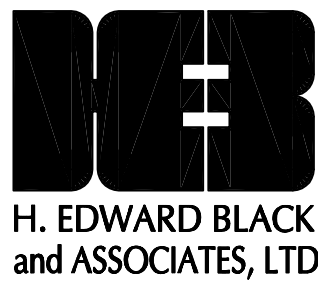


PREPARED BY:



2403 NORTH FRONT STREET
HARRISBURG, PA 17110
PHONE: (717) 233-1026
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CONTACT: CHRISTINE HUNTER, RLA.
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DATED: MAY 1, 2017
REVISED JUNE 1, 2017
REVISED JULY 3, 2017
REVISED AUGUST 01, 2017
REVISED AUGUST 22, 2017
REVISED OCTOBER 27, 2017
REVISED NOVEMBER 06, 2017
REVISED NOVEMBER 13, 2017
REVISED DECEMBER 27, 2017
REVISED MARCH 28, 2018
REVISED MAY 04, 2018
REVISED JUNE 08, 2018
REVISED JUNE 27, 2018
REVISED JULY 31, 2018

SPECIAL EXCEPTION

1. A SPECIAL EXCEPTION FOR USES PERMITTED WITHIN A STEEP SLOPE PROTECTION ZONE WAS APPROVED BY THE UPPER ALLEN TOWNSHIP ZONING HEARING BOARD ON APRIL 13, 2017.

REFERENCED PLANS

1. PRELIMINARY/FINAL MINOR SUBDIVISION PLAN OF ORCHARD HILL(MESSIAH COLLEGE PRESIDENT'S HOME), RECORDING INSTRUMENT 201515427, ON JUNE 24, 2015.
2. PRELIMINARY/FINAL RE-SUBDIVISION PLAN OF MESSIAH COLLEGE TRACTS (LOTS #1, #2, #3, #4 & #5), RECORDED IN PLAN BOOK 81, PAGE 58 ON JUNE 29, 2000.

DEED REFERENCES

UNIFORM PARCEL IDENTIFIER	DEED BOOK REFERENCE
42-11-0276-035	D.B. 276 - PG. 3637
42-11-0276-009	D.B. 261 - PG. 4291
42-11-0276-008A	D.B. 215 - PG. 642
42-30-2112-004	D.B. R, Vol. 20 - PG. 1085
42-30-2110-018	D.B. 256 - PG. 4675
42-11-0276-108	D.B. 169 - PG. 344

ZONING/SITE DATA

EXISTING ZONES:
BPO - BUSINESS AND PROFESSIONAL DISTRICT
R-2 - MEDIUM DENSITY RESIDENTIAL DISTRICT
R-3 - HIGH DENSITY RESIDENTIAL DISTRICT
INS - INSTITUTIONAL
SSP - STEEP SLOPE PROTECTION DISTRICT

EXISTING LOTS:	AREA	ZONE	USE
42-11-0276-035	33,209 AC	R-3	AGRICULTURAL
42-11-0276-009	52,485 AC	BPO	AGRICULTURAL
42-11-0276-008A	14,943 AC	R-3	AGRICULTURAL
42-30-2112-004	0.22 AC	RESIDENTIAL	
42-30-2110-018	0.85 AC	BPO	RESIDENTIAL
42-11-0276-108	13.49 AC	INS	INSTITUTIONAL

PROPOSED LOTS:	AREA	ZONE	USE
LOT 1 - MAIN ST	9.79 AC	R-3	RESIDENTIAL (MULTI-FAMILY)
LOT 2	21.59 AC	R-3	RESIDENTIAL (MULTI-FAMILY)
LOT 3	12.79 AC	R-3	RESIDENTIAL (MULTI-FAMILY)
LOT 4	4.77 AC	BPO	AGRICULTURAL
LOT 5	48.65 AC	BPO	AGRICULTURAL

BUILDING SETBACKS:	FRONT YARD	SIDE YARD	REAR YARD
LOT 1	REQ 50'	PROVIDED 63'	REQ 50'
LOT 2	50'	50'	50'

LOT 3	50'	50'	50'	50'
LOT 4	30'	30'	25'	50'
LOT 5	30'	30'	25'	50'

- * SIDE YARD SETBACK FOR 46.5' HEIGHT BUILDING IN ACCORDANCE WITH § 245-157
- ** SIDE YARD SETBACK FOR BUILDINGS ≤ 35' HEIGHT.

LOT INFORMATION:	STREET FRONTAGE	LOT SIZE
LOT 1	REQUIRED 100'*	PROVIDED 1,305'
LOT 2	REQUIRED 100'*	PROVIDED 1,742'
LOT 3	REQUIRED 100'*	PROVIDED 981'
LOT 4	REQUIRED 150'	PROVIDED 1,100'
LOT 5	REQUIRED 150'	PROVIDED 4,300'

- * 100' FOR MULTI-FAMILY DWELLINGS - § 245 ATTACHMENT 5 #5.
- ** 1 ACRE PER DEVELOPMENT AREA AND 2,000 SF PER UNIT § 245 ATTACHMENT 5 #5.
- *** REQUIRED LOT AREA IS BASED ON COMPLIANCE WITH ZONING REQUIREMENTS

LOT COVERAGE:	BUILDING COVERAGE	IMPERVIOUS COVERAGE
LOT 1	ALLOWED 35%	PROVIDED 13.45%
LOT 2	35%	55%
LOT 3	35%	55%
LOT 4	30%	0%
LOT 5	30%	0%

BUILDING HEIGHT:	ALLOWED	PROVIDED
LOT 1	35'	≤ 46.5'
LOT 2	35'	BUILDINGS 1 - ≤ 35'

LOT 3	35'	BUILDINGS 4, 5, 6 - ≤ 46.5'
LOT 4	35'	BUILDING 7 ≤ 46.5'
LOT 5	35'	BUILDING 8 ≤ 35'

*MAY BE EXCEEDED IN ACCORDANCE WITH § 245-157

PROPOSED DENSITY

LOT 1	118 DU / 9.79 AC = 12.05 DU/AC
LOT 2	196 DU / 21.58 AC = 9.05 DU/AC
LOT 3	78 DU / 12.79 AC = 6.10 DU/AC
LOT 4	RESERVED FOR FUTURE DEVELOPMENT
LOT 5	RESERVED FOR FUTURE DEVELOPMENT

OPEN SPACE	REQUIRED	PROVIDED
# OF RESIDENTIAL UNITS MORE THAN 200	8 AC.	4.95 AC.
LOT 2		5.35 AC.
LOT 3		10.30 AC.

SHEET INDEX

* 1	OF 68	COVER SHEET
* 2	OF 68	COVER SHEET 2
* 3	OF 68	OVERALL EXISTING CONDITIONS PLAN
* 4	OF 68	EXISTING CONDITIONS PLAN A
* 5	OF 68	EXISTING CONDITIONS PLAN B
* 6	OF 68	EXISTING CONDITIONS PLAN C
* 7	OF 68	EXISTING CONDITIONS WETLAND EASEMENTS
* 8	OF 68	EXISTING CONDITIONS WETLAND EASEMENTS
* 9	OF 68	SUBDIVISION PLAN
* 10	OF 68	OVERALL LAYOUT PLAN
* 11	OF 68	LAYOUT PLAN A
* 12	OF 68	LAYOUT PLAN B
* 13	OF 68	LAYOUT PLAN C
* 14	OF 68	OVERALL GRADING PLAN
* 15	OF 68	GRADING PLAN A
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* 17	OF 68	GRADING PLAN C
* 18	OF 68	GRADING PLAN D
* 19	OF 68	OVERALL UTILITY PLAN
* 20	OF 68	UTILITY PLAN A
* 21	OF 68	UTILITY PLAN B
* 22	OF 68	UTILITY PLAN C
* 23	OF 68	OVERALL EASEMENT PLAN
* 24	OF 68	EASEMENT PLAN A
* 25	OF 68	EASEMENT PLAN B
* 26	OF 68	EASEMENT PLAN C
* 27	OF 68	EASEMENT PLAN D
* 28	OF 68	EASEMENT TABULATION PLAN
* 29	OF 68	OVERALL LANDSCAPE/LIGHTING PLAN
* 30	OF 68	LANDSCAPE/LIGHTING PLAN A
* 31	OF 68	LANDSCAPE/LIGHTING PLAN B
* 32	OF 68	LANDSCAPE/LIGHTING PLAN C
* 33	OF 68	ROUNDABOUT PLAN
* 34	OF 68	PROFILES
* 35	OF 68	PROFILES
* 36	OF 68	PROFILES
* 37	OF 68	PROFILES
* 38	OF 68	PROFILES
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* 44	OF 68	PROFILES
* 45	OF 68	PROFILES
* 46	OF 68	PROFILES
* 47	OF 68	PROFILES
* 48	OF 68	PROFILES
* 49	OF 68	STREET CROSS SECTIONS
* 50	OF 68	SITE DETAILS
* 51	OF 68	SITE DETAILS
* 52	OF 68	SITE DETAILS
* 53	OF 68	SITE DETAILS
* 54	OF 68	UTILITY DETAILS
* 55	OF 68	UTILITY DETAILS
* 56	OF 68	UTILITY DETAILS
* 57	OF 68	SANITARY SEWER DETAILS
* 58	OF 68	LANDSCAPE DETAILS
* 59	OF 68	OVERALL E&S PLAN
* 60	OF 68	E&S PLAN A
* 61	OF 68	E&S PLAN B
* 62	OF 68	E&S PLAN C
* 63	OF 68	E&S PLAN D
* 64	OF 68	E&S DETAILS
* 65	OF 68	E&S DETAILS
* 66	OF 68	E&S DETAILS
* 67	OF 68	E&S DETAILS
* 68	OF 68	E&S DETAILS

* TO BE RECORDED

SALDO WAVERS, MODIFICATIONS, DEFERRALS

THE OWNER REQUESTS THE FOLLOWING MODIFICATIONS & DEFERRALS FROM THE UPPER ALLEN TOWNSHIP LAND DEVELOPMENT ORDINANCE SECTIONS.

SALDO MODIFICATION REQUESTS	APPROVED
1. 220-9.C(2)(s) Existing 30 inch caliper (or larger) shown on plan - Request 30 inch caliper trees shown within limit of disturbance only.	08/16/17
2. 220-16.B(2) A four-foot wide grass planting strip between curb and sidewalk. - Request 3'-4" grass planting strip	08/16/17
3. 220-26.B(1)(g)[5] Type 3 screen for SWM along roadways - Request type 1 screen along roadways	08/16/17
4. 220-9.C(2) Plan scale at maximum 50 feet to one inch - Request 150 scale Overall Plans - Sheets 3, 9, 10, 14, 23 and 29	08/16/17

SALDO DEFERRAL REQUESTS

1. 220-15.B(11)(a) Widen adjacent street - Request deferral of widening Mill Rd except 130 linear feet at new intersection	08/16/17
2. 220-15.B(11)(a) Widen adjacent street - Request deferral of widening W. Lisburn Rd.	08/16/17
3. 220-16.A(2) Curbs along adjoining road - Request deferral of curbs along Mill Rd.	08/16/17
4. 220-16.A(2) Curbs along adjoining road - Request deferral of curbs along W. Lisburn Rd.	08/16/17
5. 220-16.B(3) Sidewalks along adjoining road - Request deferral of sidewalks along Mill Rd.	08/16/17
6. 220-16.B(3) Sidewalks along adjoining road - Request deferral of sidewalks along W. Lisburn Rd.	08/16/17
7. 220-16.B(3) Sidewalks along proposed streets - Request deferral of sidewalks along Oakwood Hills Drive from STA 26+50 to Mill Road.	08/16/17

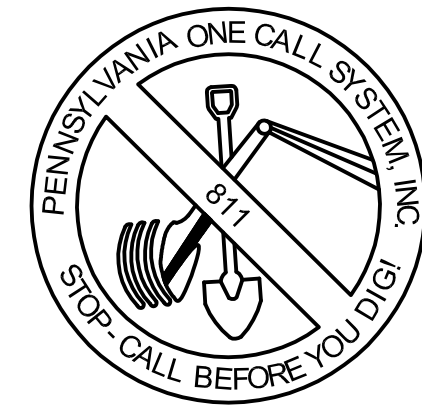
OWNER/EQUITABLE OWNER/APPLICANT

RIDER MUSSER DEVELOPMENT, LLC
5 KACEY COURT, SUITE 203, MECHANICSBURG, PA 17055

CONTACT: DAVID M. "KELLY" PHIPPS, PRESIDENT/CEO
PHONE: 717-458-5450
EMAIL: dkphpps@ridermussersdevelopment.com

OWNER/APPLICANT

MESSIAH COLLEGE
ONE COLLEGE AVENUE
MECHANICSBURG, PA 17055
CONTACT: KATHRYNNE G. SHAFER, VP. OF OPERATIONS
PHONE: (717) 691-6003
EMAIL: k.shaffer@messiah.edu



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LLC. CONTRACTORS TO CONTACT P.A. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

We, Rider Mussers Development, the undersigned, owners/equitable owners of the real estate shown and described herein, do hereby certify that we have laid off, platted and subdivided, and hereby lay off, plan and subdivide, said real estate in accordance with the within plan.

