE PIPE IS TO BE COVERED WITH EARTH FILL.

(C) THE TOP OF PIPE IS BELOW THE LEVEL OF THE NATURAL GROUND OR COMPACTED FILL (TO MINIMUM 97% SPD) AND TO BE COVERED WITH EARTH FILL TO HEIGHTS ABOVE THE NATURAL GROUND.

STEP 1: REMOVE TOPSOIL (COMPRESSIBLE LAYER OF ORGANIC MATERIAL) TO A WIDTH EQUAL TO 5 OUTSIDE DIAMETERS OF THE PIPE IN ALL FILL CONDITIONS ABOVE (A), (B) & (C). ALSO IF SPECIFIED ON THE CONTRACT DRAWING, UNDERCUT FOR THE DEPTH BELOW THE BEDDING AS SHOWN BY DESIGN (MAKE MIN WIDTH 5 DIAMETERS OF PIPE). PAY AS CLASS 1 EXCAVATION.

STEP 2: CONSTRUCT THE EMBANKMENT TO 4'-0" ABOVE THE TOP OF PIPE OR TO THE SUBGRADE ELEVATION, WHICHEVER IS LESS. FOR PIPES 72" OR GREATER SEE NOTE 1.

STEP 3: EXCAVATE THE TRENCH TO THE WIDTH OF THE OUTSIDE DIAMETER OF THE PIPE BARREL PLUS 4'-0" AND CREATE AN APPROPRIATE BEDDING 6" DEEP.

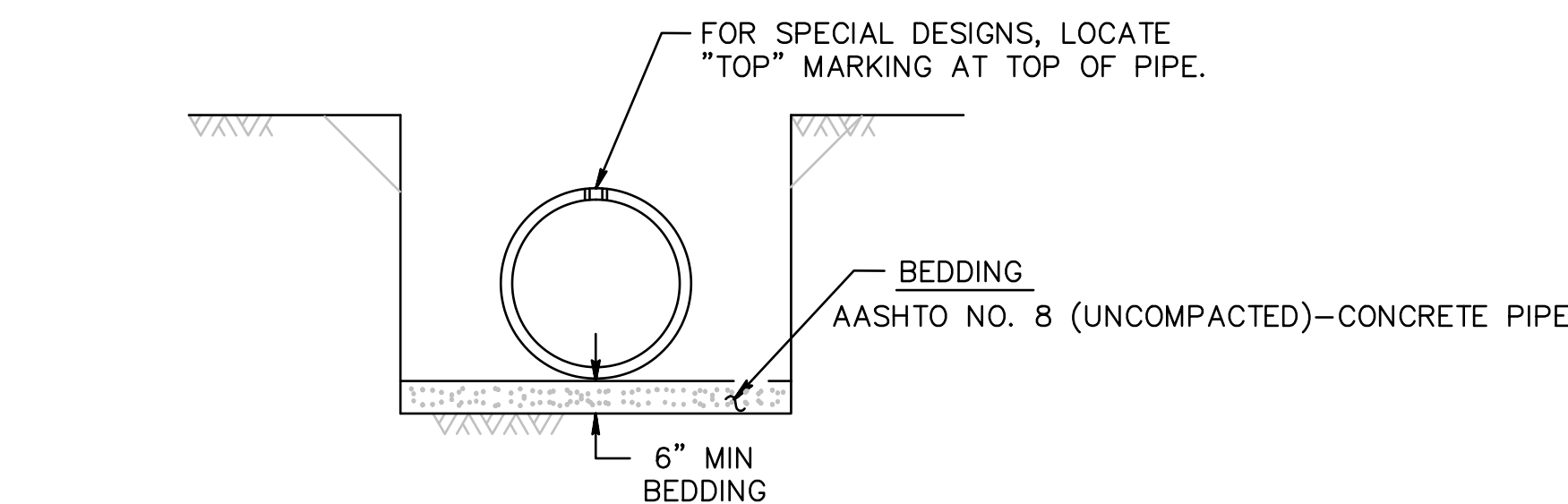


STEP 4: IF THIS EXCAVATION IS THROUGH ROCK, OR HARD SHALE, OR IN AREAS OF UNDERCUT, PROVIDE 6"+1/2" INCH/FT OF Do + 4'-0", BELOW THE INTENDED BOTTOM ELEVATION OF THE PIPE, 16" MAX.

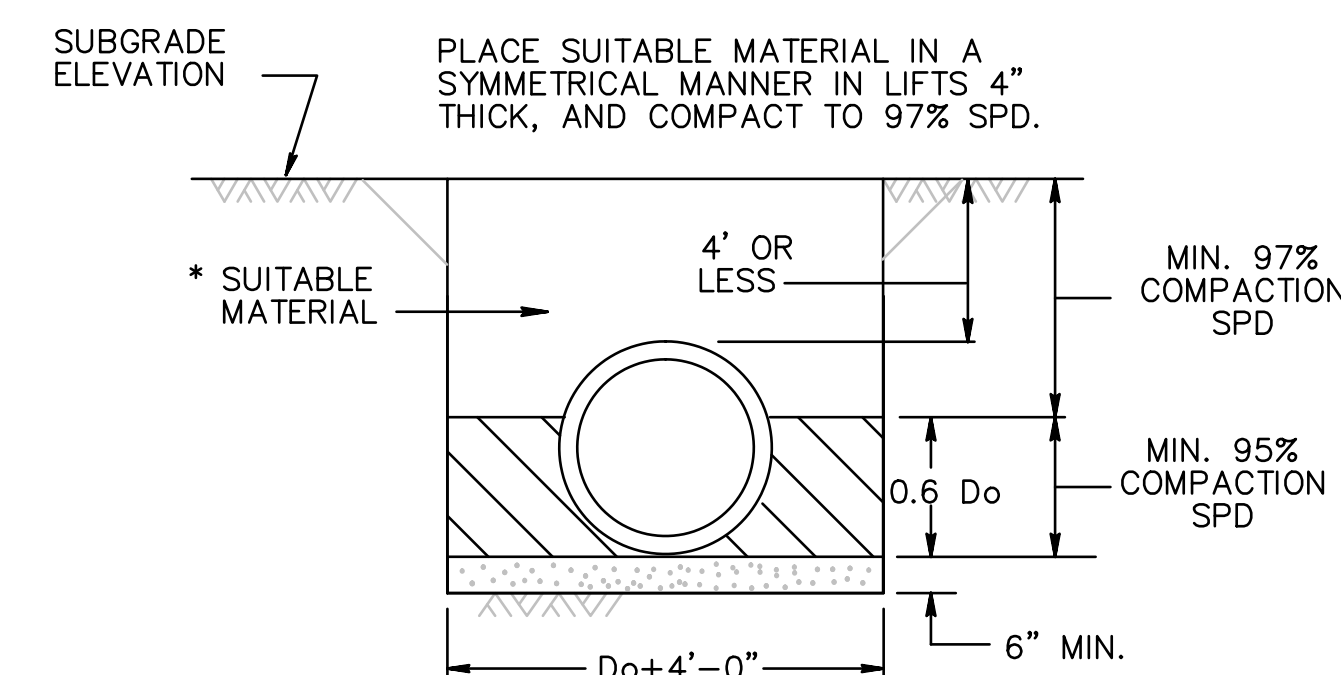
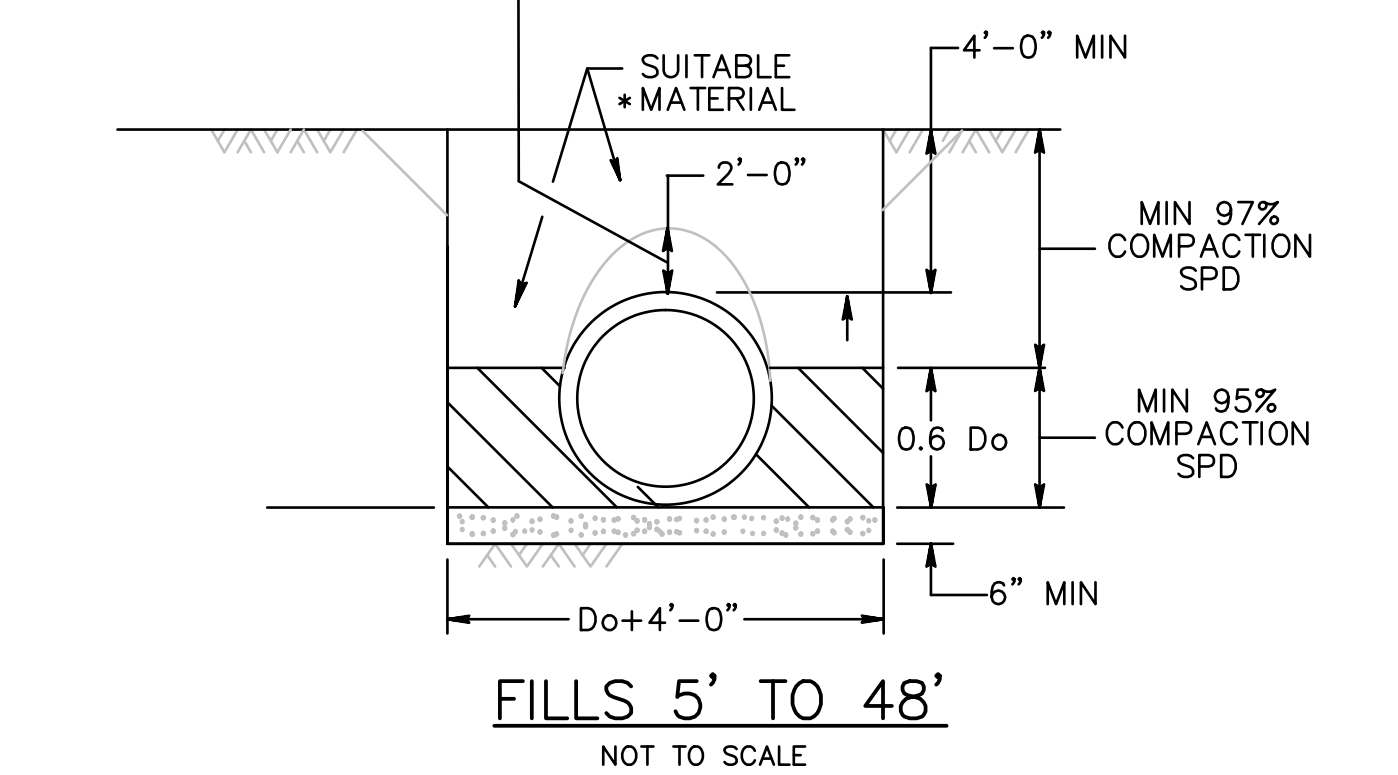
NOTE: IF UNSUITABLE MATERIAL IS FOUND, UNDERCUT AS DIRECTED AND BACKFILL WITH SUITABLE MATERIAL TO BOTTOM OF BEDDING ELEVATION. (UNLESS OTHERWISE SPECIFIED.)

STEP 5: LAY PIPE ON BEDDING.

STEP 6: PLACE 2A COARSE AGGREGATE MATERIAL, IN LIFTS 4" THICK, ADJACENT TO THE LOWER HAUNCHES TO A HEIGHT OF 0.6 Do. COMPACT TO 95% SPD. TEST THE SIDE BACKFILL MATERIAL AND CONTINUE EMBANKMENT IN ACCORDANCE WITH PUBLICATION 408, SECTION 601.

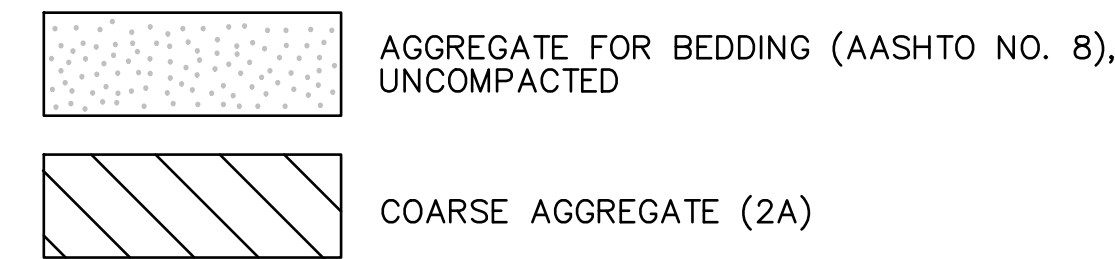


FOR SPECIAL DESIGNS, LOCATE "TOP" MARKING AT TOP OF PIPE.



SHALLOW FILLS 4' AND LESS
NOT TO SCALE

LEGEND

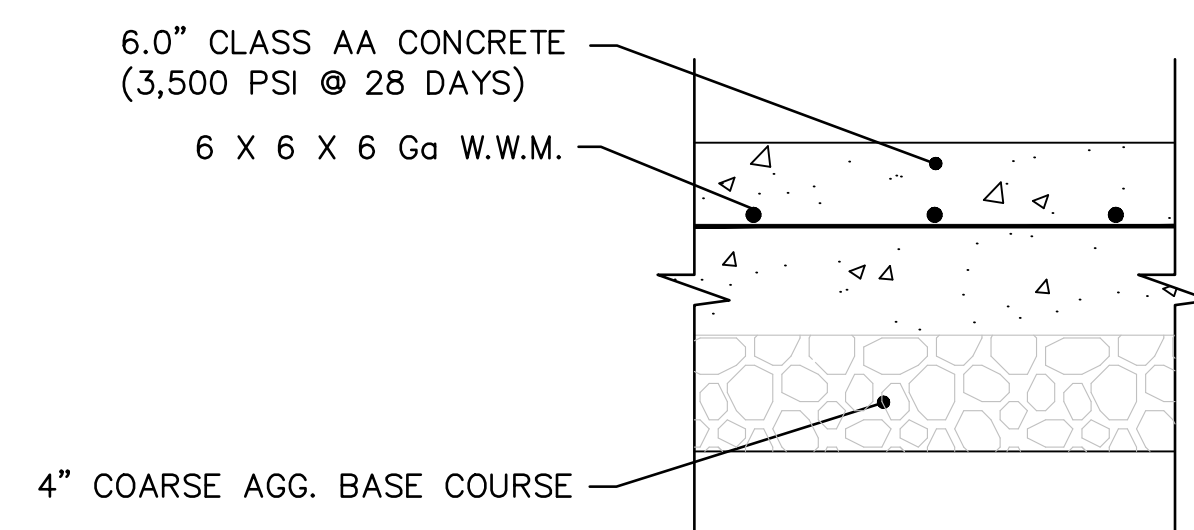


Do = OUTSIDE DIAMETER OF PIPE, MILLIMETERS

SPD = STANDARD PROCTOR DENSITY

ID = INSIDE DIAMETER

* SUITABLE = MATERIAL CONTAINING NO DEBRIS, ORGANIC MATTER, FROZEN MATERIAL OR LARGE STONES WITH A DIAMETER GREATER THAN ONE-HALF THE THICKNESS OF THE COMPACTED LAYERS BEING PLACED.



4" COARSE AGG. BASE COURSE

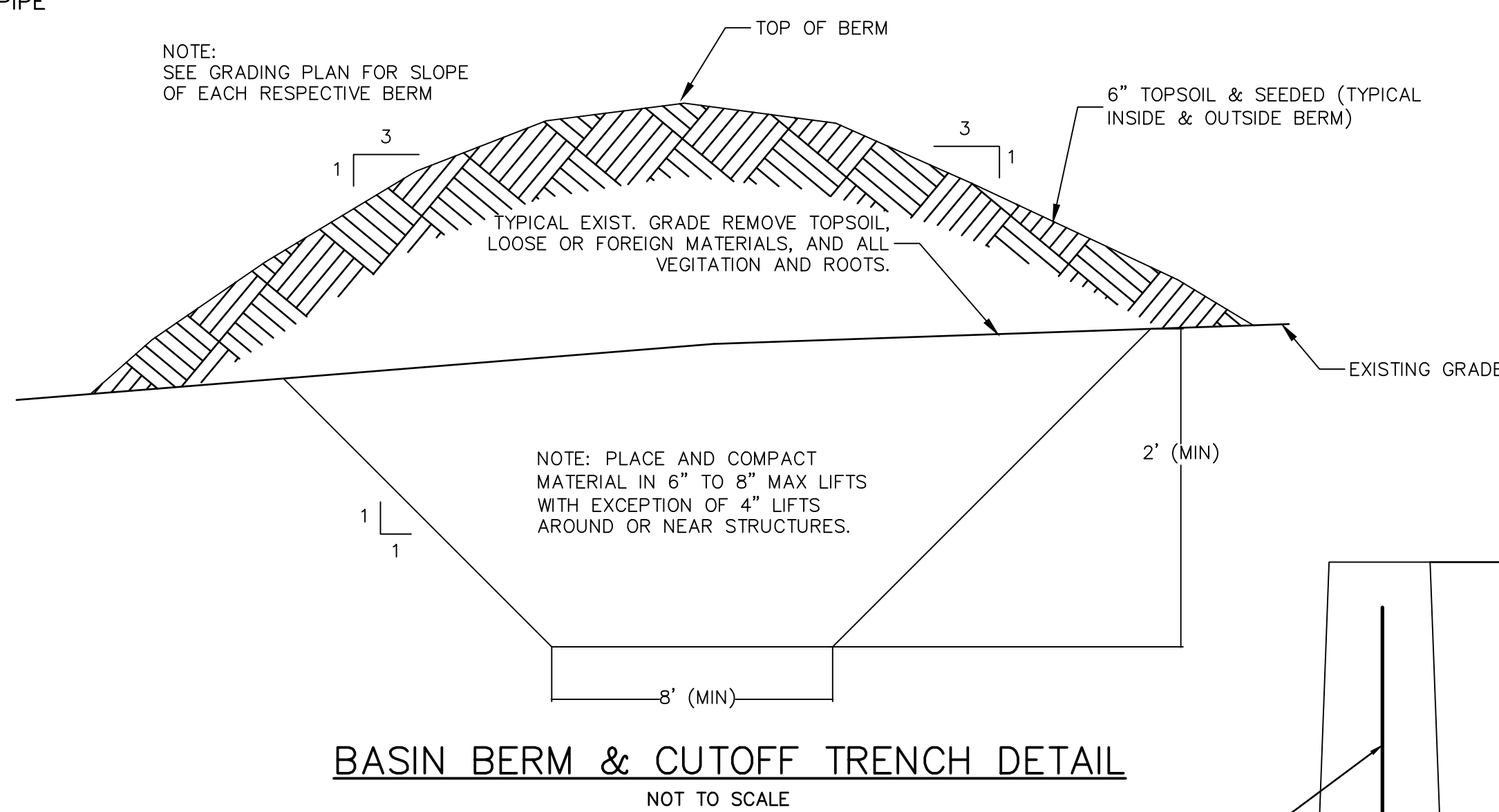
NOTE:

1. JOINT SPACING SHALL BE 12 FT., 12" LONG 1 1/4" DIAMETER DOWELS SHALL BE SPACED AT 12".

2. CBR VALUES SHALL BE OBTAINED BY GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT OF PAVING.

CONCRETE PAVEMENT DETAIL

NOT TO SCALE



BASIN BERM & CUTOFF TRENCH DETAIL

NOT TO SCALE

STANDARD BASIN BERM CONSTRUCTION NOTES:

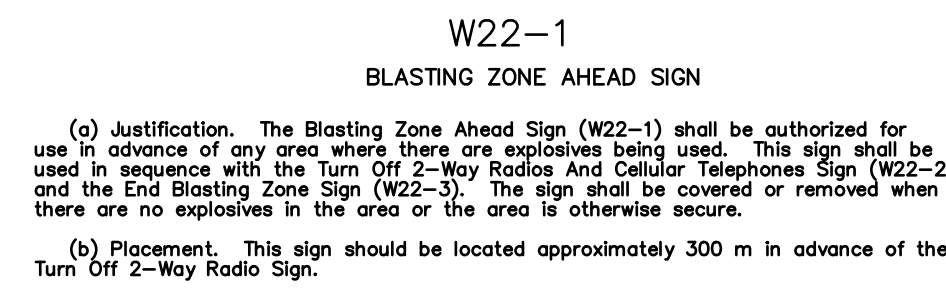
1.) SITE PREPARATION - AREAS UNDER THE EMBANKMENT AND ANY STRUCTURES SHALL BE CLEARED, GRUBBED AND THE TOPSOIL STRIPPED TO REMOVE TREES, VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. IN ORDER TO FACILITATE CLEAN-OUT AND RESTORATION, THE POOL AREA WILL BE CLEARED OF ALL BRUSH AND EXCESS TREES.

2.) CUTOFF TRENCH - A CUTOFF TRENCH WILL BE EXCAVATED ALONG THE BERM CENTERLINE BENEATH EARTH FILL EMBANKMENTS. THE MINIMUM DEPTH SHALL BE 2 FEET. THE CUTOFF TRENCH SHALL EXTEND TO THE TOP OF EXISTING GRADE. THE MINIMUM BOTTOM WIDTH SHALL BE 8 FEET BUT WIDE ENOUGH TO PERMIT OPERATION OF COMPACTOR EQUIPMENT. THE SIDE SLOPES SHALL BE NO STEEPER THAN 1:1. COMPACTOR REQUIREMENTS SHALL BE THE SAME AS THOSE FOR EMBANKMENTS. THE TRENCH SHALL BE KEPT FREE OF STANDING WATER DURING THE BACKFILLING OPERATIONS.

3.) EMBANKMENT - THE FILL MATERIAL SHALL BE TAKEN FROM SELECTED BORROW AREAS. IT SHALL BE FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES ROCKS OR OTHER OBJECTIONABLE MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. THE FILL MATERIAL SHOULD CONTAIN SUFFICIENT MOISTURE SO THAT IT CAN BE FORMED BY HAND INTO A BALL, WITHOUT CRUMBLING. IF WATER CAN BE SQUEEZED OUT OF THE BALL, IT IS TOO WET FOR PROPER COMPACTION. FILL MATERIAL MUST BE PLACED IN 6 TO 8 INCH LAYERS AND SHALL BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTOR MUST BE OBTAINED BY MECHANICAL SHEEP FOOT ROLLERS. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION OF 3% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT.

4.) COMPACTION - THE FILL MATERIAL SHALL BE COMPACTED TO 95% MAXIMUM DRY DENSITY AND A MOISTURE CONTENT 0 TO +2% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY MODIFIED PROCTOR TESTING.

5.) FILL MATERIAL TO BE USED FOR THE PROPOSED EMBANKMENT SHALL GENERALLY BE TYPE ML, CL, MH, OR CH AS PER THE UNIFIED SOIL CLASSIFICATION SYSTEM. SOILS SHALL HAVE A MAXIMUM PERMEABILITY OF 1X10-7 CM/SEC AT 95% OF THEIR MAXIMUM DRY DENSITY AS ESTABLISHED BY ASTM D-1557, PTM NO. 112 OR PTM NO. 402.



SIGN SIZE	DIMENSIONS (IN MILLIMETERS)										MAR. OR DER.	BLANK STD.
	A	B	C	D	E	F	G	H	J	K		
1200x1200	1752	1061	35	415	246	212	20	23	83	1200		

• REDUCE SPACING 40%

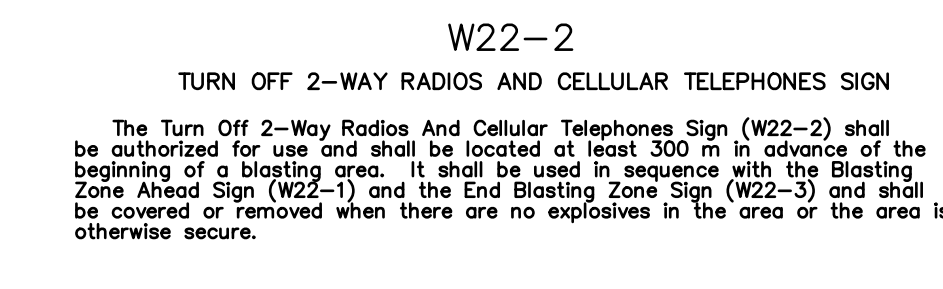
COLOR:
LEGEND AND BORDER:
BLACK (NON-REFLECTORIZED)
BACKGROUND:
ORANGE (REFLECTORIZED)



STANDARD SIGN DETAILS

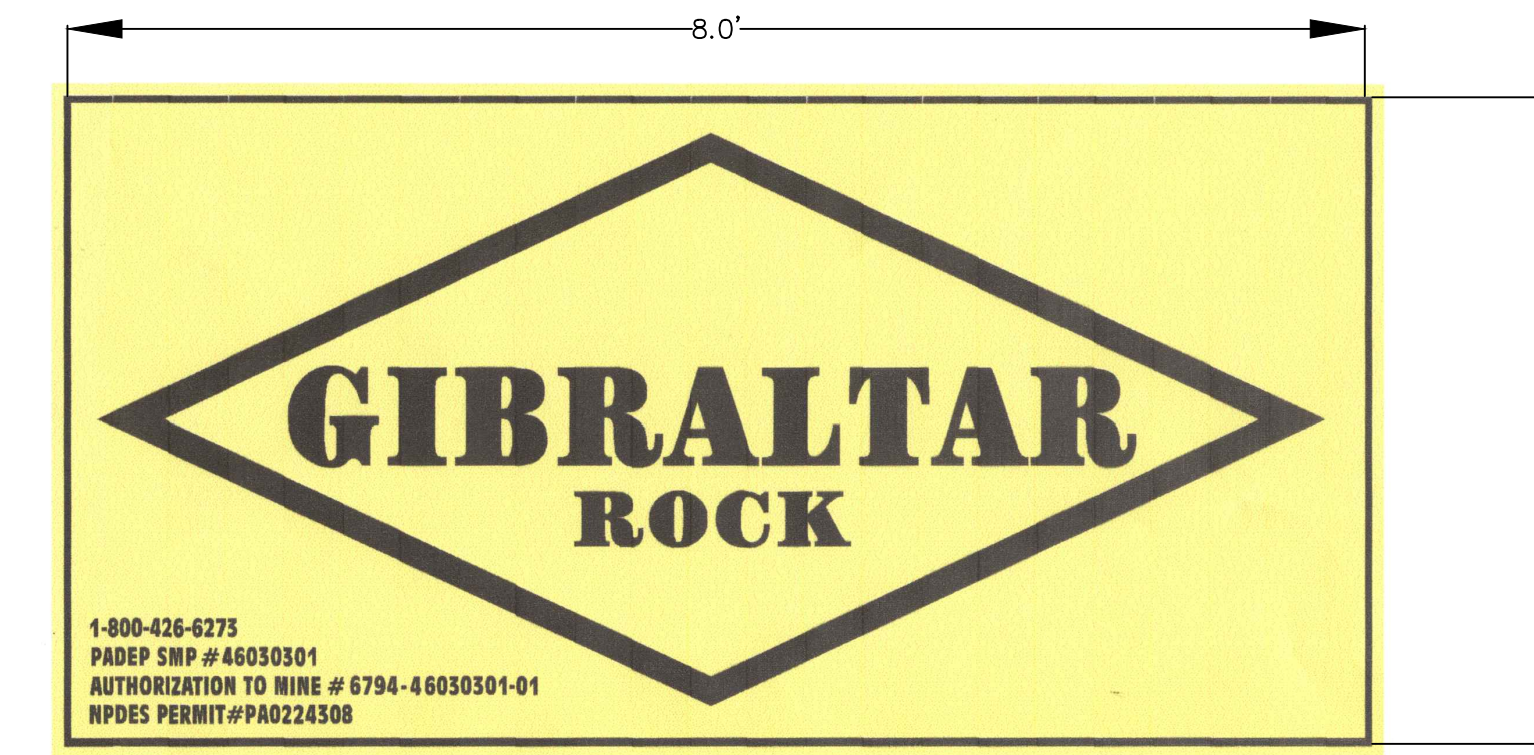
NOT TO SCALE

NOTE:
1. SIGNS TO BE SPACED 100 FEET APART AROUND MINING PERIMETER (SEE SITE PLAN FOR LOCATION.)



SIGN SIZE	DIMENSIONS (IN MILLIMETERS)										MAR. OR DER.	BLANK STD.
	A	B	C	D	E	F	G	H	J	K		
1200x1200	1294	138	75	137	361	445	343	442	15	20	83	1200

COLOR:
LEGEND AND BORDER:
BLACK (NON-REFLECTORIZED)
BACKGROUND:
ORANGE (REFLECTORIZED)



FREESTANDING SIGN DETAIL

NOT TO SCALE

NOTE:
1. PROPOSED FREESTANDING SIGNS TO BE LOCATED AT THE PERMANENT RT. 73 DRIVEWAY. THE TOTAL SIGN HEIGHT WILL NOT EXCEED THE ALLOWABLE 20 FOOT REQUIREMENT. (SEE SITE PLAN FOR LOCATION.)

NOTES:

1.) POST MOUNTED SIGNS SHALL BE TYPE B CHANNEL BAR POSTS AND SHALL CONFORM TO PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B SHEET 8 THRU 11 OF 11. APPROPRIATE POSTS SHALL BE SELECTED BASED ON THE SIZE OF THE SIGN USING THE SELECTION TABLES CONTAINED THEREIN.

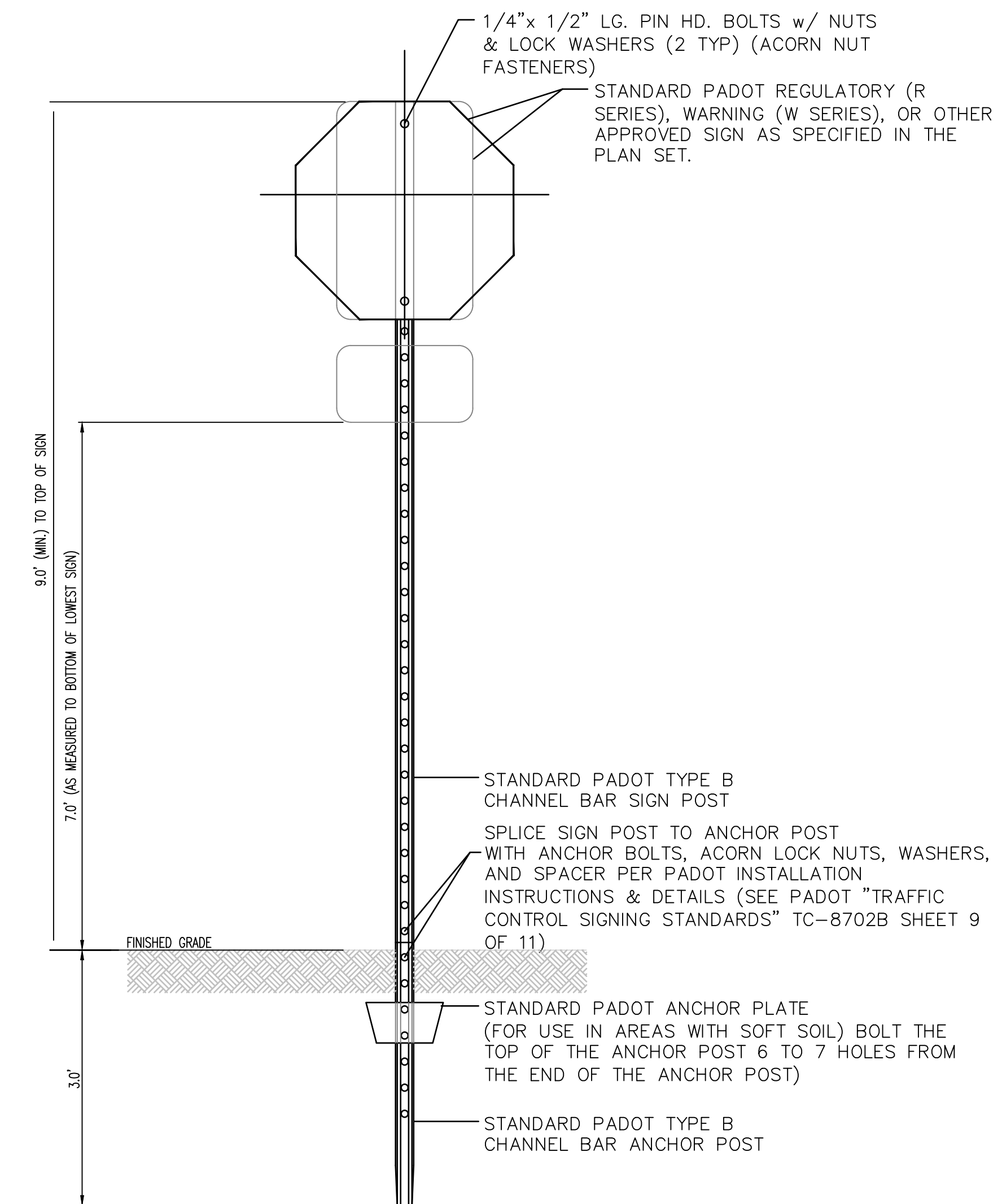
2.) SIGN INSTALLATION SHALL BE IN ACCORDANCE WITH PADOT "TRAFFIC CONTROL SIGNING STANDARDS" TC-8702B SHEETS 8 THRU 11 OF 11, AS AMENDED.

3.) SEE CIVIL PLANS FOR EXACT LOCATION, TYPE AND SIZE OF SIGNS. ALL REGULATORY (R SERIES), WARNING (W SERIES) OR OTHER APPROVED SIGNS SHALL CONFORM TO THE PADOT "HANDBOOK OF APPROVED SIGNS", PUBLICATION 236M, AS AMENDED, UNLESS OTHERWISE SPECIFIED.

4.) SIGNS SHALL BE SETBACK 2.0' FROM CURB LINES, GUIDE RAILS OR OTHER OBSTRUCTIONS AS MEASURED FROM THE FACE/EDGE OF THE SIGN.

5.) ALONG NON-CURBED LOCAL ROADWAYS SIGNS SHALL BE SETBACK 6.0' FROM THE SHOULDER/PAVING EDGE AND SHALL BE AT A HEIGHT 5.0' ABOVE THE EDGE OF PAVEMENT SURFACE.

6.) ALL SIGNS SHALL BE INSTALLED WITH ACORN NUT FASTENERS.



POLE MOUNTED SIGN INSTALLATION DETAIL

NOT TO SCALE

GENERAL CONSTRUCTION NOTE:

1. UNLESS OTHERWISE NOTED ALL CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH PENNDOT PUBLICATION 408 SPECIFICATIONS, NEW HANOVER TOWNSHIP SPECIFICATIONS AND PADEP CONSTRUCTION STANDARDS.

2. SIGN PLACEMENT SHALL BE DICTATED BY THE CONDITIONS AND STAMPED APPROVED DRAWINGS OF THE PADEP MINE PERMIT AND THE PENNDOT HIGHWAY OCCUPANCY PERMIT.

3. SIGNS WITHIN THE STATE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH PUBLICATION 236 (LATEST EDITION).

CONCRETE MONUMENT DETAIL

NOT TO SCALE

1.) SPECIFICATIONS:
- CLASS 'A' CONCRETE - MINIMUM STRENGTH (3,000 P.S.I. @ 28 DAYS)
- STEEL REINFORCEMENT (#4 REBAR)

NO.	DATE	BY	REVISIONS
1	10/15/2015	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM
2	10/15/2015	DAVID F. ALLEN, P.E.	LICENSE NO. 075102

PROJECT SITE: GIBRALTAR ROCK, INC. GIBRALTAR ROCK QUARRY NEW HANOVER TOWNSHIP, PA

PREPARED FOR: GIBRALTAR ROCK, INC.