This subdivision shall be known and designated as Oakwood Hills. All streets and alleys shown and not heretofore dedicated are hereby dedicated to the public.

Building setback lines are hereby established as shown on this plan, between which lines and the property lines of the street there shall be erected or maintained no building or structure.

There are strips of ground thirty (30) feet in width as shown on this plan and marked: "Easement, reserved for the use of public utilities for the installation of water and sewer mains, poles, ducts, lines and wires, subject at all times to the proper authorities and to the easement herein reserved." No buildings or other structures are to be erected or maintained upon said strips of land, but owners of lots in this subdivision shall take their titles subject to the rights of the utilities.

The foregoing covenants (or restrictions) are to run with the land and shall be binding on all parties and all persons claiming under them until January 1, 2042, at which time said covenants (or restrictions) shall be automatically extended for successive periods of 10 years and shall remain in full force and effect unless changed at the end of such period of 10 years by vote of a majority of the then owners of the building sites covered by these covenants (or restrictions).

The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law, of any structure or part thereof erected or maintained in violation hereof, is hereby dedicated to the public and reserved to the several owners of the several lots in this subdivision and to their heirs and assigns.

Witness our Hands and Seals this _____ day of _____, 20__.

Commonwealth of Pennsylvania: :SS

County of Cumberland: :

On this, the _____ day of _____, 20__, before me, the

undersigned officer, personally came _____ known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged

that _____ executed the same for the

purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

My commission expires: _____

DATE

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND
ON THE _____ DAY OF _____, 20____. THE
UNDERSIGNED INDIVIDUAL PERSONALLY APPEARED
BEFORE ME,
DAVID M. "KELLY" PHIPPS,
KATHRYNNE G. SHAFER,
VICE PRESIDENT OF OPERATIONS OF MESSIAH COLLEGE
PRINT NAME AND TITLE
WHO BEING DULY SWORN ACCORDING TO LAW,
DEPOSE AND SAY THAT THEY ARE THE OWNERS OF
THE PROPERTY SHOWN ON THIS PLAN AND THAT
THEY ACKNOWLEDGE THE SAME TO BE RECORDED AS
SUCH ACCORDING TO LAW.

OWNER SIGNATURE (MESSIAH COLLEGE)

WITNESS MY HAND AND NOTORIAL SEAL
THE DAY AND DATE ABOVE WRITTEN.

MY COMMISSION EXPIRES

NOTARY PUBLIC

(NOTARIAL SEAL)

OAKWOOD HILLS OWNER IS RESPONSIBLE FOR
MAINTENANCE OF STORMWATER MANAGEMENT
FACILITIES WHICH RECEIVE STORMWATER FROM TAX
PARCEL: 42-11-0276-108.

I ACKNOWLEDGE THE STORMWATER MANAGEMENT
FACILITIES AND BMPS TO BE PERMANENT FIXTURES
THAT CAN BE ALTERED OR REMOVED ONLY AFTER
APPROVAL OF A REVISED PLAN BY UPPER ALLEN
TOWNSHIP.

ATTEST: _____

OWNER: _____

I ACKNOWLEDGE THE STORMWATER MANAGEMENT
FACILITIES AND BMPS TO BE PERMANENT FIXTURES
THAT CAN BE ALTERED OR REMOVED ONLY AFTER
APPROVAL OF A REVISED PLAN BY UPPER ALLEN
TOWNSHIP.

ATTEST: _____

OWNER: _____

RIDER MUSSER DEVELOPMENT LLC.

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The right to enforce these provisions by injunction, together with the right to cause the removal, by due process of law, of any structure or part thereof erected or maintained in violation hereof, is hereby dedicated to the public and reserved to the several owners of the several lots in this subdivision and to their heirs and assigns.

Witness our Hands and Seals this _____ day of _____, 20__.

Commonwealth of Pennsylvania: :SS

County of Cumberland: :

On this, the _____ day of _____, 20__, before me, the

undersigned officer, personally came _____ known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged

that _____ executed the same for the

purposes therein contained.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal.

My commission expires: _____

DATE

THIS PLAN RECORDED IN THE OFFICE OF THE
RECORDER OF DEEDS IN AND FOR CUMBERLAND CO.

THIS _____ DAY OF _____, 20____.

INSTRUMENT NO. _____

PARCEL REFERENCE
UPI: 42-11-0276-035
UPI: 42-11-0276-009
UPI: 42-11-0276-008A
UPI: 42-30-2112-004
UPI: 42-30-2110-018

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF CUMBERLAND
ON THE _____ DAY OF _____, 20____. THE
UNDERSIGNED INDIVIDUAL PERSONALLY APPEARED
BEFORE ME,
DAVID M. "KELLY" PHIPPS,
PRESIDENT/CEO OF RIDER MUSSER DEVELOPMENT, LLC
PRINT NAME AND TITLE
WHO BEING DULY SWORN ACCORDING TO LAW,
DEPOSE AND SAY THAT THEY ARE THE OWNERS OF
THE PROPERTY SHOWN ON THIS PLAN AND THAT
THEY ACKNOWLEDGE THE SAME TO BE RECORDED AS
SUCH ACCORDING TO LAW.

OWNER SIGNATURE (RIDER MUSSER DEVELOPMENT, LLC)

WITNESS MY HAND AND NOTORIAL SEAL
THE DAY AND DATE ABOVE WRITTEN.

MY COMMISSION EXPIRES

NOTARY PUBLIC

(NOTARIAL SEAL)

REVIEWED THIS 22 DAY OF MAY, 2017.
BY THE CUMBERLAND COUNTY PLANNING
DEPARTMENT

DIRECTOR OF PLANNING

REVIEWED BY THE PLANNING COMMISSION OF UPPER
ALLEN TOWNSHIP, THIS 26 DAY OF JUNE 2017.

ATTEST: _____

CHAIRMAN: _____

SECRETARY: _____

CONDITIONALLY APPROVED BY THE BOARD OF
COMMISSIONERS OF UPPER ALLEN TOWNSHIP, THIS 16
DAY OF AUGUST 2017.
ALL CONDITIONS OF APPROVAL MET THIS _____ DAY OF
_____, 20____.

ATTEST: _____

CHAIRMAN: _____

SECRETARY: _____

SURVEYORS CERTIFICATE
I, ERIC DIFFENBAUGH, PLS, HEREBY CERTIFY THAT I
AM A REGISTERED LAND SURVEYOR IN COMPLIANCE
WITH THE LAWS OF THE COMMONWEALTH OF
PENNSYLVANIA; THAT THIS PLAN CORRECTLY
REPRESENTS A SURVEY COMPLETED BY ME ON
1/24/14 AND REVIEWED AND UPDATED ON
_____, THAT ALL MONUMENTS SHOWN THEREON
ACTUALLY EXIST; AND THAT THEIR LOCATION, SIZE,
TYPE AND MATERIAL ARE ACCURATELY SHOWN.

ERIC DIFFENBAUGH, PLS

C.W. JUNKINS ASSOCIATES

550 COVENTRY ASSOCIATES DR.

MECHANICSBURG, PA 17055

CITY & STATE

SIGNATURE

DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THIS PLAN TO BE CORRECT AS
SHOWN.

ELIZABETH C. DAVIDSON, P.E.

H. EDWARD BLACK & ASSOC.

2403 NORTH FRONT STREET

HARRISBURG, PA 17110

CITY & STATE

SIGNATURE

DATE

I, _____ ON THIS DATE _____

HAVE REVIEWED AND HEREBY CERTIFY THAT THE SWM
SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA
OF THE UPPER ALLEN TOWNSHIP STORMWATER
MANAGEMENT ORDINANCE.

H. EDWARD BLACK & ASSOC.

V:\PROJECTS\13021.020 Oakwood Hills Rev. Act Land Dev. Plans\dwg\Land Development\13021.020-Cover.dwg, 8/1/2018, 4:21:27 PM, EDT

GENERAL NOTES

- ALL PROPOSED LOTS SHALL BE SERVED BY PUBLIC SEWER & WATER FACILITIES.
- WETLAND DETERMINATION & DELINEATION WERE BY VORTEX ENVIRONMENTAL IN DECEMBER, 2013.
- FEMA MAPPING DOES NOT SHOW 100 YEAR FLOOD PLAN WITHIN THE SITE.
- PNDI RECEIPT DATED 01-31-2017 LISTED NO POTENTIAL IMPACTS.
- BOUNDARY AND TOPOGRAPHIC INFORMATION IS REFLECTIVE OF AERIAL MAPPING AND A FIELD SURVEY PERFORMED BY C.W. JUNKINS ASSOCIATES, ON OR ABOUT JANUARY 24, 2014. CONTOUR ELEVATIONS ARE NGVD29 DATUM. HORIZONTAL COORDINATES ARE SPC PA SOUTH NAD83. THE PRIMARY CONTROL POINT AND BENCHMARK IS A CONCRETE MONUMENT ALONG WEST LISBURN ROAD AT AN ELEVATION OF 544.90. THIS ELEVATION IS NGVD29 DATUM AND EXISTING CONTOURS ARE RELATIVE TO THE REFERENCED BENCH MARK.
- LIMITS OF THE STEEP SLOPE CONSERVATION DISTRICT ARE BASED ON ANALYSIS OF THE SURVEYED TOPOGRAPHIC DATA. SLOPE CRITERIA WAS BASED ON UPPER ALLEN TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.
- THERE ARE NO HISTORICAL FEATURES ON THE SITE.
- ALL KNOWN EXISTING EASEMENTS AND RIGHT-OF-WAYS HAVE BEEN SHOWN ON THIS PLAN AS DISCOVERED AS PART OF THE SURVEY OF THE SUBJECT PROPERTY. ALL PROPOSED EASEMENTS AND/OR RIGHT-OF-WAYS ARE ALSO SHOWN ON THIS PLAN.
- A CROSS ACCESS EASEMENT SHALL BE RECORDED FOR THE PROPOSED PEDESTRIAN TRAIL ON TAX PARCEL 42-11-0276-108 AND PROPOSED LOT 1.
- PURSUANT TO ARTICLE XVI OF THE UPPER ALLEN TOWNSHIP CODIFIED ORDINANCES, RESTRICTIONS ON THE USE OF LAND WITHIN THE STEEP SLOPE CONSERVATION DISTRICT EXIST.
- THE DEVELOPER SHALL COMPLY WITH ALL APPLICABLE UPPER ALLEN TOWNSHIP ORDINANCES IN EFFECT AT THE TIME OF SUBMISSION OF THE PLAN.
- AS PER UPPER ALLEN TOWNSHIP ORDINANCE, THERE SHALL BE A MINIMUM OF TWO CONCRETE MONUMENTS PER LOT.
- NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF AN EASEMENT THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT OR CONFLICT WITH THE EASEMENT AGREEMENT.
- ALL AREAS SHOWN AS WITHIN PROPOSED STREET RIGHT-OF-WAYS ARE OFFERED FOR DEDICATION TO UPPER ALLEN TOWNSHIP.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL STREET NAME AND TRAFFIC CONTROL SIGNS. STREET NAME SIGNS AND TRAFFIC CONTROL SIGNS SHALL BE INSTALLED PER THE UPPER ALLEN TOWNSHIP'S ZONING ORDINANCE. STREET NAMES AND ADDRESSES SHALL BE APPROVED BY THE TOWNSHIP AND THE UNITED STATES POST OFFICE.
- ALL INTERSECTION CONTROLS (STOP AND YIELD SIGNS) SHALL BE DETERMINED PRIOR TO STREET DEDICATION BASED ON A TRAFFIC AND ENGINEERING STUDY BY A TRAFFIC ENGINEER. SIGNS SHALL BE INSTALLED PER PENNDOT STANDARDS AND SPECIFICATIONS.
- TRAFFIC CONTROL SIGNS MUST BE POSTED ON PENNDOT APPROVED BREAKAWAY POSTS IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE TC-8700 SERIES IN PENNDOT PUBLICATION 111M.
- ALL TRAFFIC CONTROL SIGNS SHALL BE POSTED IN ACCORDANCE WITH THE 2009 MUTCD AND THE MOST RECENT VERSION OF PENNDOT PUBLICATION 236M, "HANDBOOK OF APPROVED SIGNS".
- ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS SHALL BE CONSTRUCTED TO COMPLY WITH THE FOLLOWING STANDARDS:
 - PENNDOT DESIGN MANUAL 2, CHAPTER 6.
 - PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, PUBLICATION 72M, RC-67M.
 - U.S. ACCESS BOARD, PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) AND ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG).
- AS-BUILT MYLAR PLANS, TWO SETS OF PAPER PRINTS, AND ELECTRONIC DATA FILES TO BE PROVIDED TO THE TOWNSHIP. ALL DRAWINGS MUST BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR ATTESTING TO THE CORRECTNESS OF THE FACILITY INFORMATION SHOWN.
- A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SEC. 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242, NO. 425) AS AMENDED, BEFORE ANY CONSTRUCTION IS INITIATED WITHIN A STATE HIGHWAY OR BEFORE ACCESS TO A STATE HIGHWAY IS PERMITTED.
- CONTRACTOR SHALL REFER TO APPROVED HOP AND ROW PLANS FOR ALL WORK INSIDE THE PENNDOT ROW.
- REQUIRED OPEN SPACE AREA SHALL BE MAINTAINED BY THE OWNER AND SHALL BE PERMANENTLY PRESERVED AS OPEN SPACE.
- THE OWNER SHALL MAINTAIN THE STREET LIGHTS ON OAKWOOD HILLS DRIVE.

CONSTRUCTION NOTES

- THE CONTRACTOR SHALL COMPLY WITH ALL TOWNSHIP, STATE AND FEDERAL REGULATIONS IN EFFECT AT THE TIME OF CONSTRUCTION.
- ALL WORK TO BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS, SPECIFICATIONS, AND CODES (WHERE APPLICABLE) OF UPPER ALLEN TOWNSHIP, AND PENNDOT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF NECESSARY EROSION CONTROL MEASURES AS APPROVED BY THE CUMBERLAND COUNTY CONSERVATION DISTRICT. NO EARTH DISTURBANCE SHALL TAKE PLACE ON THE SITE PRIOR TO THIS APPROVAL. THE CONTRACTOR MUST OBTAIN A COPY OF THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AND THE CUMBERLAND COUNTY CONSERVATION DISTRICT AT LEAST 7 DAYS PRIOR TO THE START OF CONSTRUCTION AND 72 HOURS BEFORE THE COMPLETION OF CONSTRUCTION.
- THE CONTRACTOR SHALL IMPLEMENT PERIMETER EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL ADHERE TO THE EARTH MOVING STAGING SEQUENCE AS DESCRIBED IN THE EROSION CONTROL PLAN AND MAINTAIN ALL EROSION CONTROL MEASURES, TEMPORARY AS WELL AS PERMANENT, THROUGHOUT THE LIFE OF THE PROJECT.
- DURING CONSTRUCTION, CONTRACTOR SHALL PROTECT ALL DRAINAGE STRUCTURES, WALKWAYS, ROADWAYS AND PARKING AREAS, STREAMS AND DRAINAGE WAYS FROM SEDIMENTATION.
- H. EDWARD BLACK AND ASSOCIATES, LTD. MAKES NO REPRESENTATION AS TO THE ACCURACY OF ACTUAL ON-SITE INFORMATION. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED ON SURFACE EVIDENCE, EXISTING DRAWINGS, AND INFORMATION FURNISHED BY THE RESPECTIVE UTILITY COMPANIES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL UTILITY LOCATIONS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CONTACT PA ONE CALL 1-800-242-1776 AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.
- THE CONTRACTOR SHALL CHECK AND VERIFY ALL EXISTING CONDITIONS AND CONTACT THE SITE ENGINEER IF THERE ARE QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL SAFEGUARD ALL UTILITIES DURING CONSTRUCTION AND VERIFY THE LOCATION OF THE PROPOSED CONNECTIONS.
- DO NOT INTERRUPT EXISTING UTILITY SERVICES TO FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER OR ENGINEER. INTERRUPTIONS SHALL OCCUR ONLY AFTER ACCEPTABLE TEMPORARY UTILITY SERVICE HAS BEEN PROVIDED.
- PROPOSED DRIVEWAYS ON INDIVIDUAL LOTS SHALL BE REQUIRED TO SATISFY MINIMUM SIGHT DISTANCE REQUIREMENTS AT UPPER ALLEN TOWNSHIP.
- ALL LOTS OR UNITS SHALL BE SERVED WITH GRAVITY SEWER LATERALS OR MAINS EXTENDING TO SANITARY SEWER MANHOLES LOCATED WITHIN EXISTING OR PROPOSED PUBLIC SANITARY SEWER RIGHTS-OF-WAY.
- THE PERMITTEE FOR THIS SEWER EXTENSION IS UPPER ALLEN TOWNSHIP.
- SEWER TAPPING FEE WILL BE PAID AT THE THEN CURRENT RATE PER EDU AS DETERMINED BY THE LATEST RESOLUTION OF THE TOWNSHIP OF UPPER ALLEN.
- BEFORE CONSTRUCTION BEGINS, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH UPPER ALLEN TOWNSHIP CONSTRUCTION DETAILS AS PROVIDED, FOR CERTAIN DESIGN STANDARDS.
- ALL SANITARY SEWER CONSTRUCTION MATERIALS, METHODS, AND APPURTENANCES SHALL BE IN ACCORDANCE WITH UPPER ALLEN TOWNSHIP'S STANDARD SPECIFICATIONS AND DETAILS IN EFFECT AT THE TIME OF THE CONSTRUCTION. THE CONTRACTOR SHOULD REFER TO THE DETAIL IN THE STANDARD CONSTRUCTION AND MATERIAL SPECIFICATIONS OF UPPER ALLEN TOWNSHIP.
- PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF TEN (10) FEET BETWEEN THE SANITARY SEWER AND OTHER UNDERGROUND UTILITIES. PROVIDE A MINIMUM HORIZONTAL CLEARANCE OF FIVE (5) FEET BETWEEN THE SANITARY SEWER AND EXISTING AND PROPOSED STRUCTURES SUCH AS MANHOLES, INLETS, CURBS, ETC.
- ALL SANITARY SEWER MAINS AND LATERALS/WATER MAINS AND SERVICE LINES/STORM SEWER PIPING CROSSINGS SHALL MAINTAIN A MINIMUM 18 INCH VERTICAL CLEARANCE. ALL CROSSINGS HAVING LESS THAN 18 INCH CLEARANCE SHALL BE APPROVED BY AND INSTALLED AS DIRECTED BY THE TOWNSHIP ENGINEER.
- PROVIDE A MINIMUM COVER OF FIVE (5) FEET OVER THE SANITARY SEWER MEASURED FROM FINISH GRADE ELEVATION.
- WATER MAIN AND APPURTENANCES TO BE DESIGNED AND INSTALLED BY SUEZ WATER PENNSYLVANIA. REVISIONS TO THE POTABLE WATER SYSTEM LAYOUT MAY BE REQUIRED UPON COMPLETION AND APPROVAL OF SUEZ WATER PA'S WATER SYSTEM DESIGN FOR THE DEVELOPMENT.
- ALL WATER LINE CONSTRUCTION SHALL COMPLY WITH THE REGULATIONS OF THE LOCAL WATER SUPPLIER.
- ALL WATER LINES SHALL HAVE A MINIMUM COVER OF 4' FROM FINISH GRADE.
- FIRE HYDRANTS SHALL BE FITTED WITH A 5 INCH STORZ HYDRANT ADAPTER.
- THE CONTRACTOR SHALL MAINTAIN AND PROTECT PROPERTY LINE STAKES AND MONUMENTS THROUGHOUT THE COMPLETION OF THE PROJECT.
- CONTOURS AND SPOT ELEVATIONS ARE CONTROLS ONLY. ALL GRADES SHALL BE SMOOTH AND CONTINUOUS. TOPS AND BOTTOMS OF SLOPES SHALL BE ROUNDED.
- PROPOSED ELEVATIONS ON PAVED SURFACES INDICATE FINISHED GRADES.
- SPOT ELEVATIONS SHOWN IN PARKING AREAS REPRESENT BOTTOM OF CURB ELEVATIONS UNLESS OTHERWISE NOTED.
- ALL LAWN AREAS ADJACENT TO CURBING AND PAVING SHALL BE FLUSH WITH THE TOP OF CURB, WALKS, AND ROADWAYS.
- ALL VEGETATED AREAS TO BE GRADED TO PROVIDE POSITIVE DRAINAGE AT A MINIMUM SLOPE OF TWO PERCENT (2%). MINIMUM SLOPE AWAY FROM BUILDINGS TO BE TWO PERCENT (2%) UNLESS OTHERWISE NOTED IN PAVED AREAS.
- ALL DISTURBED AREAS AND AREAS WITH EXISTING EROSION PROBLEMS ARE TO BE DRESSED WITH TOPSOIL, SEEDED AND MULCHED.
- THE CONTRACTOR SHALL SAFEGUARD & PROTECT ALL VEGETATION NOTED TO BE PROTECTED THROUGHOUT THE DURATION OF THE PROJECT.
- AT NO TIME SHALL THE CONTRACTOR SCALE UNDIMENSIONED AREAS. ANY AND ALL QUESTIONS RELATING TO LAYOUT OR DIMENSIONS SHALL BE DIRECTED TO THE LANDSCAPE ARCHITECT OR ARCHITECT PRIOR TO START OF CONSTRUCTION.
- ALL SANITARY SEWERS CONSTRUCTED IN PUBLIC STREETS SHALL BE SUBJECT TO BACKFILL COMPACTION TESTS AT THE DEVELOPER'S EXPENSE.
- ALL SANITARY SEWER CLEANOUTS IN PAVED AREAS SHALL CONFORM TO UPPER ALLEN TOWNSHIP SEWER AUTHORITY STANDARDS.

CONSTRUCTION EARTHWORK NOTES

- INVESTIGATIONS
 - COMPREHENSIVE FOUNDATION INVESTIGATIONS SHALL BE COMPLETED FOR ALL MULTI-STORY CONSTRUCTION.
- SOIL FILLS
 - PLACE AND COMPACT APPROVED SOIL FILL IN EIGHT (8") INCH LOOSE LAID LAYERS WHERE LARGE COMPACTION EQUIPMENT CAN BE OPERATED AND IN FOUR (4") INCH LOOSE LAID LAYERS WHERE SMALL COMPACTION EQUIPMENT, SUCH AS HAND OPERATED TAMPERS, IS REQUIRED TO REQUIRED ELEVATIONS AS FOLLOWS:
 - ALL FILL MATERIALS SHALL MEET GEOTECHNICAL STANDARDS AND BE REVIEWED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
 - FOR FILL SLOPES GREATER THAN FIFTEEN (15) FEET IN HEIGHT, USE STRUCTURAL FILL. FOR FILL SLOPES LESS THAN FIFTEEN (15) FEET IN HEIGHT USE SATISFACTORY FILL.
 - UNDER GRASS AND PLANTED AREAS, USE SATISFACTORY SOIL.
 - UNDER WALKS AND PAVEMENTS, USE SATISFACTORY SOIL.
 - UNDER STEPS AND RAMPS, USE STRUCTURAL FILL WITHIN THREE (3') FEET OF SUBGRADE AND SATISFACTORY SOIL FILL OR ROCK FILL AT DEEPER DEPTHS.
 - UNDER BUILDING SLABS, USE STRUCTURAL FILL WITHIN FIVE (5') FEET OF SUBGRADE AND SATISFACTORY FILL AT DEEPER DEPTHS.
 - UNDER FOOTINGS AND FOUNDATIONS, USE STRUCTURAL FILL WITHIN FIVE (5') FEET OF SUBGRADE AND SATISFACTORY FILL OR ROCK FILL AT DEEPER DEPTHS.
- COMPACTION OF SOIL BACKFILLS AND FILLS
 - COMPACT SOIL MATERIALS TO NOT LESS THAN THE FOLLOWING MODIFIED PROCTOR METHOD PERCENTAGES OF MAXIMUM DRY UNIT WEIGHT PER ASTM D 1557:
 - UNDER STRUCTURES, BUILDING SLABS, STEPS, AND PAVEMENTS, AND WITHIN FILL SLOPES GREATER THAN FIFTEEN (15) FEET IN TOTAL HEIGHT SCARIFY AND RECOMPACT TOP 12 INCHES OF EXISTING SUBGRADE AND EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 95 PERCENT.
 - PLACE BACKFILL AND FILL SOIL MATERIALS EVENLY ON ALL SIDES OF STRUCTURES TO REQUIRED ELEVATIONS, AND UNIFORMLY ALONG THE FULL LENGTH OF EACH STRUCTURE.
 - UNDER WALKWAYS, SCARIFY AND RECOMPACT TOP 6 INCHES BELOW SUBGRADE AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 95 PERCENT.
 - UNDER TURF OR UNPAVED AREAS, SCARIFY AND RECOMPACT TOP 6 INCHES BELOW SUBGRADE AND COMPACT EACH LAYER OF BACKFILL OR FILL SOIL MATERIAL AT 85 PERCENT.
 - FOR UTILITY TRENCHES, COMPACT EACH LAYER OF INITIAL AND FINAL BACKFILL SOIL MATERIAL AT 95 PERCENT IN PAVEMENT AND UNDER STRUCTURES, AND 85 PERCENT UNDER UNPAVED AREAS.
 - ALL CHOK STONE LAYERS, REGARDLESS OF LOCATION, AT 95 PERCENT.

WATER QUALITY BMP OPERATION & MAINTENANCE

STORMWATER MANAGEMENT OWNERSHIP, ADMINISTRATION & MAINTENANCE

The proposed storm sewers located off public street rights-of-way, swales, outlet protection and stormwater management basins will be privately owned and maintained. The owners will be:

Property Owner:	Rider Musser Development, LLC	Messiah College
Address:	5 Kacey Court, Suite 203 Mechanicsburg, PA 17055	One College Avenue Mechanicsburg, PA 17055
Phone:	(717) 458-5450	(717) 691-6003

The new off road stormwater system will not be dedicated to the Upper Allen Township and will remain under the ownership of Rider Musser Development, LLC and Messiah College or successors and assigns.