PREPARED BY: EarthRes ENGINEERING AND SCIENCE

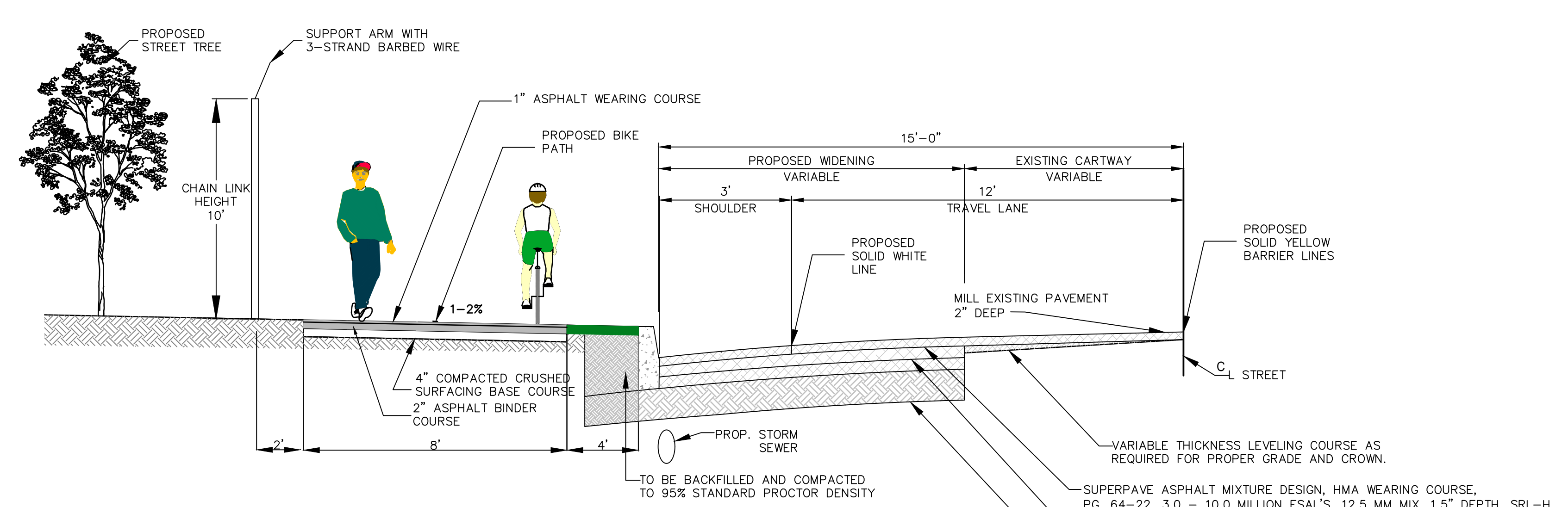
FINAL LAND DEVELOPMENT PLANS FOR GIBRALTAR ROCK QUARRY

CHECKED BY: JSC

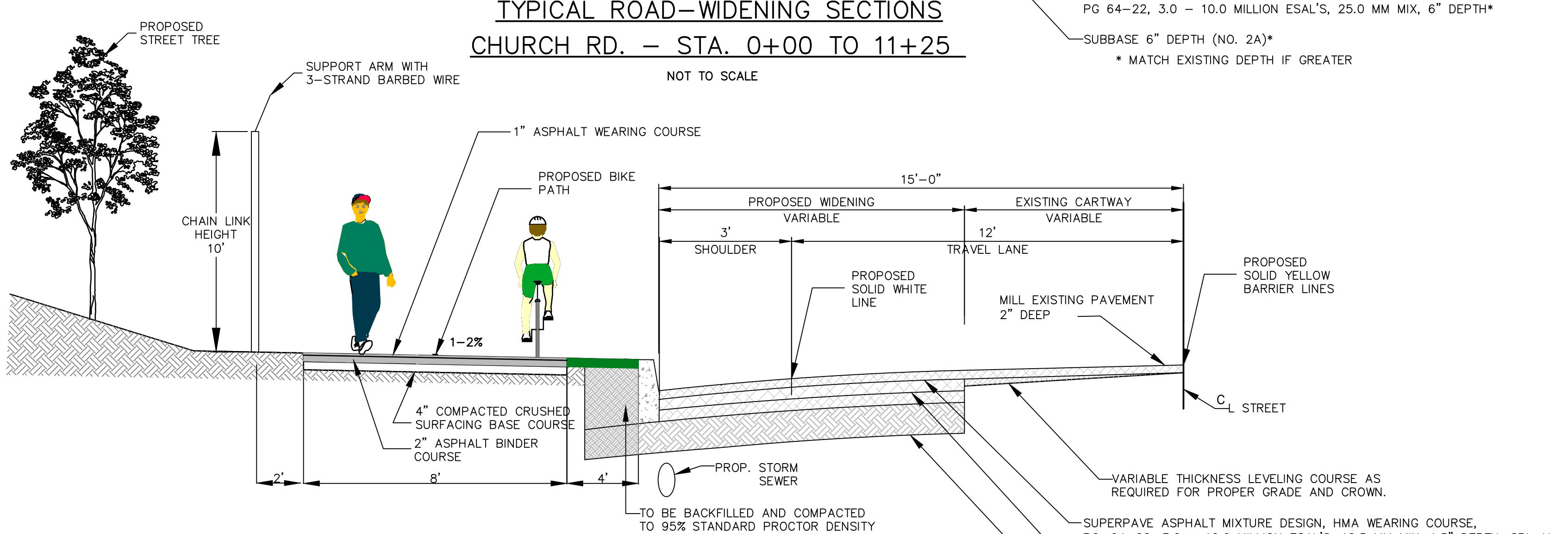
DATE: 10/15/2015

DRAWING NO.: C-24

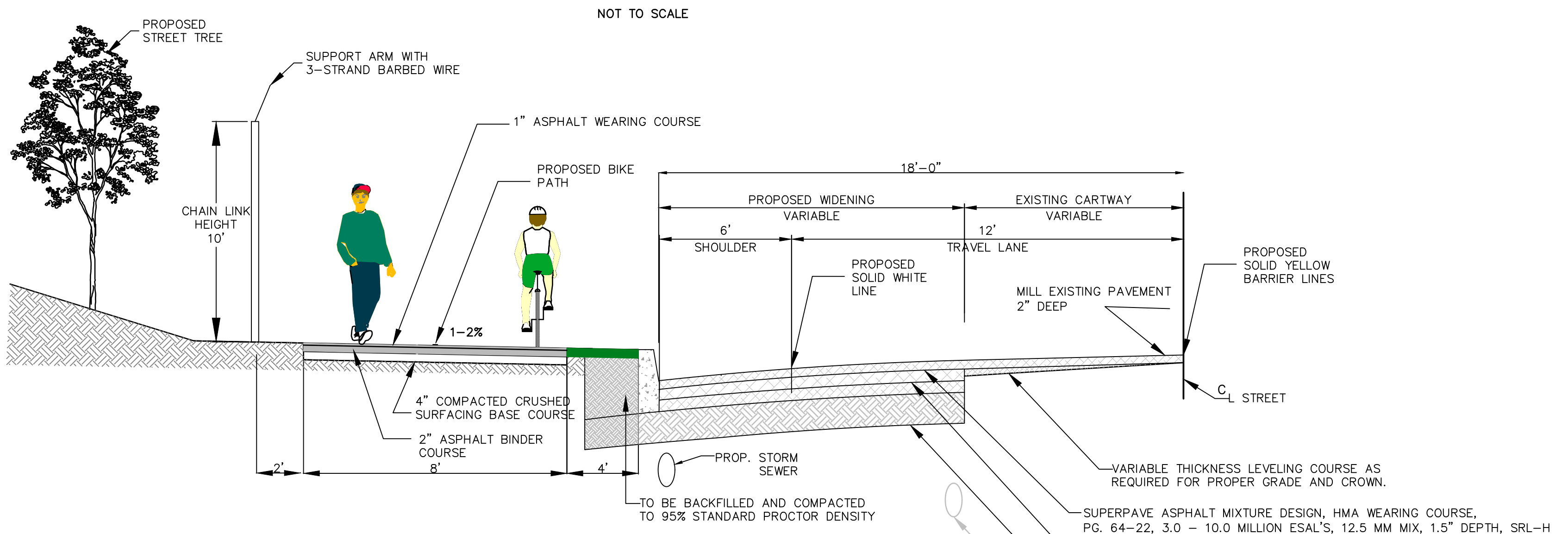
SHEET 24 OF 34



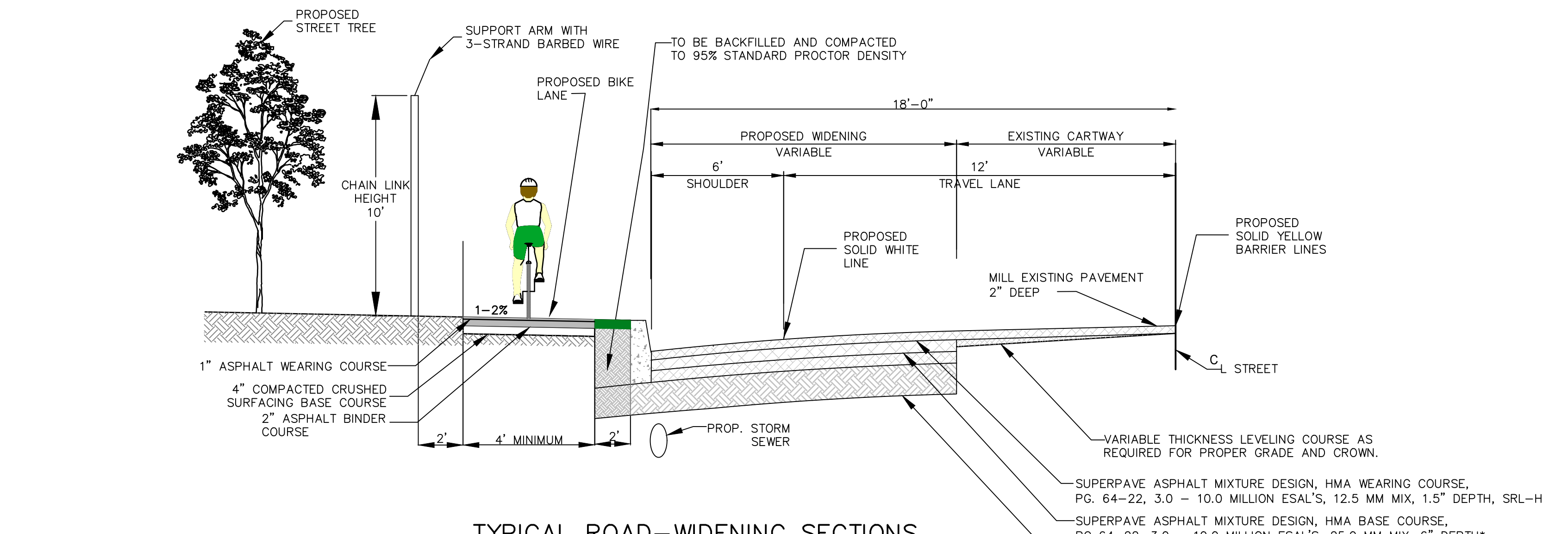
TYPICAL ROAD-WIDENING SECTIONS
CHURCH RD. - STA. 0+00 TO 11+25
NOT TO SCALE



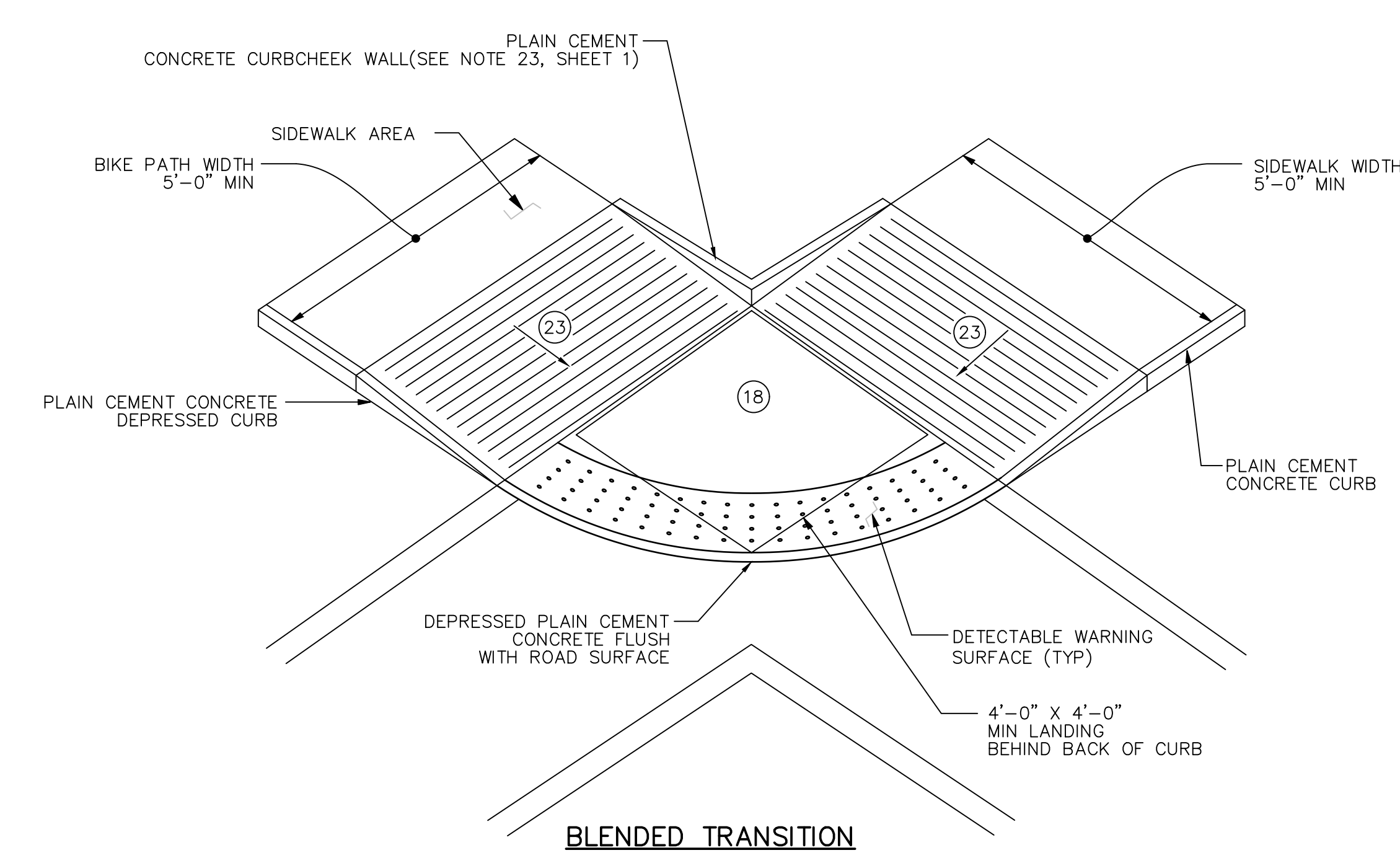
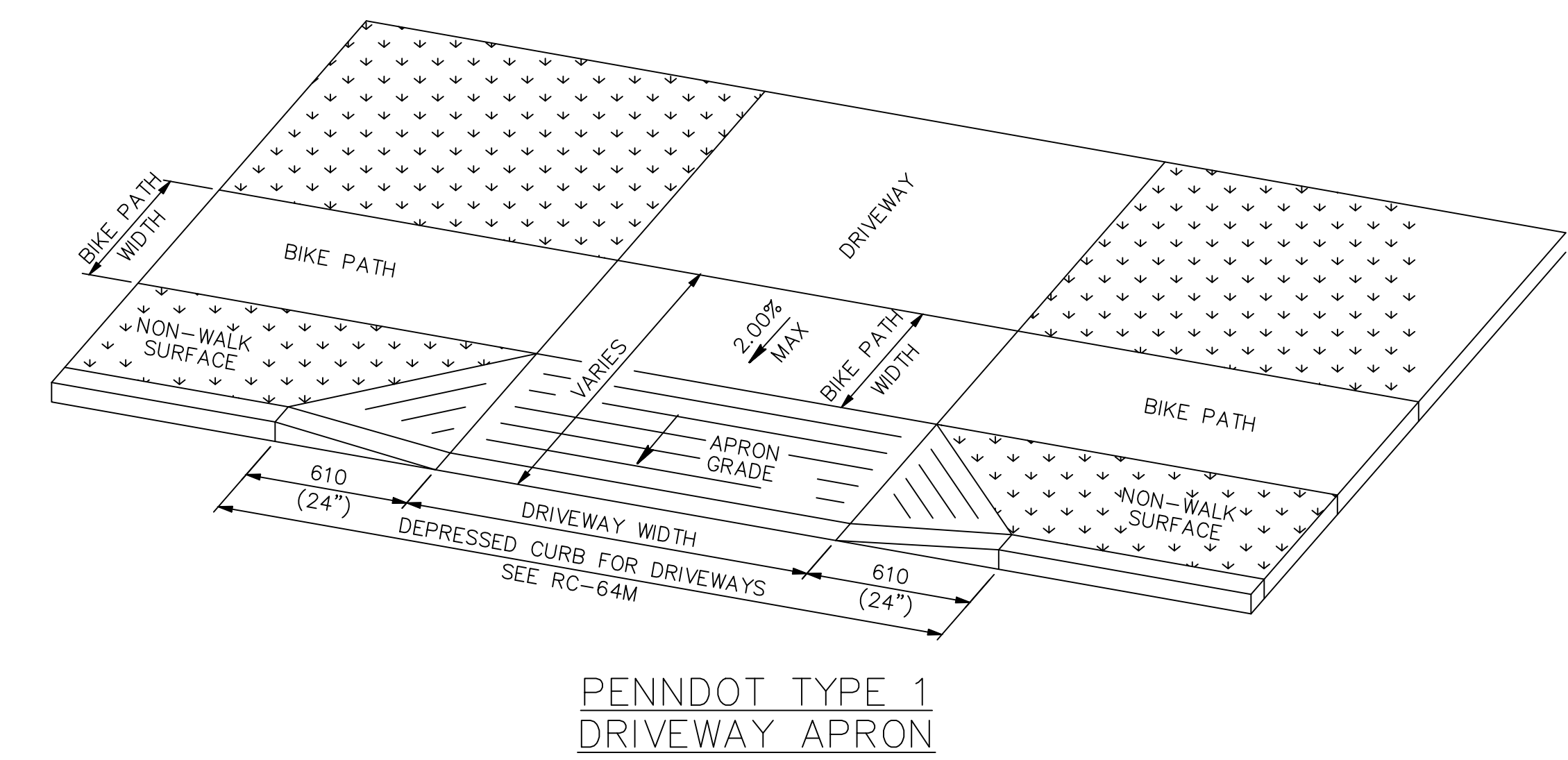
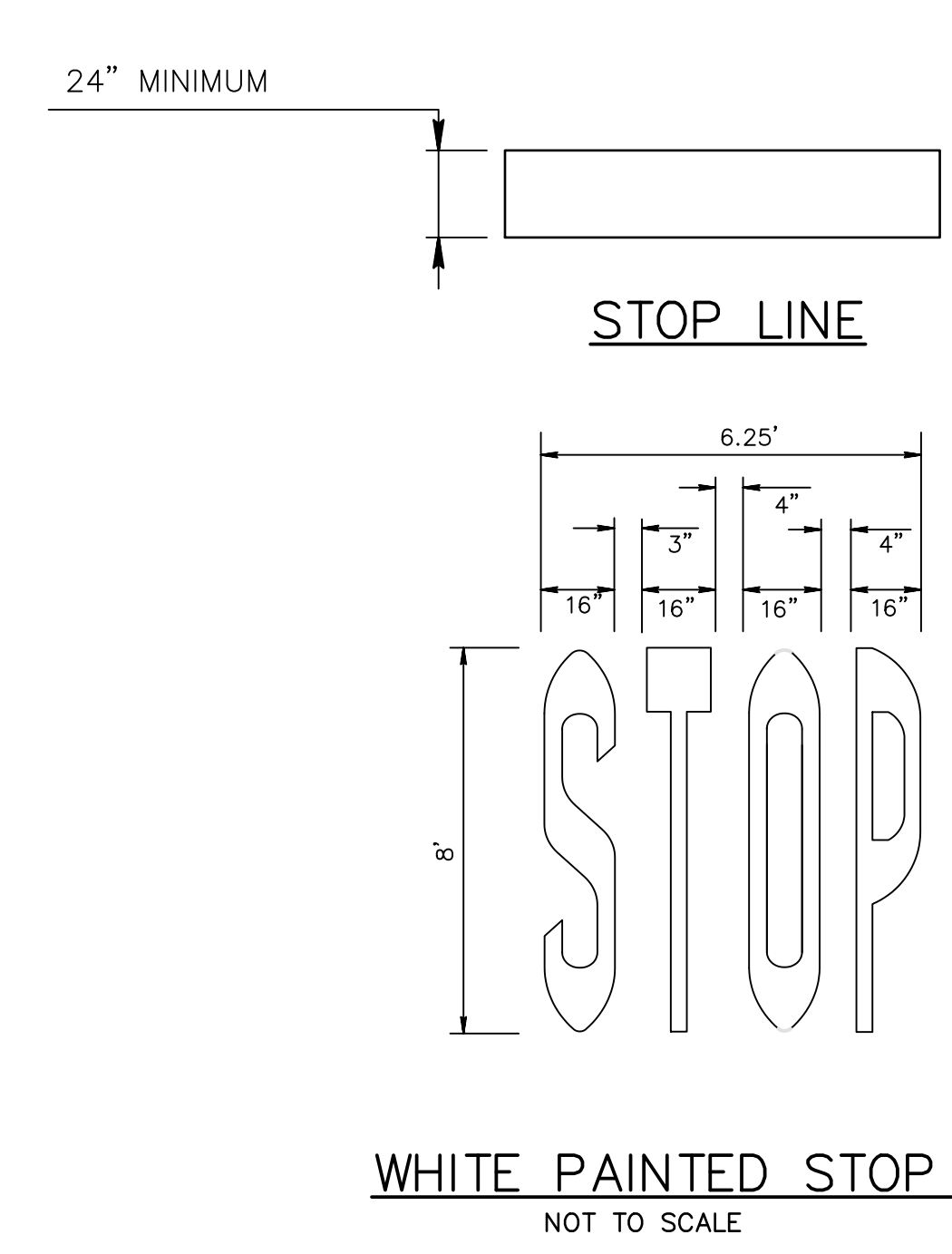
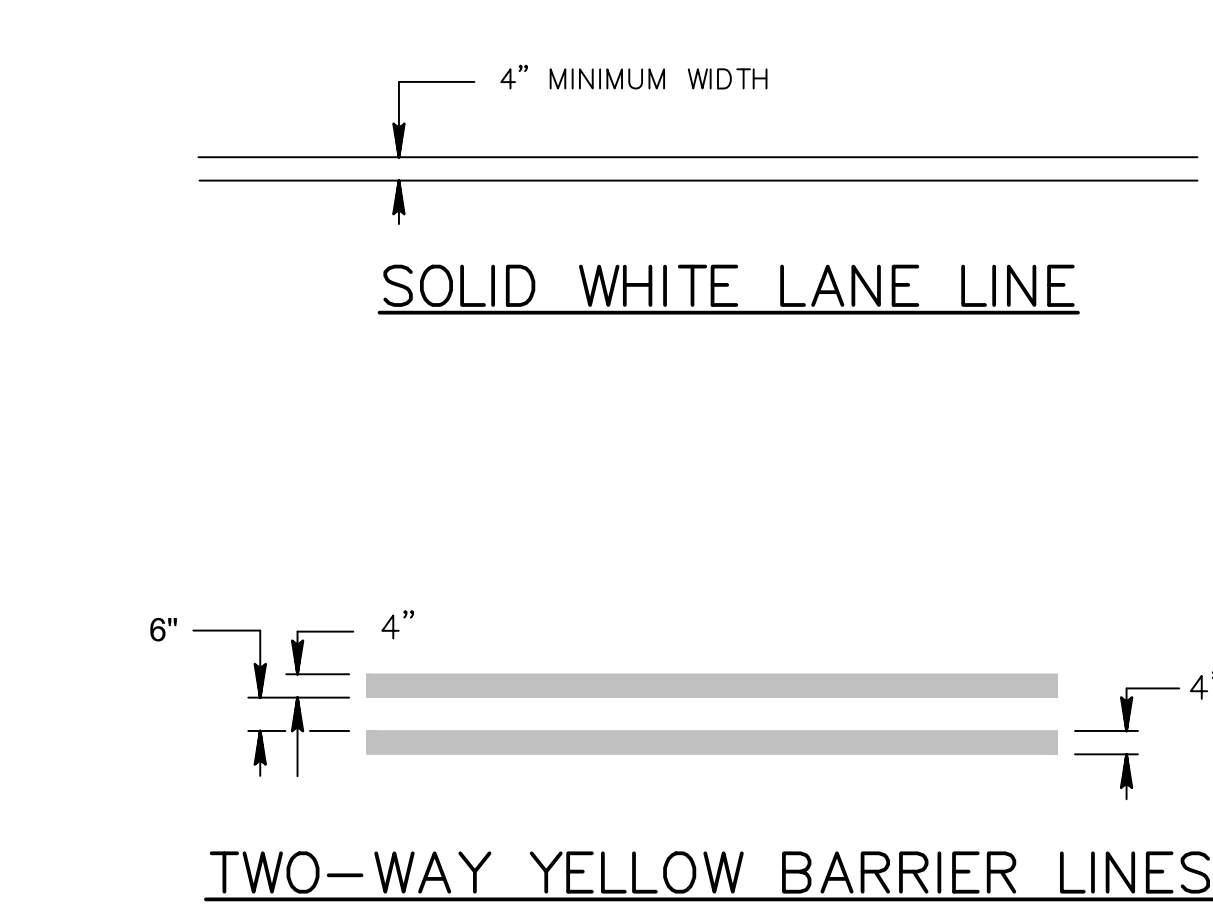
TYPICAL ROAD-WIDENING SECTIONS
CHURCH RD. - STA. 11+25 TO 22+61
NOT TO SCALE



TYPICAL ROAD-WIDENING SECTIONS
HOFFMANVILLE RD. - STA. 0+00 TO 22+00
NOT TO SCALE



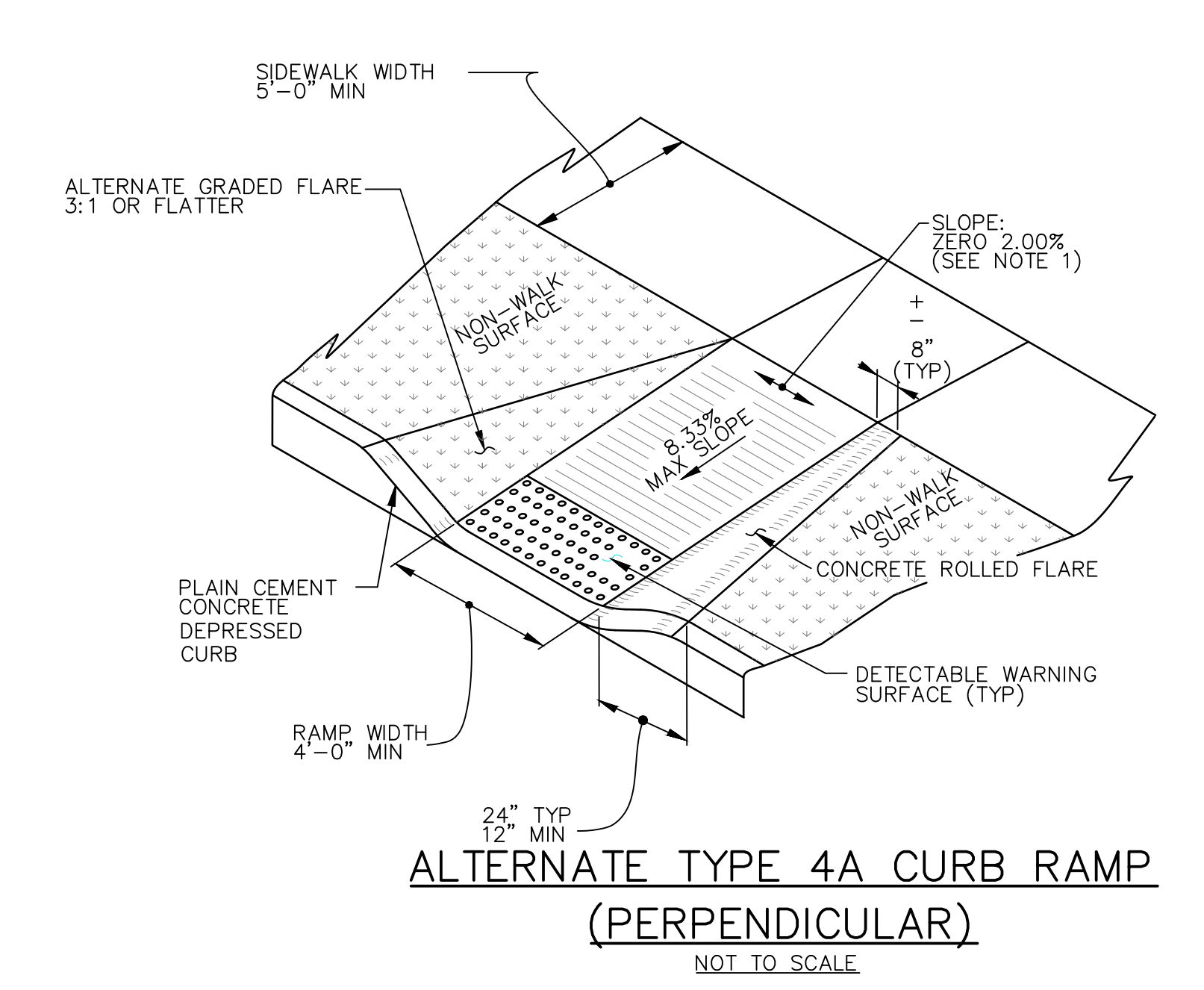
TYPICAL ROAD-WIDENING SECTIONS
HOFFMANVILLE RD. - STA. 22+00 TO 36+81
NOT TO SCALE



NOTE:
DO NOT INSTALL GRATINGS, ACCESS COVERS AND OTHER APPURTENANCES ON THE BLENDED TRANSITION SURFACE WITHIN THE PEDESTRIAN ACCESS ROUTE. EXISTING UTILITY COVERS IN THE PATH OF TRAVEL ARE ACCEPTABLE IF THE TOP SURFACE IS FLUSH (LESS THAN 6 (1/4") IN ELEVATION DIFFERENCE) FIRM, STABLE AND SLIP RESISTANT. INLET GRATES MUST HAVE OPENINGS NO GREATER THAN 13 (1/2") IN DIRECTION OF TRAVEL.

18 CURB RAMPS REQUIRE A 1220 (4'-0") MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE DETAILS FOR LOCATIONS AND DIMENSIONS.

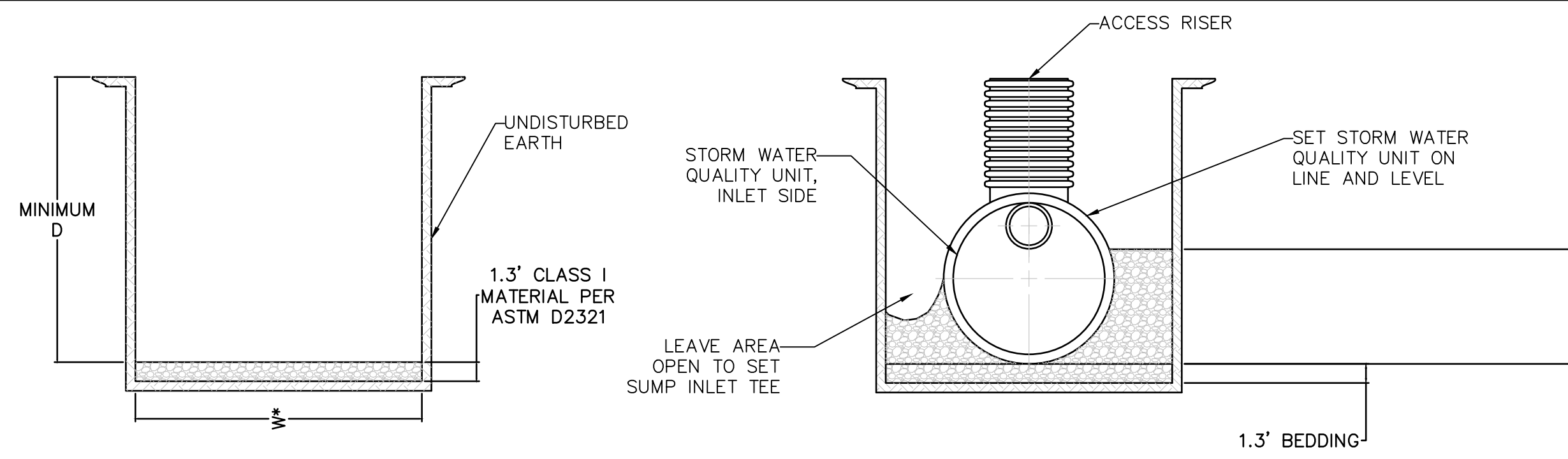
23 5.00% MAX RUNNING SLOPE FOR BLENDED TRANSITION FOR SLOPES GREATER THAN 5.00% SEE TYPE 2 CURB RAMPS ON SHEET 3 FOR ADDITIONAL DETAILS.



NOTES:
1. CURB RAMPS REQUIRE A TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS. SEE AREA SPECIFIC DETAILS FOR LOCATIONS AND DIMENSIONS AS APPROVED BY PENNDOT AND NEW HANOVER TOWNSHIP.

PROJECT SITE:	GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA									
PREPARED FOR:	GIBALTAR ROCK, INC.									
PROJECT NO.:	C-25	DATE: 10/19/2015								
DRAWING NO.:	C-25	DATE: 10/19/2015								
CHECKED BY:	JVA	DATE: 10/19/2015								
DRAWN BY:	JVA	DATE: 10/19/2015								
REVISIONS:	<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>REVISIONS</th> </tr> <tr> <td>1</td> <td>10/19/17</td> <td>JSC</td> <td>REVISED PER TWP COMMENTS & 12/9/15 PCM</td> </tr> </table>		NO.	DATE	BY	REVISIONS	1	10/19/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM
NO.	DATE	BY	REVISIONS							
1	10/19/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM							
FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY	SHEET 25 OF 34									

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- NOTES:
1. AVOID EXCESSIVE GROUNDWATER IN THE TRENCH. DE-WATER AS NECESSARY.
 2. PROVIDE SHEETING OR SHORING AS REQUIRED.
 3. MAXIMUM COVER HEIGHT MEASURED FROM THE TOP OF THE UNIT TO FINAL GRADE SHALL NOT EXCEED 8 FEET.
 4. MODIFIED TRENCH BOTTOM REQUIRED IF SOFT OR ROCK MATERIAL IS FOUND.
- NOTES:
1. UTILIZE CARE WHEN LOWERING UNIT INTO THE TRENCH. HANDLE USING NYLON SLINGS AND TWO PICK POINTS. DO NOT USE SLINGS AROUND RISERS.
 2. PLACE BACKFILL AROUND THE UNIT IN UNIFORM 8"-12" LIFTS, COMPACTED.
 3. WHEN THE UNIT CONSISTS OF 2 SECTIONS, PLACE THE DOWNSTREAM SECTION FIRST. PROPERLY LUBE THE BELL AND SPIGOT. CONNECT AND HOME THE REMAINING SECTIONS.

UNIT SIZE	MINIMUM W	MINIMUM W'
36"	4.5'	6.5'
42"	5.0'	7.0'
48"	5.5'	7.5'
60"	7.5'	8.5'

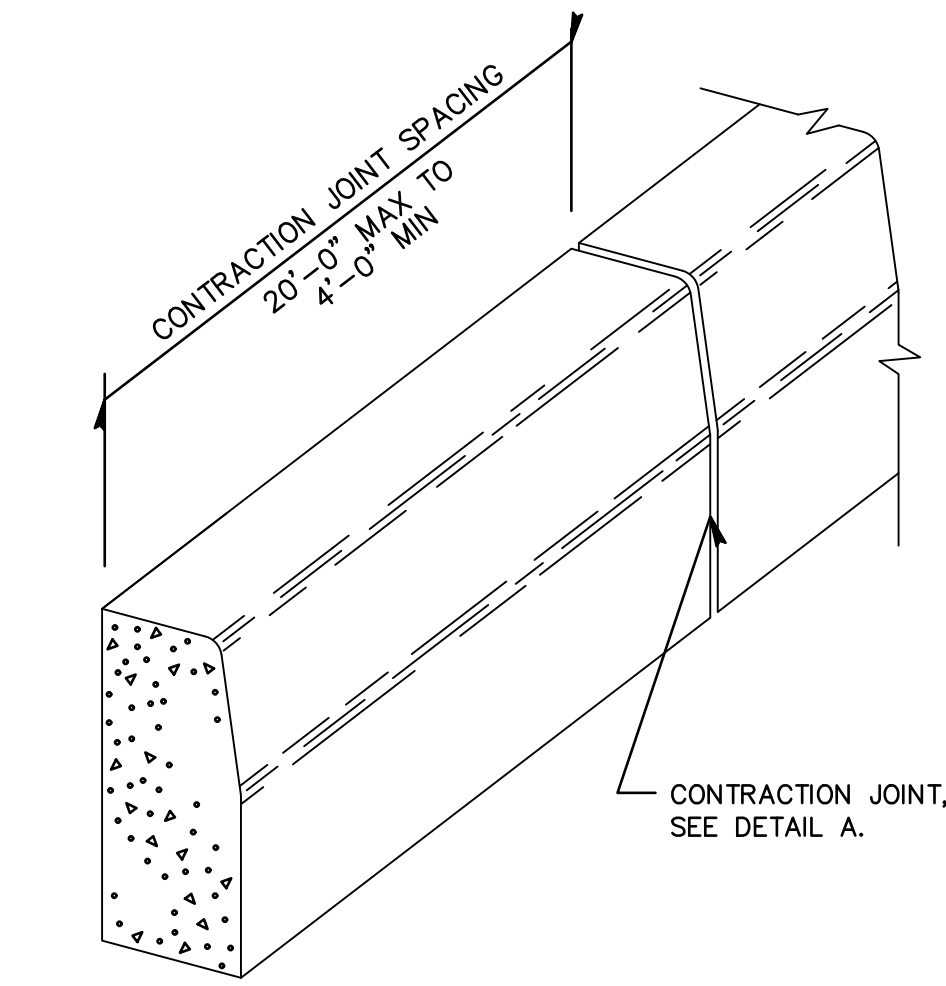
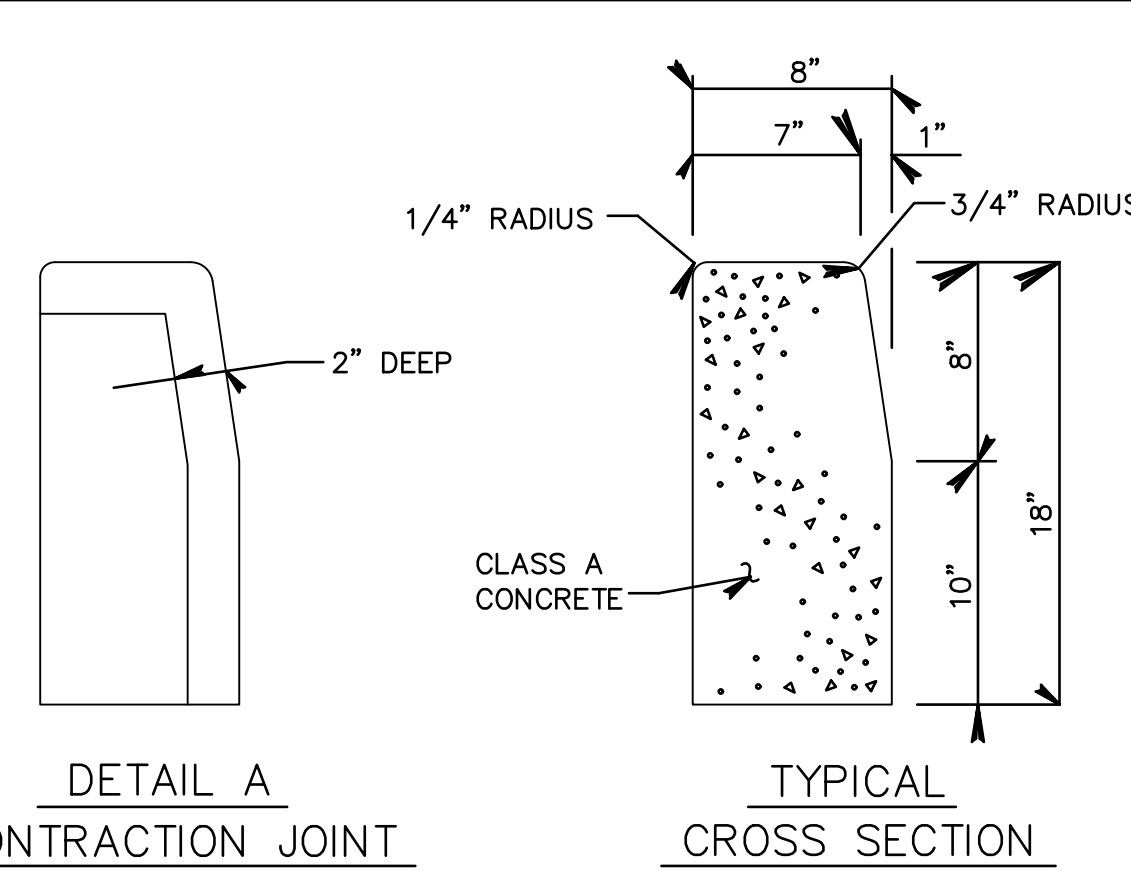
* TRENCH WIDTH DOES NOT ACCOUNT FOR BY-PASS PIPE. THIS ESTIMATE IS FOR THE MAIN UNIT ONLY

TRENCH AND BEDDING PREPARATION FOR UNIT

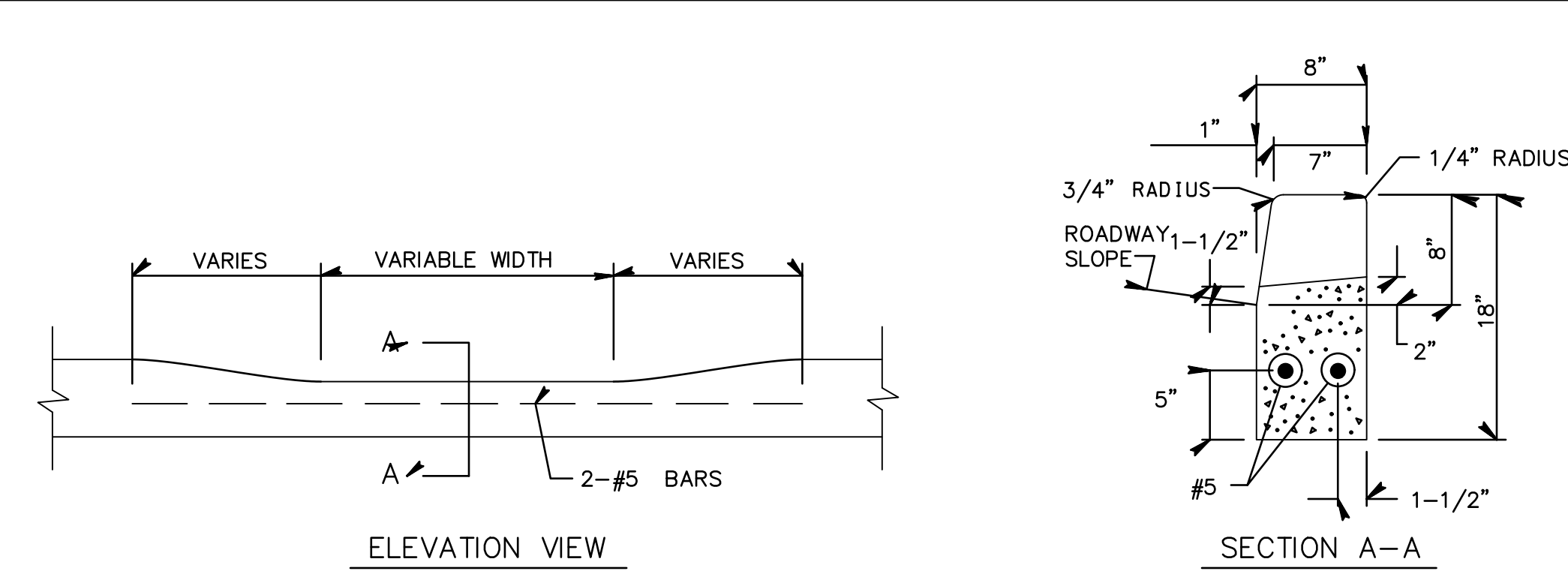
NOT TO SCALE

PLACING UNIT AND INITIAL BACKFILL

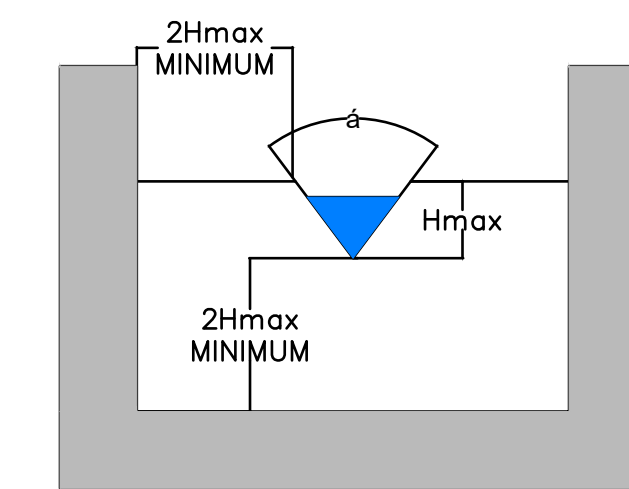
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PLAIN CEMENT CONCRETE CURB