Upper Allen Township shall have right to inspect the facilities at any time; require the owner to take corrective measures and assign the owner reasonable time period for any necessary action; and authorize maintenance to be done and lien all costs of the work against the property of the private entity responsible for maintenance, if corrective measures are not taken within the specified time period.

WATER QUALITY INLET OPERATION & MAINTENANCE SCHEDULE

- Monitor Monthly for the first year of a new installation after the site has been stabilized, and quarterly thereafter.
- Check sediment depth and note any surface pollutants in the structure. The pollutants collected in SNOUT, equated structures will consist of floatation on the surface of the captured water, and grit and sediment in the sumped bottom of the structure.
- It is best to schedule maintenance based on the solids collected in the sump. Optimally, the structure should be cleaned when the sump is no more than half full (e.g. when 1 foot of material collects in a 2 foot sump, clean it out).
- Structures should also be cleaned if a spill or other incident causes a larger than normal accumulation of pollutants in a structure.
- Maintenance is best done with a vacuum truck.
- If oil absorbent hydrophobic booms are being used in the structure to enhance hydrocarbon capture and removals, they should be checked on a monthly basis, and serviced or replaced when more than 2/3 of the boom is submerged, indicating a nearly saturated state.
- All collected wastes must be handled and disposed of according to local and state environmental requirements.
- To maintain the SNOUT hoods themselves, an annual inspection of the antishock vent and access hatch are recommended. Flushing of the vent with water or compressed air, or gently rod with a flexible wire. Opening and closing the access hatch once a year.

VEGETATED SWALE OPERATIONS & MAINTENANCE SCHEDULE

- The swale shall be inspected twice per year, between March 15th & April 30th and again between October 1st & November 30th to evaluate its health and to remove and replace any dead, diseased or unsalvagable vegetation. Pests and diseases of the vegetation shall be treated as necessary with low-toxic, preventative measures. Program of prevention and treatment shall be approved by the owner or his representative prior to implementation of the program.
- Areas of bare soil shall be raked, seeded and mulched immediately.
- During times of extended drought, look for physical features of stress. Water in the early morning as needed to maintain one (1") inch of water weekly.
- Remove accumulated sediment and debris from the channel on a monthly basis.
- The soils and organic material shall be tested annually and the pH adjusted per the tests to maintain a pH required for the planting.
- After each rainstorm, inspect surface to insure that drainage paths are clear and that ponding water dissipates over 4-6 hours. (water may pond for longer times during the winter and early spring.) The swale is not a pond. It should not provide a breeding ground for mosquitoes.
- Inspect vegetation on side slopes and channel bottom for erosion and formation of rills or gullies, correct as needed to design grade.
- Inspect for litter; remove prior to mowing.
- Mow and trim vegetation to ensure safety, aesthetics, proper swale operation, or to suppress weeds and invasive vegetation; dispose of cutting in a local composting facility; mow only when swale is dry to avoid rutting.
- Mow meadow seed mix area only once per year during dormant season (early spring).

DETENTION/INFILTRATION BASIN OPERATION & MAINTENANCE SCHEDULE

- All basin structures expected to receive and/or trap debris and sediment should be inspected for clogging and excessive debris and sediment accumulation at least four (4) times per year, as well as after every storm greater than 1 inch.
 - o Structures include basin bottoms, trash racks, outlet structures, riprap or gabion structures, and inlets.
- Sediment removal should be conducted when the basin is completely dry. Sediment should be disposed of properly and once sediment is removed, disturbed areas need to be immediately stabilized and revegetated.
- Mowing and/or trimming of vegetation should be performed as necessary to sustain the system, but all detritus should be removed from the basin.
 - o Vegetated areas should be inspected annually for erosion.
 - o Vegetated areas should be inspected annually for unwanted growth of exotic/invasive species.
 - o Vegetative cover should be maintained at 95 percent. If vegetative cover has been reduced by percent, vegetation should be reestablished.
- Gross on the stormwater basin emergency spillway shall be mowed on a regular basis to prevent brush and tree growth and to provide adequate channel flow.
- Upon finding any component of the drainage structures not functioning as intended, that portion of the structure shall be immediately cleaned, repaired or replaced.

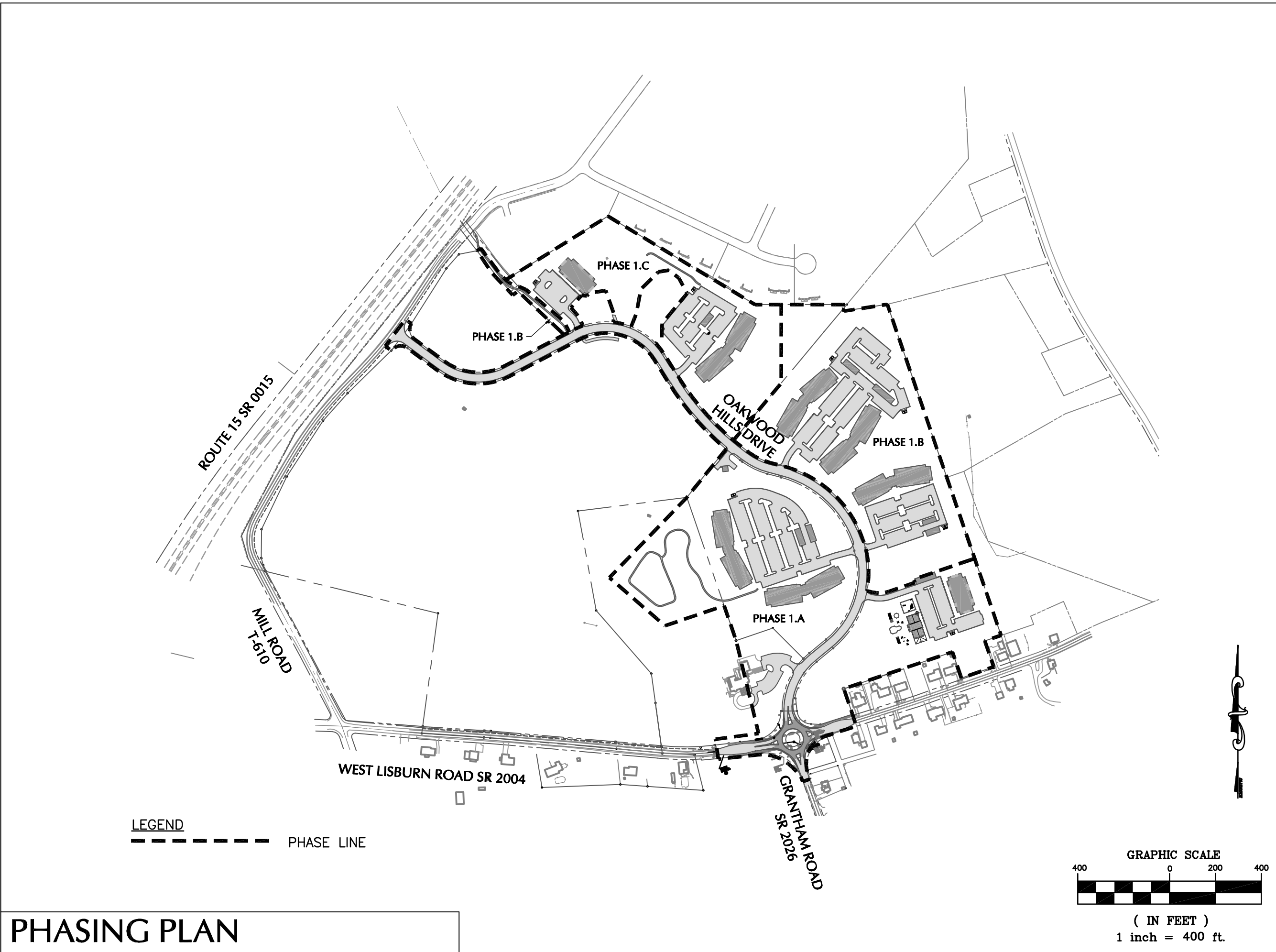
STREET SUMMARY TABLE

STREET NAME	LENGTH	ROW WIDTH	CARTWAY WIDTH
OAKWOOD HILLS DRIVE	3,512 FT	50 FT	34 FT

SANITARY SEWER MANHOLE NORTHING & EASTING		
MH-G01-56A	305333.65	2180109.37
MH-G01-164	304940.41	2180001.71
MH-G01-165	304848.16	2179794.76
MH-G01-166	305174.81	2180362.95
MH-G01-167	303310.76	2180840.22
MH-G01-168	303437.66	2180886.29
MH-G01-169	303649.42	2181096.32
MH-G01-170	303757.18	2181148.03
MH-G01-171	303885.43	2181165.44
MH-G01-172	303939.43	2181041.71
MH-G01-173	303875.32	2180855.24
MH-G01-174	303832.14	2180729.64
MH-G01-175	303959.80	2180685.75
MH-G01-176	303998.39	2181146.01
MH-G01-177	304108.78	2181094.86
MH-G01-178	304196.37	2181023.84
MH-G01-179	304278.67	2180908.81
MH-G01-180	304478.82	2181028.34
MH-G01-181	304192.60	2181281.44
MH-G01-182	303649.37	2181140.04
MH-G01-183	303756.61	2181252.16
MH-G01-184	303783.52	2181344.6

- * COORDINATES BASED ON PA83-SF DATUM.

SANITARY SEWER INDEX MAP



PHASING PLAN

PHASING SCHEDULE		
PHASE	UNITS	FILING DATE
1.A	137	2017
1.B	177	2022
1.C	78	2027

NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 400'

JOB NUMBER: 13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

COVER SHEET 2

H. EDWARD BLACK
and ASSOCIATES, Ltd.

2403 North Front Street
Harrisburg, Pennsylvania 17110 • Telephone 717/233-1026 • FAX 717/233-2192

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

FOR CORRECTIONS

PER SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

07-31-18

06-27-18

06-08-18

05-04-18

03-28-18

12-27-17

11-13-17

THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, LTD. ANY REUSE OR PROJECT EXTENSIONS OF ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, LTD.

GENERAL NOTES

- The Contractor shall notify PA DEP of proposed demolition.
- The Contractor shall provide dust control in accordance with DEP regulations.
- The Contractor shall remove all construction and demolition waste to a DEP approved landfill.
- The Contractor shall provide landfill receipts to the Owner.
- The Contractor shall remove all clean fill rubble such as brick, block, concrete, etc. to an approved off-site disposal area.
- The Contractor shall comply with all Municipal, State and Federal regulations in effect at the time of construction.
- All construction methods and materials shall conform to the latest standard construction specifications and details of Upper Allen Township.
- The Contractor shall check and verify all existing conditions prior to the start of construction.
- The Contractor is responsible for contacting "The Pennsylvania One-Call System" to obtain information on utility locations on site at least three (3) business days prior to initiating construction at 1-800-242-1776.
- The Contractor shall notify all utilities to disconnect services.
- The Contractor shall be responsible for verifying all utility locations prior to the start of construction.
- The Contractor shall verify that existing utilities have been turned off by the Utility Provider prior to demolition.
- The Contractor shall safeguard all utilities during construction and verify the location of the proposed disconnections.
- All lawn areas adjacent to curbing and paving shall be flush with the top of curb, walks, and roadways.
- The Contractor shall adhere to all aspects of the Erosion Control Plan, including the earth moving staging sequence, and maintain all erosion control measures, temporary as well as permanent, throughout the life of the project.
- The Contractor shall notify the Owner's Representative and the Cumberland Conservation County District at least 72 hours prior to the start of construction and 72 hours before the completion of construction.
- The Contractor shall implement perimeter erosion control measures prior to the start of construction.
- During construction, Contractor shall protect all drainage structures, walkways, roadways and parking areas, streams and drainage ways from sedimentation.
- Contractor shall inspect locations of previously demolished buildings to ensure that they have been removed in accordance with the requirements of the 2009 International Building Code (2009IBC), any applicable laws and ordinances of Upper Allen Township and any state and/or federal laws.

DEMOLITION NOTES

Site demolition shall consist of the removal and off site disposal of existing features and construction rubble; and abandonment of utilities. All items to be demolished are highlighted on plans.

Items to be demolished and disposed of include, but are not limited to the following

- Pavements, including asphalt, base, sidewalks, curbing and gravel.
- Trees, shrubbery, vegetation and topsoil.
- Abandoned utilities dug up during construction.
- Buildings
- Wells
- On-lot sewer systems.
- Subsurface infiltration Facilities

Utilities to be abandoned

- Electric lines & poles
- Communication line & poles

- The subject buildings shall be completely demolished in accordance with the requirements of the 2009 International Building Code (2009IBC), any applicable laws and ordinances of Upper Allen Township and any state and/or federal laws.
- Any surface voids shall be filled with clean fill and compacted by tracking infill materials with excavation equipment or equal.
- Remove steps and foundations to a minimum of 18" below grade.
- Wells to be abandoned as per well abandonment notes. All wells to be abandoned are not shown on the plans.
- On-lot sewer system removal to be in accordance with DEP regulations.
- Subsurface infiltration facility under and adjacent to existing residential driveway to be completely removed, backfilled and compacted in accordance with penndot 408.

WELL ABANDONMENT NOTES

The contractor shall prepare the water well for abandonment by the following procedures:

- Water Well Drillers License Act require that the owner or consultant who is to abandon the well notify the PA DEP Bureau of Topographic and Geologic Survey (BTGS) of the intent to decommission a well at least 10 days before the well is sealed.
- Contractor shall protect well and the associated groundwater from contamination and intrusion of foreign objects during demolition operations.
- Water well is at an unknown depth.
- The well shall be cleared of all obstructions such as pumps, pipes, wiring and air lines.
- The casing pipe shall be removed and disposed. Before the casing is pulled, the well should be grouted to near the bottom of the casing to provide some type of a seal if well collapses after the casing is pulled. If casing pipe cannot be pulled then the casing pipe shall be ripped or perforated prior to filling the column with neat cement grout.
- The entire column shall be filled with a sealant consisting of "Neat" cement grout and bentonite clay.
- Neat cement grout shall be formulated using a ratio of one 94# bag of Portland cement to no more than 6 gallons of water with 6 to 8 percent bentonite to decrease shrinkage.
- A grout pump and tremie pipe shall be use to deliver grout to the bottom of the well.
- Abandonment shall be completed at one (1) foot below proposed building foundation.
- The area of the well shall be covered with a 4 inch layer of grout prior to backfilling soil to grade.
- The Well Abandonment Form shall be sent to BTGS along with a photograph of the well site and a reference map showing the surveyed location of the abandoned well.

ADJACENTS

- Rider Musser Development, LLC
Instrument #20160372
Tax Parcel ID: 42-30-2112-004
Lot Area: 0.275 Acre
- Glenn C. Karper
D.B. P. Vol. 20, Pg. 641
Tax Parcel ID: 42-30-2112-005
- Wayne P. & Kelly J. Mallon
D.B. 151, Pg. 596
Tax Parcel ID: 42-30-2112-006
- Michael D. Rice
D.B. 271, Pg. 4204
Tax Parcel ID: 42-30-2112-007
- Rider Musser Development, LLC
D.B. 2142, Pg. 689
Tax Parcel ID: 42-30-2112-008
- Kenneth E. & Sherry L. Bruck
D.B. Q. Vol. 21, Pg. 111
Tax Parcel ID: 42-30-2112-009
- Ronald W. & Claire A. Gruver
D.B. I. Vol. 25, Pg. 241
Tax Parcel ID: 42-30-2112-010
- Alan M. Kiesel
Instrument #200936971
Tax Parcel ID: 42-30-2112-012
- Sherry L. Hughes
Instrument #201115206
P.B. 74, Pg. 94, Lot 1
Tax Parcel ID: 42-30-2112-072
- Kasey J. and Karen L. Troyer
DB 00276-01085
Tax Parcel ID: 42-30-2112-028
- Craig Lee Souillard and Lynn Ellen Davis
DB 00322-Page 218
Tax Parcel ID: 42-30-2112-030
Lot Area: 0.387 Acre

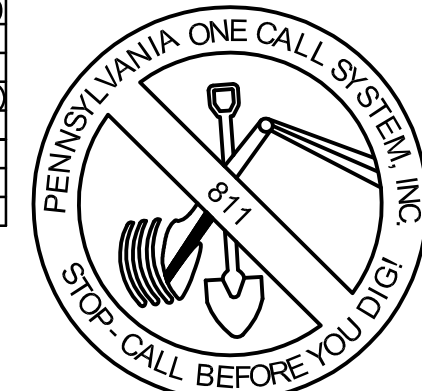
EXISTING EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L200	33.04	S52°07'07"W
L201	201.31	N19°36'51"W
L202	297.50	N22°19'45"W
L203	307.32	N45°33'44"W
L204	257.04	N19°43'50"E
L205	293.23	N19°54'24"E
L206	190.07	N18°14'00"W
L207	302.09	N18°52'13"W
L208	83.15	N13°51'03"E
L209	36.37	S69°25'45"W
L210	94.90	N13°51'03"E
L211	293.45	N18°52'13"W
L212	200.60	N18°14'00"W
L213	303.56	N19°54'24"E
L214	237.77	N19°43'50"E
L215	294.27	N45°33'44"W
L216	304.38	N22°19'45"W
L217	225.10	N19°36'51"W

EXISTING LINE TABLE		
LINE	LENGTH	BEARING
L1	5.10	N28°06'32"W
L2	54.53	N14°51'55"W
L3	265.84	N45°42'54"E
L4	82.56	N41°35'39"E
L5	80.13	N78°49'58"E
L6	49.71	S83°05'35"W
L7	5.00	N06°54'25"W
L8	61.78	S83°05'35"W
L9	5.00	S03°38'26"E
L10	66.76	S72°28'19"W
L11	49.72	S83°05'35"W
L13	545.27	N85°05'05"W
L14	28.14	N86°37'42"W
L15	289.07	N86°13'51"W
L16	30.81	N28°06'32"W
L17	32.71	N14°51'55"W

EXISTING CURVE TABLE				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C1	229.35	1817.53	7°13'48"	114.83
C2	130.50	1817.53	4°06'49"	65.28
C3	61.51	1078.95	3°15'59"	30.77
C4	171.29	1083.95	9°03'15"	85.82
C5	208.44	1812.53	6°35'20"	104.33
C6	150.45	1812.53	4°45'21"	75.27
C7	171.67	1078.95	9°06'59"	86.02
C10	77.11	50.00	88°21'56"	48.59
C11	306.98	325.00	54°07'07"	166.02

EASEMENT CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIR.
C100	171.82	325.00	30°17'27"	87.97	169.82	N05°17'51"E
C101	110.72	1812.53	3°29'59"	55.37	110.70	S76°46'05"W
C102	175.52	1028.95	9°46'25"	87.97	175.31	S88°45'14"E
C103	58.66	1028.95	3°16'00"	29.34	58.66	N84°43'34"E
C104	196.43	1762.53	6°23'08"	98.32	196.33	N80°05'00"E

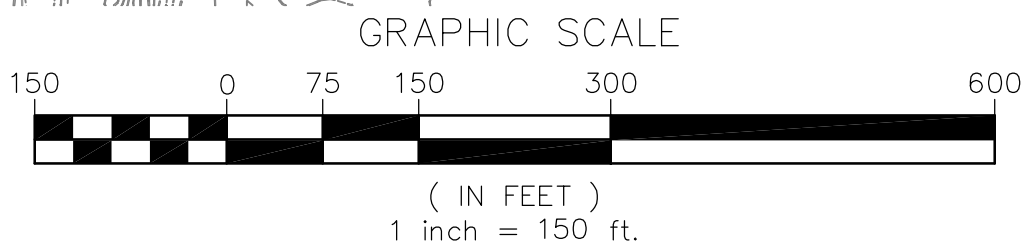
SANITARY SEWER ELEVATION NOTES:				
A. EXISTING SANITARY SEWER MH RIM AND INVERT ELEVATIONS FROM 2017 TWP. AS-BUILT SEWER SURVEY WHICH IS BASED ON NAVD 88 DATUM. PLAN TOPOGRAPHY IS BASED ON NGVD 29 DATUM.				
B. EXISTING SANITARY SEWER MH RIM ELEVATIONS FROM 2017 SURVEY BY OFFENBAUGH, WADEL, INC. WHICH IS BASED ON NAVD 29 DATUM. INVERTS ARE CALCULATED BY SUBTRACTING THE DIMENSION BETWEEN RIM AND INVERT ON 2017 TWP. AS-BUILT SEWER SURVEY (SEE CHART).				
MANHOLE NUMBER	TOWNSHIP RIM ELEVATION	TOWNSHIP MEASURED INV.	PLAN SURVEYED RIM ELEVATION	PLAN CALCULATED ELEVATION
G01-45	453.81	444.58 INV. IN (N)	454.63	445.40 INV. IN (N)
		INSIDE DROP		441.40 INV. IN (E)
		441.28 INV. IN (W)		442.10 INV. IN (W)
G01-80	454.72	444.86 INV. IN (E)	455.53	445.67 INV. IN (E)
		443.10 INV. OUT (W)		443.91 INV. OUT (W)
		446.73 INV. IN (S)	461.62	447.42 INV. IN (S)
G01-81	460.93	446.49 INV. IN (S)		447.18 INV. IN (S)
		446.34 INV. OUT (W)		447.03 INV. OUT (W)
		446.34 INV. OUT (W)		447.03 INV. OUT (W)
SMH-G01-56	496.97	487.59 INV. IN	497.94	488.56 INV. IN
		487.55 INV. OUT		488.52 INV. OUT
SMH-G01-57	508.72	494.83 INV. IN	509.44	495.55 INV. IN
		494.64 INV. OUT		495.36 INV. OUT



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LLC. CONTRACTORS TO CONTACT PA. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.



LEGEND

- Existing Property Line
- Existing Right-of-Way Line
- Existing Adjoining Property Line
- Existing Building Setback Line
- Existing Buffer Line
- Existing Easement
- Existing Major Contour
- Existing Minor Contour
- Existing Centerline
- Existing Edge of Paving/Gravel
- Existing Curb
- Existing Edge of Shoulder
- Existing Sidewalk
- Existing Guidrail
- Existing Fence Line
- Existing Sanitary Sewer Line
- Existing Storm Sewer Pipes
- Existing Gas Line
- Existing Electric Line
- Existing Water Line
- Existing Cable TV Line
- Existing Communications Line
- Existing Overhead Wires
- Existing Telephone Line
- Existing Stream
- Existing Tree Line
- Existing Soils Boundary Line
- Existing Zone Line
- Existing Benchmark
- Existing Monument
- Existing Iron Pin
- Existing Sign
- Existing Spot Elevation
- Existing Catch Basin
- Existing Drainage Manhole
- Existing Headwall/Endwall
- Existing Cleanout
- Existing Sanitary Sewer Manhole
- Existing Light Post
- Existing Utility Pole
- Existing Gas Valve
- Existing Water Valve
- Existing Hydrant
- Existing Well
- Existing Wetlands
- Existing Building
- Existing Slopes 15% to Greater

DEMOLITION LEGEND

- PREVIOUSLY DEMOLISHED BUILDINGS (SEE GENERAL NOTE 19)
- EXISTING FEATURES TO BE REMOVED
- VEGETATION TO BE REMOVED
- SAWCUT LINE
- GRAVEL DRIVE TO BE REMOVED
- ASPHALT TO BE REMOVED
- POROUS PAVEMENT TO BE REMOVED



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AA	FOR CORRECTIONS	EIS	07-31-18
AA	FOR SIGNATURES	EIS	06-27-18
AA	PER PENNDOT COMMENTS	EIS	06-08-18
AA	PER PENNDOT COMMENTS	EIS	05-04-18
AA	PER SUEZ WATER DESIGN	EIS	03-28-18
AA	PER 105 COMMENTS	EIS	12-27-17
AA	PER SUEZ WATER DESIGN	EIS	11-13-17
REV.	DESCRIPTION	BY	DATE

- ☐ COMPREHENSIVE LAND AND SITE PLANNING
 - ☐ LANDSCAPE ARCHITECTURE
 - ☐ ENGINEERING
- 2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone (717) 733-1036 • FAX (717) 733-2192

H. EDWARD BLACK AND ASSOCIATES, LLC.

PRELIMINARY SUBD. AND LAND DEV. PLAN		OVERALL EXISTING CONDITIONS PLAN	
EIS	CHH	EIS	CHH
OAKWOOD HILLS		WEST LISBURN ROAD	
LOCATION:		UPPER ALLEN TOWNSHIP	
CUMBERLAND COUNTY		PENNSYLVANIA	
DATE: 05-01-17		SCALE: 1" = 150'	
DRAWN BY:		JOB NUMBER: 13021.020	
CHECKED BY:		3 OF 68	
SHEET			