DEPRESSED CURB FOR DRIVEWAYS



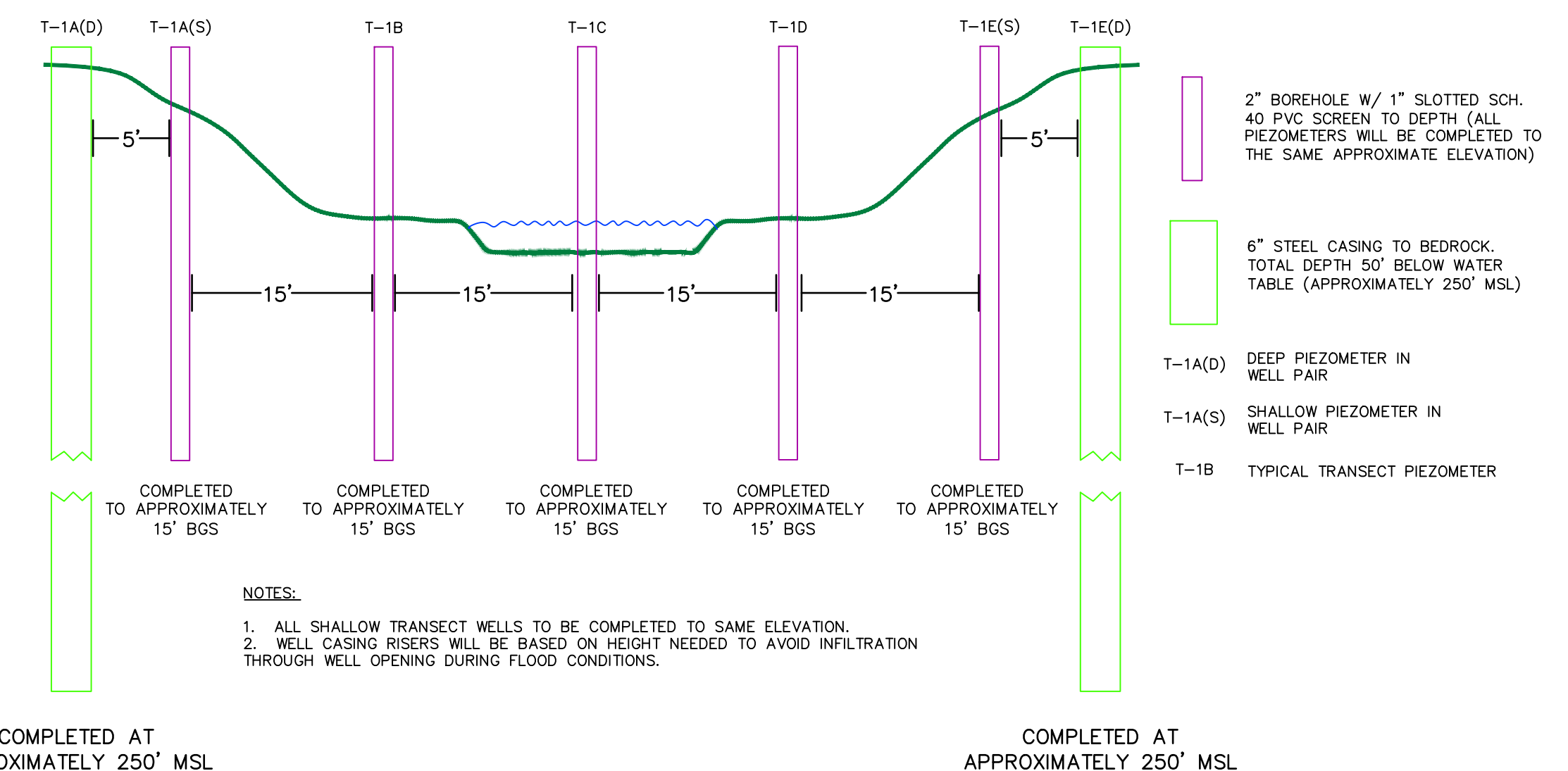
V-NOTCH (TRIANGULAR) SHARP-CRESTED WEIR DETAILS

MINIMUM AND MAXIMUM RECOMMENDED FLOW RATES FOR V-NOTCH WEIRS WITH HEAD IN FEET

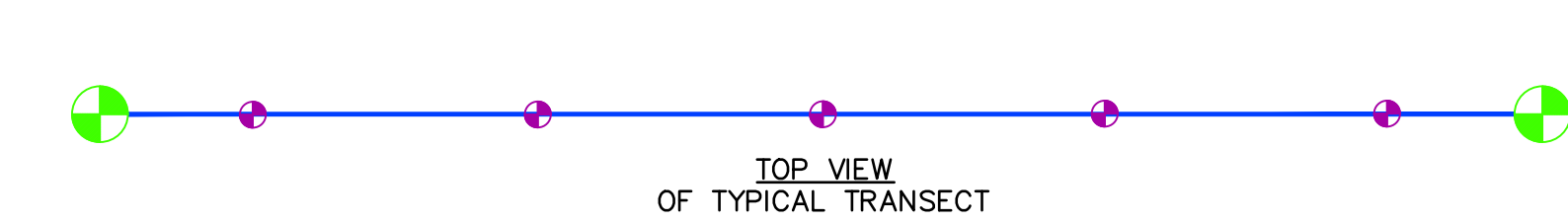
V-NOTCH ANGLE	MINIMUM HEAD (FT)	CFS	MINIMUM FLOW RATE GPM	MGD	MAXIMUM HEAD (FT)	CFS	MAXIMUM FLOW RATE GPM	MGD
60°	0.2	0.028	11.6	0.017	2.0	8.16	3660	5.28

SOURCE: ISCO OPEN CHANNEL FLOW MEASUREMENT HANDBOOK, FIFTH EDITION, DOUGLAS M. GRANT & BRIAN D. DAWSON, 2001

LEGEND



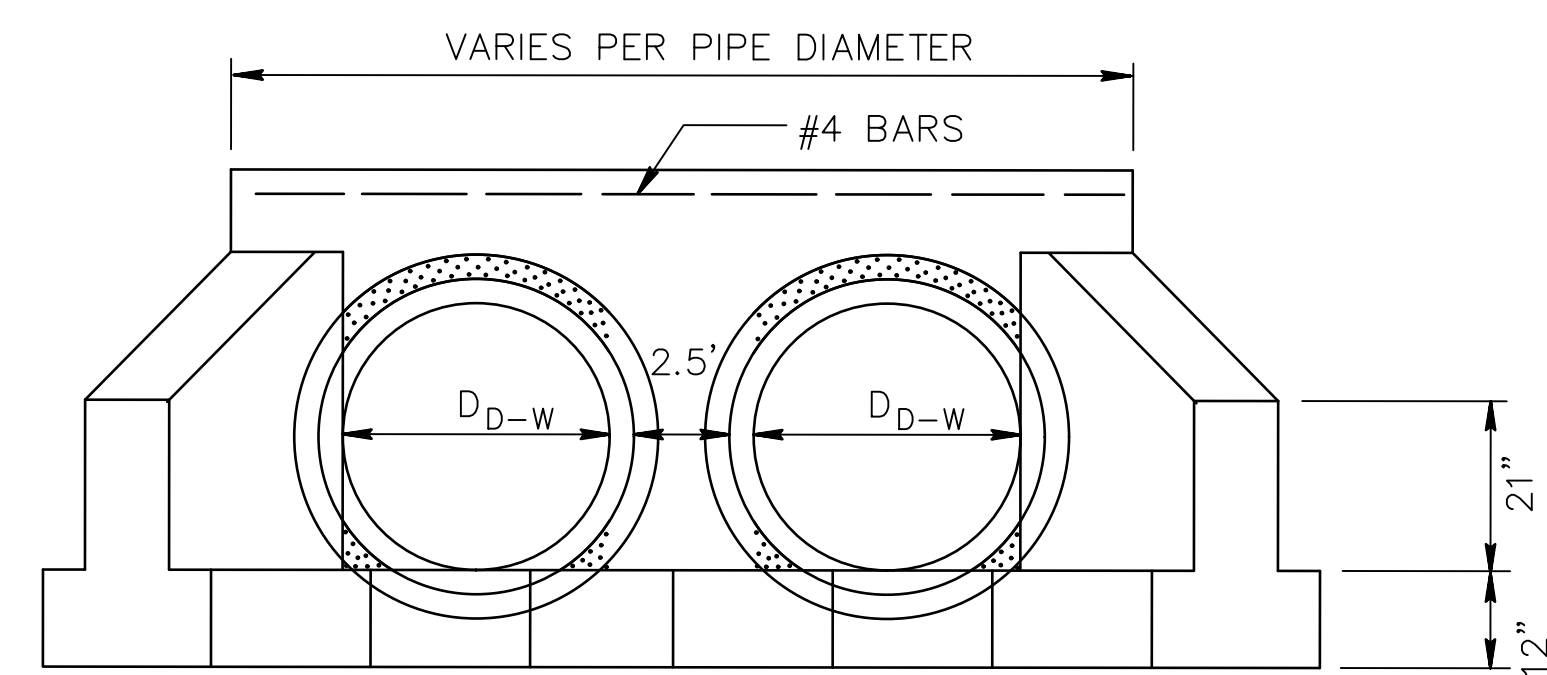
COMPLETED AT APPROXIMATELY 250' MSL



TYPICAL PIEZOMETER TRANSECT CROSS-SECTION

NOTES:

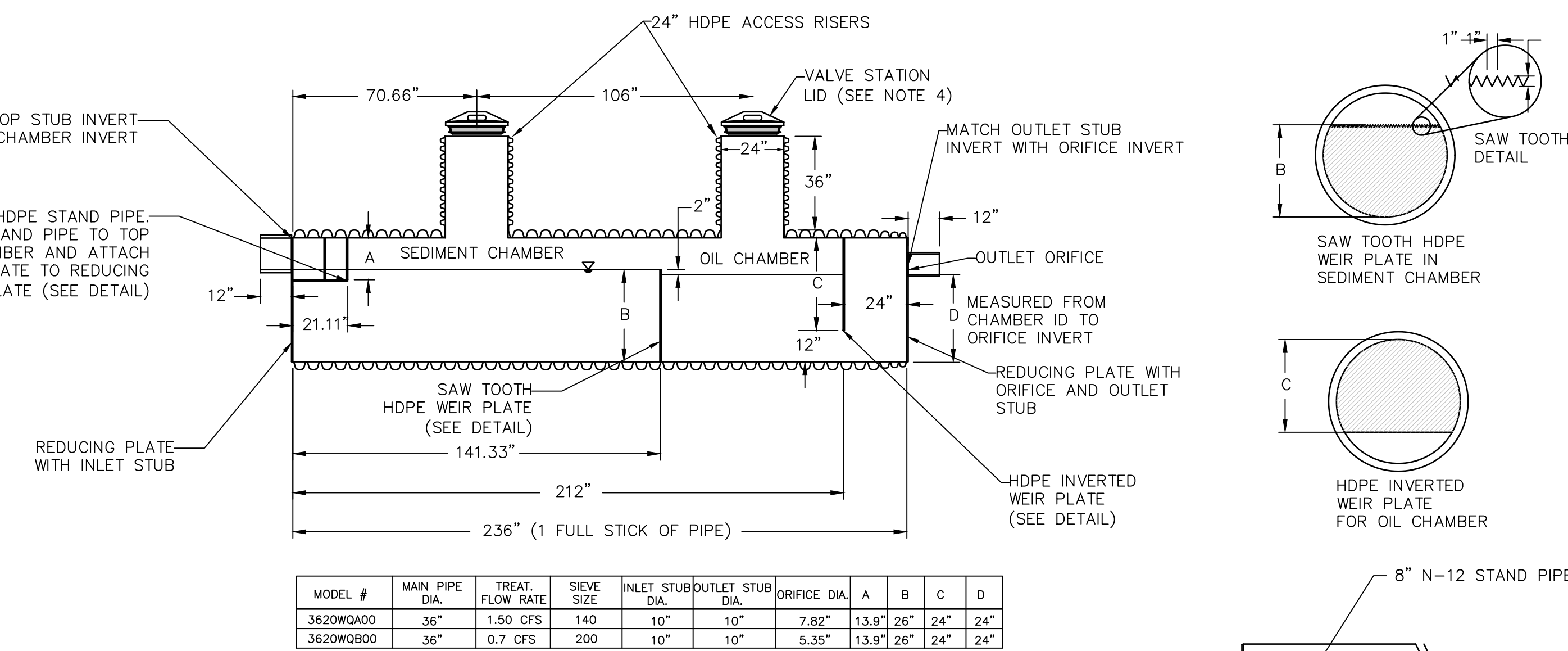
1. ALL SHALLOW TRANSECT WELLS TO BE COMPLETED TO SAME ELEVATION.
 2. WELL CASING RISERS WILL BE BASED ON HEIGHT NEEDED TO AVOID INFILTRATION THROUGH WELL OPENING DURING FLOOD CONDITIONS.
- THE ABOVE DETAILS HAVE BEEN APPROVED AS PART AND CONDITION OF THE NON COAL SURFACE MINING PERMIT. THE PERMITTEE SHALL ANNUALLY EVALUATE THE FUNCTIONS AND VALUES OF WETLAND A AND WETLAND B DURING THE MONTH OF JUNE, AND THE INITIAL EVALUATION SHALL OCCUR WITHIN ONE YEAR OF THIS SMP ISSUANCE.
- THE PERMITTEE SHALL INSTALL TWO 60" V-NOTCH WEIRS (WEIR 1 AND 2) AT THE LOCATIONS SHOWN ON FIGURE WSM 1, DATED 01/25/04 AS APPROVED BY THE POTTSVILLE DISTRICT MINING OFFICE. THE DEPARTMENT WILL RECEIVE MONITORING DATA TO ENSURE THE MINING ACTIVITIES ARE NOT IMPACTING THE FLOW AND THE WETLANDS IN ANY MANNER.
- THE PERMITTEE IS TO SUBMIT A COPY OF EACH EVALUATION, WITHIN SIXTY DAYS OF COMPLETION, TO THE MONITORING AND COMPLIANCE MANAGER AT THE POTTSVILLE DISTRICT OFFICE.



REFER TO TYPE D-W ENDWALL FOR ADDITIONAL INFORMATION, DIMENSIONS AND REINFORCEMENT DETAILS.

DOUBLE ENDWALLS CAST-IN-PLACE & PRECAST

NOT TO SCALE



MODEL #	MAIN PIPE DIA.	TREAT. FLOW RATE	SIENVE SIZE	INLET STUB DIA.	OUTLET STUB DIA.	ORIFICE DIA.	A	B	C	D
3620WQAD0	36"	1.50 CFS	140	10"	10"	7.82"	13.9"	26"	24"	24"
3620WQBD0	36"	0.7 CFS	200	10"	10"	5.35"	13.9"	26"	24"	24"

NOTES:

1. ALL DIMENSIONS ARE NOMINAL.
2. ALL FITTING CONNECTIONS WILL BE MADE USING A STANDARD BELL/BELL OR SPLIT COUPLER.
3. USE 24" (MIN.) CORRUGATED HDPE FOR VALVE STATIONS FOR VALVES INSTALLED BELOW GRADE.
4. ADS AND PLUG (#3633-AA) OR APPROVED EQUIVALENT.

STORMWATER QUALITY UNIT

TABLE A (INCHES)

Z : 1 EMBANKMENT SLOPES

PIPE DIA.	SKENW 4 = 30°	SKENW 4 = 45°	SKENW 4 = 60°	SKENW 4 = 75°	SKENW 4 = 90°	SKENW 4 = 105°	SKENW 4 = 120°	SKENW 4 = 135°	SKENW 4 = 150°	SKENW 4 = 165°	SKENW 4 = 180°
36	5.8	4.4	3.3	2.5	1.9	1.4	1.1	0.8	0.6	0.4	0.3
42	6.3	4.8	3.6	2.7	2.0	1.5	1.2	0.9	0.7	0.5	0.4
48	6.9	5.2	3.9	2.9	2.2	1.6	1.3	1.0	0.8	0.6	0.5
54	7.5	5.6	4.2	3.1	2.4	1.7	1.4	1.1	0.9	0.7	0.6
60	8.1	6.1	4.5	3.3	2.5	1.8	1.5	1.2	1.0	0.8	0.7
72	9.2	6.9	5.1	3.7	2.8	2.0	1.6	1.3	1.1	0.9	0.8

ENGLISH EQUATION

$$L_w = \frac{D}{\cos \theta} \times 2.5'$$

$$W = \frac{2D \sin \theta}{\cos \theta}$$

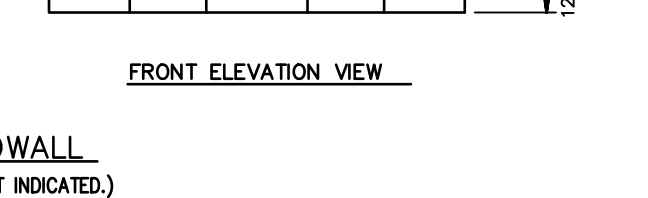
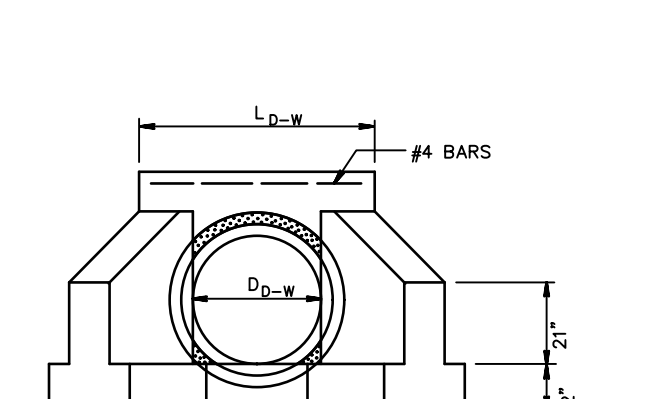
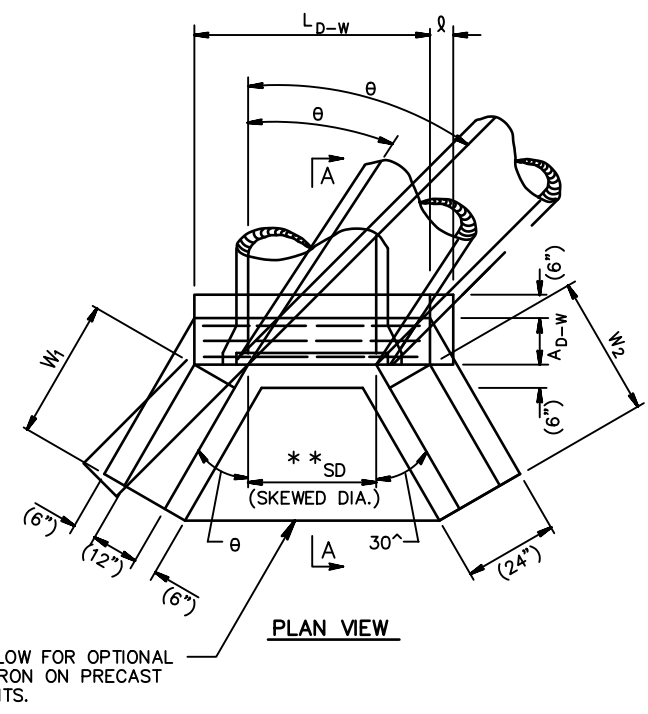
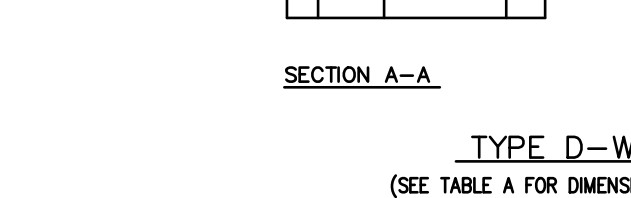
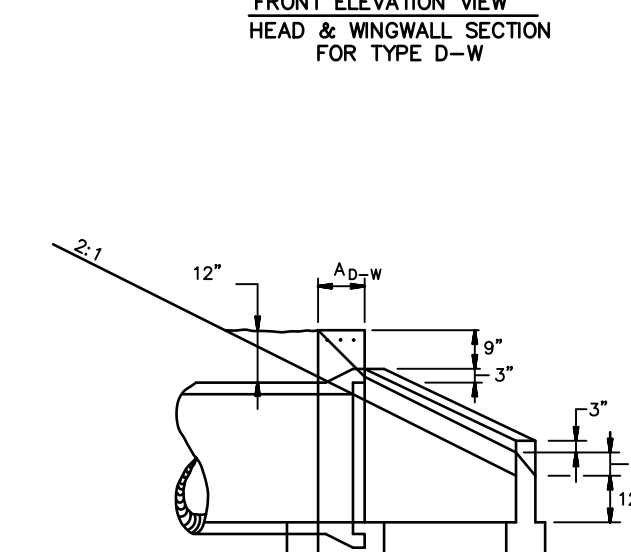
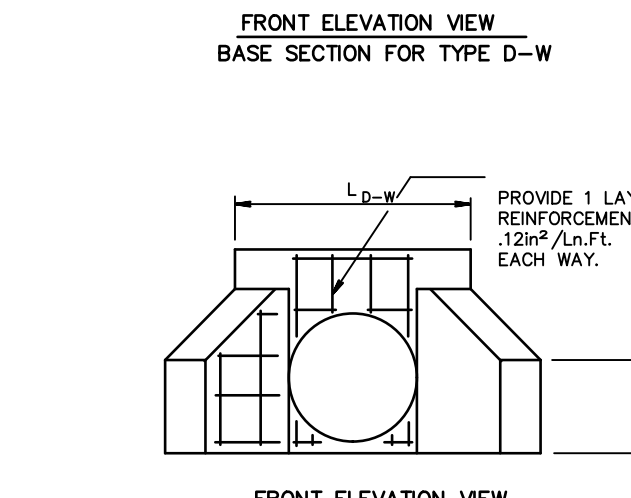
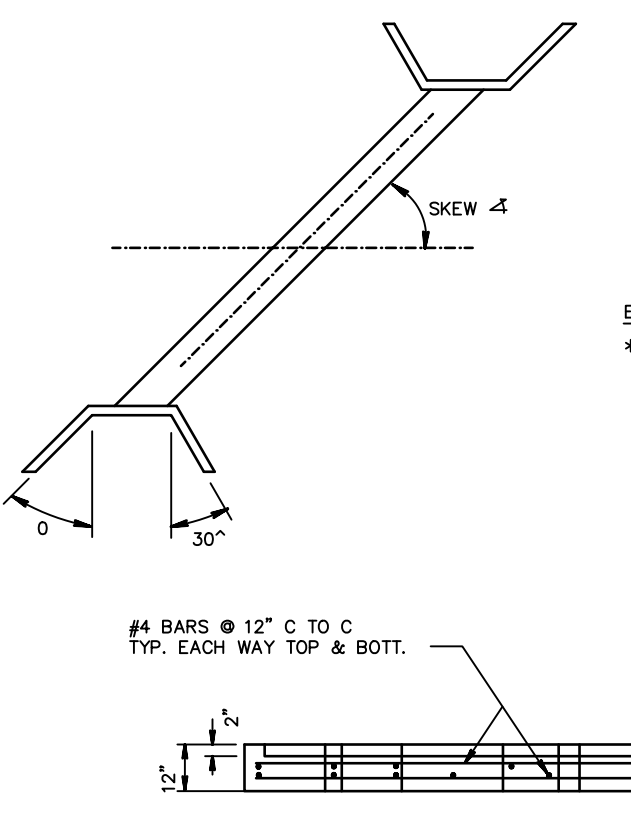
$$W = \frac{X}{\cos \theta} \left(\theta \text{ in } 0.5 - 1.5 \right)$$

$$L_w = \frac{D}{\cos \theta} \times 2.5'$$

$$W = \frac{X}{\cos \theta} \left(\theta \text{ in } 0.5 - 1.5 \right)$$

$$L_w = \frac{D}{\cos \theta} \times 2.5'$$

$$W = \frac{X}{\cos \theta} \left(\theta \text{ in } 0.5 - 1.5 \right)$$

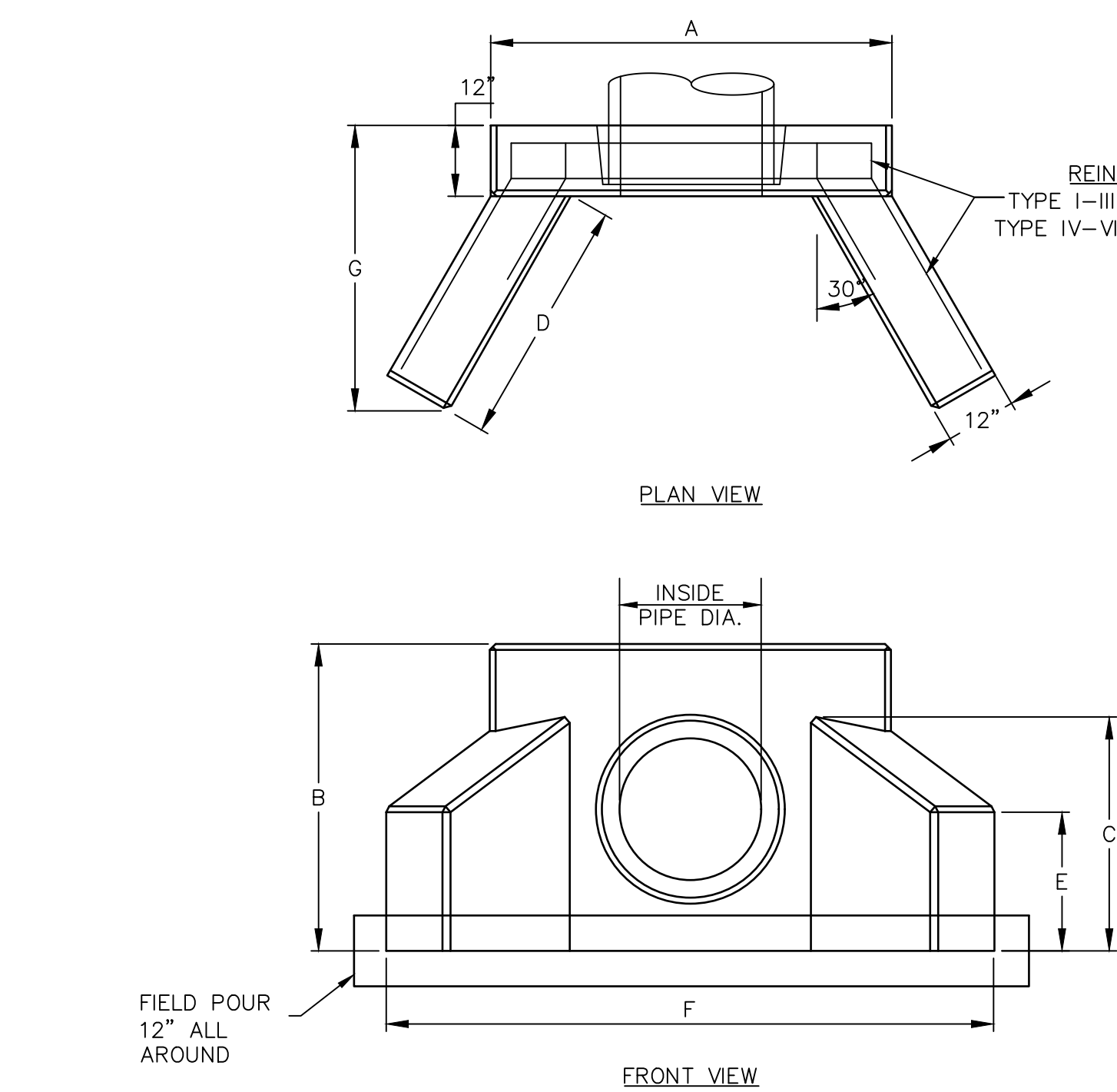


NOTE: EITHER ALL METRIC OR ALL ENGLISH VALUES MUST BE USED ON PLANS. METRIC AND ENGLISH VALUES SHOWN MAY NOT BE MIXED.

ENDWALLS CAST-IN-PLACE & PRECAST

NOT TO SCALE

RECOMMENDED	RECOMMENDED	SHT. 2 OF 2
MAR. 30, 2006	MAR. 30, 2006	RC-31M
DICTIONARY, BUREAU OF DESIGN	CHIEF ENGINEER	



TYPE	INSIDE PIPE DIA. (IN)	WEIGHT (LB)	A (IN)	B (IN)	C (IN)	D (IN)	E (IN)	F (IN)	G (IN)
I	12-15	3400	56	39	26	36	12	86	44
II	18-21	4800	65	48	36	39	20	96	48
III	24-27	5270	68	52	40	42	24	104	48
IV	30-36	9250	79	65	54	63	28	134	67

ENDWALL PENNDOT TYPE DW DETAIL

NOT TO SCALE

NOTES:

1. THE CONCRETE IS DESIGNED TO OBTAIN A STRENGTH OF 4000 PSI IN 28 DAYS.
2. THE REINFORCING STEEL HAS A YIELD STRENGTH OF 60,000 PSI.

PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA

PREPARED FOR: GIBALTAR ROCK, INC.

PREPARED BY: EarthRes ENGINEERING AND SCIENCE

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

CHECKED BY: [Signature]

PROJECT NO: 02/02/029

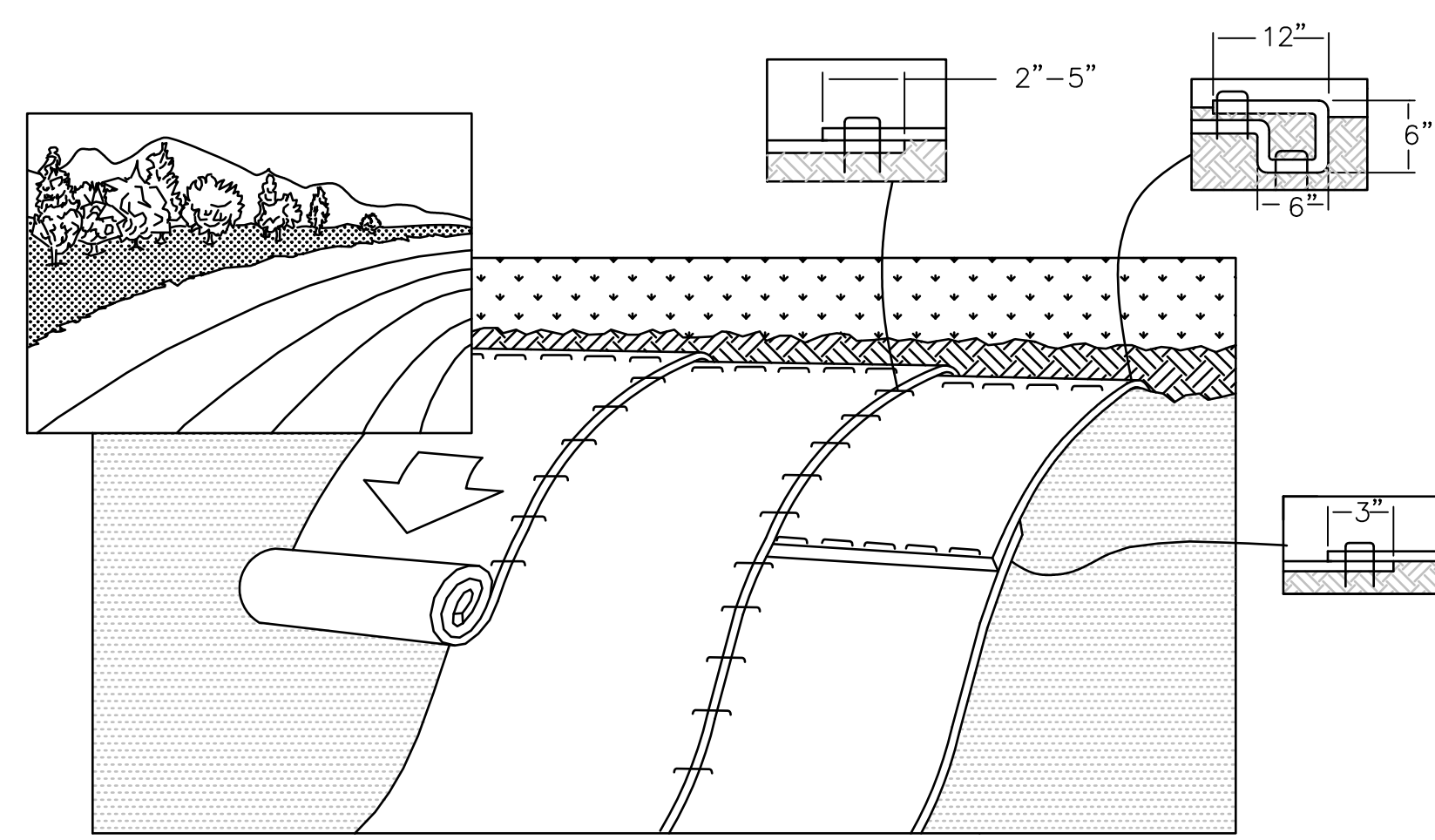
DRAWING NUMBER: C-26

SHEET 26 OF 34

REVISIONS:

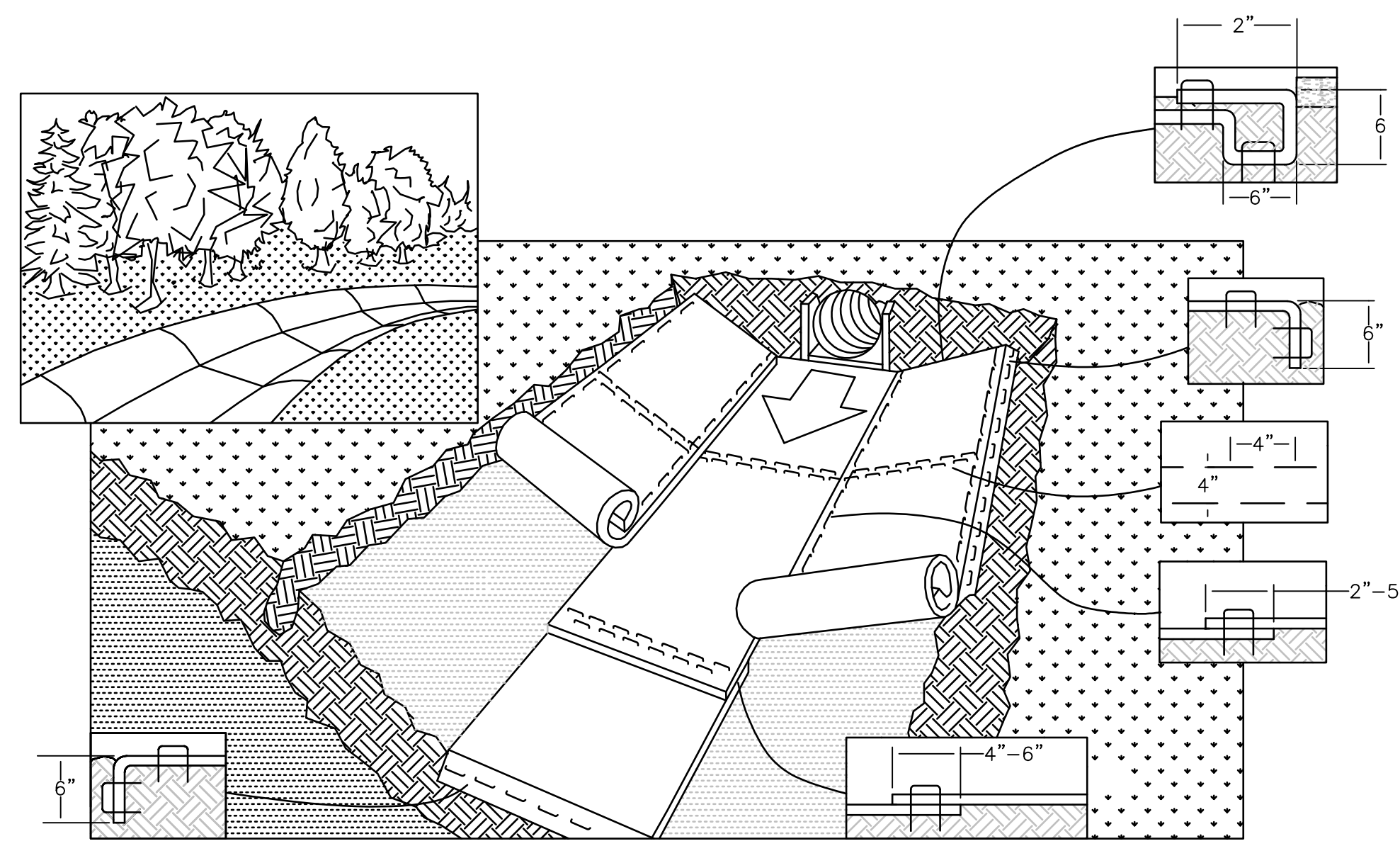
NO.	DATE	BY	REVISIONS
1	8/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM

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**TEMPORARY EROSION CONTROL MAT DETAIL
SLOPE INSTALLATION**
NOT TO SCALE

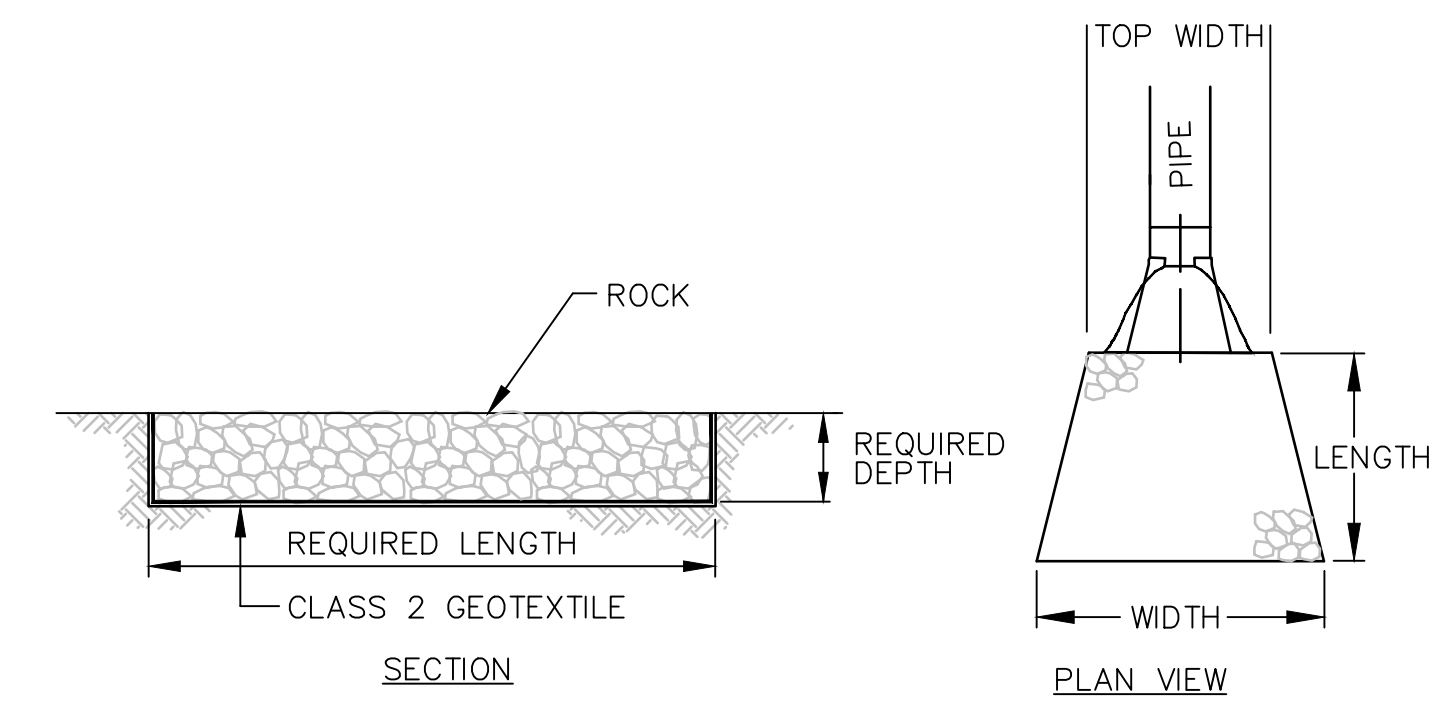
- NOTES:
1. EROSION CONTROL MAT TO BE USED ON SLOPES STEEPER THAN 3H:1V.
 2. EROSION CONTROL MAT TO BE MACHINE-PRODUCED 100% BIO-DEGRADABLE MAT S150 BN AS MANUFACTURED BY NORTH AMERICAN GREEN, OR EQUIVALENT.
 3. USE AN AVERAGE OF 2 STAPLES OR STAKES PER SQUARE YARD MINIMUM.
 4. REFER TO MANUFACTURER'S INSTRUCTIONS FOR EROSION CONTROL MAT SLOPE INSTALLATION.



**EROSION CONTROL MAT DETAIL
CHANNEL INSTALLATION**
NOT TO SCALE

- NOTES:
1. TEMPORARY EROSION CONTROL MAT TO BE MACHINE-PRODUCED 100% BIO-DEGRADABLE MAT S75 AS MANUFACTURED BY NORTH AMERICAN GREEN, OR EQUIVALENT.
 2. PERMANENT EROSION CONTROL MAT SHALL BE MIRAFI MIRAMAT TMB AS MANUFACTURED BY TEN CATE NICOLON, OR EQUIVALENT.
 3. USE AN AVERAGE OF 2 STAPLES OR STAKES PER SQUARE YARD MINIMUM. ADDITIONAL STAPLES SHOULD BE INSTALLED AS NECESSARY TO SECURE CRITICAL POINTS ALONG THE CHANNEL SURFACE.
 4. REFER TO MANUFACTURER'S INSTRUCTIONS FOR EROSION CONTROL MAT CHANNEL INSTALLATION.