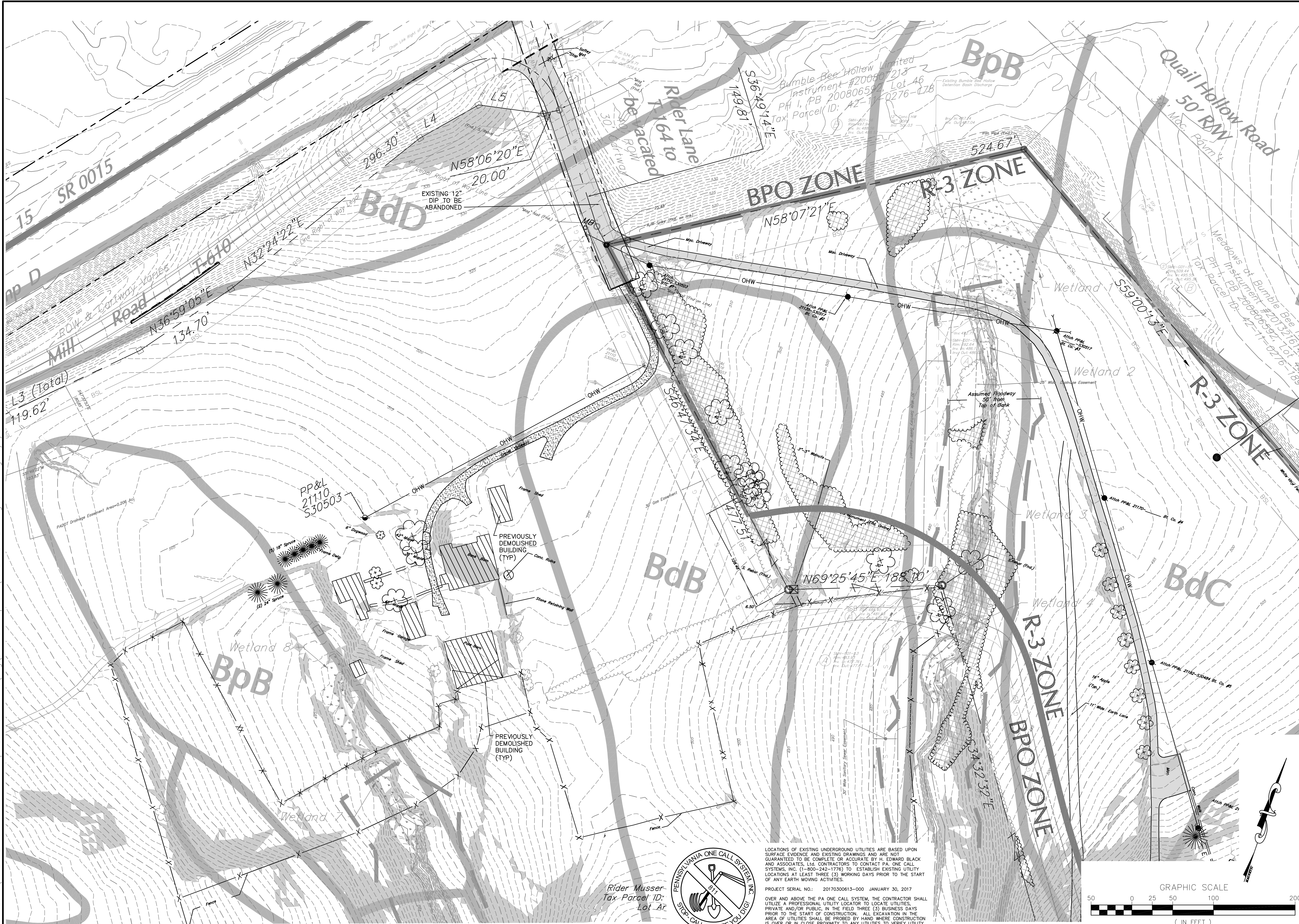
LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE ACCURATE. LOCATIONS OF CONTACT BLANKS AND ASSOCIATES, INC. CONTRACTORS TO CONTACT. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PAI 70300613-000 SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, MINIMUM 14 DAYS PRIOR TO THE START OF CONSTRUCTION. THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION, ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

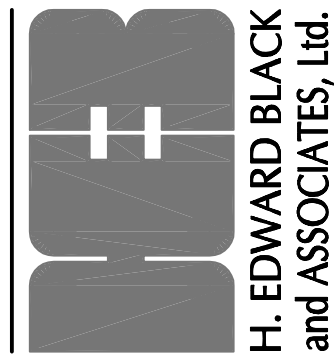
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NOT FOR CONSTRUCTION	
DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN	
OAKWOOD HILLS	
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	
EXISTING CONDITIONS PLAN C	



- ☐ COMPREHENSIVE LAND AND SITE PLANNING
☐ LANDSCAPE ARCHITECTURE
☐ ENGINEERING

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone (717) 233-1026 • FAX (717) 233-2192

REV	DESCRIPTION	BY	DATE
1	FOR CORRECTIONS	EIS	07-31-18
2	FOR SIGNATURES	EIS	06-27-18
3	FOR PENNDOT COMMENTS	EIS	06-08-18
4	FOR PENNDOT COMMENTS	EIS	05-04-18
5	FOR SUEZ WATER DESIGN	EIS	03-28-18
6	FOR 105 COMMENTS	EIS	12-27-17
7	FOR SUEZ WATER DESIGN	EIS	11-13-17

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WETLAND EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L30	21.97	N79°42'16"W
L31	17.86	S89°14'23"W
L32	16.49	N69°58'46"W
L33	9.62	S77°55'17"W
L34	6.65	S02°20'05"W
L35	10.32	S88°48'41"W
L36	11.38	N22°17'02"W
L37	16.36	N10°51'28"E
L38	16.70	N78°31'23"E
L39	11.40	S83°15'12"E
L40	18.32	N19°29'56"W
L41	26.84	N34°56'54"W
L42	13.47	N65°45'32"W
L43	39.60	N74°57'39"W
L44	18.22	S79°35'44"W
L45	18.33	N49°43'30"W
L46	22.34	N09°46'28"W
L47	18.62	N46°43'57"W
L48	25.73	N53°36'03"E
L49	10.55	N58°07'21"E
L50	23.38	S81°51'48"E
L51	23.89	S87°10'44"E
L52	23.74	S30°04'52"E
L53	22.68	S53°04'39"E
L54	24.41	S53°22'19"E
L55	24.48	S51°20'15"E
L56	38.64	S45°54'14"E
L57	16.02	S27°27'28"W
L58	13.69	S22°12'09"E
L59	7.91	S22°12'09"E
L60	19.13	S12°34'24"W
L61	8.92	S77°23'08"W
L62	20.26	N37°19'49"W
L63	13.68	N23°51'41"W
L64	15.60	N41°54'16"W
L65	16.94	N19°17'03"W
L66	14.22	N31°46'46"W
L67	7.01	N60°07'10"E
L68	14.58	S46°34'03"E
L69	13.10	S31°54'32"E
L70	11.68	S55°56'28"E
L71	5.99	S18°37'00"W
L72	17.06	S20°53'54"E
L73	24.10	S31°29'00"E
L74	13.10	N42°06'45"W
L75	23.44	N22°19'42"W
L76	12.04	N10°16'16"W
L77	16.27	N04°42'25"E
L78	25.55	N16°54'37"W
L79	15.85	N19°39'10"W
L80	12.77	N03°41'31"W
L81	17.97	S65°39'02"E
L82	21.83	S16°14'38"E
L83	28.11	S12°51'18"E
L84	23.01	S24°02'12"E
L85	33.52	S11°31'00"E
L86	12.86	S81°19'10"W
L87	10.05	S68°53'46"W
L88	16.98	N76°14'11"W
L89	22.79	N33°23'30"W
L90	16.18	N04°16'38"W
L91	15.87	N17°42'20"E
L92	19.70	N21°57'35"E
L93	9.29	N41°15'01"E
L94	12.89	S84°57'57"E
L95	0.71	N26°23'52"W
L96	18.49	N20°19'49"W
L97	15.93	N20°54'55"E
L98	9.67	S83°31'32"E
L99	29.76	S23°10'36"E
L100	21.89	S40°22'02"W
L101	1.00	N26°23'52"W
L102	1.04	S36°55'39"W
L103	9.89	S09°02'36"E
L104	11.40	S43°45'46"W
L105	8.59	S33°01'26"W
L106	21.57	S13°36'58"E
L107	18.94	S29°39'48"E

WETLAND 4

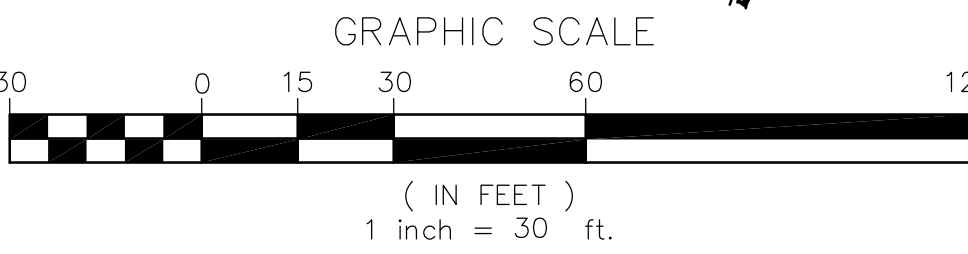
WETLAND CONSERVATION EASEMENT PLAN A



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LTD. CONTRACTORS TO CONTACT PA. ONE CALL SYSTEMS, INC. (1-800-242-1778) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.



NOT FOR CONSTRUCTION

SHEET	DRAWN BY:	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN	
	CHECKED BY:	CHH	OAKWOOD HILLS	
	DATE:	05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	
	SCALE:	1" = 30'	EXISTING CONDITIONS WETLAND EASEMENTS	
JOB NUMBER: 13021.020				

H. EDWARD BLACK
and ASSOCIATES, Ltd.

- ☐ COMPREHENSIVE LAND AND SITE PLANNING
- ☐ LANDSCAPE ARCHITECTURE
- ☐ ENGINEERING

2403 North Front Street □ Harrisburg, Pennsylvania 17110 □ Telephone 717/733-1026 □ FAX 717/733-2192

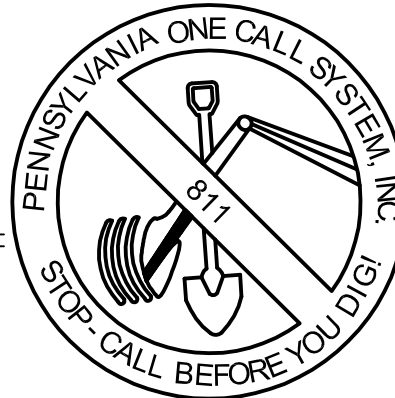
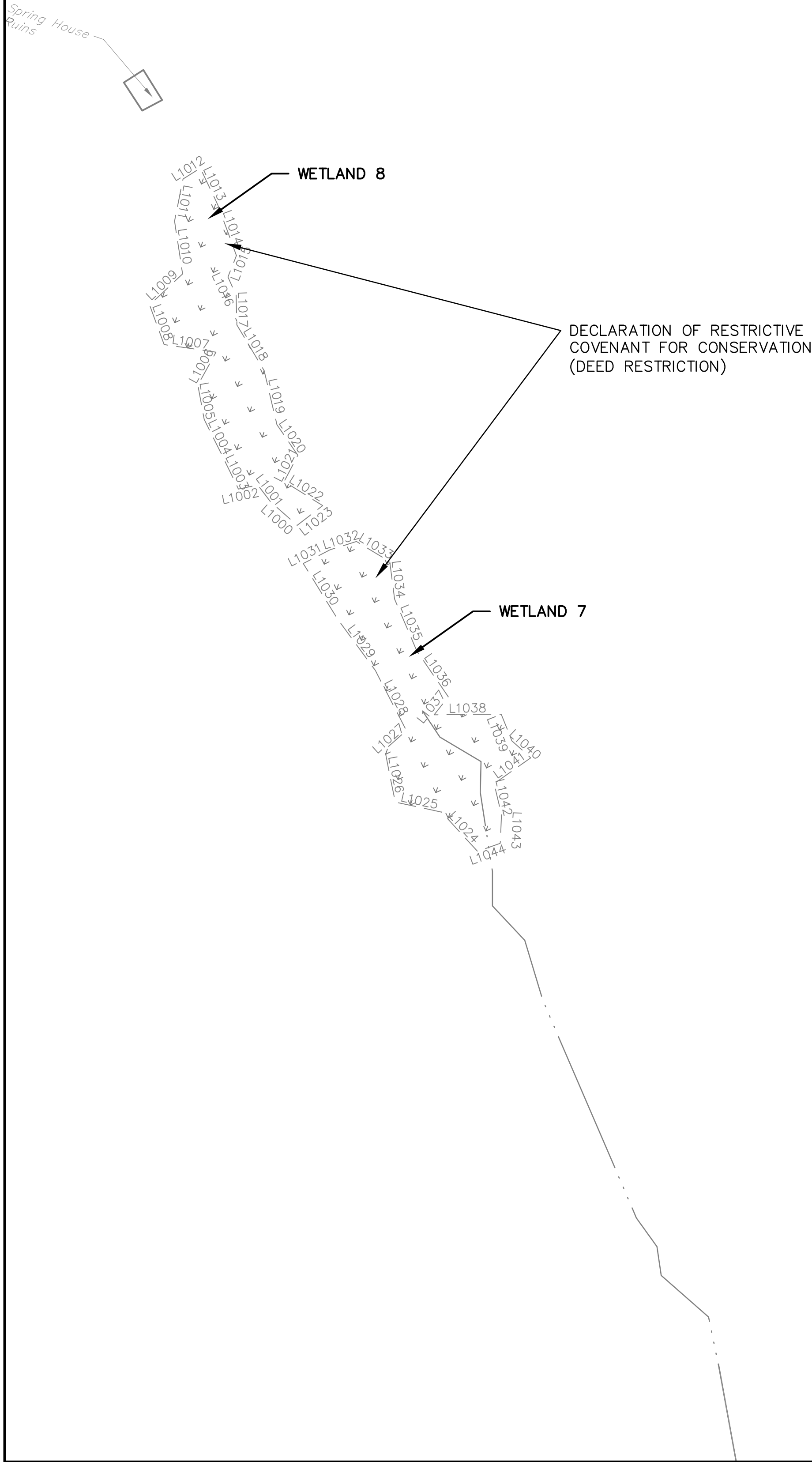
FOR CORRECTIONS	EIS	07-31-18	DATE
FOR SIGNATURES	EIS	06-27-18	
PER PENNDOT COMMENTS	EIS	06-08-18	
PER PENNDOT COMMENTS	EIS	05-04-18	
PER SUEZ WATER DESIGN	EIS	03-28-18	
PER 105 COMMENTS	EIS	12-27-17	
PER SUEZ WATER DESIGN	EIS	11-13-17	
REV	DESCRIPTION	BY	DATE