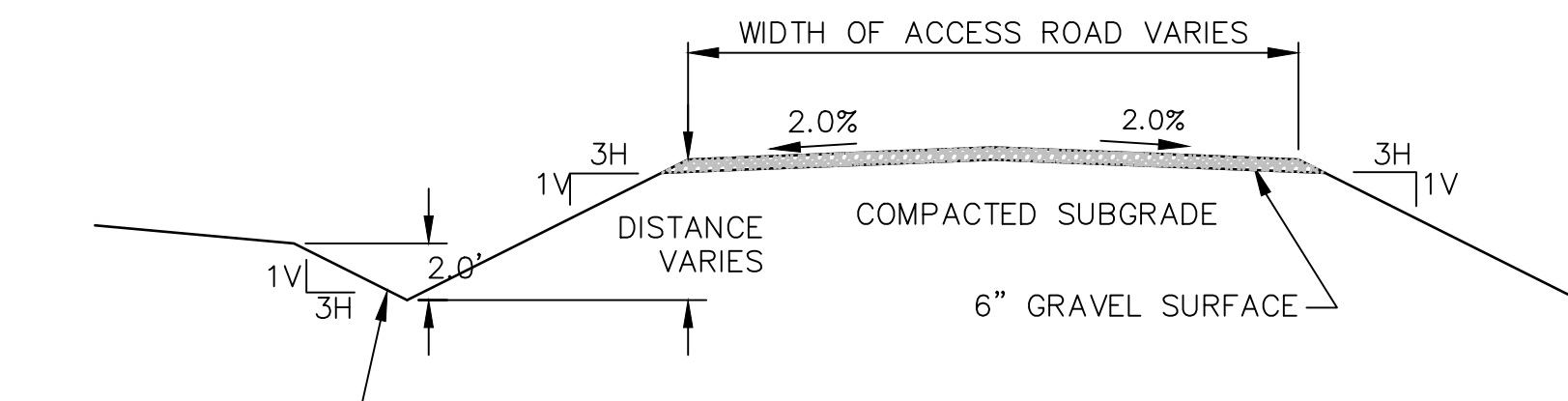
STAPLE PATTERN DETAIL
2 STAPLES PER SQUARE YARD
NOT TO SCALE



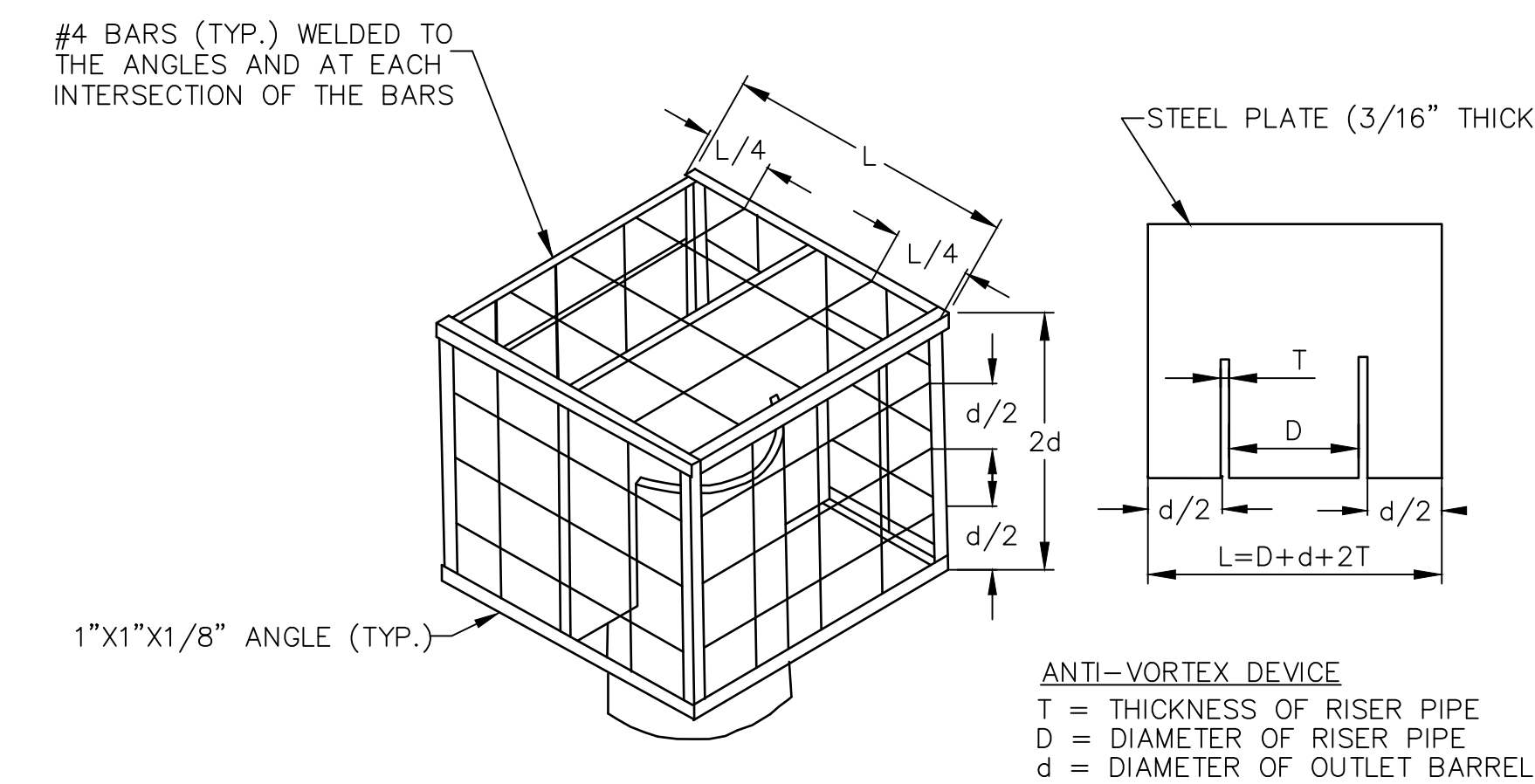
DRAINAGE SWALE DISCHARGE PIPE						
PIPE I.D.	PIPE TYPE	TOP WIDTH (FT)	LENGTH (FT)	WIDTH (FT)	ROCK SIZE	REQUIRED DEPTH
CULVERT #5	30" RCP	7.5	18	14.7	R-3	7.5"
NPDES PT 002	12" HDPE	3	13	8.2	R-3	7.5"
NPDES PT 003	24" CMP	7.5	18	14.7	R-3	7.5"
EW-1	(2) 48" RCP	13	46	31.4	R-5	27"
EW-2	(2) 48" RCP	13	26	39	R-6	36"
EW-3	36" RCP	9	33	22.2	R-4	18"
EW-4	18" RCP	4.5	8	7.7	R-3	9"

ROCK APRON
NOT TO SCALE

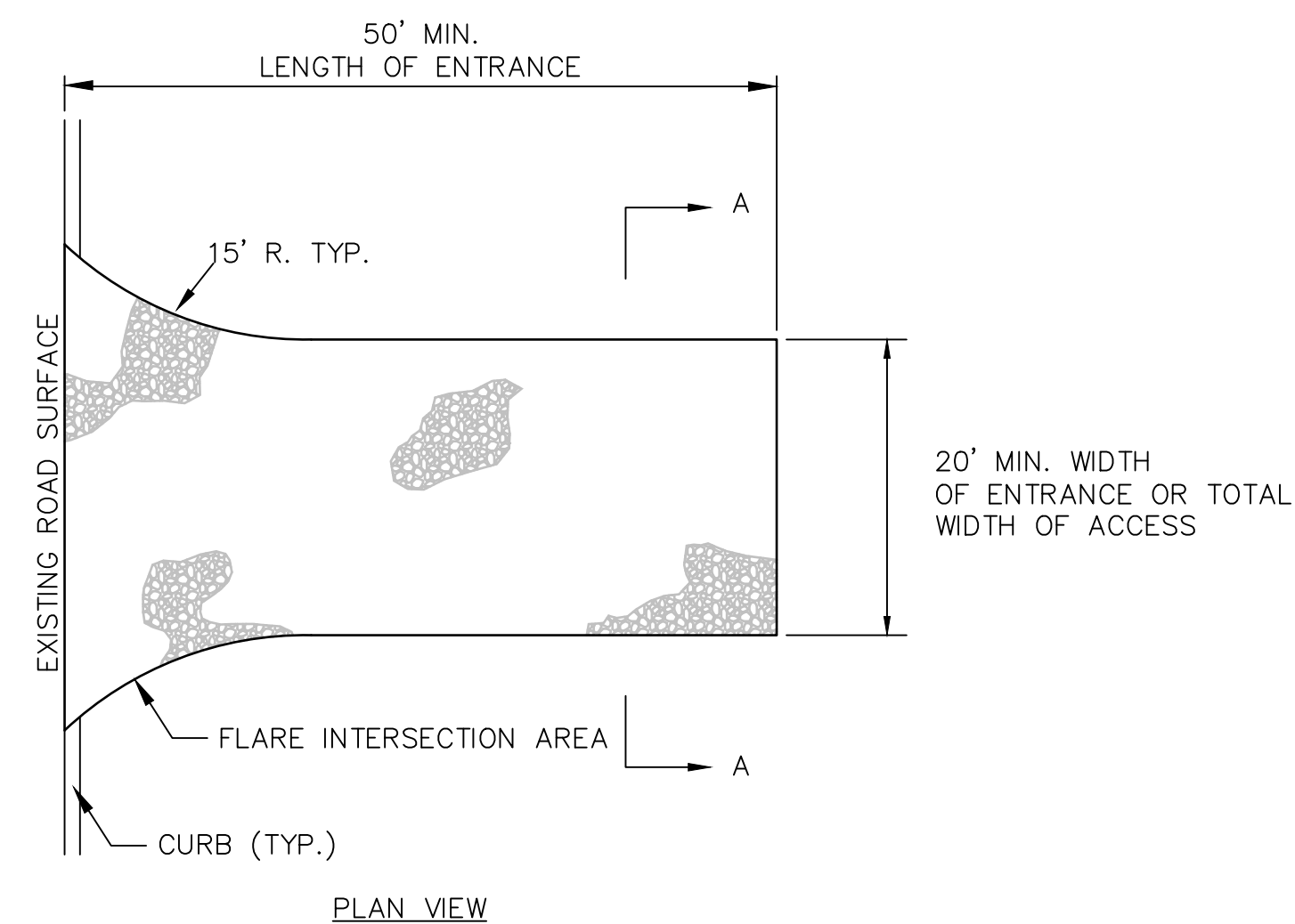
- NOTE:
1. ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.



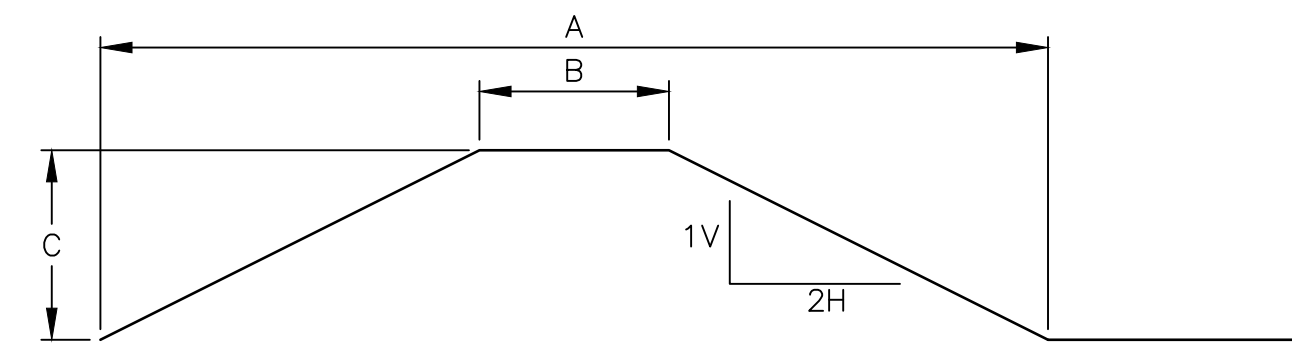
ROUTE 73 ACCESS ROAD DETAIL
NOT TO SCALE



TRASH RACK AND ANTI-VORTEX DEVICE
SCALE: 1"=30"



ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



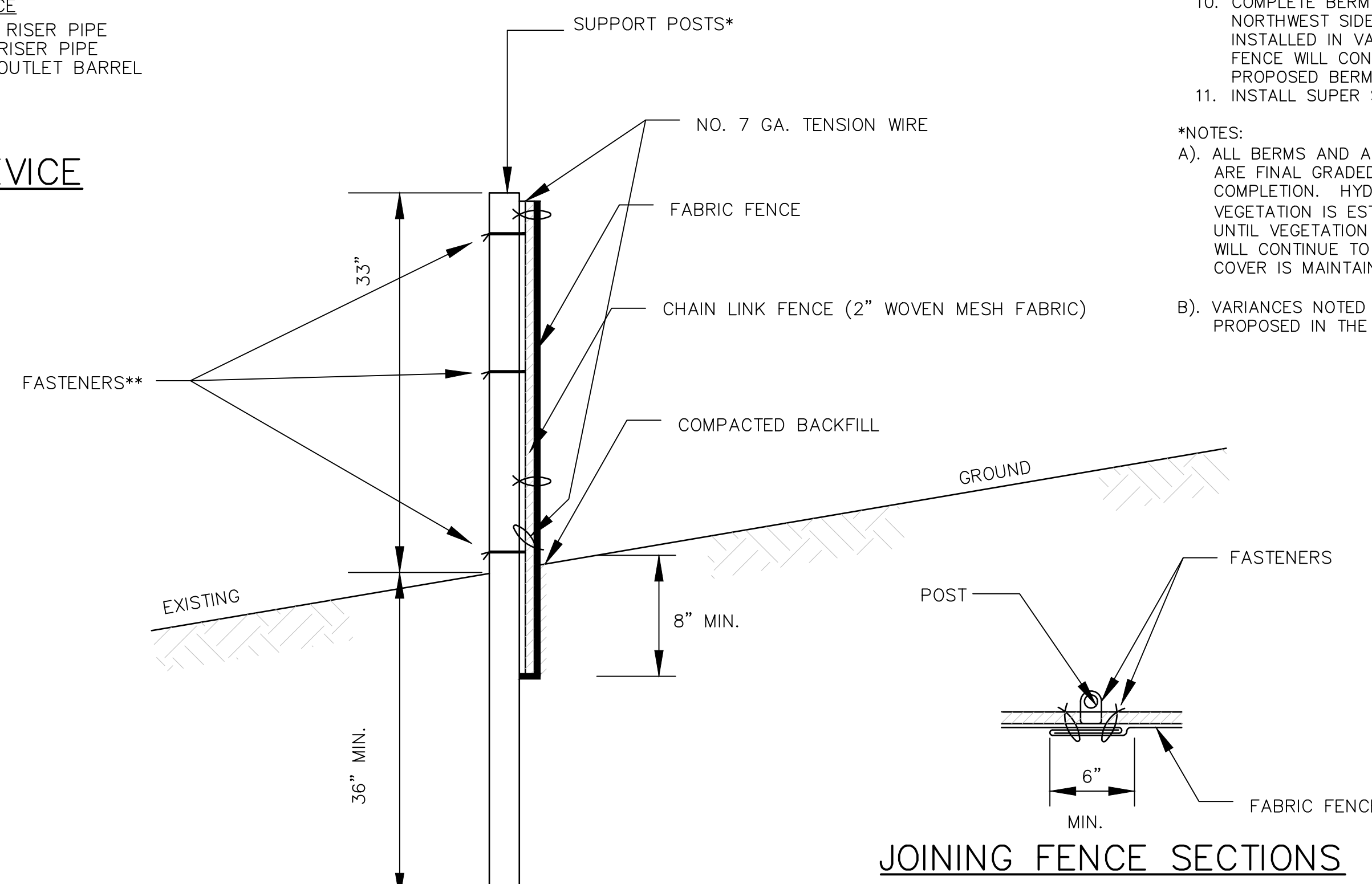
TYPICAL SCREENING BERMS
NOT TO SCALE

BERM	A (FT)	B (FT)	C (FT)	SIDESLOPES H:V
5'	25	5	5	2:1
10'	50	10	10	2:1
20'	95	15	20	2:1

BERM CONSTRUCTION SEQUENCE & DETAILS

1. IMMEDIATELY PRIOR TO STRIPPING OF THE OPERATIONS AREA AND FIRST 5-ACRE MINING PHASE OF PIT, INSTALL SUPER SILT FENCE OR SILT SOXX AROUND BERMS TO BE CONSTRUCTED FIRST, AS SHOWN. SILT FENCE/SOXX WILL BE PLACED IN THE 15-FOOT SETBACK BETWEEN THE OUTSIDE TOE OF BERM SLOPE AND THE ROAD. FOR THE INNER SIDE OF EACH BERM, SILT FENCE WILL BE PLACED 40 FEET FROM THE INSIDE TOE OF SLOPE TO ALLOW ACCESS FOR TRUCKS AND EARTH-MOVING EQUIPMENT.
2. THE SMALL BERMS AROUND THE RTE. 73 SITE ENTRANCE WILL BE CONSTRUCTED FIRST, AND WILL BE HYDROSEEDED UPON COMPLETION.
3. CONSTRUCT SEGMENT OF BERM EXTENDING FROM THE NORTH CORNER OF THE PIT AREA, MOVING FROM NORTHWEST TO SOUTHEAST ALONG HOFFMANVILLE ROAD TOWARDS VARIANCE AREA NO. 1 (PERIMETER BERM / SECURITY FENCE IN STREAM SETBACK). BERM CONSTRUCTION MATERIAL WILL BE GENERATED FROM STRIPPING THE FIRST MINING PHASE OF THE PIT.
4. PRIOR TO CONSTRUCTION OF THE PERIMETER BERM IN VARIANCE AREA NO. 1, STORE CONSTRUCTION MATERIALS (E.G. - CLEAN STONE, SOIL FENCE CONSTRUCTION ITEMS) NEEDED TO COMPLETE THE BERM SECTION THAT WILL BE WITHIN THE STREAM SETBACK AREA INSIDE THE E&S CONTROLS INSTALLED ADJACENT TO VARIANCE AREA NO. 1. PERIMETER BERMS WILL BE NO CLOSER THAN 55' FROM THE STREAM BANK IN ALL VARIANCE AREAS. REMOVE SILT FENCE/SOXX ALONG SETBACK LINE & INSTALL SECONDARY SILT FENCE/SOXX AROUND WORK AREA WITHIN SETBACK ZONE.
5. CONSTRUCT BERM IN VARIANCE AREA NO. 1 FOLLOWING E&S GUIDELINES OUTLINED IN MODULE 14 OF THE MINE PERMIT APPLICATION. MATERIAL TRANSPORT VEHICLES WILL OPERATE INSIDE THE SUPER SILT FENCE ALONG CHURCH AND HOFFMANVILLE ROADS. INSTALL SILT FENCE BETWEEN STREAM BANK AND AFFECTED (HYDROSEEDED) AREA.
6. INSTALL SECURITY FENCE CONNECTING THE INNER EDGES OF THE BERMS ON OPPOSITE SIDES OF UNNAMED TRIBUTARY TO SWAMP CREEK ALONG HOFFMANVILLE ROAD. THE FENCE BOTTOM WILL BE ABOVE THE LEVEL TO WHICH A 25-YEAR STORM WOULD RAISE STREAM FLOW. BOARD ON BOARD FENCING WILL BE INSTALLED CONNECTING THE OUTER EDGES OF THE BERM, AND WILL BE CONSTRUCTED TO THE SAME SPECIFICATIONS AS THE SECURITY FENCE RELATIVE TO INCREASED WATER LEVELS FROM STORM FLOW.
7. CONTINUE CONSTRUCTION OF BERM ALONG HOFFMANVILLE AND CHURCH ROADS AS SHOWN. THIS MATERIAL WILL ORIGINATE FROM THE INITIAL CUT FOR THE INTERMEDIATE OPERATIONS AREA AND ANY OVERBURDEN LEFT OVER FROM STRIPPING OF THE FIRST 5-ACRE MINING PHASE.
8. STOCKPILE CONSTRUCTION MATERIALS TO COMPLETE BERM IN VARIANCE AREA NO. 2 ON EITHER SIDE OF STREAM SETBACK AREA.
9. COMPLETE BERM IN VARIANCE AREA NOS. 2 & 3 FOLLOWING E&S GUIDELINES OUTLINED IN MODULE 14 OF THE MINE PERMIT APPLICATION. THE AREA BETWEEN VARIANCE AREAS #2 & #3 WILL NOT BE BERMED, AS EXISTING VEGETATION AND TREES WILL PROVIDE AN ADEQUATE VISUAL /NOISE /DUST BARRIER. THE 100-FOOT SETBACK AREA WILL BE SURVEYED, STAKED AND FLAGGED VARIANCE AREAS 2 & 3 SO THAT NEITHER CONSTRUCTION ACTIVITIES NOR SUPPORT ACTIVITIES DO NOT ENVOACH UPON THE STREAM / WETLAND SETBACK OUTSIDE THE REQUESTED VARIANCE AREAS.
10. COMPLETE BERM CONSTRUCTION AROUND THE PIT AS SHOWN, INCLUDING VARIANCE NO. 4 ALONG NORTHWEST SIDE OF THE PIT AREA. THE BERM WILL BE CONSTRUCTED IN THE SAME MANNER AS THOSE INSTALLED IN VARIANCE AREAS 1 AND 2, FOLLOWING E&S GUIDELINES OUTLINED IN MODULE 14. SECURITY FENCE WILL CONNECT THE OUTER EDGE OF THE BERMS ACROSS THE CHANNEL THAT LIES BETWEEN THE PROPOSED BERMS.
11. INSTALL SUPER SILT FENCE AROUND REMAINING BERM AREA AS SHOWN.

- *NOTES:
- A. ALL BERMS AND AREAS DISTURBED DURING CONSTRUCTION OF BERMS WILL BE HYDROSEEDED AS SEGMENTS ARE FINAL GRADED. BERMS OVERLYING VARIANCE AREAS WILL BE HYDROSEEDED IMMEDIATELY UPON COMPLETION. HYDROSEEDING AREAS WILL BE INSPECTED PERIODICALLY TO ENSURE THAT SOIL-STABILIZING VEGETATION IS ESTABLISHED. SUPER SILT FENCE/SILT SOXX WILL NOT BE REMOVED FROM AROUND A BERM UNTIL VEGETATION IS ESTABLISHED. ONCE VEGETATION IS ESTABLISHED IN AN AREA, PERIODIC INSPECTION WILL CONTINUE TO ENSURE THAT POTENTIAL PROBLEM AREAS ARE ADDRESSED, AND THAT VEGETATIVE COVER IS MAINTAINED. EROSION GULLIES AND SLOUGH AREAS WILL BE REPAIRED AND RESEEDED PROMPTLY.
 - B. VARIANCES NOTED ABOVE REFER TO APPROVED VARIANCES GRANTED BY PA DEP IN SETBACKS REDUCTIONS PROPOSED IN THE APPROVED SURFACE MINING PERMIT.

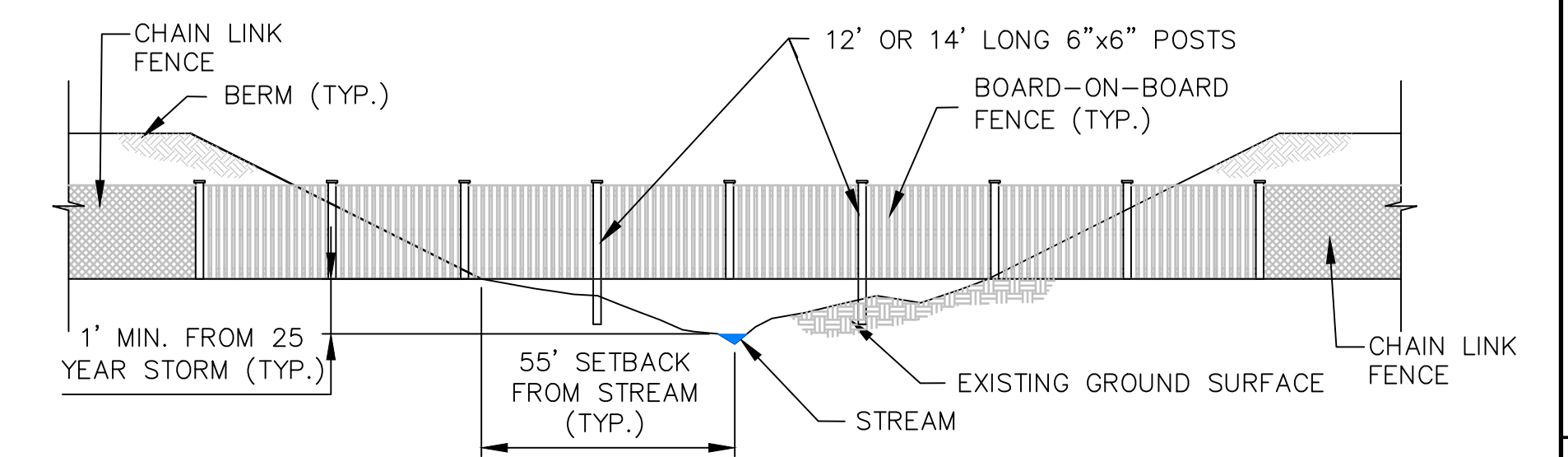
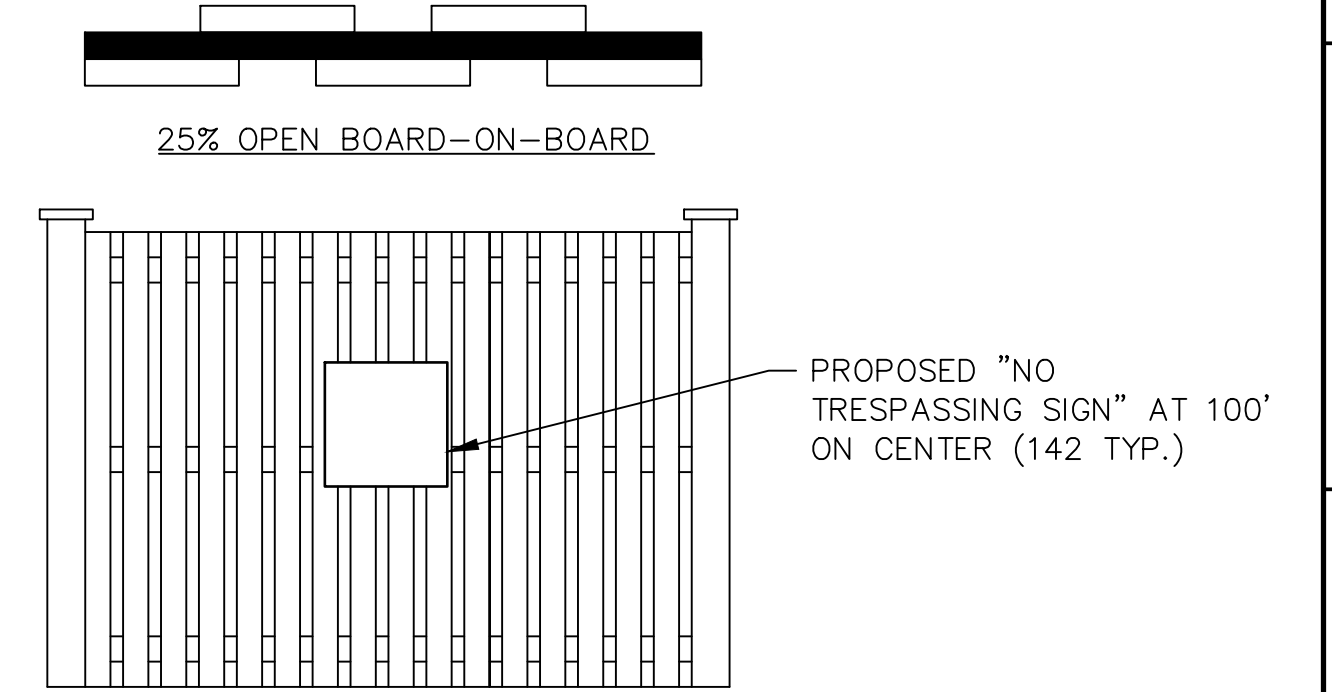


SUPER SILT FENCE DETAIL (TYP)
NOT TO SCALE

1. SILT FENCE MUST BE CONSTRUCTED ACCORDING TO THE ABOVE DETAIL.
2. SILT FENCE MUST BE INSTALLED PARALLEL TO EXISTING CONTOURS OR BE CONSTRUCTED IN LEVEL ALIGNMENTS BENEATH DISTURBED AREAS. ENDS OF FENCING MUST BE EXTENDED TEN FEET, TRAVELLING UPSLOPE AT 45° TO THE ALIGNMENT
3. SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 OF THE ABOVE GROUND HEIGHT OF THE SILT FENCE.
4. ANY SILT FENCE WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE REPLACED WITH ROCK FILTER OUTLETS IMMEDIATELY.

JOINING FENCE SECTIONS

BOARD-ON-BOARD FENCE PANEL DETAIL
NOT TO SCALE



BOARD-ON-BOARD FENCE DETAIL (TYP)
NOT TO SCALE

- NOTES:
1. BOARD ON BOARD FENCE AS SHOWN ABOVE HAS BEEN REQUESTED AND APPROVED BY PA DEP DURING THE SURFACE MINING PERMIT APPROVAL PROCESS.
 2. THE PROPOSED BOARD ON BOARD FENCE IS TO BE UTILIZED IN THE BREAK IN THE SCREENING BERM ALONG HOFFMANVILLE ROAD ONLY.

PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP, MONTGOMERY COUNTY, PA

PREPARED FOR: GIBALTAR ROCK, INC.

PREPARED BY: EarthRes ENGINEERING AND SCIENCE

EROSION AND SEDIMENT CONTROL DETAILS

FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY

CHECKED BY: JCA/1

PROJECT NO: 021027.029

DATE: 10/19/2015

DRAWING NUMBER: C-27

DATE: 10/19/17

REVISIONS: JSC REVISED PER TWP COMMENTS & 12/9/15 PCM

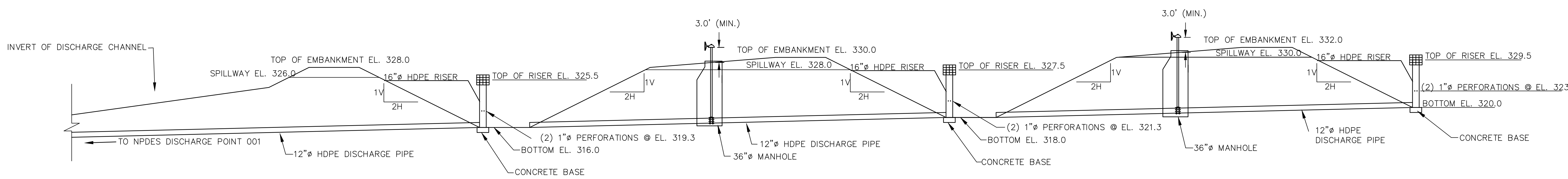
BY: JSC

DATE: 12/9/15

NO. 01

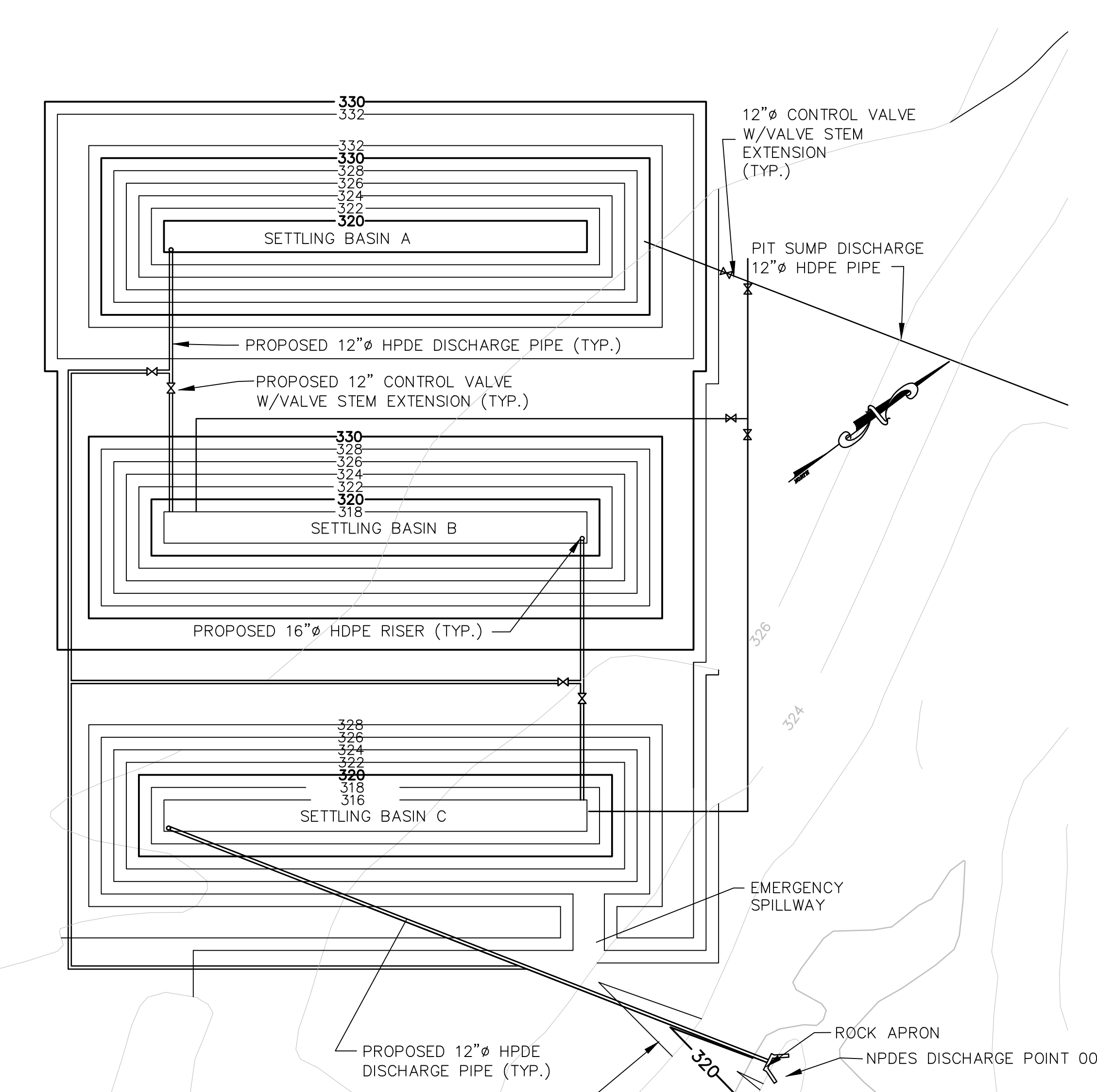
DAVID F. ALLEN, P.E. LICENSE NO. 05102

SHEET 27 OF 34



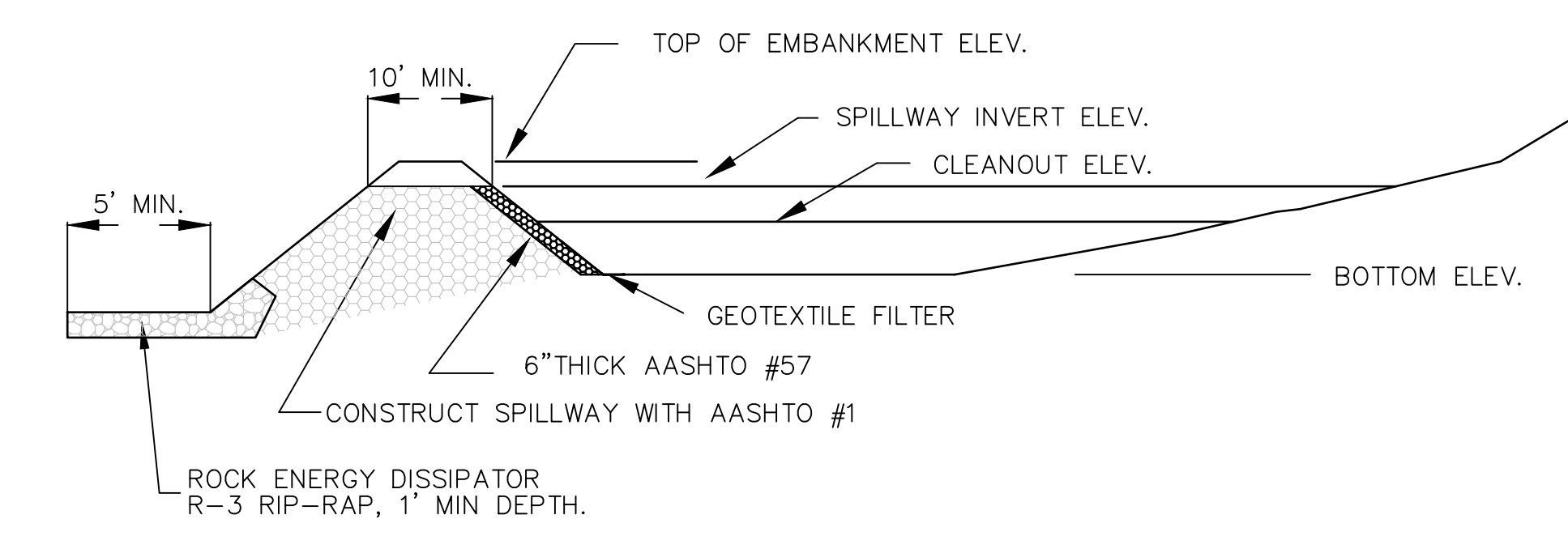
SETTLING BASINS PRINCIPAL SPILLWAY SECTION
NOT TO SCALE

SETTLING BASIN	RISER			BARREL			EMBANKMENT		CLEANOUT ELEV. (FT)	BOTTOM ELEV. (FT)	EMERGENCY SPILLWAY INVERT (FT)	BASIN (BOTTOM) DIMENSIONS L X W (FT.)	STORAGE VOLUME (CF)		
	DIA (IN)	INLET RCE (FT)	MAT'L	DIA (IN)	INLET BIE (FT)	MAT'L	LENGTH BI (FT)	OUTLET BOE (FT)							
BASIN A	16	329.5	HDPE	12	320.0	HDPE	85.0	318.0	332.0	10	323.3	320.0	330.0	135 x 10	47,720
BASIN B	16	327.5	HDPE	12	318.0	HDPE	85.0	316.0	330.0	10	321.3	318.0	328.0	135 x 10	47,720
BASIN C	16	325.5	HDPE	12	316.0	HDPE	250.0	313.0	328.0	10	319.3	316.0	326.0	135 x 10	47,720



SETTLING BASINS - PLAN VIEW
SCALE: 1"=30'

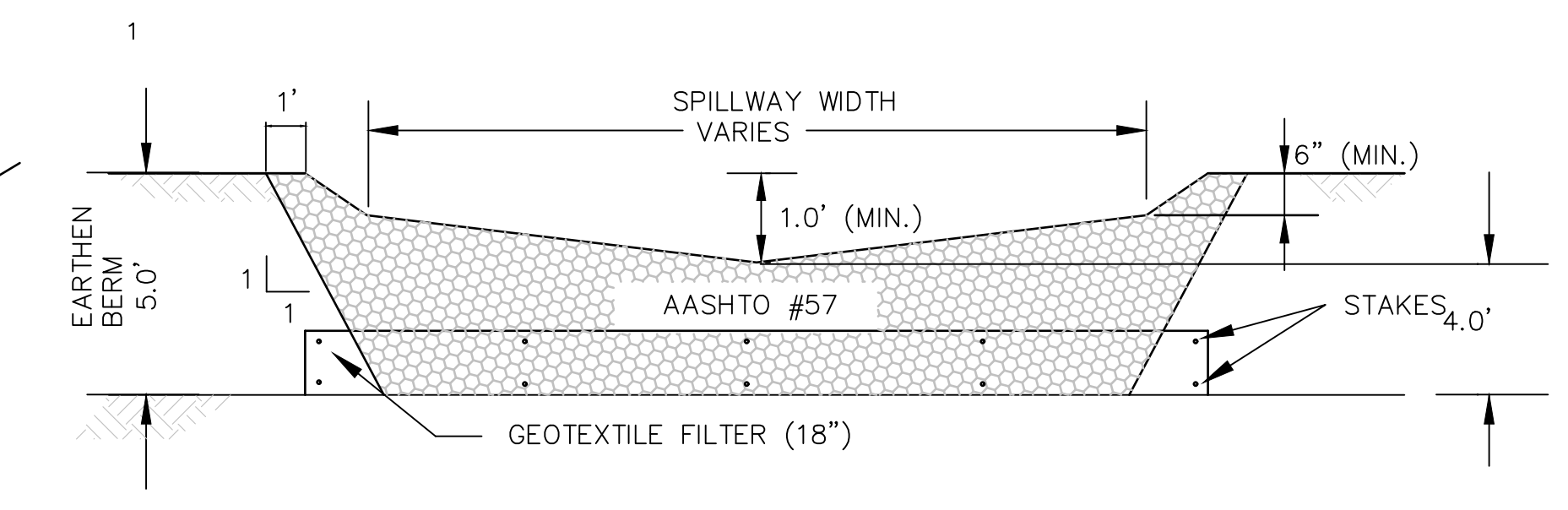
- LEGEND**
- 340 — EXISTING 10' GRADE CONTOUR
 - 450 — PROPOSED 10' GRADE CONTOUR
 - PROPOSED BASIN DISCHARGE PIPING
 - PROPOSED QUARRY SUMP DISCHARGE PIPING
 - ⊗ PROPOSED CONTROL VALVE