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WETLAND EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L1000	12.70	N67°16'21"W
L1001	7.33	N56°19'23"W
L1002	6.99	S59°15'40"W
L1003	10.93	N44°53'20"W
L1004	16.54	N45°17'47"W
L1005	12.34	N29°27'08"W
L1006	13.29	N09°44'19"E
L1007	18.56	S79°26'38"W
L1008	14.88	N39°01'08"W
L1009	16.03	N27°39'54"E
L1010	18.92	N27°35'50"W
L1011	15.18	N07°39'18"W
L1012	7.22	N38°55'30"E
L1013	14.38	S44°35'29"E
L1014	19.12	S39°07'12"E
L1015	8.19	S02°34'10"W
L1016	6.95	S43°35'43"E
L1017	10.65	S20°24'45"E
L1018	18.78	S49°49'54"E
L1019	19.72	S32°19'59"E
L1020	13.10	S53°21'21"E
L1021	10.48	S08°40'29"W
L1022	16.07	S76°58'15"E
L1023	11.43	S33°15'22"W
L1024	18.86	N61°33'11"W
L1025	16.75	S83°10'07"W
L1026	18.90	N30°19'38"W
L1027	10.25	N29°30'23"E
L1028	23.99	N46°18'21"W
L1029	22.27	N55°21'13"W
L1030	23.38	N50°41'57"W
L1031	10.63	N43°48'52"E
L1032	9.82	N53°39'23"E
L1033	13.81	S77°45'36"E
L1034	13.35	S26°16'10"E
L1035	20.06	S42°11'31"E
L1036	19.55	S53°33'24"E
L1037	8.11	S19°02'49"W
L1038	23.75	N70°30'40"E
L1039	10.13	S40°34'16"E
L1040	8.99	S66°53'06"E
L1041	15.82	S35°42'25"W
L1042	11.16	S32°24'17"E
L1043	10.26	S16°27'39"E
L1044	8.51	S51°35'11"W
L1045	21.07	N10°23'39"W
L1046	15.48	S66°28'29"E
L1047	20.00	S47°13'37"E
L1048	32.89	S53°52'11"E
L1049	14.02	S08°05'25"W
L1050	6.85	S62°16'59"W
L1051	33.68	N54°16'55"W
L1052	22.69	N45°45'29"W
L1053	21.07	S10°23'39"E
L1054	4.08	N45°45'29"W
L1055	24.64	N73°16'04"W
L1056	21.76	N59°07'47"W
L1057	17.12	N29°23'39"W
L1058	26.15	N66°29'59"W
L1059	14.38	N45°23'30"W
L1060	24.91	N28°43'48"W
L1061	27.81	N33°15'37"W
L1062	8.50	N43°15'03"E
L1063	12.53	S73°44'08"E
L1064	17.73	S32°02'10"E
L1065	24.07	S55°24'50"E
L1066	21.96	S38°26'58"E
L1067	12.83	N37°20'20"W
L1068	4.59	N27°10'46"E
L1069	15.25	N14°49'02"E
L1070	6.35	N74°21'03"E
L1071	31.04	S08°01'22"W
L1072	13.42	S75°56'46"E
L1073	28.12	S22°07'16"E
L1074	18.11	S76°07'41"E
L1075	10.16	S66°28'29"E

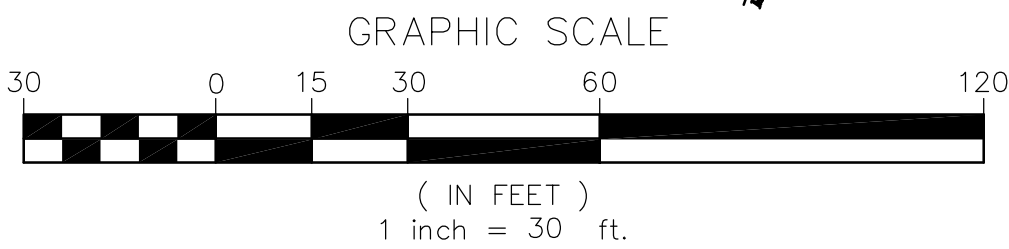
WETLAND CONSERVATION EASEMENT PLAN B



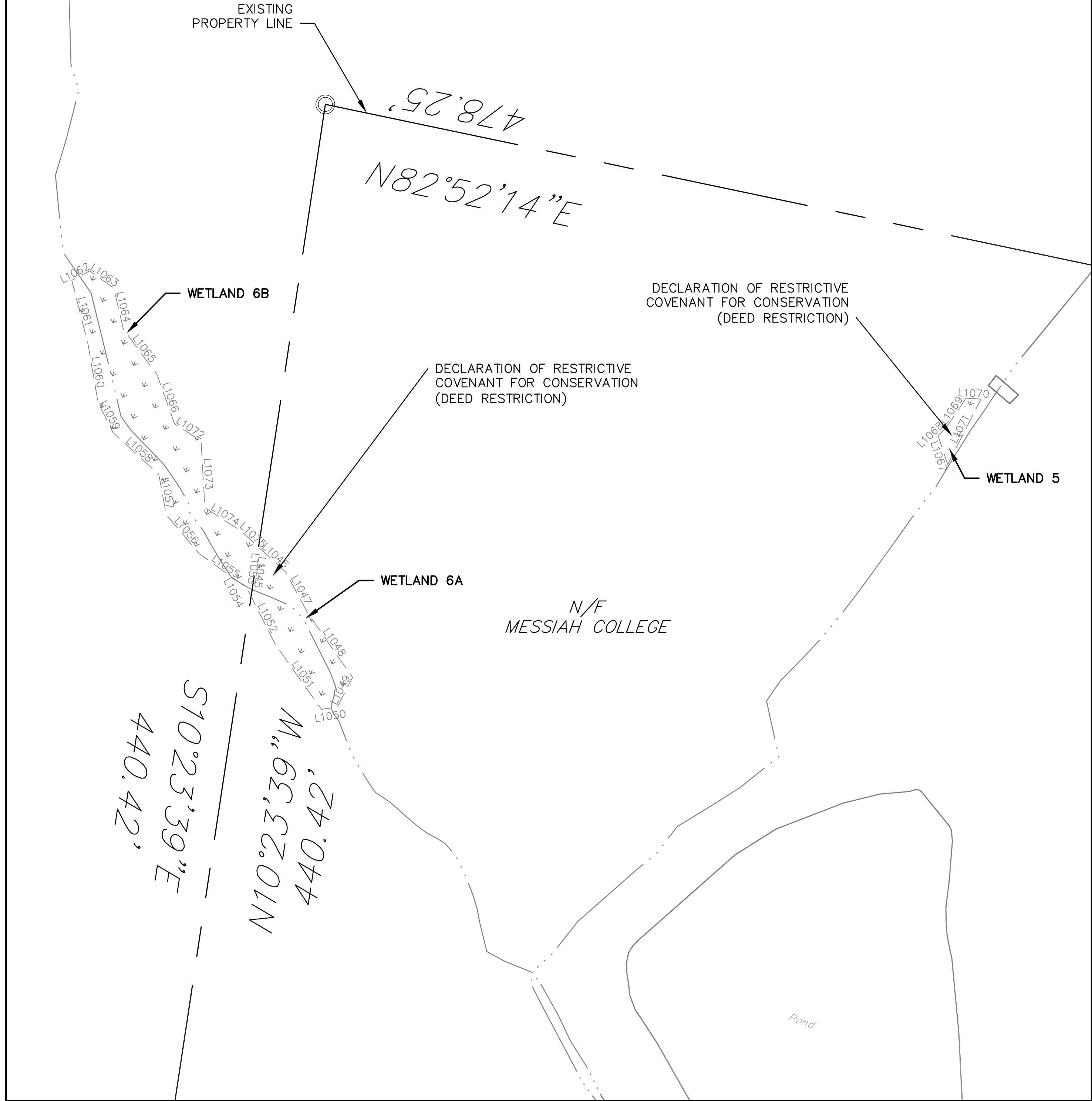
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PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.



LOT 5
N/F
RIDER MUSSER DEVELOPMENT, LLC



WETLAND CONSERVATION EASEMENT PLAN C

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EIS

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

BY

DATE

07-31-18

06-27-18

06-08-18

05-04-18

03-28-18

12-27-17

11-13-17

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK and ASSOCIATES, LTD.
2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/233-1026 • FAX 717/233-2192

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

EXISTING CONDITIONS WETLAND EASEMENTS

NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 30'

JOB NUMBER: 13021.020

SHEET

8 OF 68

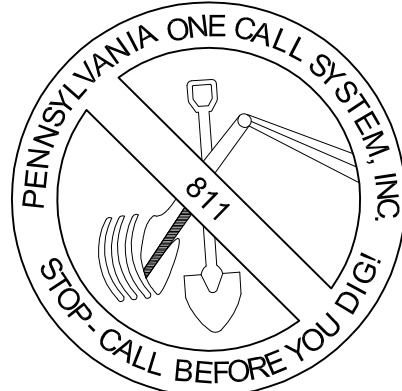
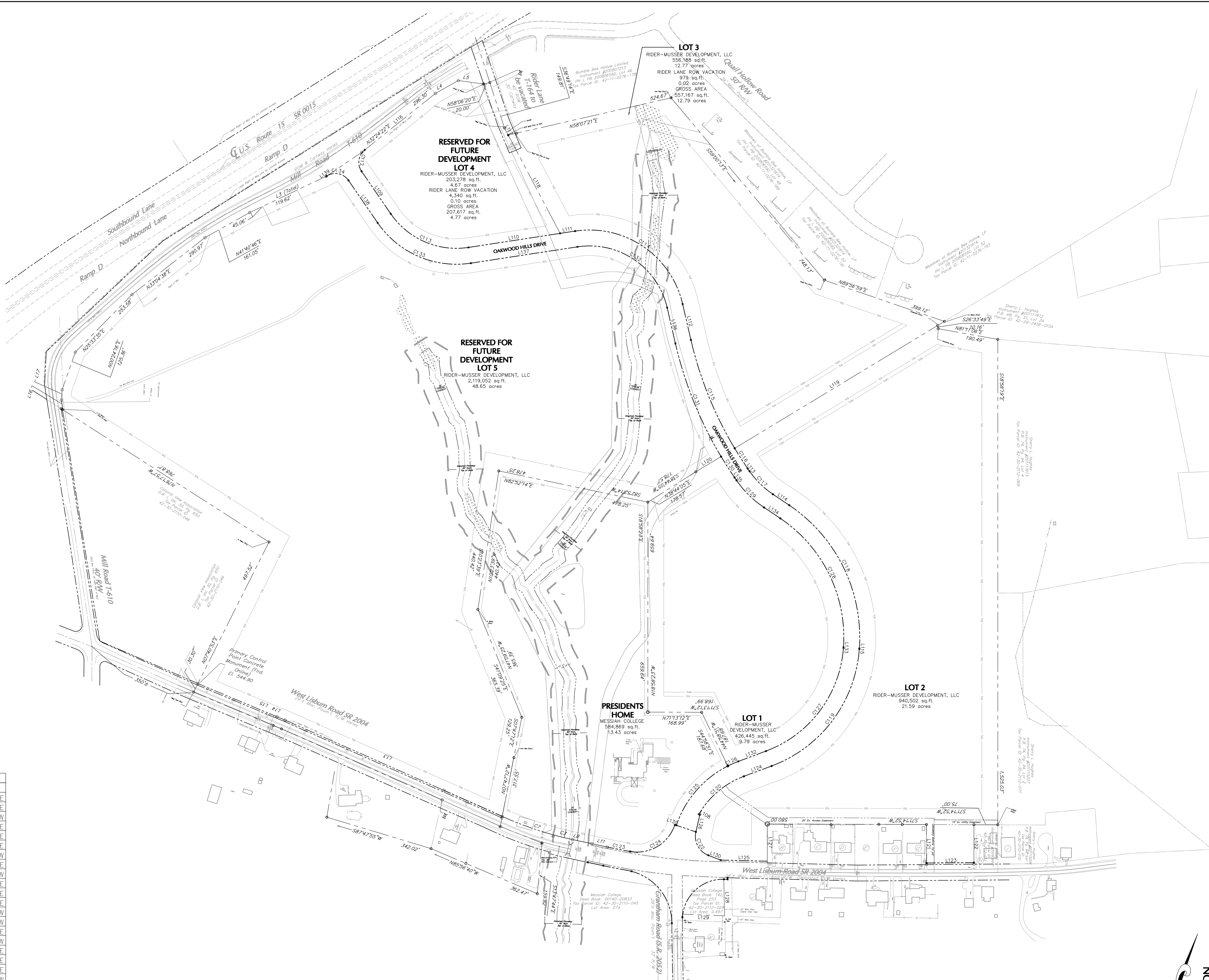
LEGEND	
	PROPOSED PROPERTY LINE
	PROPOSED RIGHT-OF-WAY LINE
	PROPOSED BUILDING SETBACK LINE
	PROPOSED MONUMENT
	PROPOSED IRON PIN

- NOTES:
- EXISTING TAX PARCELS 42-11-0276-009, 42-11-0276-008A, AND 42-11-0276-035 HAVE BEEN RECONFIGURED TO CREATE PROPOSED LOTS 1, 2, 3, 4 AND 5.
 - EXISTING LOT A, TAX PARCEL 42-30-2112-004, HAS BEEN CONSOLIDATED INTO PROPOSED LOT 2.
 - EXISTING TAX PARCEL 42-11-0276-108 IS RECONFIGURED TO PROVIDE RIGHT OF WAY FOR OAKWOOD HILLS DRIVE AND WEST LISBURN ROAD ROUNDABOUT.