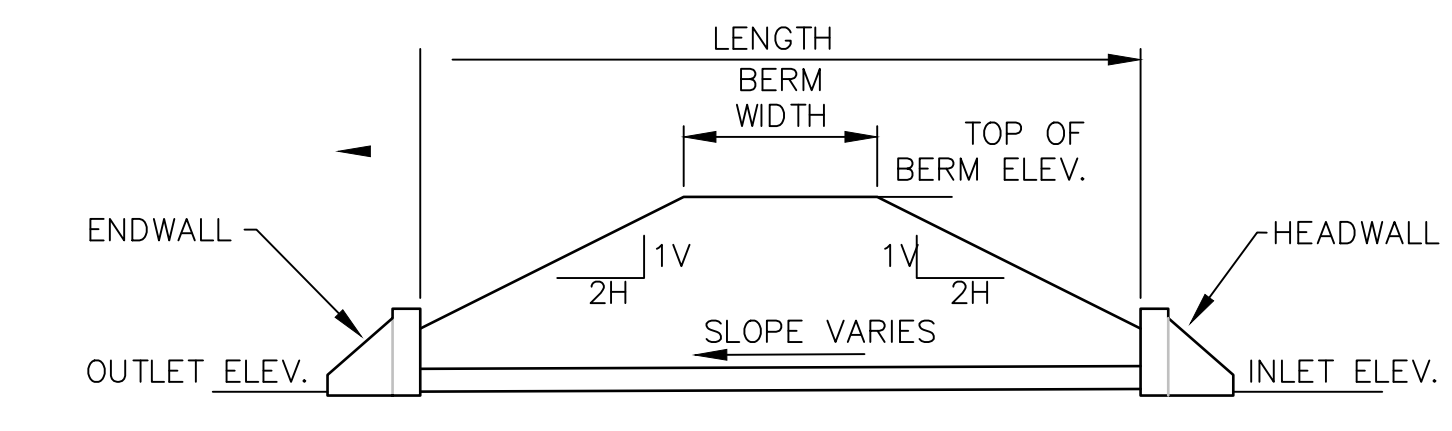
SECTION THROUGH TRAP OUTLET
NOT TO SCALE

SEDIMENT TRAPS NO. 1 AND NO. 3 THROUGH NO. 9 SECTIONS
NOT TO SCALE

SEDIMENT I.D.	EMBANKMENT ELEV. (FT)	WIDTH (FT)	CLEANOUT ELEV. (FT)	BOTTOM ELEV. (FT)	EMBANKMENT SPILLWAY INVERT (FT)	BASIN (BOTTOM) DIMENSIONS L X W (FT.)	STORAGE VOLUME (CF)
TRAP NO. 3	332.0	10	328.19	327.0	331.0	72 x 36	14,455
TRAP NO. 4	352.0	10	348.07	347.0	351.0	72 x 36	14,455
TRAP NO. 5	320.0	10	315.83	315.0	319.0	72 x 38	19,023
TRAP NO. 6	320.0	10	305.80	315.0	319.0	62 x 124	18,368
TRAP NO. 7	321.16	10	313.81	315.0	319.0	72 x 36	19,023
TRAP NO. 8	329.0	10	326.04	325.0	328.0	64 x 31	7,822
TRAP NO. 9	328.0	10	324.09	323.0	327.0	66 x 28	14,846
TRAP NO. 10	336.34	10	333.15	333.0	335	40 x 74	7,575

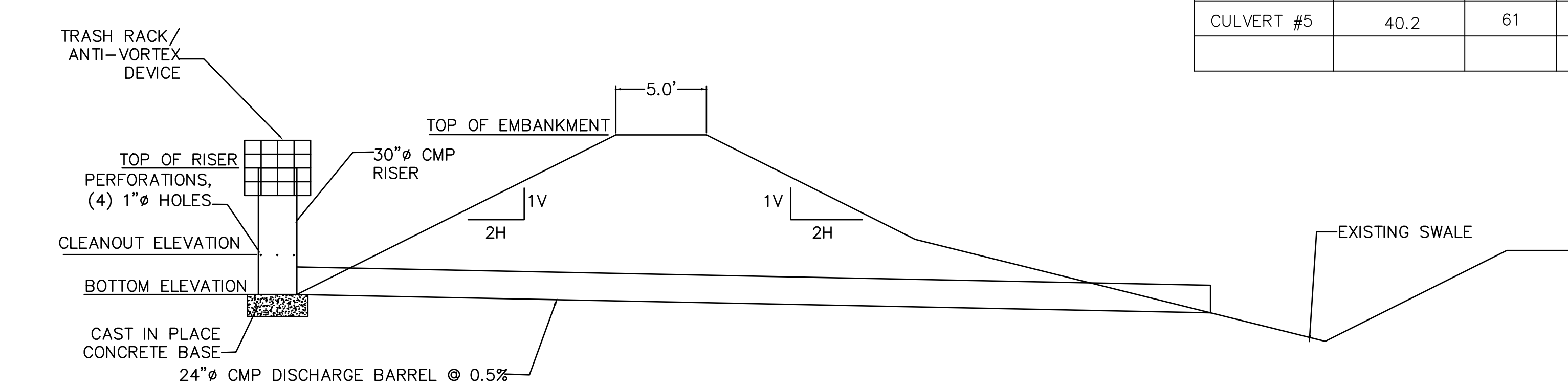


SECTION THROUGH TRAP EMBANKMENT
NOT TO SCALE



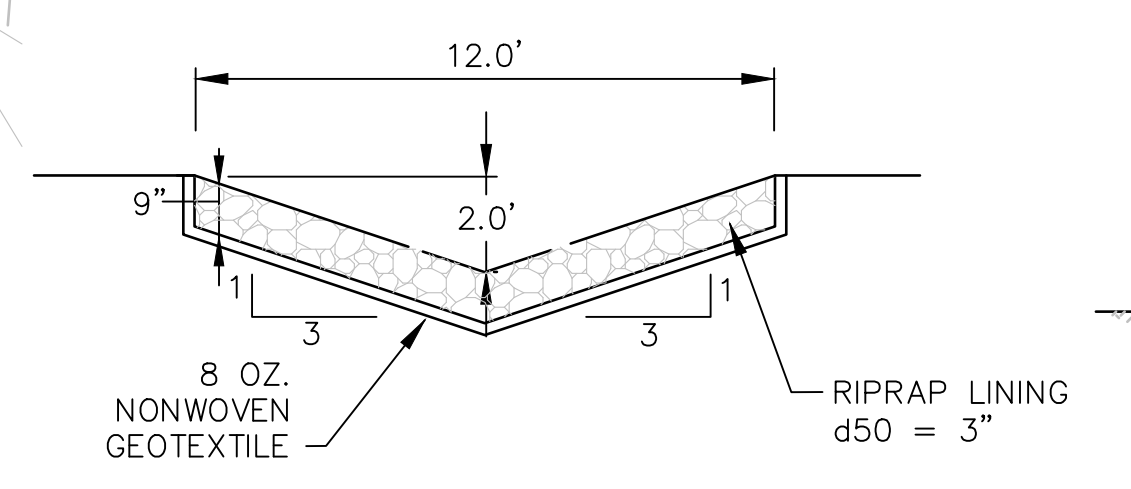
TYPICAL DRAINAGE SWALE DISCHARGE PIPE
NOT TO SCALE

CULVERT #5	FLOW (CFS)	LENGTH	INLET ELEV.	OUTLET ELEV.	TOP OF BERM ELEV.	SLOPE (%)	BERM WIDTH	PIPE (RCP)
	40.2	61	305.5	303.5	317.0	3.3	10'	30"

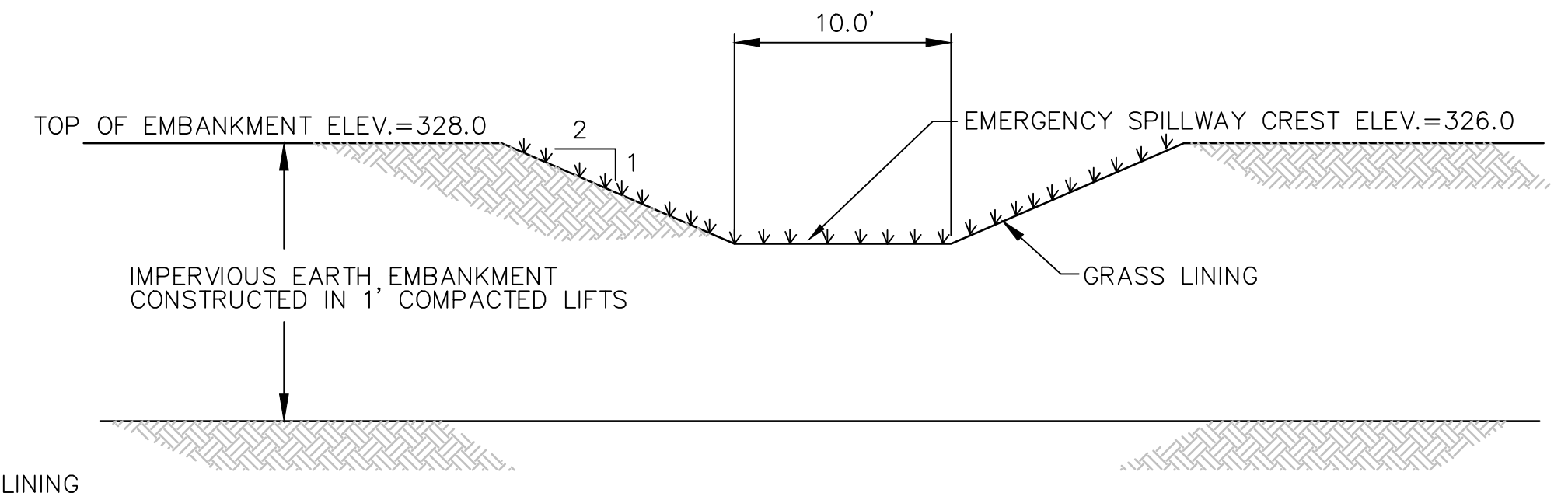


SEDIMENT TRAP NO. 2 SECTION
NOT TO SCALE

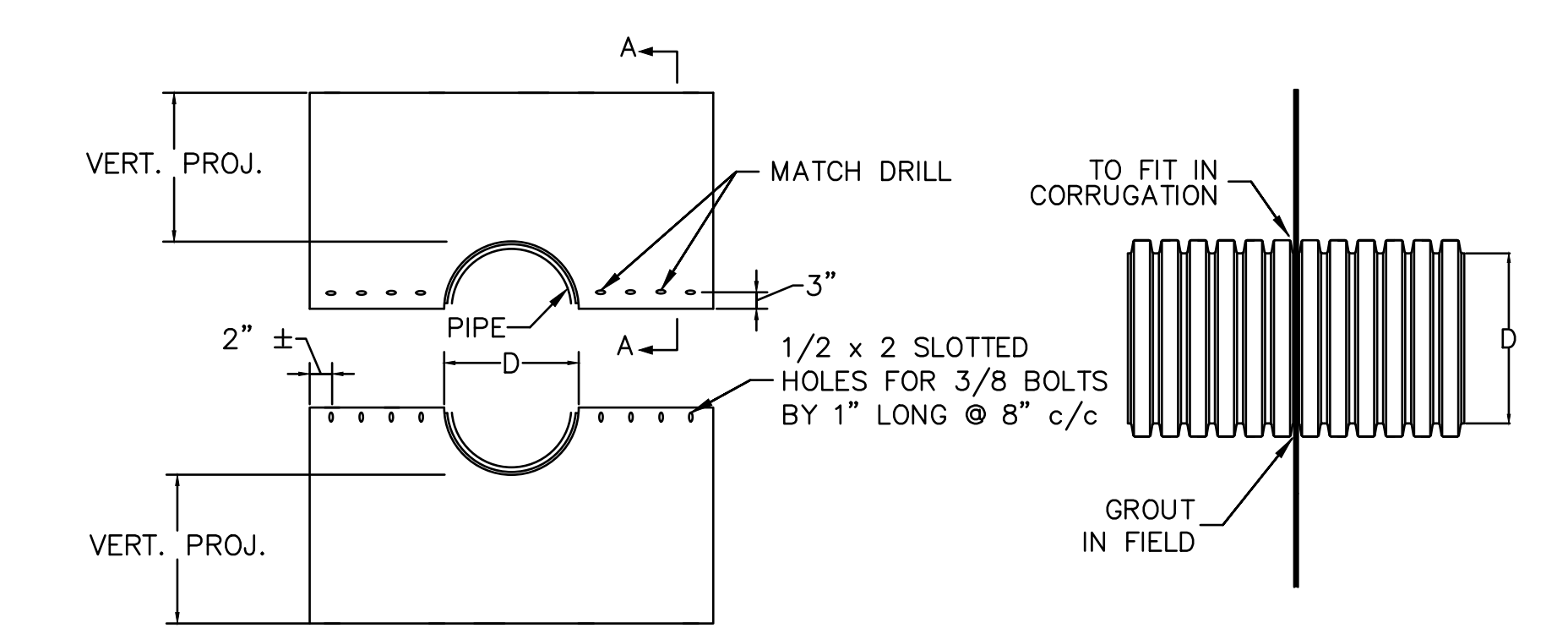
SEDIMENT TRAP NO. 2	RISER			BARREL			EMBANKMENT		CLEANOUT ELEV. (FT)	BOTTOM ELEV. (FT)	BASIN (BOTTOM) DIMENSIONS L X W (FT.)	STORAGE VOLUME (CF)	DEWATERING TIME (DAYS)		
	DIA (IN)	INLET (FT)	MAT'L	DIA (IN)	INLET (FT)	MAT'L	LENGTH (FT)	OUTLET (FT)							
	30	293.0	CMP	24	291.42	CMP	164.0	290.6	295.0	5	290.0	289.0	82 x 41	17,700	4.44



SETTLING BASIN C EMERGENCY SPILLWAY DISCHARGE CHANNEL
NOT TO SCALE



SETTLING BASIN C EMERGENCY SPILLWAY
NOT TO SCALE



TYPICAL TWO-PIECE HDPE DIAPHRAGM
TYPICAL HDPE ANTI-SEEP COLLARS
NOT TO SCALE

DISCHARGE PIPE NO.	PIPE DIA. (IN.)	VERT. PROJ. (FT)	NUMBER OF COLLARS	SPACING (FT)
BASIN C	12	2.25	2	11

PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA
 PREPARED FOR: GIBALTAR ROCK, INC.
 PREPARED BY: EarthRes ENGINEERING AND SCIENCE
 EROSION AND SEDIMENT CONTROL DETAILS
 FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY
 DRAWN BY: [Name] CHECKED BY: [Name] DATE: 10/19/2015 PROJECT NO: 021027.029 DRAWING NUMBER: C-28
 SHEET 28 OF 34
 REVISIONS: 18/15/17 JSC REVISED PER TWP COMMENTS & 12/9/15 PCM BY: [Name] DATE: [Date] NO. [Number] INCL. [Number]

GENERAL NOTES – MAINTENANCE REQUIREMENTS

- EROSION AND SEDIMENTATION CONTROLS MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE DISTURBANCE IN TRIBUTARY AREAS UPSLOPE.
- TEMPORARY EROSION AND SEDIMENTATION CONTROLS MUST BE REMOVED AFTER DISTURBED AREAS ARE STABILIZED. STABILIZED MEANS THAT AT LEAST 70% OF PERMANENT VEGETATION HAS BEEN ESTABLISHED. AREAS DISTURBED DURING REMOVAL OF CONTROLS MUST BE REPAIRED AND STABILIZED IMMEDIATELY.
- ANY TOPSOIL STOCKPILED WHICH WILL REMAIN FOR MORE THAN TWENTY DAYS MUST BE HYDROSEEDED UPON CESSATION OF ACTIVITY. DURING NON-GERMINATING PERIODS MULCH MUST BE APPLIED AT THE RECOMMENDED MINIMUM RATE OF 3.0 TONS PER ACRE AND SEEDED WHEN CONDITIONS PERMIT.
- UNTIL CONSTRUCTION IS COMPLETE AND PERMANENT STABILIZATION HAS BEEN ACHIEVED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE INCLUDES INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH STORM EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEANOUT, REPAIR, REPLACEMENT, REGRADEING, RESEEDING, REMULCHING, AND RESETTING, MUST BE PERFORMED WITHIN 48 HOURS OF COMPLETION OF A STORM EVENT.
- THE PERMITTEE WILL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, STABILIZATION, AND MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROLS AND RELATED ITEMS INCLUDED WITHIN THIS APPLICATION.
- ADDITIONAL MEASURES MAY BE IMPLEMENTED BY THE PERMITTEE TO ADEQUATELY REMOVE SEDIMENT FROM ON-SITE FLOWS PRIOR TO DISCHARGE.
- ANY SEDIMENT REMOVED FROM THE TRAPS OR SILT FENCE WILL BE HAULED TO THE OVERBURDEN STOCKPILE AREAS.
- ANY PROJECT WASTES WILL BE REMOVED FROM THE SITE. FOR OFFSITE DISPOSAL, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED EROSION AND SEDIMENTATION CONTROL PLAN FROM THE APPROPRIATE CONSERVATION DISTRICT.
- ALL DISTURBED AREAS WILL BE PERMANENTLY OR TEMPORARILY STABILIZED DEPENDING UPON THE NATURE OF THE WORK REMAINING WITHIN 20 DAYS OF THE MOST RECENT EARTHMOVING ACTIVITY IN THAT AREA, WEATHER PERMITTING.
- ALL STOCKPILE AREAS, SEDIMENT TRAPS, SETTLING BASINS, ACCESS ROADS, EARTH BERMS, AND STORMWATER CHANNELS MUST BE STABILIZED IMMEDIATELY UPON PLACEMENT.
- FAILURE TO ESTABLISH PERMANENT VEGETATION IN ANY STABILIZED AREA WILL RESULT IN CONSTRUCTION OF A PERMANENT TRAP/BASIN THAT WILL REMAIN IN PLACE UNTIL OR UNLESS VEGETATION IS ESTABLISHED IN THAT AREA.

STANDARD EROSION AND SEDIMENT CONTROL PLAN NOTES

- VEHICLES AND EQUIPMENT MAY ONLY ENTER AND EXIT THE CONSTRUCTION SITE VIA A STABILIZED ROCK CONSTRUCTION ENTRANCE.
- IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER WILL BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE PADEP DISTRICT MINING OFFICE WILL BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.
- STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.
- THE OPERATOR SHALL ASSURE THAT THE APPROVED EROSION AND SEDIMENT CONTROL PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
- FAILURE TO CORRECTLY INSTALL SEDIMENT CONTROL FACILITIES OR FAILURE TO PREVENT SEDIMENT LADEN RUNOFF FROM LEAVING THE CONSTRUCTION SITE OR FAILURE TO TAKE CORRECTIVE ACTIONS TO IMMEDIATELY RESOLVE FAILURES OF SEDIMENT CONTROL FACILITIES MAY RESULT IN ADMINISTRATIVE, CIVIL AND/OR CRIMINAL PENALTIES BEING INSTITUTED BY THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION AS DEFINED IN SECTION 602 OF THE CLEAN STREAMS LAW OF PENNSYLVANIA. THE CLEAN STREAMS LAW PROVIDES FOR UP TO \$10,000 PER DAY IN CIVIL PENALTIES, UP TO \$10,000 IN SUMMARY CRIMINAL PENALTIES, AND UP TO \$25,000 IN MISDEMEANOR CRIMINAL PENALTIES FOR EACH VIOLATION.
- UNTIL THE SITE ACHIEVES FINAL STABILIZATION, THE OPERATOR SHALL ASSURE THAT THE BEST MANAGEMENT PRACTICES ARE IMPLEMENTED, OPERATED, AND MAINTAINED PROPERLY AND COMPLETELY. MAINTENANCE SHALL INCLUDE INSPECTIONS OF ALL BEST MANAGEMENT PRACTICE FACILITIES. THE OPERATOR WILL MAINTAIN AND MAKE AVAILABLE TO THE PADEP DISTRICT MINING OFFICE COMPLETE, WRITTEN INSPECTION LOGS OF ALL THOSE INSPECTIONS. ALL MAINTENANCE WORK, INCLUDING CLEANING, REPAIR, REPLACEMENT, RE-GRADING, AND RE-STABILIZATION SHALL BE PERFORMED IMMEDIATELY.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- BEFORE INITIATING ANY REVISIONS TO THE APPROVED EROSION AND SEDIMENT CONTROL PLAN OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED E&S CONTROL PLAN, THE OPERATOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM PADEP.
- THE OPERATOR SHALL ASSURE THAT AN EROSION AND SEDIMENT CONTROL PLAN HAS BEEN PREPARED, APPROVED BY THE PADEP DISTRICT MINING OFFICE, AND IS BEING IMPLEMENTED AND MAINTAINED FOR ALL SOIL AND/OR ROCK SPOIL AND BORROW AREAS, REGARDLESS OF THEIR LOCATIONS.
- ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG DISCHARGING OVER NON-DISTURBED AREAS.
- THE CONTRACTOR IS ADVISED TO BECOME THOROUGHLY FAMILIAR WITH THE PROVISIONS OF THE APPENDIX 64, EROSION CONTROL RULES AND REGULATIONS, TITLE 25, PART 1, DEPARTMENT OF ENVIRONMENTAL PROTECTION, SUBPART C, PROTECTION OF NATURAL RESOURCES, ARTICLE III, WATER RESOURCES, CHAPTER 102, EROSION CONTROL.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN MUST BE AVAILABLE AT THE PROJECT SITE AT ALL TIMES.
- EROSION AND SEDIMENT BMPs MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THE TRIBUTARY AREAS OF THOSE BMPs. E&SPCPM P168
- AFTER FINAL SITE STABILIZATION HAS BEEN ACHIEVED, TEMPORARY EROSION AND SEDIMENT BMP CONTROLS MUST BE REMOVED. AREAS DISTURBED DURING REMOVAL OF THE BMPs MUST BE STABILIZED IMMEDIATELY. E&SPCPM P168
- AT LEAST 7 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, THE OPERATOR SHALL INVITE ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES, THE LANDOWNER, ALL APPROPRIATE MUNICIPAL OFFICIALS, THE EROSION AND SEDIMENT CONTROL PLAN PREPARER, AND THE PADEP DISTRICT MINING OFFICE TO AN ON-SITE MEETING. ALSO, AT LEAST 3 DAYS BEFORE STARTING ANY EARTH DISTURBANCE ACTIVITIES, ALL CONTRACTORS INVOLVED IN THOSE ACTIVITIES SHALL NOTIFY THE PENNSYLVANIA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 FOR BURIED UTILITIES LOCATIONS.
- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED ONLY TO THOSE AREAS DESCRIBED IN EACH STAGE.
- IMMEDIATELY AFTER EARTH DISTURBANCE ACTIVITIES CEASE, THE OPERATOR SHALL STABILIZE ANY AREAS DISTURBED BY THE ACTIVITIES. DURING NON-GERMINATING PERIODS, MULCH MUST BE APPLIED AT THE SPECIFIED RATES. DISTURBED AREAS WHICH ARE NOT AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY VEGETATIVE STABILIZATION SPECIFICATIONS. DISTURBED AREAS WHICH ARE AT FINISHED GRADE OR WHICH WILL NOT BE REDISTURBED WITHIN 1 YEAR MUST BE STABILIZED IN ACCORDANCE WITH THE PERMANENT VEGETATIVE STABILIZATION SPECIFICATIONS.
- AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING AND OTHER MOVEMENTS.

TEMPORARY STABILIZATION & PERMANENT STABILIZATION

- HAY OR STRAW MULCH MUST BE APPLIED AT 3.0 TONS PER ACRE.
- MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED ON ALL SLOPES 3:1 AND STEEPER.
- STRAW MULCH SHALL BE APPLIED IN LONG STRANDS, NOT CHOPPED OR FINELY BROKEN.
- UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENT BMPs MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENT CONTROL BMPs AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, REGRADEING, RESEEDING, REMULCHING, AND RESETTING, MUST BE PERFORMED IMMEDIATELY. IF EROSION AND SEDIMENT CONTROL BMPs FAIL TO PERFORM AS EXPECTED, REPLACEMENT BMPs, OR MODIFICATIONS OF THOSE INSTALLED WILL BE REQUIRED. E&SPCPM P168
- SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES AND IMMEDIATELY STABILIZED, OR PLACED IN TOPSOIL STOCKPILES.
- THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

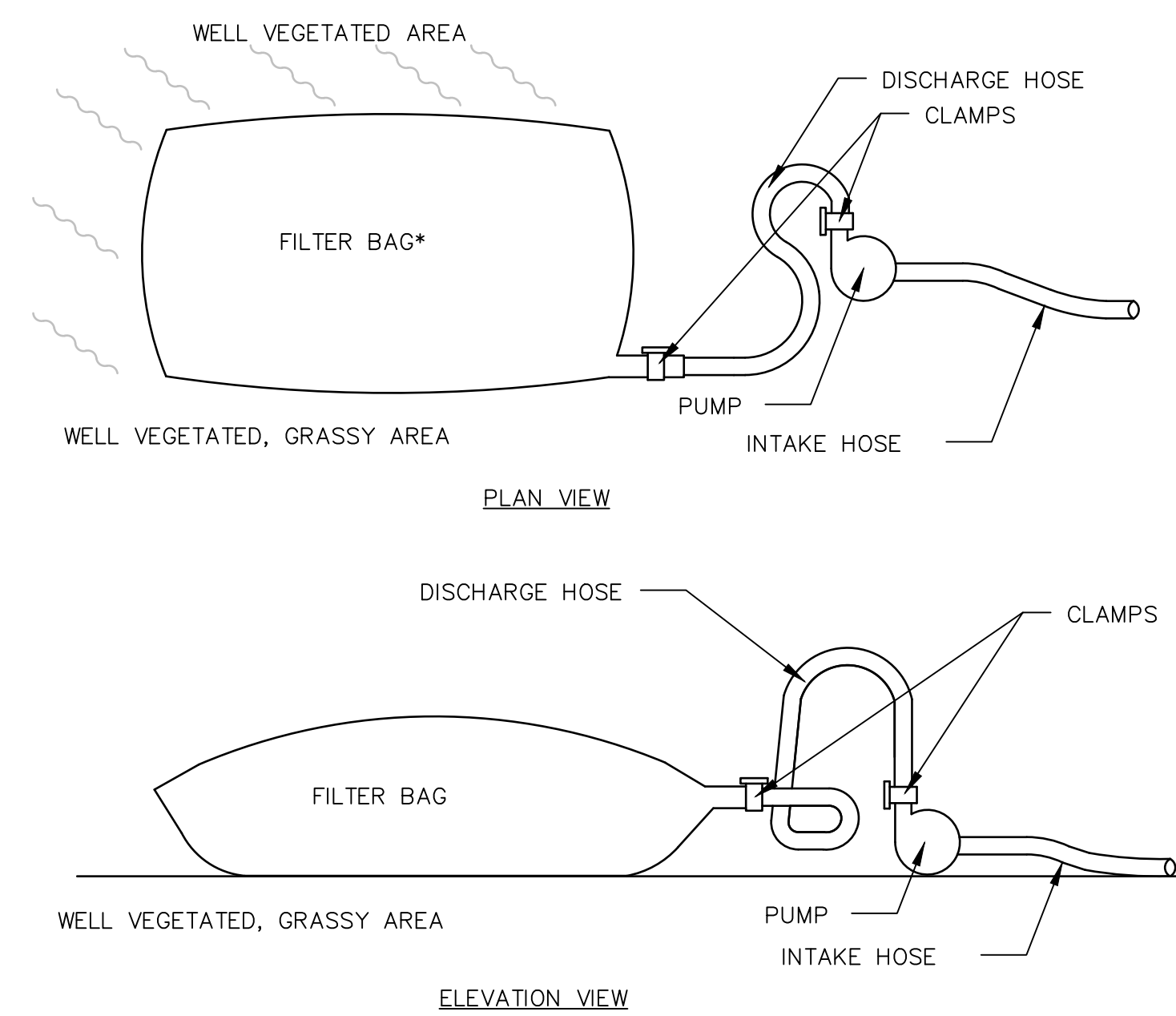
SEEDING SPECIFICATIONS

TEMPORARY SPECIES:	100% ANNUAL RYE GRASS
% PURE LIVE SEED:	98%
APPLICATION RATE:	40 LBS./ACRE
FERTILIZER TYPE:	5-10-10 (N-P-K) FOR HYDROSEEDING APPLICATIONS 10-10-10 (N-P-K) FOR OTHER APPLICATIONS
FERTILIZER APPLICATION RATE:	250 LBS./ACRE (HYDROSEEDING), 150 LBS./ACRE (OTHER APPLICATIONS)
LIMING RATE:	OPTIMUM PH 6.5, IF EXCHANGEABLE ACIDITY > 4 THEN MULTIPLY EXCHANGEABLE ACIDITY BY 840 TO DETERMINE LIMING RATE; IF EXCHANGEABLE ACIDITY < 4 AND PH IS STILL LESS THAN 6.5, THEN ADD 2000 LBS./ACRE HAY OR STRAW / VIRGIN FIBER MULCH – HYDROSEEDER 3.0 TONS/ACRE / 75 LBS. PER 1000 SQUARE FEET
MULCH TYPE:	HAY OR STRAW / VIRGIN FIBER MULCH – HYDROSEEDER
MULCHING RATE:	3.0 TONS/ACRE / 75 LBS. PER 1000 SQUARE FEET
NURSE CROP SPECIES:	SPRING SEEDING USE SPRING OATS, FALL SEEDING USE WINTER RYE
APPLICATION RATE:	OATS 64 LBS./ACRE, RYE 56 LBS./ACRE
PERMANENT SPECIES:	SEE SEED MIXTURE TABLE
% PURE LIVE SEED:	SEE SEED MIXTURE TABLE
APPLICATION RATE:	SEE SEED MIXTURE TABLE
FERTILIZER TYPE:	AS DETERMINED BY SOIL TEST
FERTILIZER APPLICATION RATE:	AS DETERMINED BY SOIL TEST
LIMING RATE:	OPTIMUM PH 6.5, IF EXCHANGEABLE ACIDITY > 4 THEN MULTIPLY EXCHANGEABLE ACIDITY BY 840 TO DETERMINE LIMING RATE; IF EXCHANGEABLE ACIDITY < 4 AND PH IS STILL LESS THAN 6.5, THEN ADD 2000 LBS./ACRE HAY OR STRAW / VIRGIN FIBER MULCH – HYDROSEEDER 3.0 TONS/ACRE / 75 LBS. PER 1000 SQUARE FEET
MULCH TYPE:	ANNUAL RYEGRASS
MULCHING RATE:	64 LBS./ACRE
NURSE CROP SPECIES:	
APPLICATION RATE:	

NOTES:

- IF CONTRACTOR SPECIFIES A SEED WITH A LOWER % PURE LIVE SEED AND IS APPROVED BY OWNER AND/OR ENGINEER, CONTRACTOR SHALL ADJUST APPLICATION RATE TO OBTAIN THE REQUIRED % PURE LIVE SEED SPECIFICATION.
- USE PERMANENT (LAWN) SEED FOR ALL DISTURBED AREAS EXCLUDING DESIGNATED LANDSCAPE RESTORATION AREAS AND THE STORMWATER MANAGEMENT BASIN.
- CONSERVATION PLANTING SEED MIXTURE NO.1 OR NO.2 WILL BE UTILIZED TO ESTABLISH PERMANENT COVER ON THE AFFECTED AREAS. CONSERVATION STRUCTURE SEED MIXTURE NO.3 WILL BE UTILIZED FOR BERMS, POND BANKS AND OCCASIONAL WATER FLOW AREAS. CONSERVATION SEED MIXTURE NO.1 WILL ALSO BE UTILIZED TO STABILIZE THE INSIDE SLOPES OF POND BANKS, POND BOTTOMS AND OTHER FREQUENT WATER FLOW AREAS.
- SEED MIXTURE NO. 1 NOT TO BE USED IN AREAS OF POND BANKS, BOTTOMS, AND OTHER AREAS TYPICALLY EXPERIENCING CONTINUED INUNDATION OR SATURATION.

SEED MIXTURE TABLE				
SEED MIXTURE NO.	SEED MIXTURES	% PURE LIVE SEED	RATE OF APPLICATION (LBS./ACRE)	SEEDING DATED (MONTHS)
1 (SEE NOTE 4)	BIRDSFOOT TREFOIL	98	10	BEFORE MAY 30 OR BETWEEN AUG. 10 & SEPT. 15
	TALL FESCUE	95	35	
	SWITCHGRASS	60	15	
2	WEEPING LOVERGRASS	97	11	BEFORE MAY 30 OR BETWEEN AUG. 10 & SEPT. 15
	BIRDSFOOT TREFOIL	98	10	
3	DEER TONGUE	98	10	BEFORE MAY 30 OR BETWEEN AUG. 10 & SEPT. 15
	VIRGINIA WILD RYE	95	15	
	PERENNIAL RYEGRASS MIX	95	25	

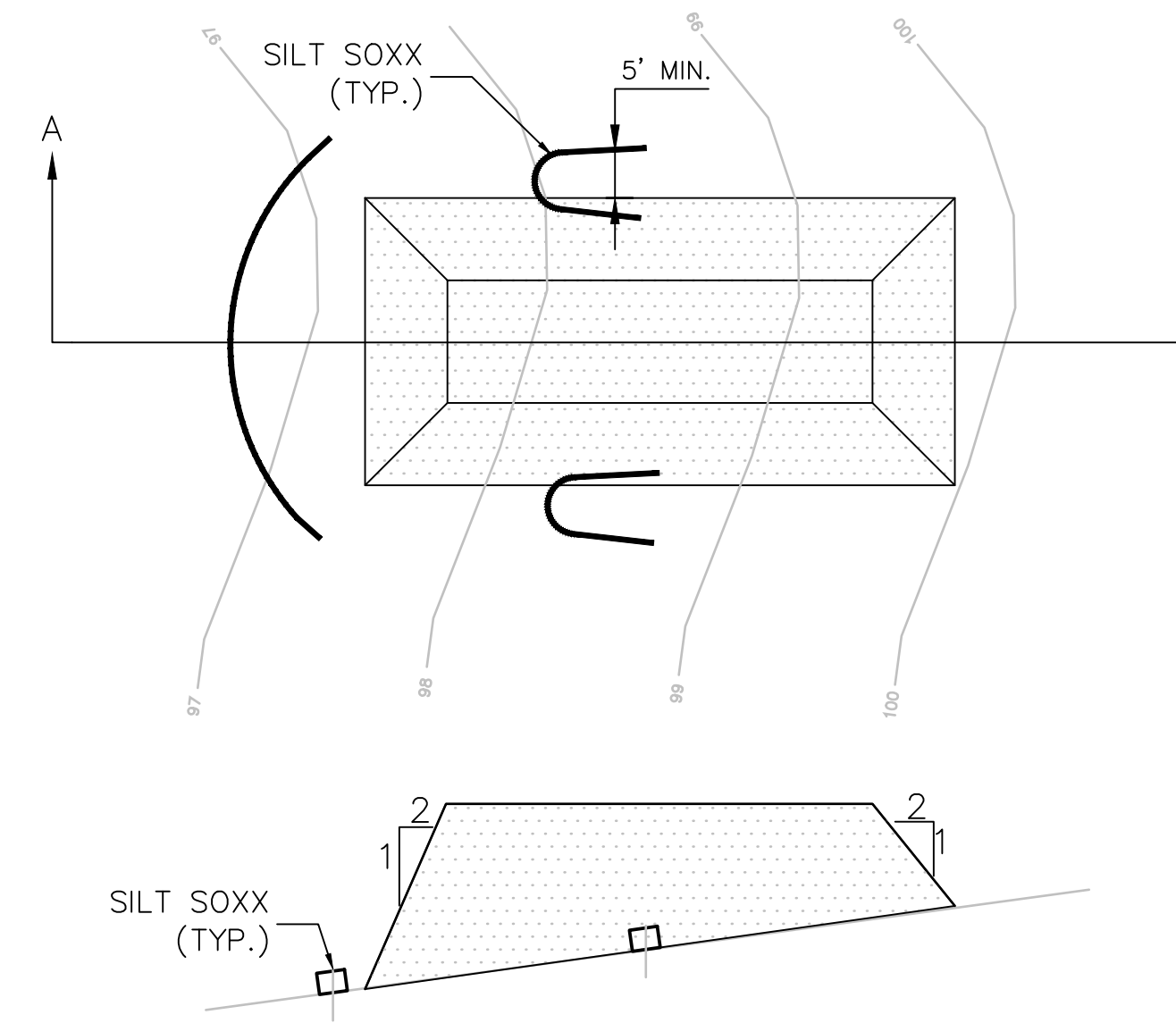


PUMPED WATER FILTER BAG DETAIL

NOT TO SCALE

NOTES:

- DETAIL OBTAINED FROM PA DEP EROSION AND SEDIMENTATION CONTROL PROGRAM MANUAL, STANDARD CONSTRUCTION DETAIL #26.
- FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE SEWN WITH HIGH STRENGTH, DOUBLE STITCHED 'J' TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
- FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME HALF FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT.
- BAGS SHALL BE LOCATED IN WELL VEGETATED AREAS AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
- THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
- THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR ONE-HALF OF THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.

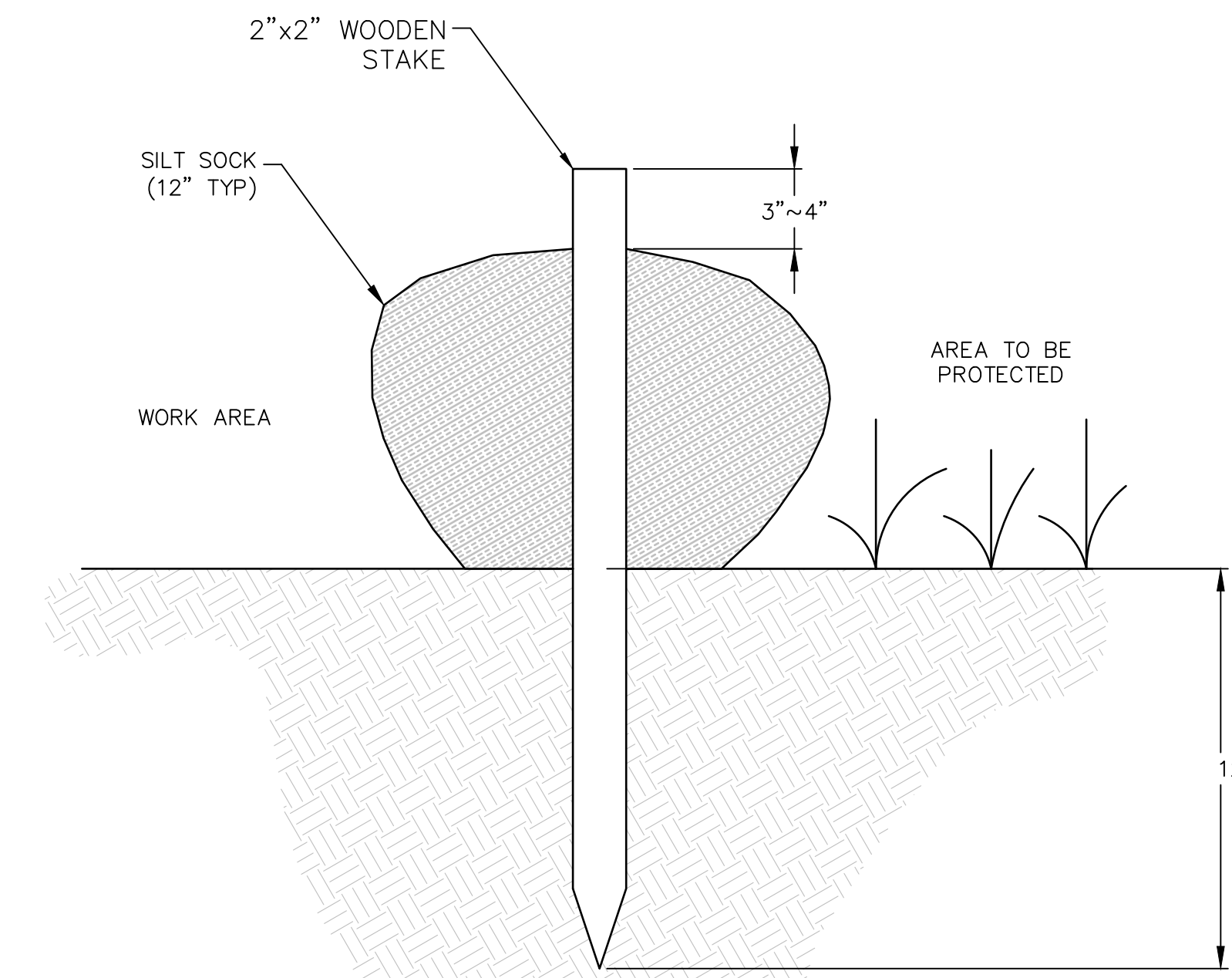


TEMPORARY CONSTRUCTION STOCKPILE DETAIL

NOT TO SCALE

NOTES:

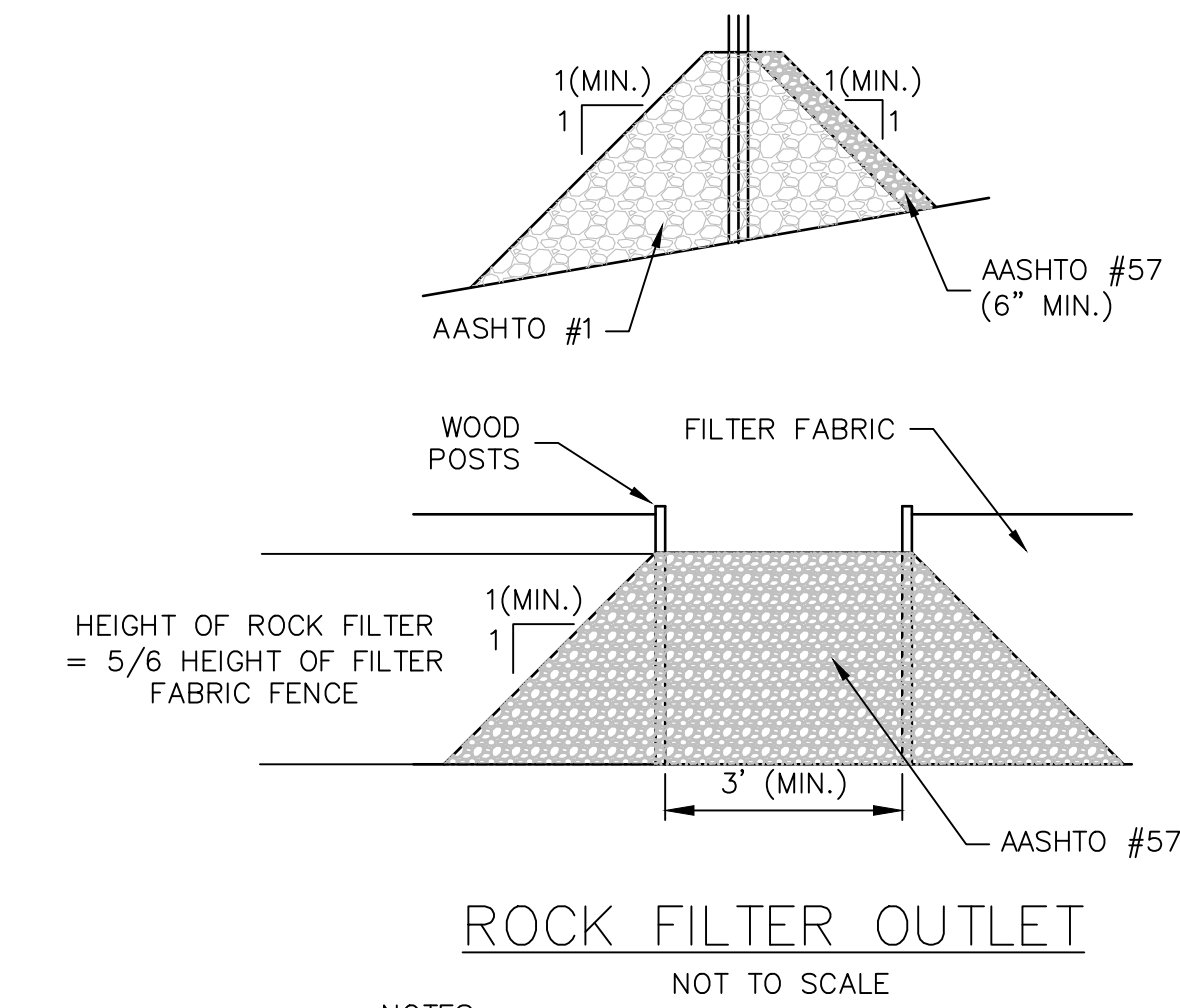
- PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLAN.
- ALL SIDE SLOPES SHALL BE 2 TO 1 OR FLATTER.
- STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH THE MINIMUM STABILIZATION REQUIREMENTS.
- SILT SOXX SHALL BE INSTALLED AS DETAILED HEREON.
- LOCATION OF PROPOSED STOCKPILE WHICH AFFECT EROSION CONTROLS ARE SHOWN SCHEMATICALLY ONLY. ACTUAL STOCKPILE LOCATION MAY CHANGE DURING CONSTRUCTION.



SILT SOXX SEDIMENT BARRIER DETAIL

NOT TO SCALE

GRADE SLOPE PERCENT	MAXIMUM SLOPE LENGTH ABOVE SILTSOXX (FT)				
	8"	12"	24"	32"	SOXX DIAMETER
2 (OR LESS)	600	750	1000	1300	1650
5	400	500	550	650	750
10	200	250	300	400	500
15	140	170	200	325	450
20	100	125	140	260	400
25	80	100	110	200	275
30	60	75	90	130	200
35	60	75	80	115	150
40	60	75	80	100	125
45	40	50	60	80	100
50	40	50	55	65	75



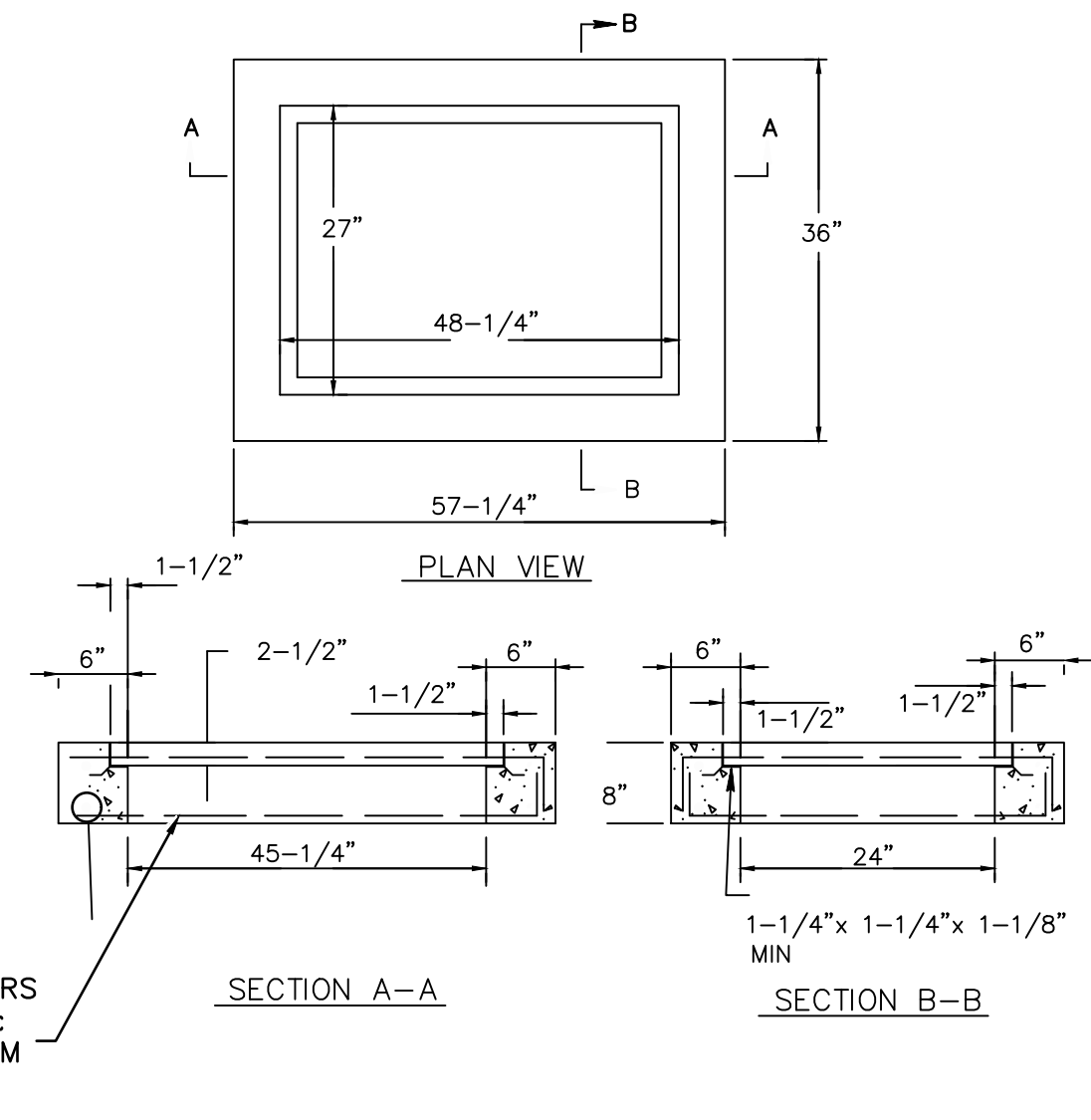
ROCK FILTER OUTLET

NOT TO SCALE

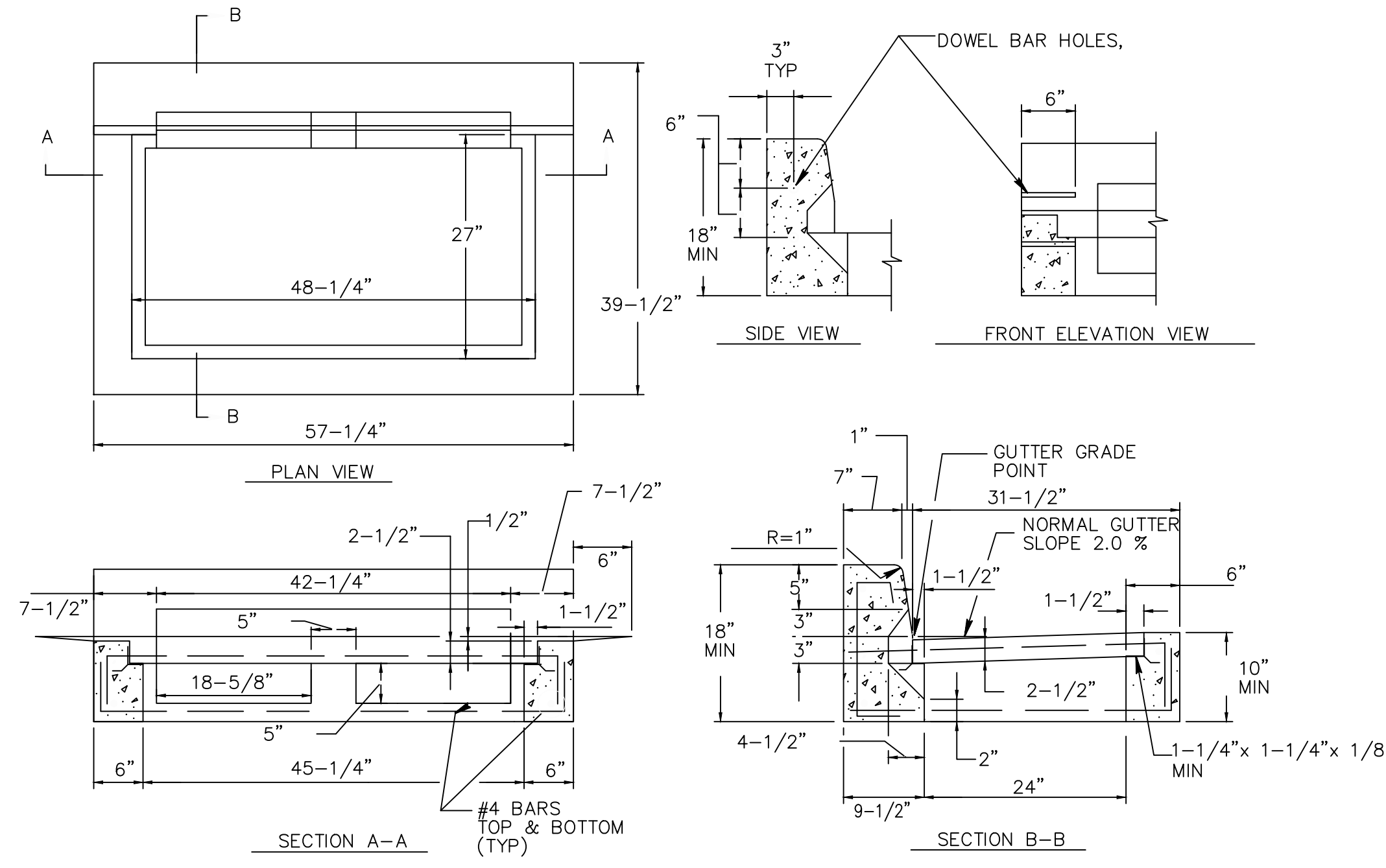
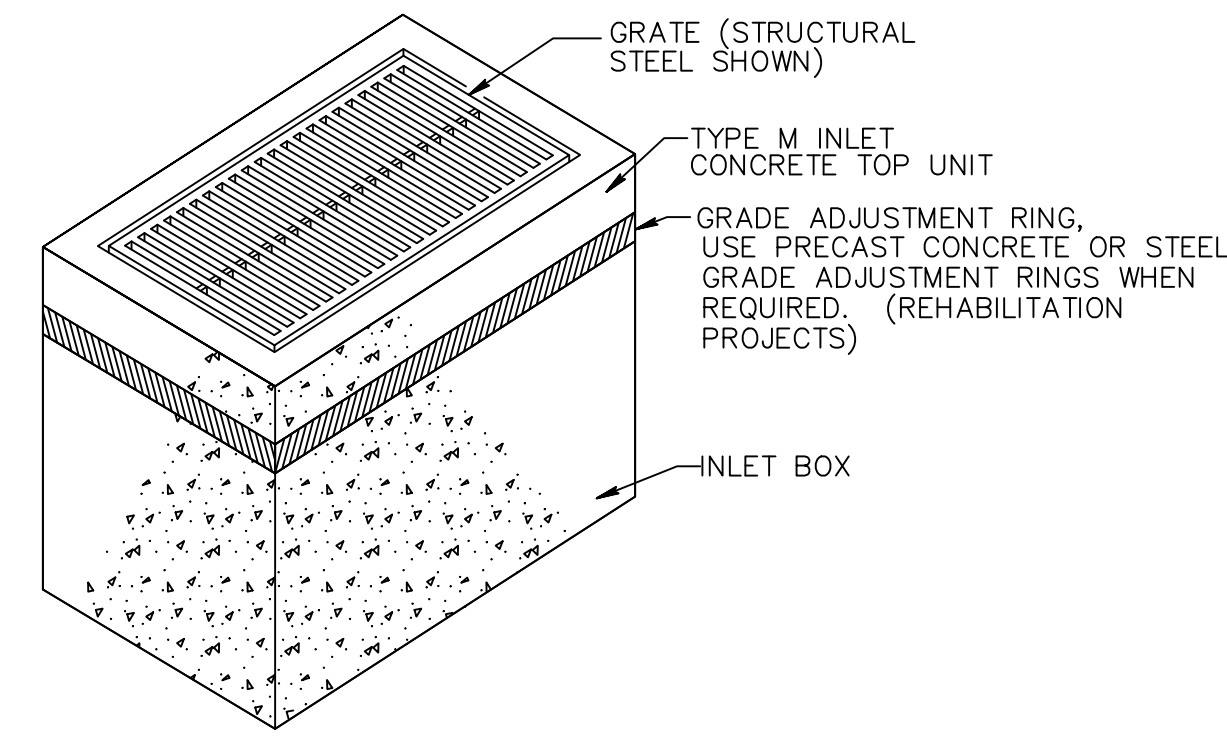
NOTES:

- SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

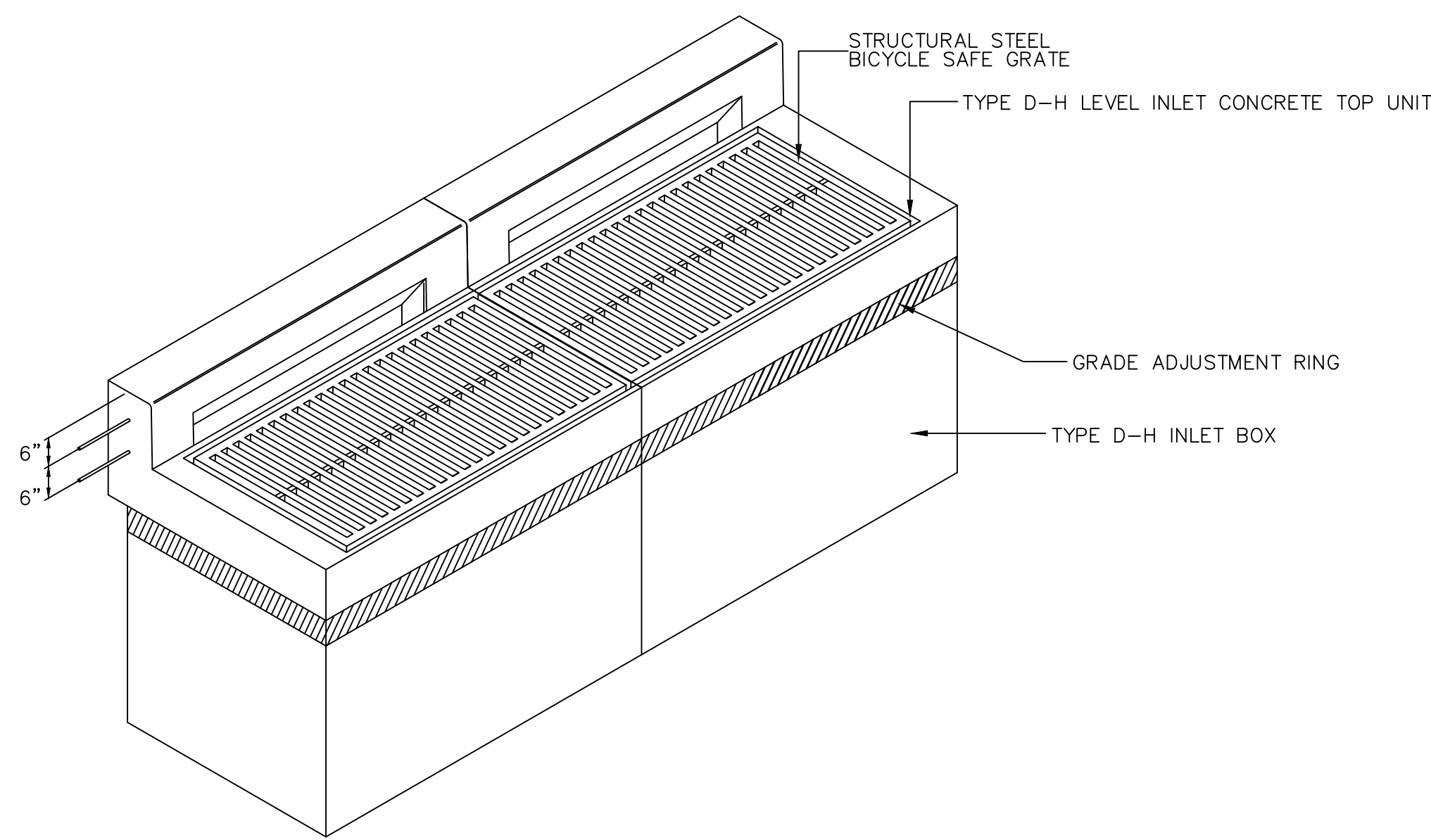
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NO.	DATE	BY	DESCRIPTION						
1	8/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM						
<p>PREPARED FOR:</p> <p>GIBALTAR ROCK, INC.</p>	<p>PREPARED BY:</p> <p>EarthRes ENGINEERING AND SCIENCE</p>								
<p>CHECKED BY:</p> <p>2/21</p>	<p>PROJECT NO.:</p> <p>021027.029</p>								
<p>DRAWN BY:</p> <p>1/11</p>	<p>DRAWING NUMBER:</p> <p>C-29</p>								
<p>DATE:</p> <p>10/19/2015</p>	<p>SHEET 29 OF 34</p>								



TYPE 'M' INLET AND FRAME DETAIL
NOT TO SCALE

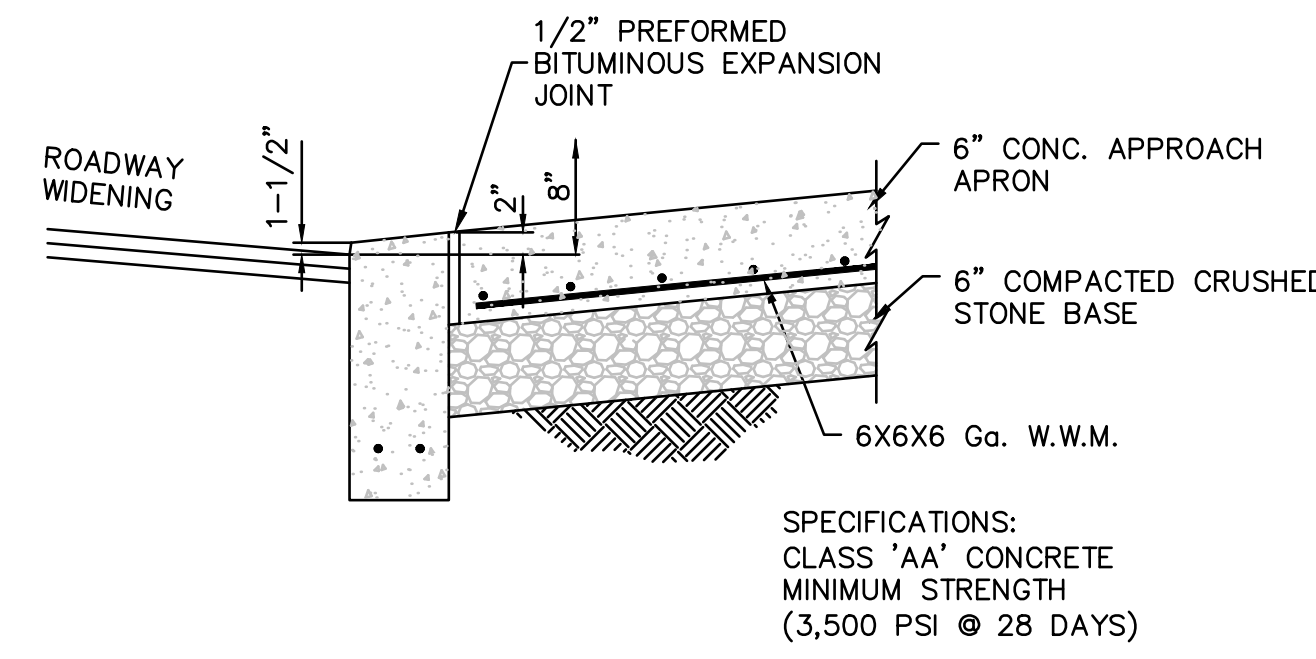


TYPE 'C' INLET AND FRAME DETAIL
NOT TO SCALE



DOUBLE INLET DETAIL
NOT TO SCALE

NOTES:
1. DOUBLE INLET SHOWN ABOVE HAS BEEN REFERENCED FROM PENNDOT RC-STANDARDS, RC-46M, PG. 5 OF 44 "CONCRETE TOP UNIT, TYPE D-H LEVEL".



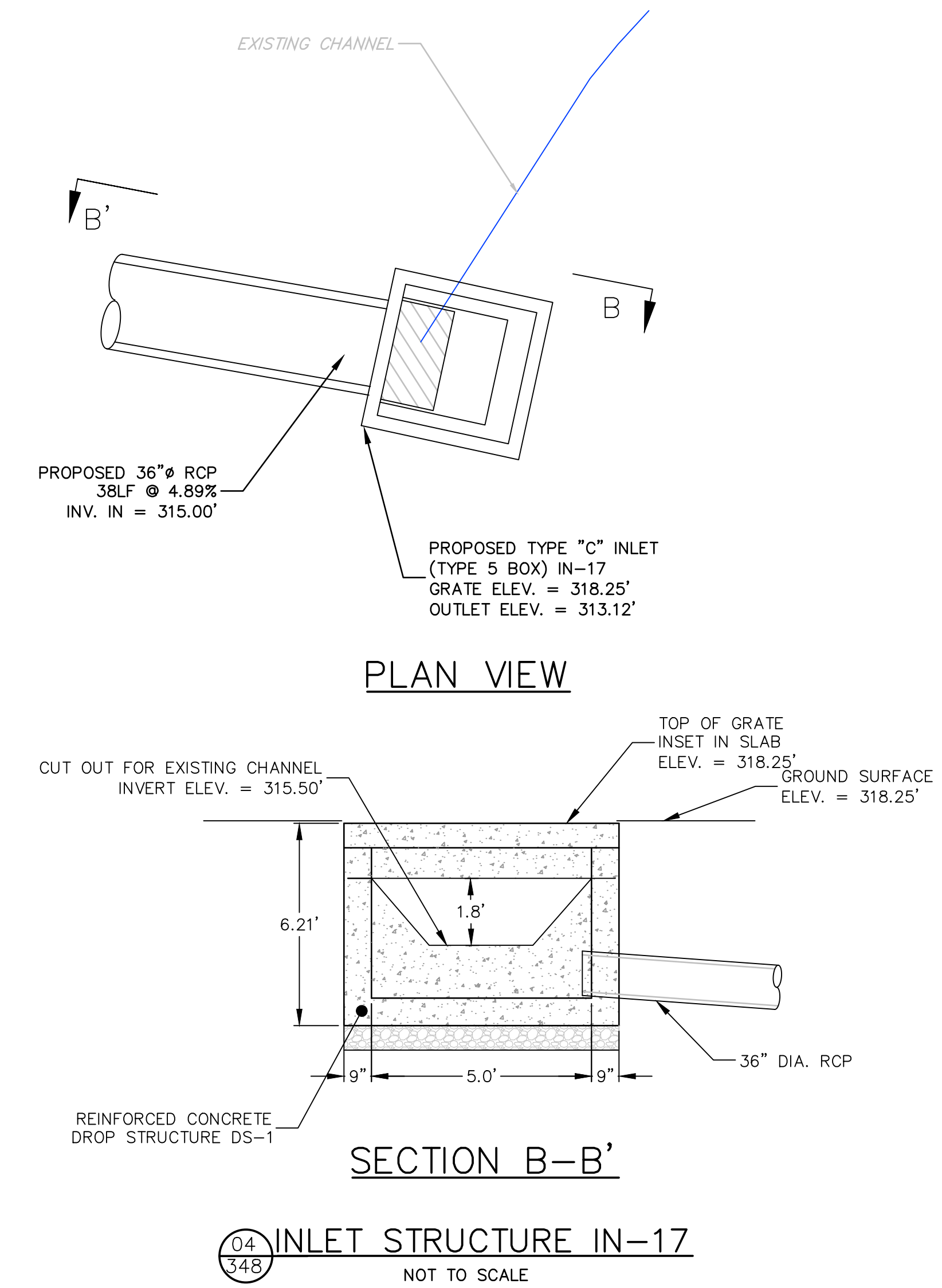
DRIVEWAY APRON DETAIL
NOT TO SCALE



EX. CULVERT #4 PHOTO. 1
NOT TO SCALE, LOOKING NORTH



EX. CULVERT #4 PHOTO. 2
NOT TO SCALE, LOOKING SOUTH



INLET STRUCTURE IN-17
NOT TO SCALE

DRAWN BY: /nil	CHECKED BY: /DPA
DATE: 10/19/2015	PROJECT NO.:021027.029
DRAWING NUMBER: C-30	SHEET 30 OF 34

EROSION AND SEDIMENT CONTROL DETAILS
FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY



PREPARED BY:
GIBALTAR ROCK, INC.

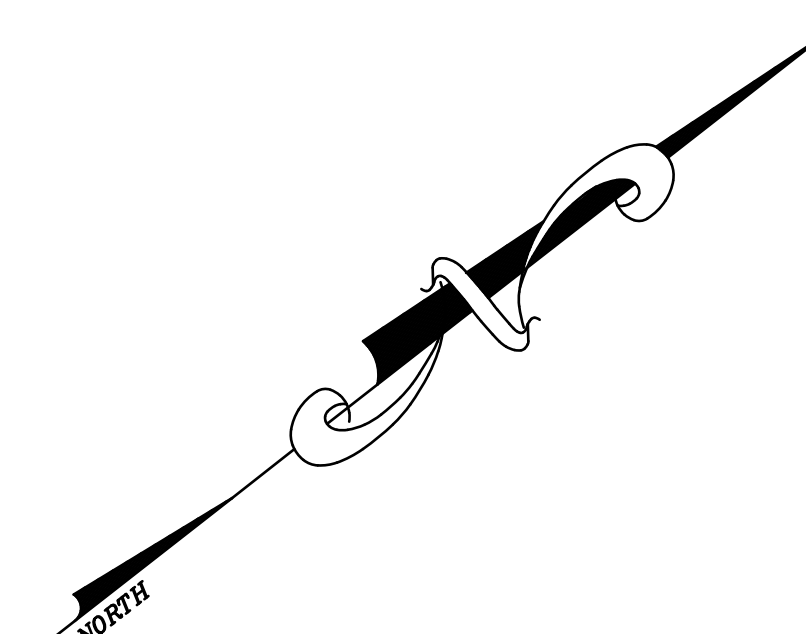
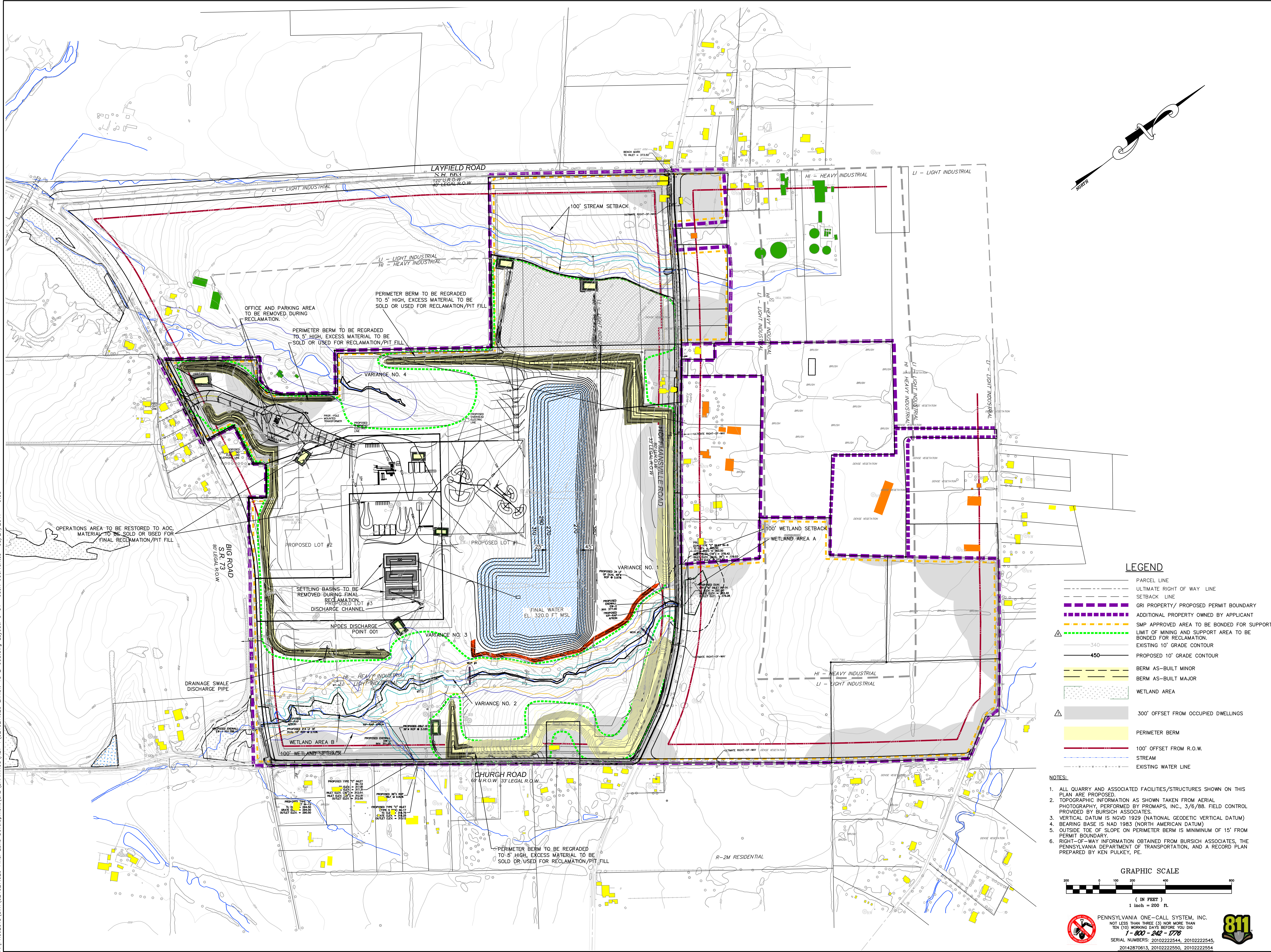
PREPARED FOR:
GIBALTAR ROCK, INC.

PROJECT SITE:
GIBALTAR ROCK, INC.
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA

NO.	DATE	BY	REVISIONS
1	10/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM

DAVID F. ALLEN, P.E.
LICENSE NO. 075102

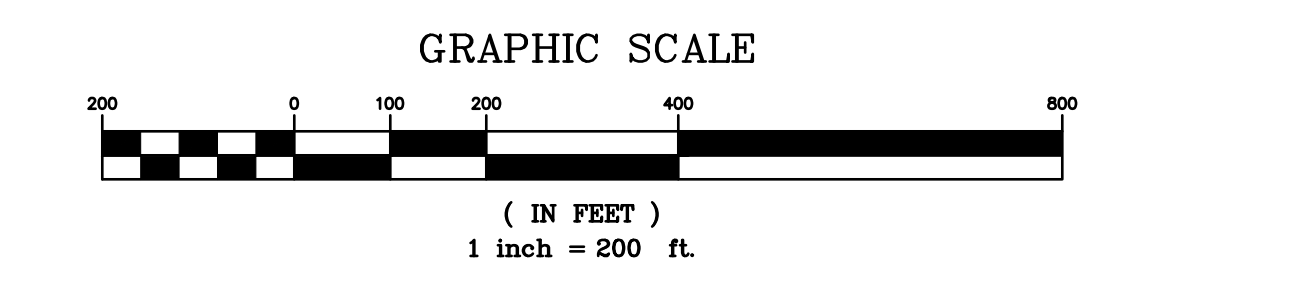
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LEGEND

- PARCEL LINE
- ULTIMATE RIGHT OF WAY LINE
- SETBACK LINE
- GRI PROPERTY/ PROPOSED PERMIT BOUNDARY
- ADDITIONAL PROPERTY OWNED BY APPLICANT
- SMP APPROVED AREA TO BE BONDED FOR SUPPORT
- LIMIT OF MINING AND SUPPORT AREA TO BE BONDED FOR RECLAMATION.
- EXISTING 10' GRADE CONTOUR
- 340
- 450
- PROPOSED 10' GRADE CONTOUR
- BERM AS-BUILT MINOR
- BERM AS-BUILT MAJOR
- WETLAND AREA
- 300' OFFSET FROM OCCUPIED DWELLINGS
- PERIMETER BERM
- 100' OFFSET FROM R.O.W.
- STREAM
- EXISTING WATER LINE

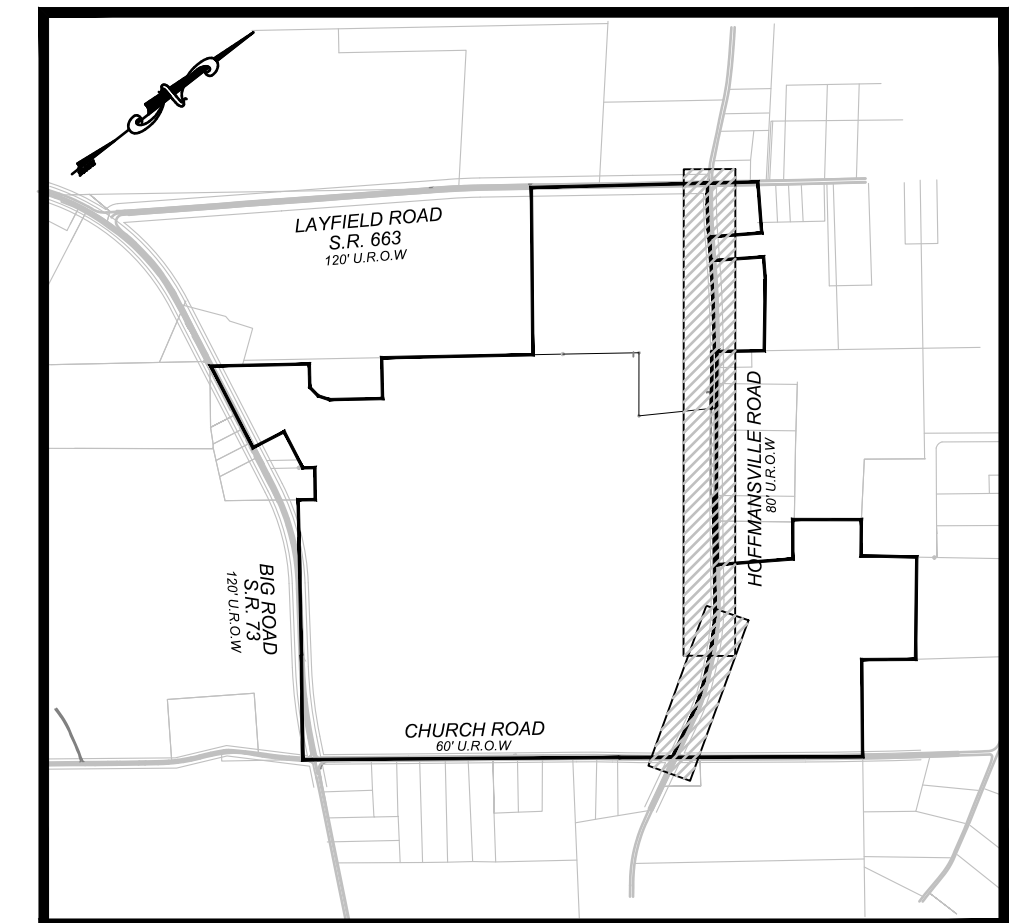
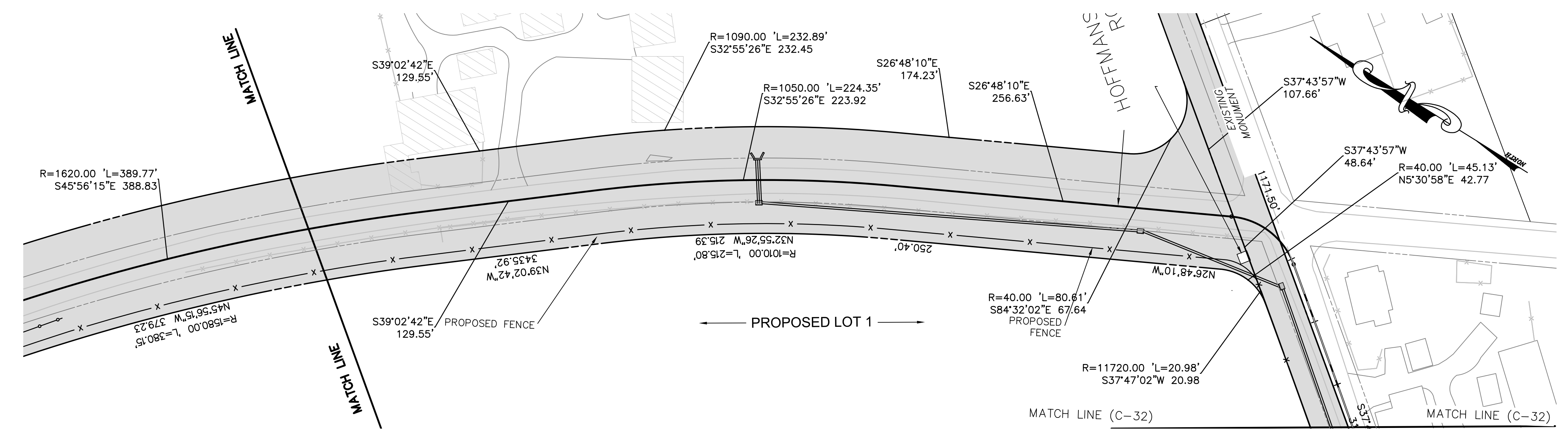
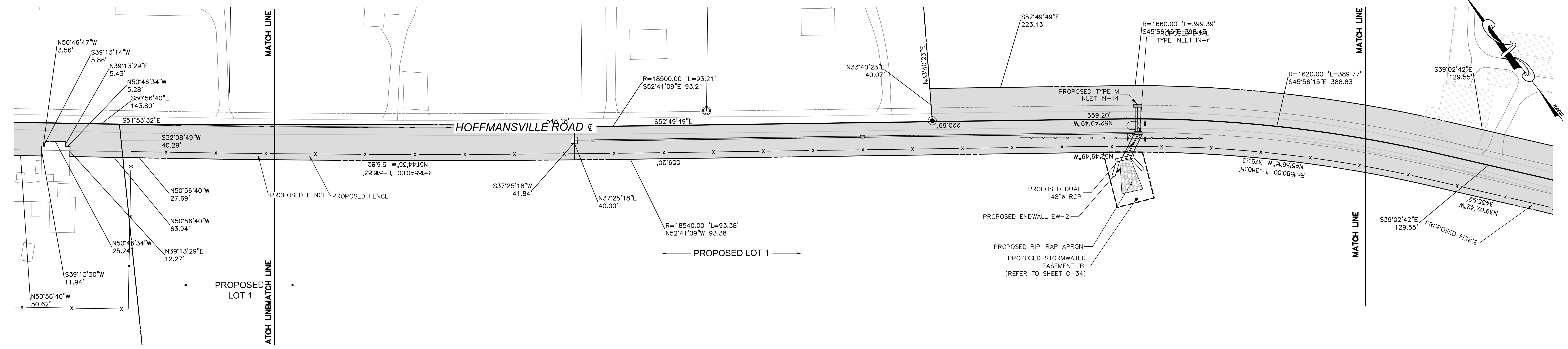
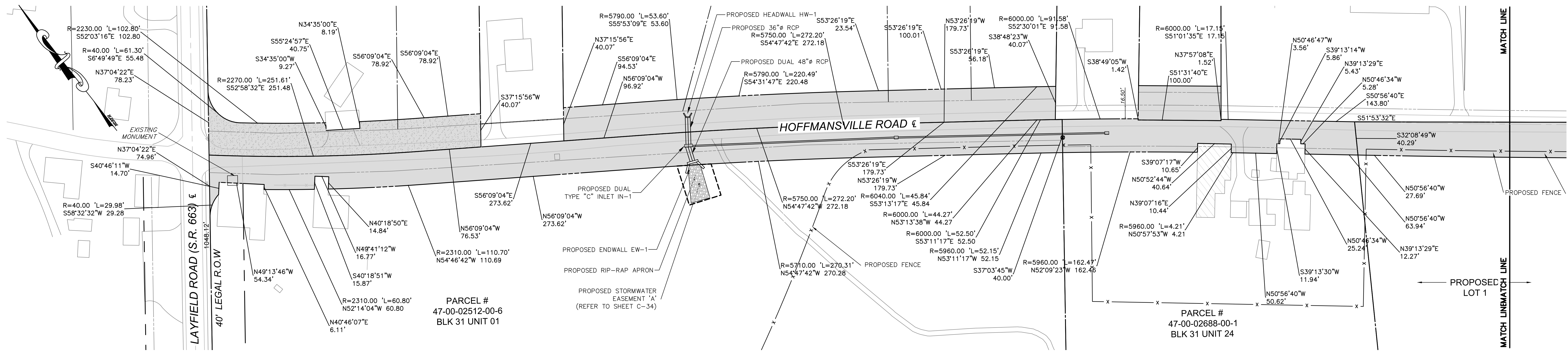
- NOTES:**
1. ALL QUARRY AND ASSOCIATED FACILITIES/STRUCTURES SHOWN ON THIS PLAN ARE PROPOSED.
 2. TOPOGRAPHIC INFORMATION AS SHOWN TAKEN FROM AERIAL PHOTOGRAPHY, PERFORMED BY PROMAPS, INC., 3/8/88. FIELD CONTROL PROVIDED BY BURSICH ASSOCIATES.
 3. VERTICAL DATUM IS NGVD 1929 (NATIONAL GEODETIC VERTICAL DATUM)
 4. BEARING BASE IS NAD 1983 (NORTH AMERICAN DATUM)
 5. OUTSIDE TOE OF SLOPE ON PERIMETER BERM IS MINIMUM OF 15' FROM PERMIT BOUNDARY.
 6. RIGHT-OF-WAY INFORMATION OBTAINED FROM BURSICH ASSOCIATES, THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, AND A RECORD PLAN PREPARED BY KEN PULKEY, PE.



PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN
 TEN (10) WORKING DAYS BEFORE 10:00 A.M.
 1-800-442-1776
 SERIAL NUMBERS: 2010222544, 2010222545,
 20142870613, 2010222550, 2010222554

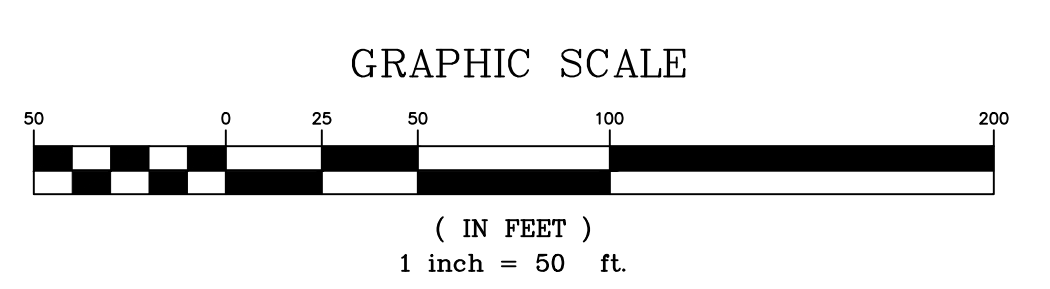
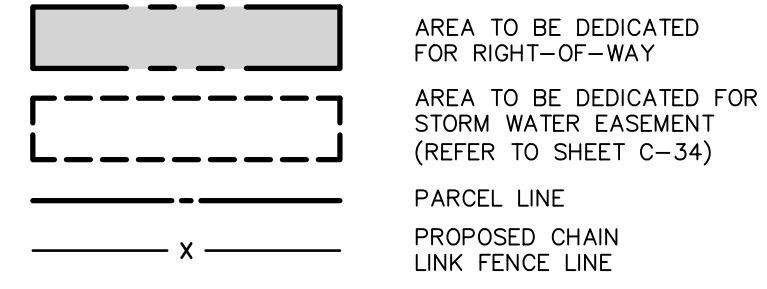
PROJECT SITE:	GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA
PREPARED FOR:	GIBALTAR ROCK, INC.
PREPARED BY:	EarthRes ENGINEERING AND SCIENCE
CHECKED BY:	DCA
PROJECT NO.:	021027.029
DRAWING NUMBER:	E-008
DATE:	10/19/2015
BY:	JSC
DATE:	10/15/17
NO.:	1
REVISIONS:	REVISED PER TWP COMMENTS & 12/9/15 PCM

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NOTE:
 1. IN THE EVENT THE STRUCTURES ENCRDACHING INTO THE ULTIMATE RIGHT-OF-WAY ARE DEMOLISHED, THE 60 FOOT ULTIMATE RIGHT-OF-WAY WILL BE OFFERED FOR DEDICATION BY THE APPLICANT OR ITS SUCCESSORS OR ASSIGNEES. PARTIAL DEMOLITION INCIDENTAL TO REPAIRS AND/OR REHABILITATION NECESSARY TO MAINTAIN THE STRUCTURES AS OCCUPIED DWELLINGS WILL NOT CONSTITUTE AN OFFER OF DEDICATION. THE APPLICANT MAY MAINTAIN THE ENCRDACHING STRUCTURE (DECK, PORCH, STEPS, ETC.) UNTIL SUCH TIME THAT THE STRUCTURE IS DEMOLISHED IN ITS ENTIRETY.

LEGEND

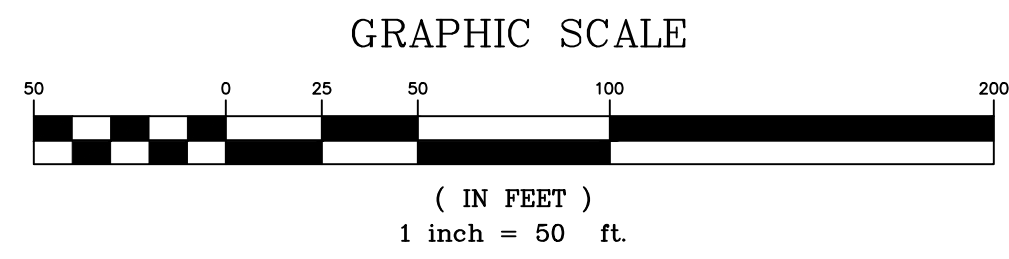
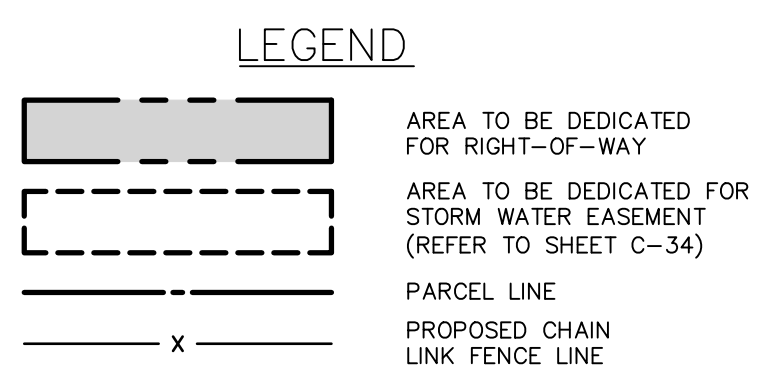
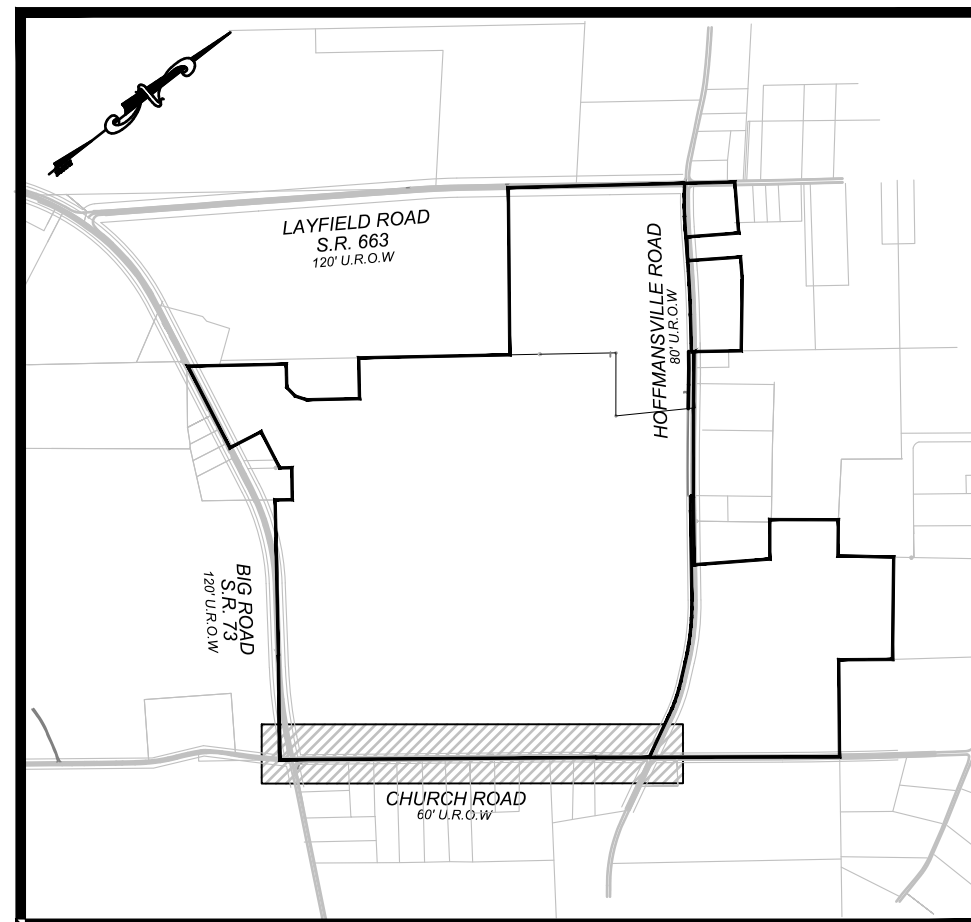
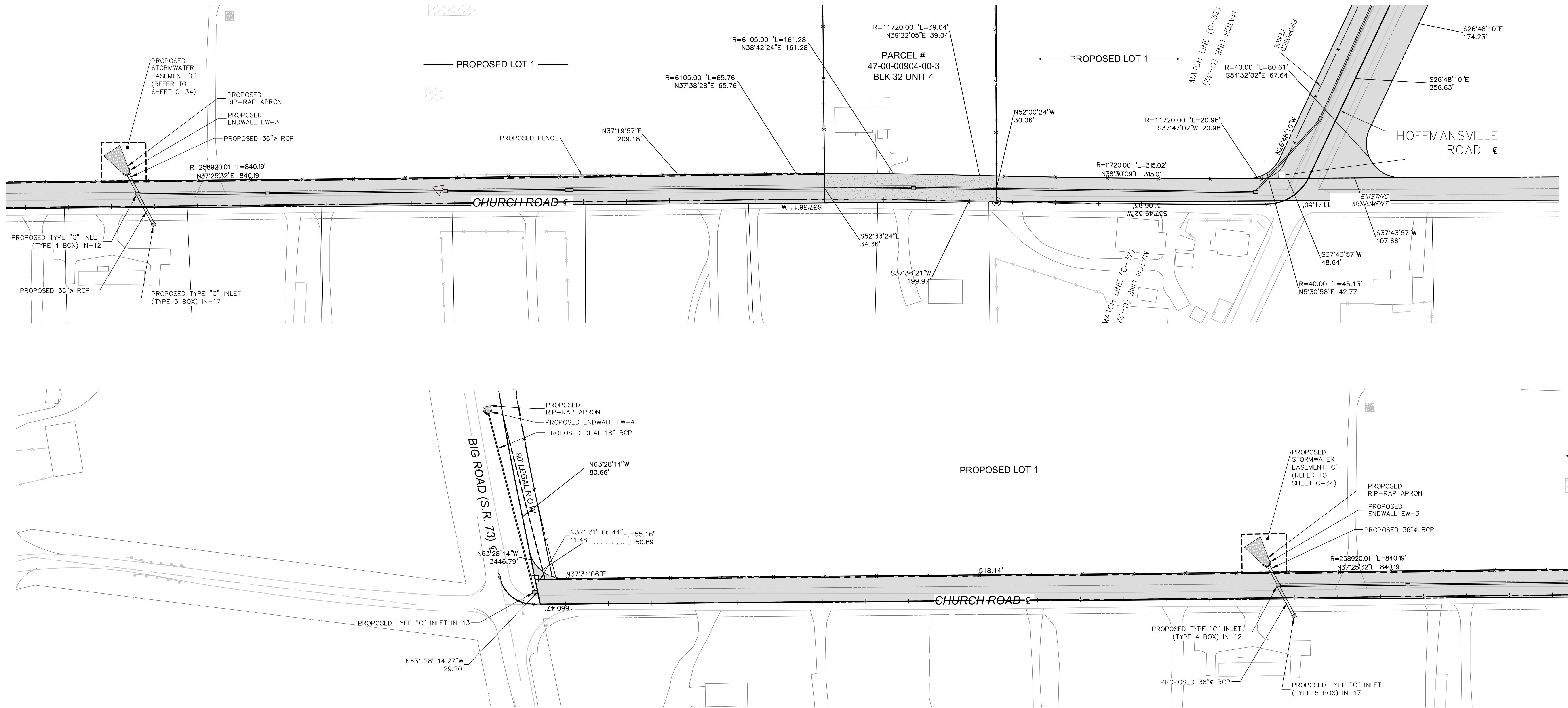


PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG
 1-800-442-7776
 SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554



PROJECT SITE:	GIBRALTAR ROCK, INC. GIBRALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA
PREPARED FOR:	GIBRALTAR ROCK, INC.
PREPARED BY:	EarthRes ENGINEERING AND SCIENCE
CHECKED BY:	JCA
DATE:	10/19/2015
PROJECT NO.:	021027.029
DRAWING NUMBER:	C-32
REVISIONS:	NO. DATE BY
	18/15/17 JSC
	DAVID F. ALLEN, P.E. LICENSE NO. 075102

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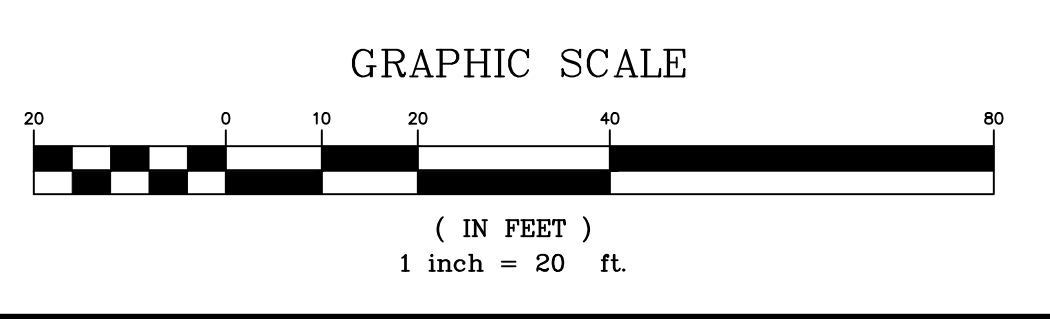
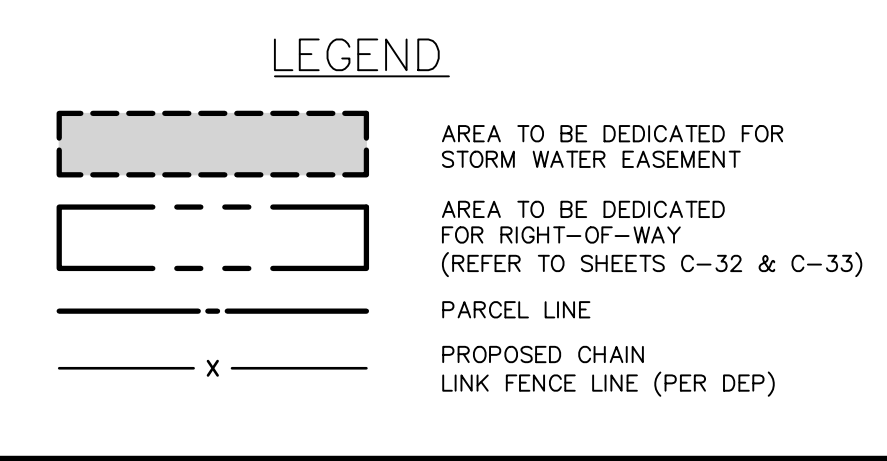
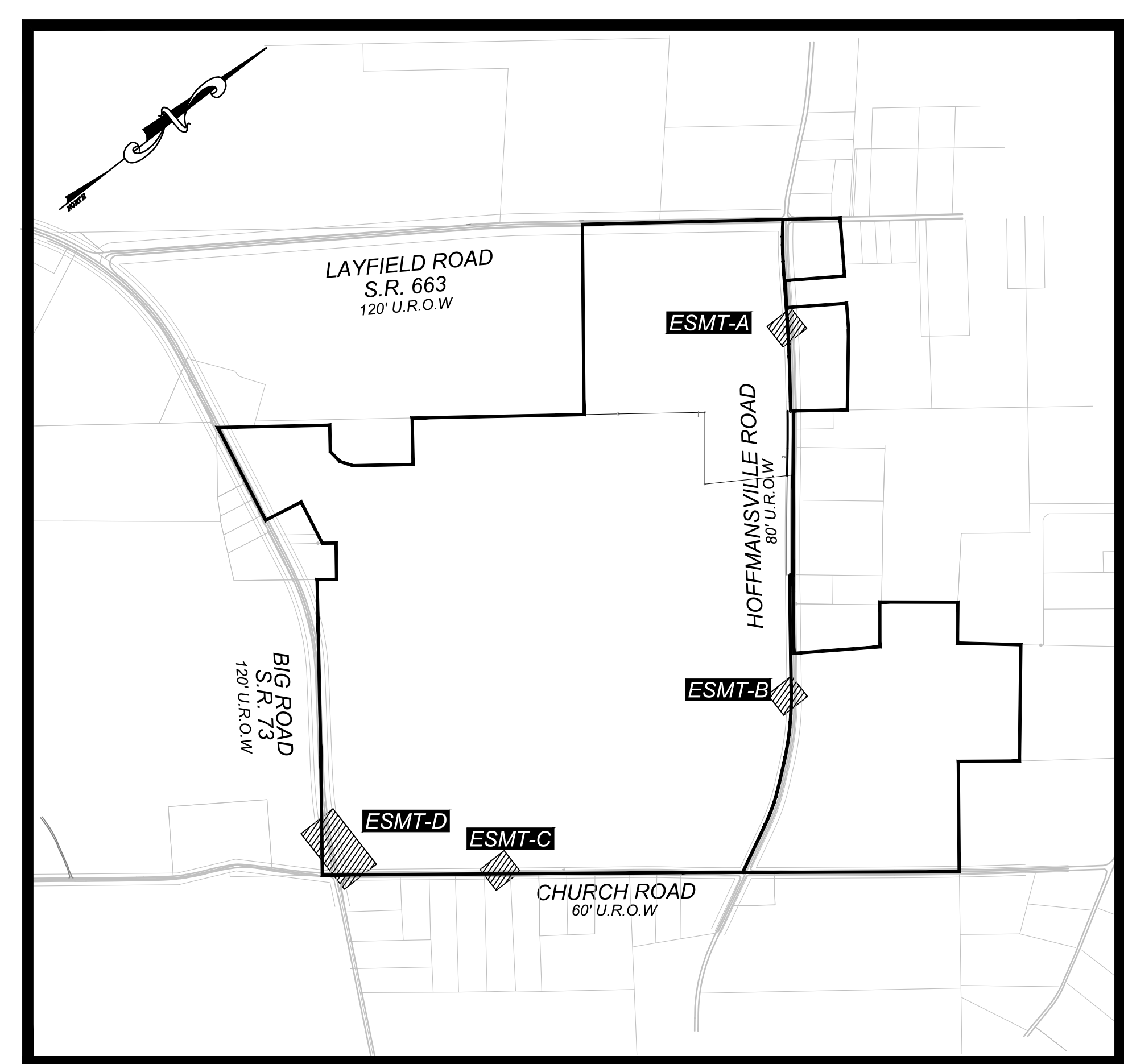
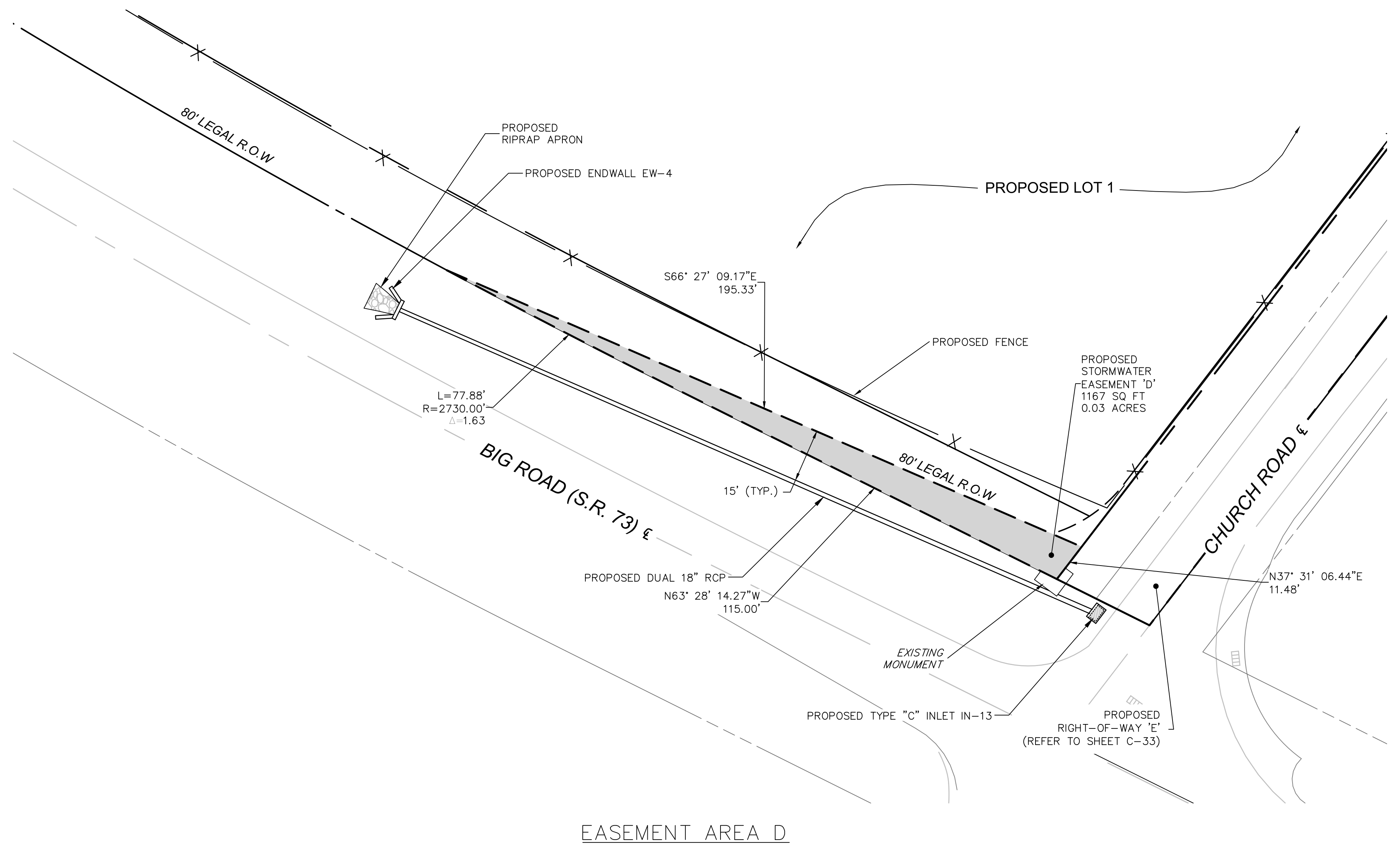
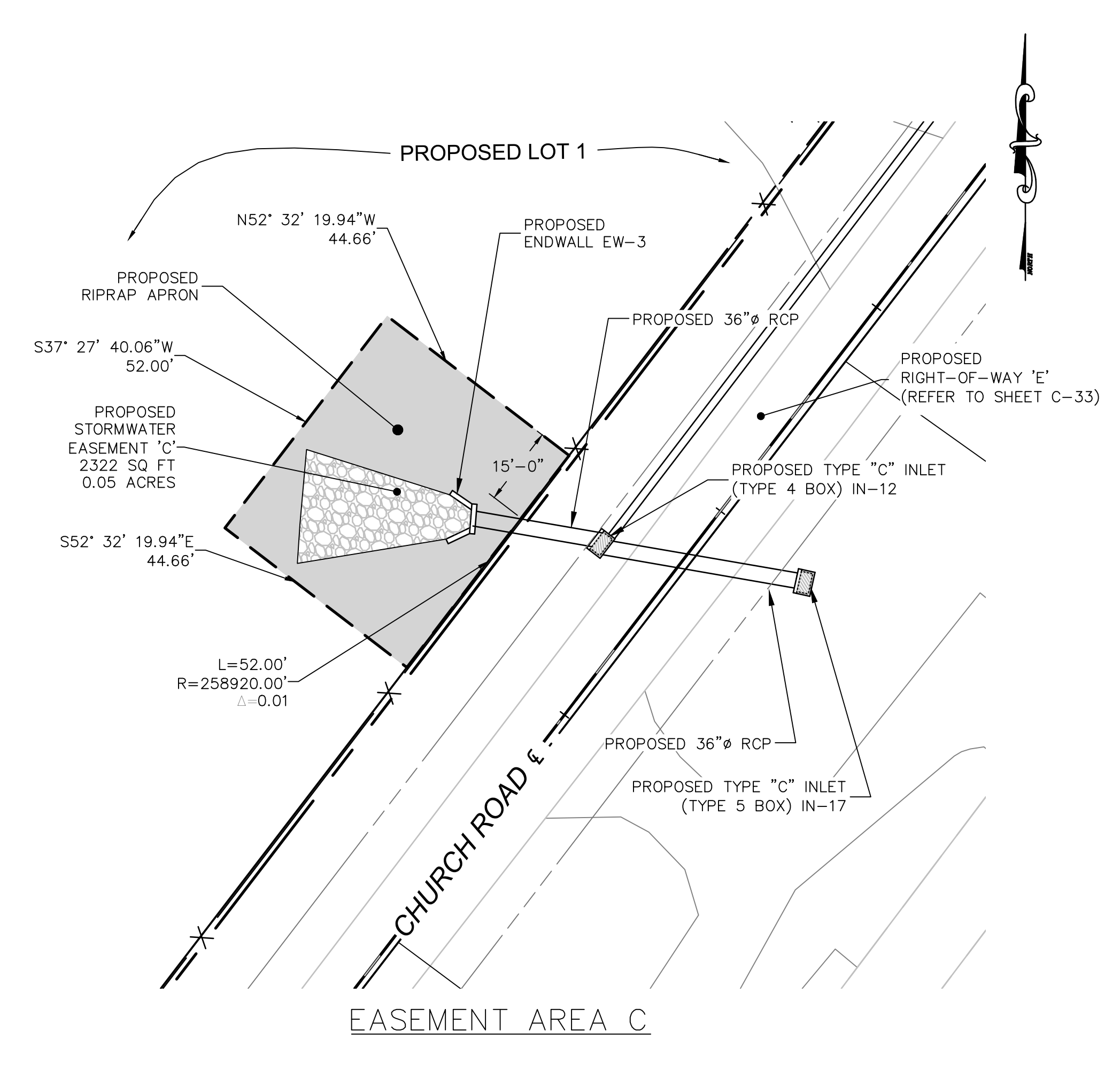
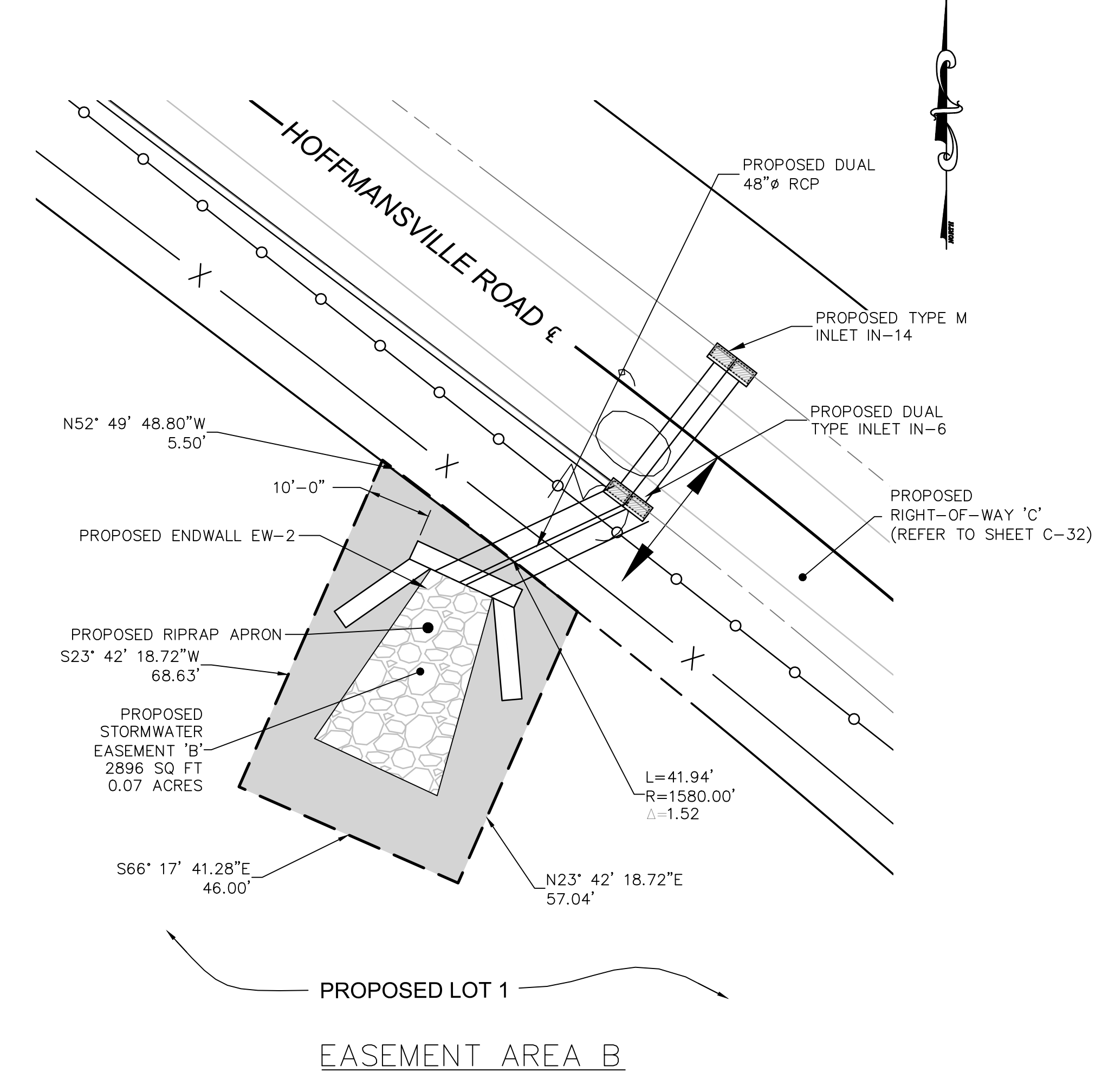
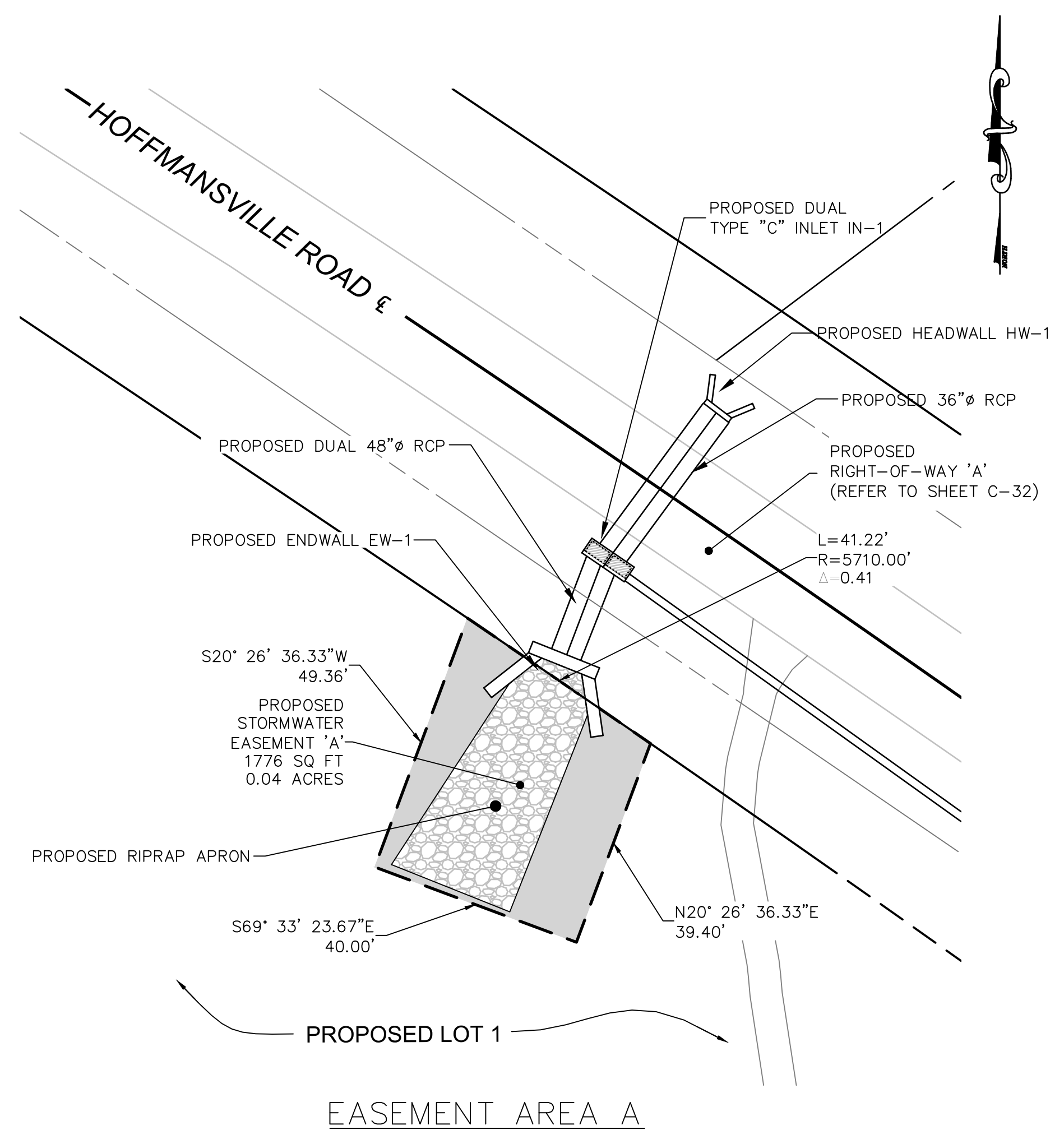


PENNSYLVANIA ONE-CALL SYSTEM, INC.
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1-800-442-7776
 SERIAL NUMBERS: 2010222544, 2010222545, 20142870613, 2010222550, 2010222554



DRAWN BY: MJA	CHECKED BY: DJA	PROJECT NO: 021027.029	DATE: 10/19/2016	DRAWING NUMBER: C-33	SHEET 33 OF 34
	PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA				
CHURCH ROAD RIGHT-OF-WAY DEDICATION PLAN TO BE RECORDED (7 OF 8) FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY			PREPARED BY: ENGINEERING AND SCIENCE		
P.O. Box 468 6832 Old York Road Piquette, PA 18947 USA			P.O. Box 704 Magnolia, WV 26555 www.earthres.com PA office: 215.766.0211 Toll free: 800.224.8533		
PROJECT SITE: GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA			PREPARED FOR: GIBALTAR ROCK, INC.		
PROJECT NO: 021027.029			DATE: 10/19/2016		
DRAWING NUMBER: C-33			SHEET 33 OF 34		
REVISIONS			REVISIONS		

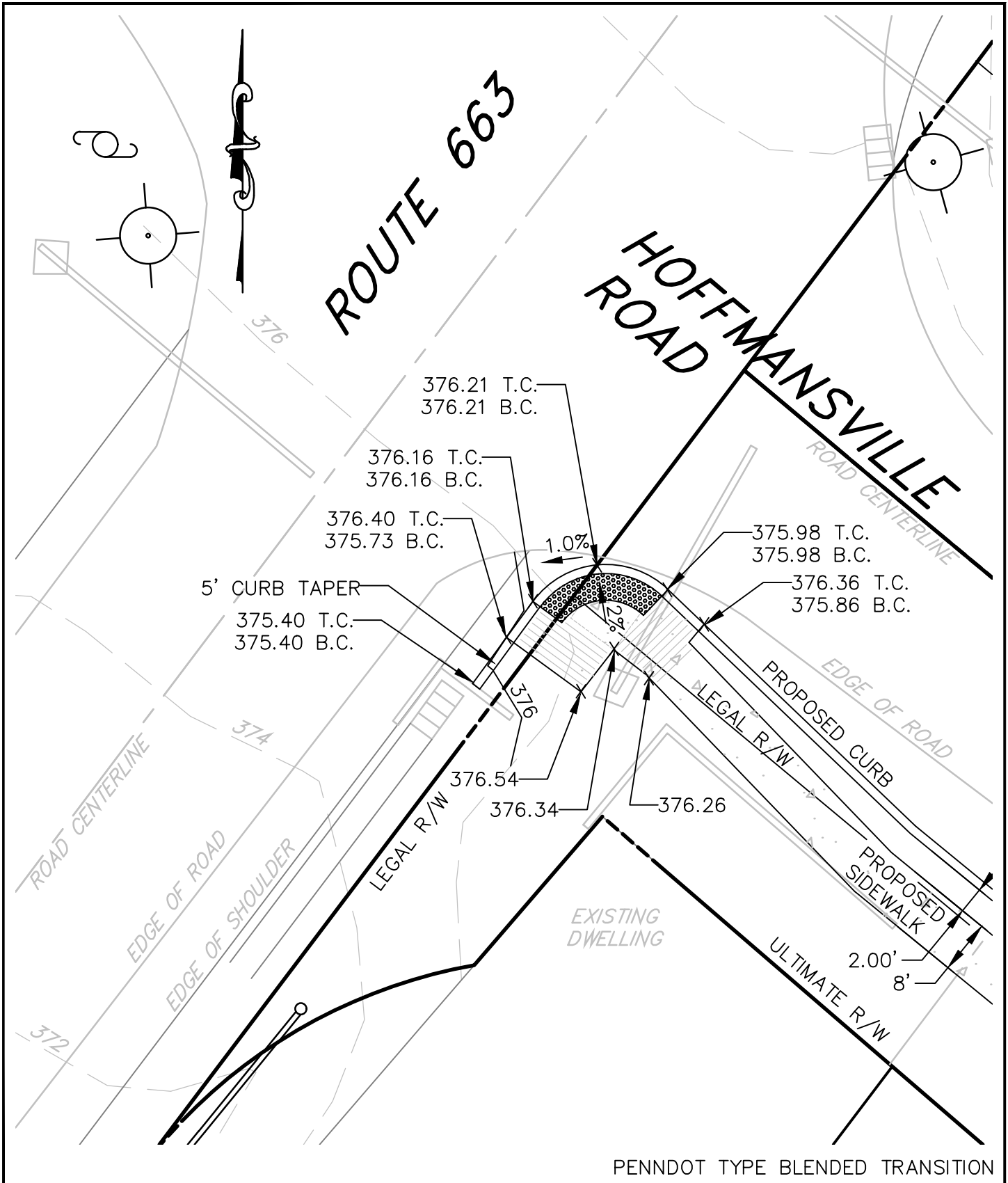
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PENNSYLVANIA ONE-CALL SYSTEM, INC.
 NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG
1-800-242-1776
 SERIAL NUMBERS: 20102222544, 20102222545, 20142870613, 20102222550, 20102222554



<p>STORMWATER EASEMENT PLAN</p> <p>TO BE RECORDED (8 OF 8) FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY</p>	<p>PROJECT NO: 021027.029</p> <p>DRAWING NO: C-34</p>	<p>CHECKED BY: JCP</p> <p>DATE: 10/19/2015</p>	<p>PROJECT SITE: GIBALTAR ROCK, INC.</p> <p>PREPARED FOR: GIBALTAR ROCK, INC.</p> <p>PREPARED BY: EarthRes ENGINEERING AND SCIENCE</p> <p>P.O. Box 468 6832 Old York Road Piquette, PA 15867 USA</p> <p>P.O. Box 704 Morgantown, WV 26505 www.earthres.com</p> <p>PA office: 216.766.0211 fax: 216.766.0211 toll free: 800.224.4533</p>	<p>REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>BY</th> <th>REVISIONS</th> </tr> <tr> <td>1</td> <td>10/15/17</td> <td>JSC</td> <td>REVISED PER TWP COMMENTS & 12/9/15 PCM</td> </tr> </table>	NO.	DATE	BY	REVISIONS	1	10/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM
NO.	DATE	BY	REVISIONS									
1	10/15/17	JSC	REVISED PER TWP COMMENTS & 12/9/15 PCM									



PENNDOT TYPE BLENDED TRANSITION



6912 Old Easton Road
Pipersville, PA 18947 USA

8000 Combs Farm Drive
Morgantown, WV 26508

www.earthres.com

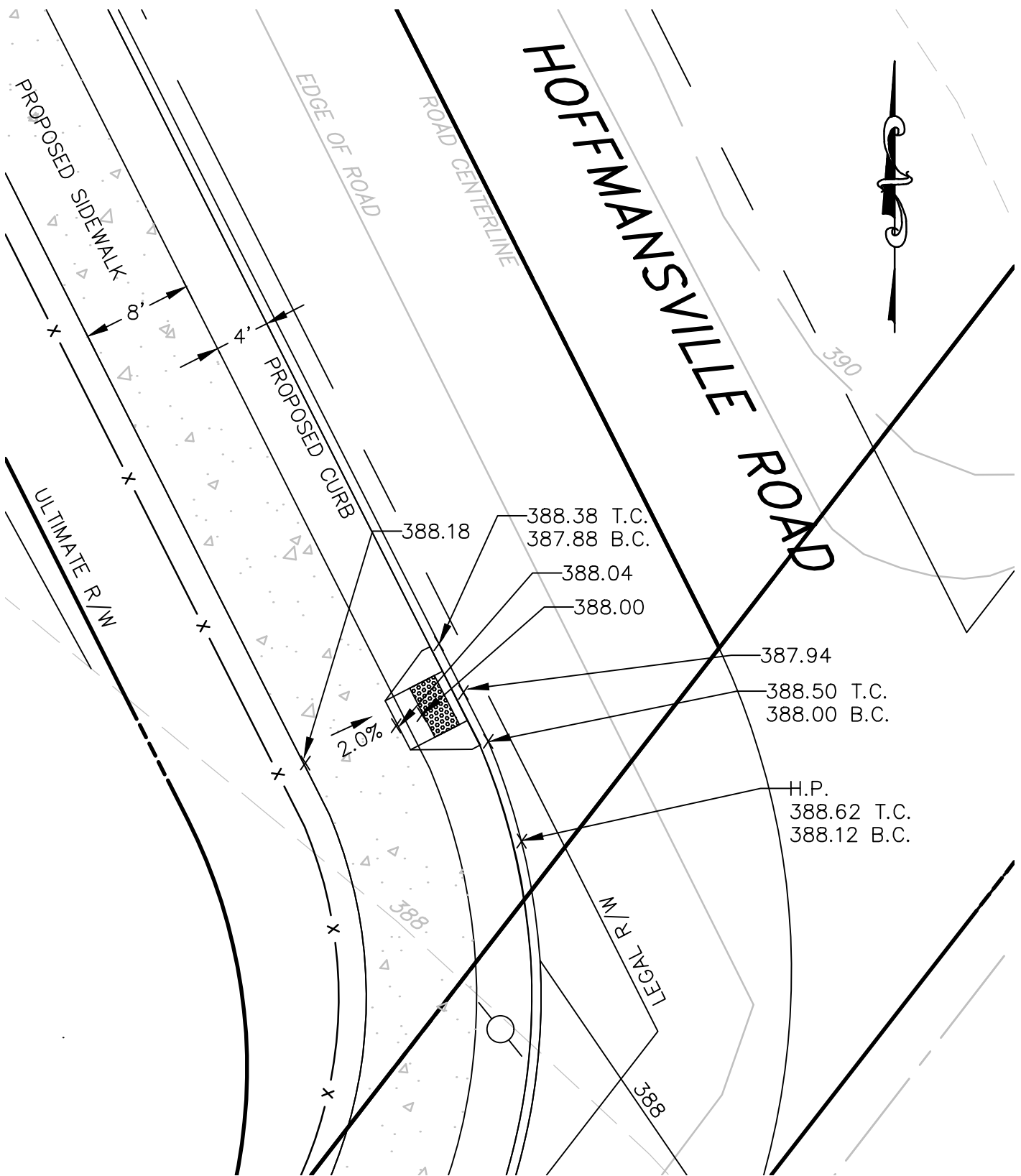
PA office 215.766.1211
WV office 304.212.6866
toll free 800.264.4553

DRAWN BY: JLD	CHECKED BY: DFA
DATE: 8/18/2017	PROJECT NO: 021027.029
DRAWING SCALE: 1" = 10'	

PROPOSED ADA RAMP
SW CORNER OF HOFFMANSVILLE RD & S.R. 663

PROPOSED BIKEPATH TERMINAL END
GIBRALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA

HOFFMANSVILLE ROAD



PENNDOT TYPE 4A

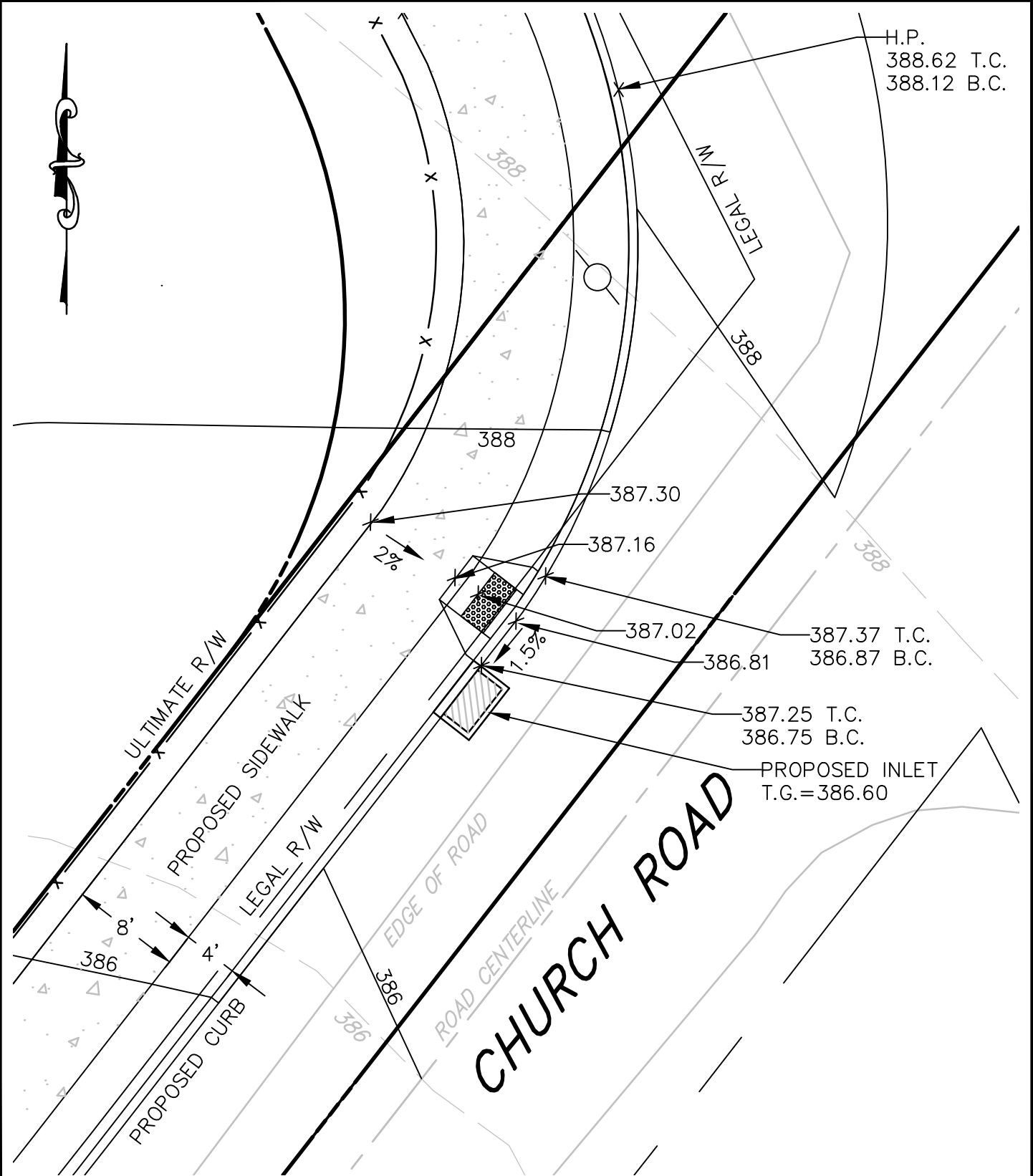


6912 Old Easton Road
Pipersville, PA 18947 USA
8000 Combs Farm Drive
Morgantown, WV 26508
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PA office 215.766.1211
WV office 304.212.6866
toll free 800.264.4553

DRAWN BY: JLD	CHECKED BY: DFA
DATE: 8/18/2017	PROJECT NO: 021027.029
DRAWING SCALE: 1" = 10'	

PROPOSED ADA RAMP NW CORNER OF HOFFMANSVILLE RD & CHURCH RD

PROPOSED BIKEPATH
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA



H.P.
388.62 T.C.
388.12 B.C.

387.37 T.C.
386.87 B.C.

387.25 T.C.
386.75 B.C.

PROPOSED INLET
T.G.=386.60

PENNDOT TYPE 4A



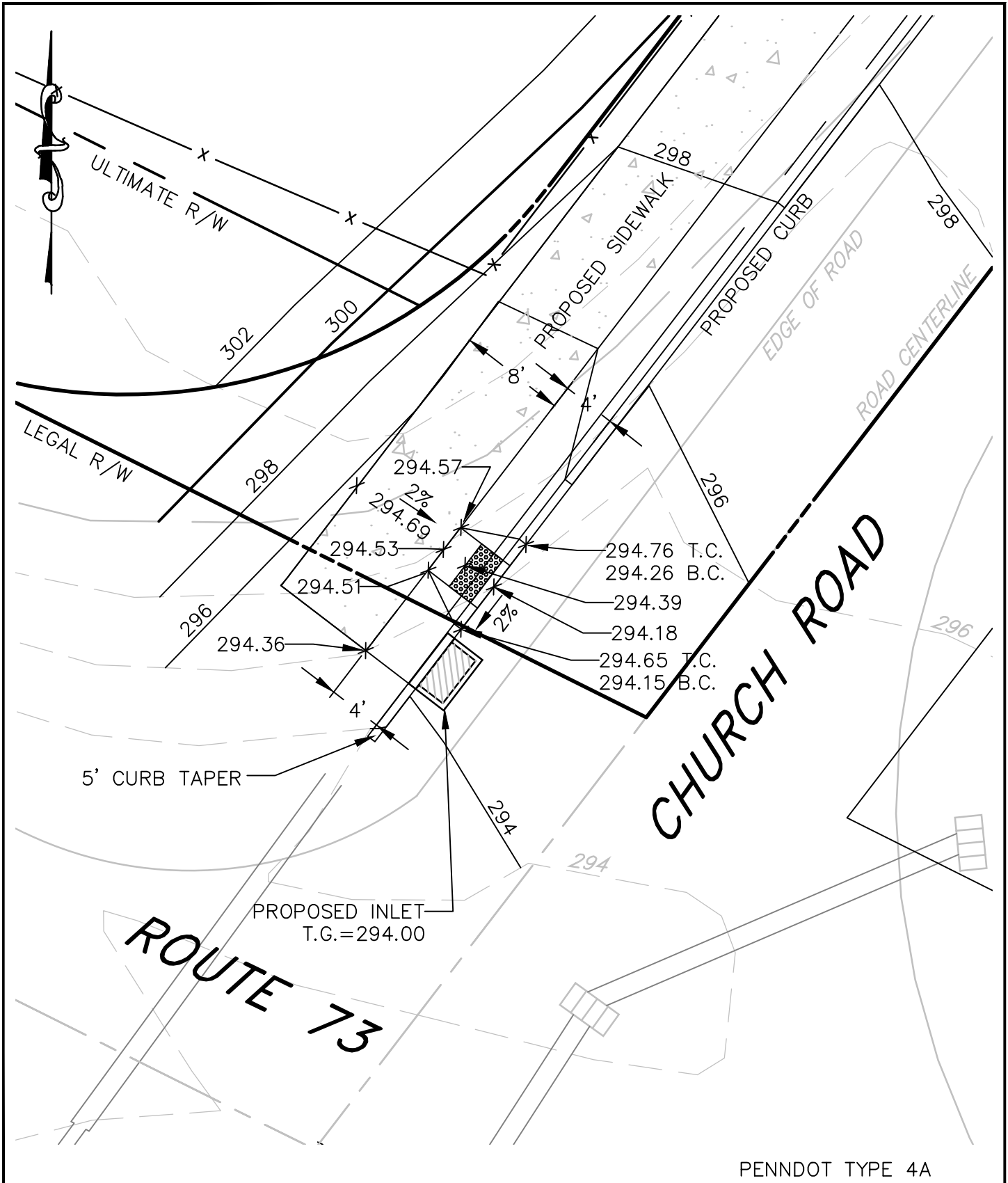
6912 Old Easton Road
Pipersville, PA 18947 USA
8000 Combs Farm Drive
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PA office 215.766.1211
WV office 304.212.6866
toll free 800.264.4553

DRAWN BY: JLD	CHECKED BY: DFA
DATE: 8/18/2017	PROJECT NO: 021027.029
DRAWING SCALE: 1" = 10'	

PROPOSED ADA RAMP
NW CORNER OF HOFFMANVILLE RD & CHURCH RD

PROPOSED BIKEPATH
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA



PENNDOT TYPE 4A



6912 Old Easton Road
Pipersville, PA 18947 USA

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JLD

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DFA

DATE:
8/18/2017

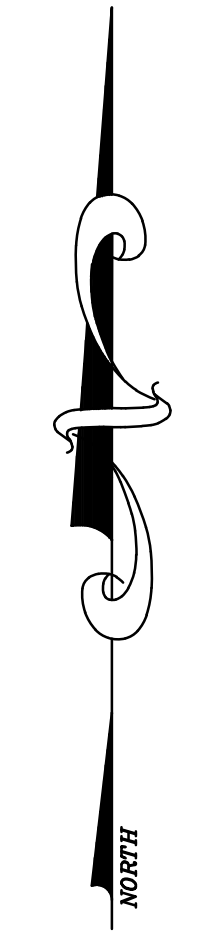
PROJECT NO:
021027.029

DRAWING SCALE:
1" = 10'



PROPOSED ADA RAMP
SOUTHERN CORNER OF ROUTE 73 & CHURCH RD

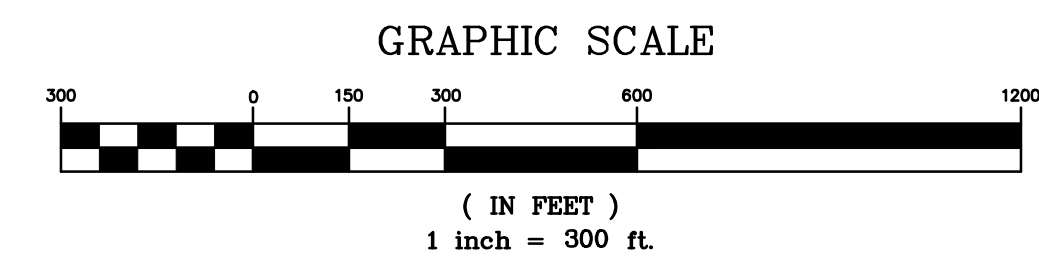
PROPOSED BIKEPATH
GIBALTAR ROCK QUARRY
NEW HANOVER TOWNSHIP
MONTGOMERY COUNTY, PA



LEGEND

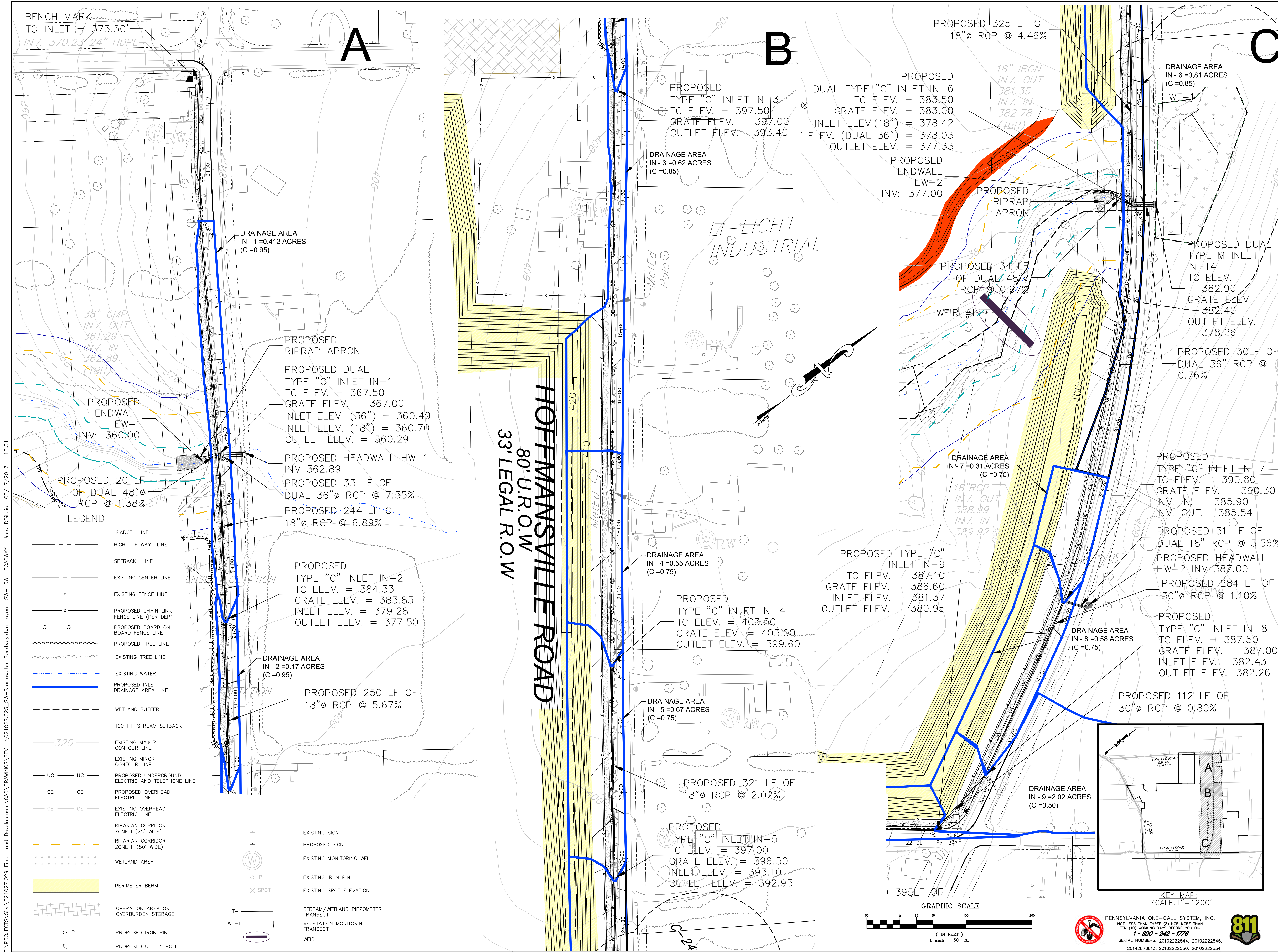
- EXISTING DRAINAGE AREA
- PROPERTY BOUNDARY

NOTE:
1. MAP SHOWN REFERENCES U.S.G.S. STANDARD FOR SASSAMANSVILLE, PA. QUADRANGLE, 7.5 MINUTE SERIES.



<p>DRAWN BY: LWE</p> <p>DATE: 02/24/12</p> <p>DRAWING NUMBER: EXHIBIT 1</p> <p style="text-align: right;">SHEET 1 OF 1</p>	<p>CHECKED BY: DFA</p> <p>PROJECT NO.: 021027.025</p>	<p>OFFSITE DRAINAGE AREA</p> <p>PRELIMINARY LAND DEVELOPMENT PLANS NOT TO BE RECORDED</p>	<p>PREPARED FOR: CIBALTAR ROCK, INC.</p> <p>PREPARED BY: EarthRes ENGINEERING AND SCIENCE</p> <p><small>P.O. Box 468 6612 Old Easton Road Pipersville, PA 18847 USA</small></p> <p><small>P.O. Box 794 Morgantown, WV 26505</small></p> <p><small>www.earthres.com</small></p> <p><small>PA office 215.766.1211 WV office 304.212.8866 toll free 800.294.4553</small></p>											
		<p>REVISIONS</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">NO.</th> <th style="width: 15%;">DATE</th> <th style="width: 15%;">BY</th> <th style="width: 65%;">REVISED PER TOWNSHIP COMMENTS</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">10/15/15</td> <td style="text-align: center;">JTK</td> <td>REVISED PER FIELD CONDITIONS</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">3/25/15</td> <td style="text-align: center;">JTK</td> <td>REVISED PER FIELD CONDITIONS</td> </tr> </tbody> </table>	NO.	DATE	BY	REVISED PER TOWNSHIP COMMENTS	1	10/15/15	JTK	REVISED PER FIELD CONDITIONS	2	3/25/15	JTK	REVISED PER FIELD CONDITIONS
NO.	DATE	BY	REVISED PER TOWNSHIP COMMENTS											
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2	3/25/15	JTK	REVISED PER FIELD CONDITIONS											

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BENCH MARK
TG INLET = 373.50'
INV. 370.23 24" HDPE

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- LEGEND**
- PARCEL LINE
 - RIGHT OF WAY LINE
 - SETBACK LINE
 - EXISTING CENTER LINE
 - x --- EXISTING FENCE LINE
 - x --- PROPOSED CHAIN LINK FENCE LINE (PER DEP)
 - o --- PROPOSED BOARD ON BOARD FENCE LINE
 - PROPOSED TREE LINE
 - EXISTING TREE LINE
 - EXISTING WATER
 - PROPOSED INLET DRAINAGE AREA LINE
 - WETLAND BUFFER
 - 100 FT. STREAM SETBACK
 - 320 --- EXISTING MAJOR CONTOUR LINE
 - EXISTING MINOR CONTOUR LINE
 - UG --- UG --- PROPOSED UNDERGROUND ELECTRIC AND TELEPHONE LINE
 - OE --- OE --- PROPOSED OVERHEAD ELECTRIC LINE
 - OE --- OE --- EXISTING OVERHEAD ELECTRIC LINE
 - RIPARIAN CORRIDOR ZONE I (25' WIDE)
 - RIPARIAN CORRIDOR ZONE II (50' WIDE)
 - WETLAND AREA
 - PERIMETER BERM
 - OPERATION AREA OR OVERBURDEN STORAGE
 - o IP --- PROPOSED IRON PIN
 - o IP --- PROPOSED UTILITY POLE
 - EXISTING SIGN
 - PROPOSED SIGN
 - EXISTING MONITORING WELL
 - o IP --- EXISTING IRON PIN
 - x SPOT --- EXISTING SPOT ELEVATION
 - STREAM/WETLAND PIEZOMETER TRANSECT
 - WT-1 --- VEGETATION MONITORING TRANSECT
 - WEIR

DRAWN BY: <i>AW</i>	CHECKED BY: <i>DPA</i>	DATE: 10/15/2015	PROJECT NO: 021027/029	DRAWING NUMBER: SW-RW1	SHEET 1 OF 2	PROJECT SITE: GIBALTAR ROCK, INC.	PREPARED FOR: GIBALTAR ROCK, INC.
ROADWAY IMPROVEMENTS DRAINAGE AREAS FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY							PREPARED BY: EarthRes ENGINEERING AND SCIENCE P.O. Box 468 6952 Old York Road Pottsville, PA 19847 USA P.O. Box 784 Mcgovern, WI 26505 www.earthres.com PA Office: 215.765.0211 PA Fax: 803.224.6555
PENNSYLVANIA ONE-CALL SYSTEM, INC. NOT LESS THAN THREE (3) NOR MORE THAN TEN (10) WORKING DAYS BEFORE YOU DIG 1-800-482-1779 SERIAL NUMBERS: 20102222544, 20102222545, 20142870613, 20102222550, 20102222554							

NO.	DATE	BY	REVISIONS

DAWD F. ALLEN, P.E.
 LICENSE NO. 075102

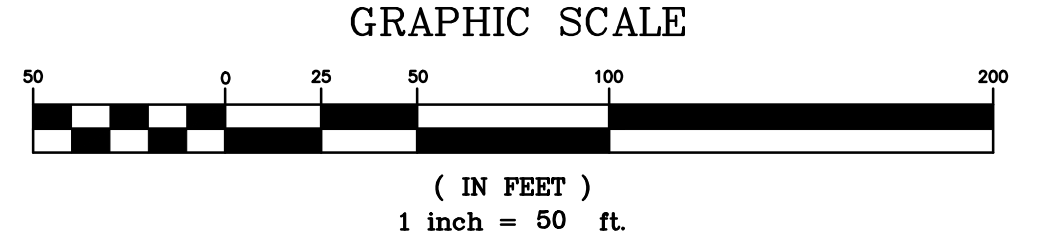
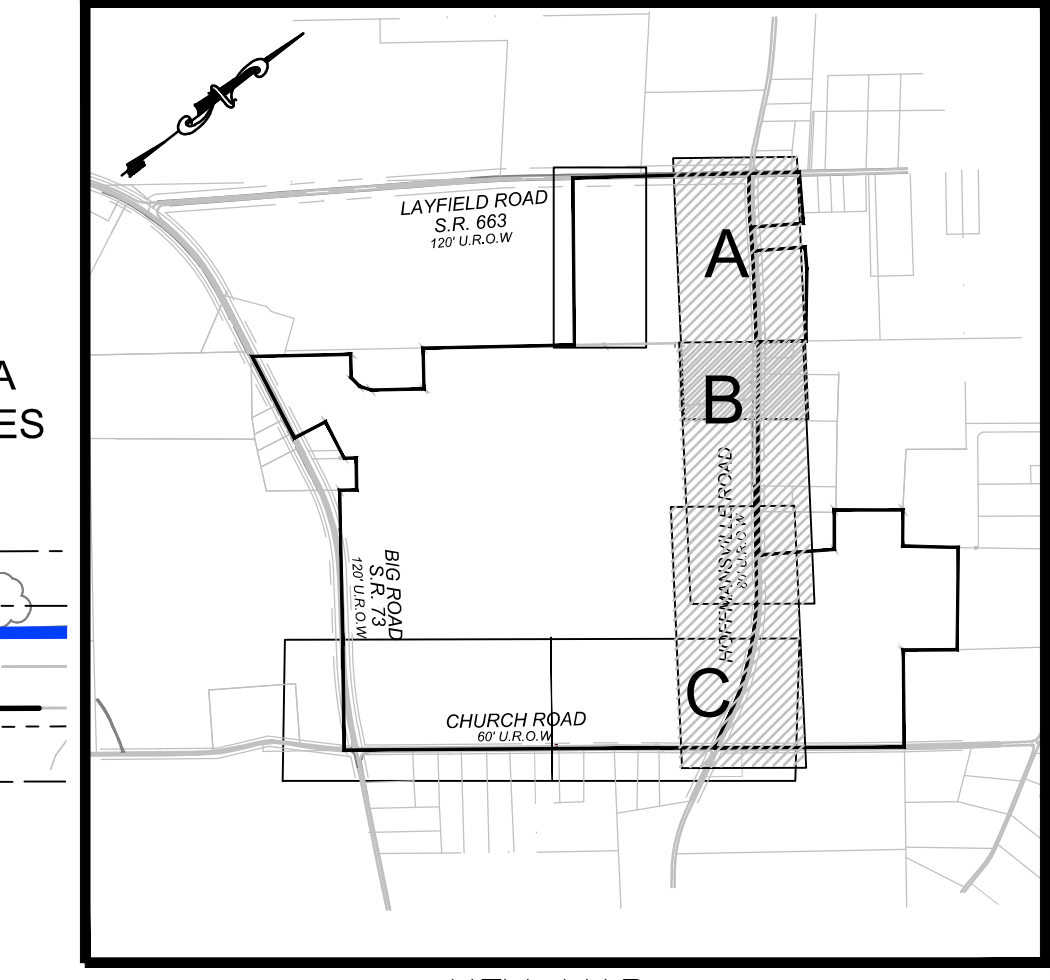
GIBALTAR ROCK, INC.
 GIBALTAR ROCK QUARRY
 NEW HANOVER TOWNSHIP
 MONTGOMERY COUNTY, PA

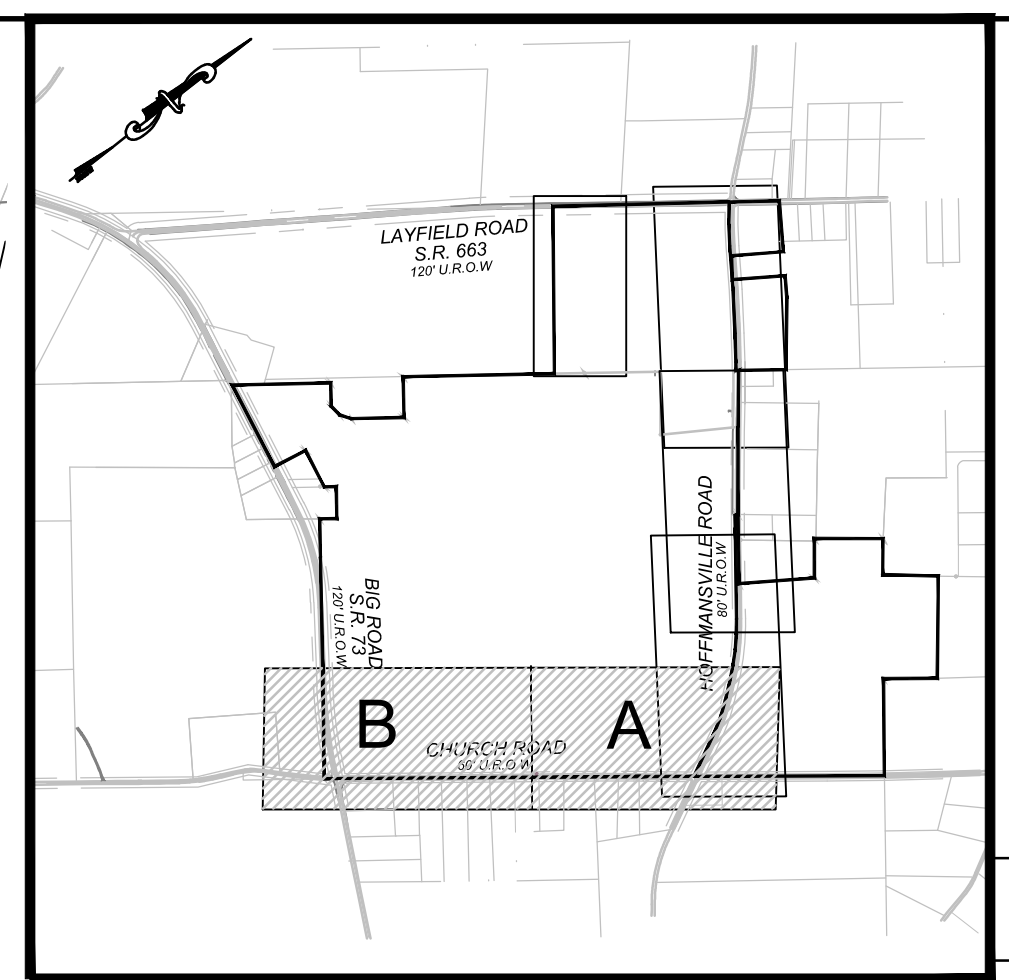
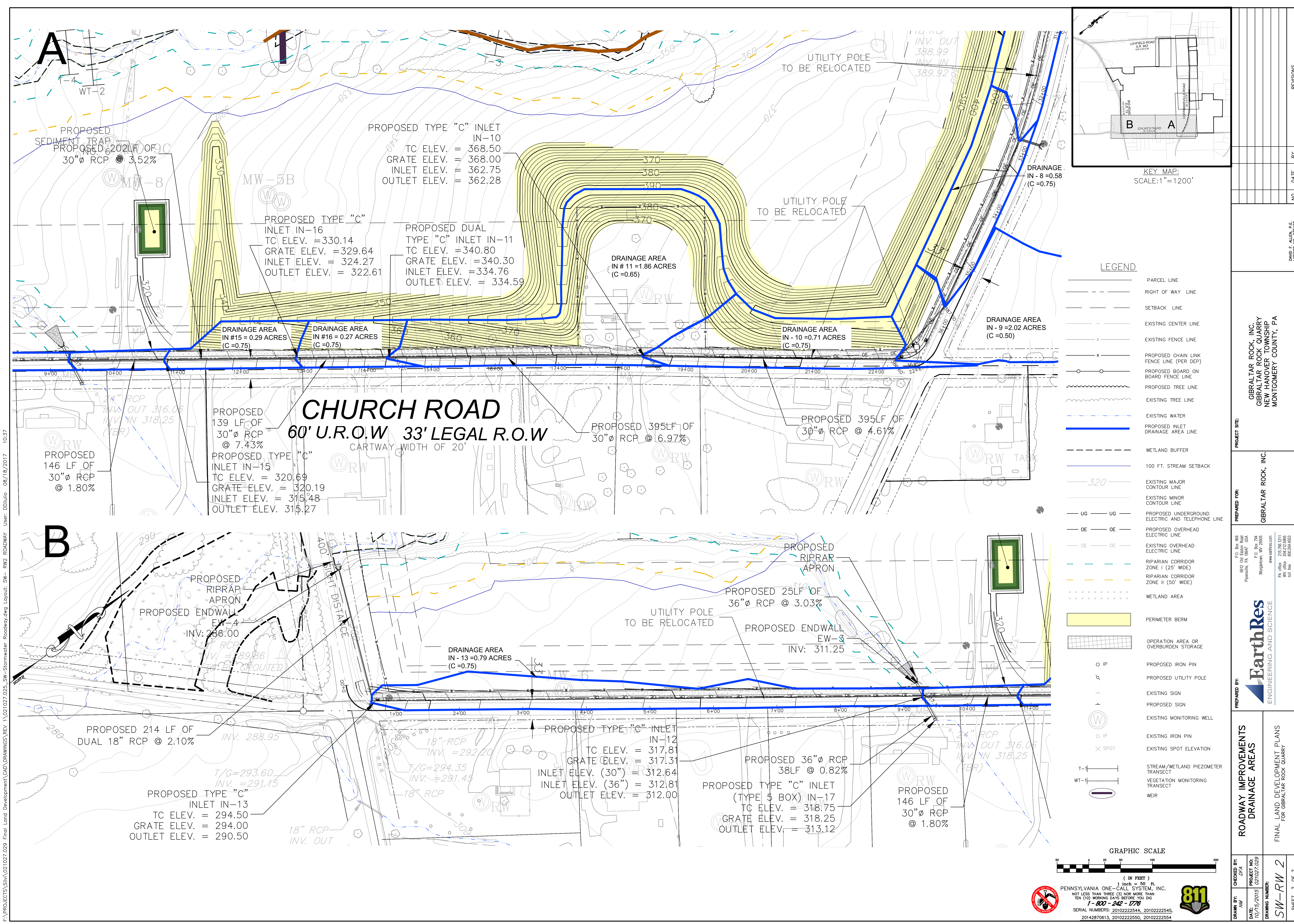
PROJECT SITE: GIBALTAR ROCK, INC.

PREPARED FOR: GIBALTAR ROCK, INC.

PREPARED BY: **EarthRes**
 ENGINEERING AND SCIENCE

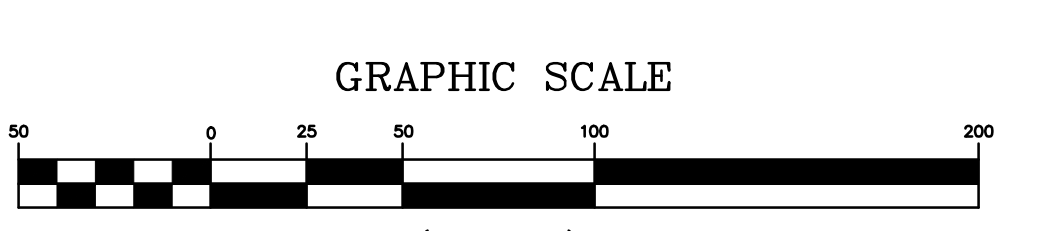
ROADWAY IMPROVEMENTS DRAINAGE AREAS
 FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY





- LEGEND**
- PARCEL LINE
 - RIGHT OF WAY LINE
 - SETBACK LINE
 - EXISTING CENTER LINE
 - x-x- EXISTING FENCE LINE
 - x-x- PROPOSED CHAIN LINK FENCE LINE (PER DEP)
 - PROPOSED BOARD ON BOARD FENCE LINE
 - PROPOSED TREE LINE
 - EXISTING TREE LINE
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 - × SPOT EXISTING SPOT ELEVATION
 - T-T- STREAM/WETLAND PIEZOMETER TRANSECT
 - WT-T- VEGETATION MONITORING TRANSECT
 - WEIR

CHURCH ROAD
 60' U.R.O.W 33' LEGAL R.O.W
 CARTWAY WIDTH OF 20'



PROJECT SITE:	GIBALTAR ROCK, INC. GIBALTAR ROCK QUARRY NEW HANOVER TOWNSHIP MONTGOMERY COUNTY, PA
PREPARED FOR:	GIBALTAR ROCK, INC.
PREPARED BY:	EarthRes ENGINEERING AND SCIENCE
ROADWAY IMPROVEMENTS DRAINAGE AREAS	FINAL LAND DEVELOPMENT PLANS FOR GIBALTAR ROCK QUARRY
CHECKED BY:	D/CA
DATE:	10/16/2015
DRAWING NO.:	SW-RW 2
PROJECT NO.:	1021027.029
SHEET:	2 OF 2

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 1-800-242-1776
 SERIAL NUMBERS: 2010222544, 2010222545,
 20142870613, 2010222550, 2010222554



REVISIONS
 NO. DATE BY
 DAVID F. ALLEN, P.E.
 LICENSE NO. 076102