LINE TABLE		
LINE	LENGTH	BEARING
L108	3.78	N78°40'29"W
L109	161.92	S53°26'54"E
L110	291.25	N62°18'38"E
L111	47.68	N62°18'38"E
L112	115.61	S31°56'53"E
L113	10.55	S53°36'37"E
L114	61.71	S75°08'30"E
L115	0.45	S14°55'26"E
L116	284.17	N32°24'22"E
L117	25.48	S46°47'34"E
L118	349.04	S46°47'34"E
L119	745.32	N39°51'02"E
L120	92.36	N39°51'02"E
L121	120.75	S19°00'37"E
L122	119.08	S19°00'37"E
L123	149.00	N70°36'10"E
L124	92.98	S50°36'14"W
L125	146.78	N72°28'19"E
L126	55.07	S05°55'26"E
L127	117.15	N19°00'37"W
L128	114.91	S20°08'24"E
L129	131.33	S73°20'36"W
L130	24.60	S82°42'16"W
L131	5.00	N89°40'01"E
L132	92.98	N50°36'14"E
L133	0.45	N14°55'26"W
L134	61.71	N75°08'30"W
L135	10.55	N53°36'37"W
L136	115.61	N31°56'53"W
L137	338.93	S62°18'38"W
L138	161.92	N53°26'54"W
L139	0.79	S36°59'05"W

- ADJOINERS
- Rider Musser Development, LLC
Instrument #201603772
Tax Parcel ID: 42-30-2112-004
Lot Area: 0.275 Acre
 - Glenn C. Karper
D.B. P, Vol. 20, Pg. 641
Tax Parcel ID: 42-30-2112-005
 - Wayne P. & Kelly J. Mallon
D.B. 151, Pg. 596
Tax Parcel ID: 42-30-2112-006
 - Michael D. Rice
D.B. 271, Pg. 4204
Tax Parcel ID: 42-30-2112-007
 - Rider Musser Development, LLC
Instrument #201809680
Tax Parcel ID: 42-30-2112-008
 - Kenneth E. & Sherry L. Bruck
D.B. Q, Vol. 21, Pg. 111
Tax Parcel ID: 42-30-2112-009
 - Ronald W. & Claire A. Gruver
D.B. I, Vol. 25, Pg. 241
Tax Parcel ID: 42-30-2112-010
 - Alan M. Knisely
Instrument #200936971
Tax Parcel ID: 42-30-2112-012
 - Sherry L. Hughes
Instrument #201115206
P.B. 74, Pg. 94, Lot 1
Tax Parcel ID: 42-30-2112-072

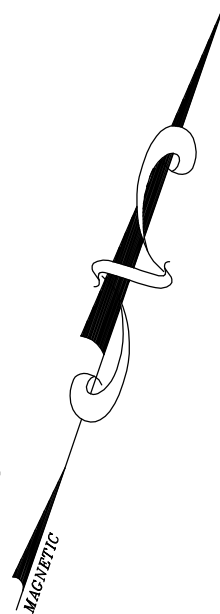
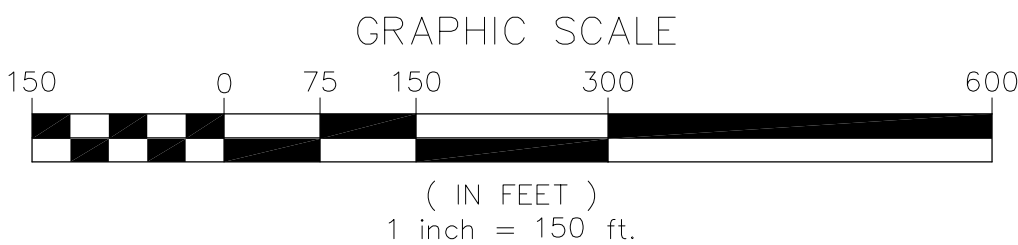
CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIR.
C112	74.92	50.00	85°51'17"	46.51	68.11	S10°31'16"E
C113	280.30	250.00	64°14'28"	156.95	265.85	S85°34'08"E
C114	448.94	300.00	85°44'30"	278.49	408.21	N74°49'08"W
C115	368.71	1175.00	17°58'45"	185.88	367.20	S40°56'15"E
C116	75.53	1175.00	3°40'59"	37.78	75.52	S51°46'08"E
C117	103.34	275.00	21°31'52"	52.29	102.74	S64°22'33"E
C118	525.50	500.00	60°13'04"	289.94	501.64	N45°01'58"W
C119	486.06	425.00	65°31'40"	273.51	460.00	N17°50'24"E
C120	188.52	275.00	39°16'43"	98.14	184.85	S30°57'52"W
C122	110.56	69.33	91°22'18"	71.01	99.21	S51°36'35"E
C123	73.40	1812.53	2°19'13"	36.71	73.40	N82°06'49"E
C124	178.11	125.00	81°38'28"	107.98	163.42	N40°07'58"E
C125	253.01	325.00	44°36'15"	133.31	246.67	S21°58'08"W
C126	35.92	325.00	6°19'59"	17.98	35.90	S47°26'15"W
C127	428.88	375.00	65°31'40"	241.34	405.88	N17°50'24"E
C128	472.95	450.00	60°13'04"	260.95	451.48	N45°01'58"W
C129	122.13	325.00	21°31'52"	61.79	121.41	S64°22'33"E
C130	78.55	1225.00	3°40'26"	39.29	78.54	S51°46'24"E
C131	384.60	1225.00	17°59'18"	193.89	383.02	S40°56'32"E
C132	374.12	250.00	85°44'30"	232.08	340.17	N74°49'08"W
C133	336.37	300.00	64°14'28"	188.34	319.02	S85°34'08"E
C134	78.16	50.00	89°34'00"	49.62	70.44	S81°46'05"W



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LTD. CONTRACTORS TO CONTRACT PA ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.



NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 150'

JOB NUMBER: 13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

SUBDIVISION PLAN

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK and ASSOCIATES, LTD.

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

07-31-18

06-27-18

06-08-18

05-04-18

03-28-18

12-27-17

11-13-17

EIS

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EIS

BY

DATE

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2403 North Front Street - Harrisburg, Pennsylvania 17110 - Telephone 717/733-1026 - FAX 717/733-2192

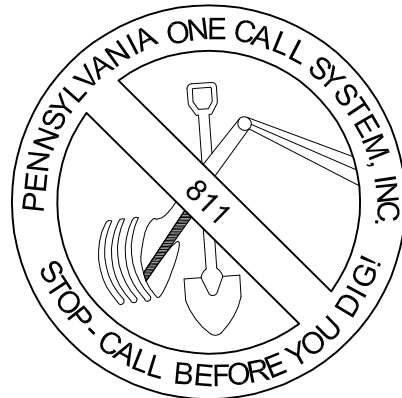
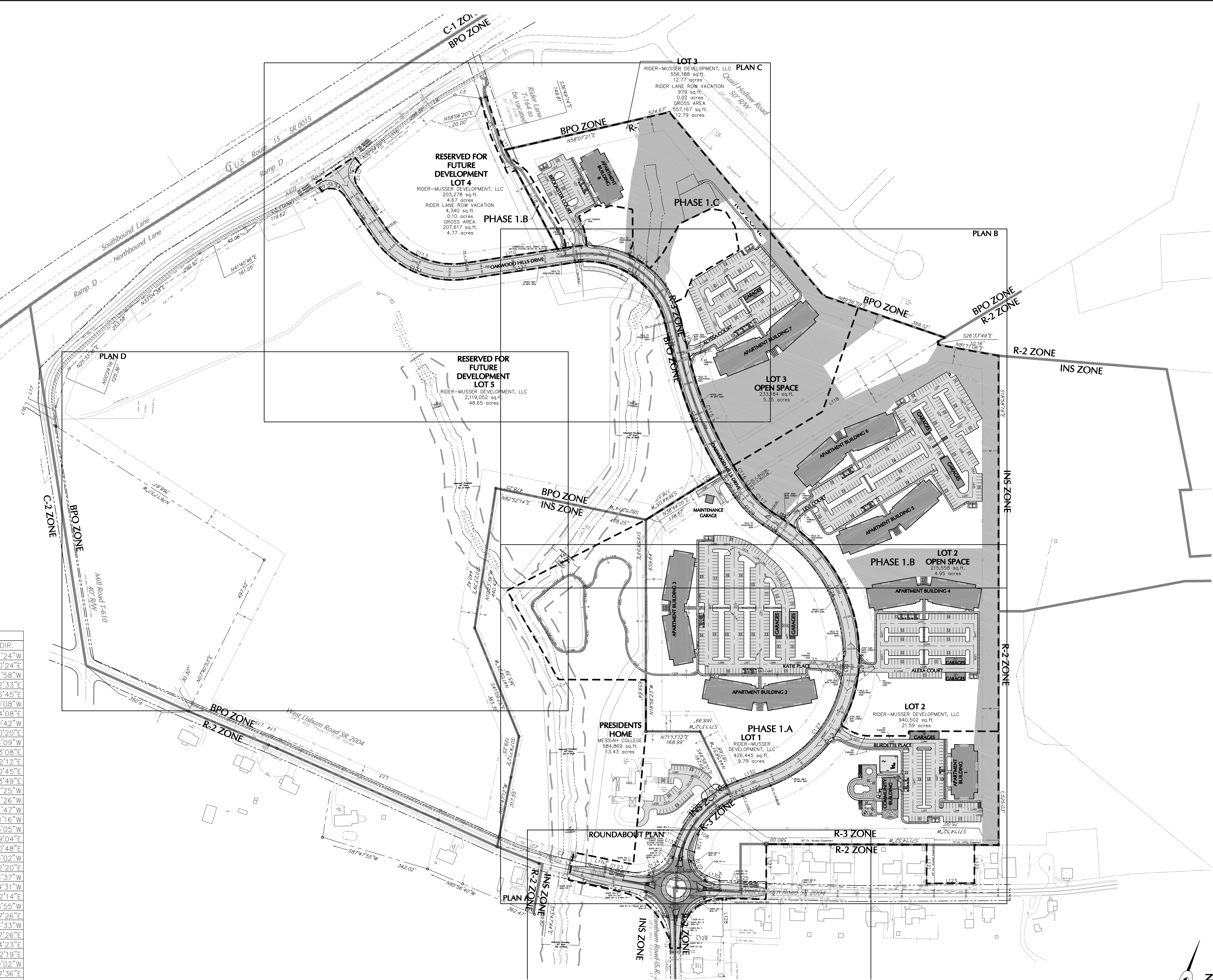
LEGEND

	PROPOSED PROPERTY LINE
	PROPOSED RIGHT-OF-WAY LINE
	PROPOSED BUILDING SETBACK LINE
	HEIGHT ADJUSTED BUILDING SETBACK LINE
	PROPOSED BUFFER SETBACK LINE
	PROPOSED CENTERLINE
	PROPOSED EDGE OF PAVING/GRAVEL
	PROPOSED CURB
	PROPOSED ASPHALT
	PROPOSED SIDEWALK
	PROPOSED GUIDERAIL
	PROPOSED FENCE LINE
	PROPOSED MONUMENT
	PROPOSED IRON PIN
	PROPOSED SIGN
	PROPOSED BUILDING
	PROPOSED CLEAR SIGHT TRIANGLE
	PROPOSED OPEN SPACE
	PHASE LINE

NOTE:

- BUILDING CORNERS TO BE 10' FROM FACE OF CURB OR FROM EXTENSION OF CURB LINE.
- CURB RAMPS TO BE A MAXIMUM OF 1:12 (8.33%) SLOPE OR A MAXIMUM OF 15' LENGTH.
- INSTALL CONCRETE DOOR SLAB WITH FROST WALL AT ALL ENTRANCES TO APARTMENT BUILDINGS SEE DETAIL.
- CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
- GRAVEL SANITARY SEWER ACCESS DRIVES TO BE INSTALLED IN ACCORDANCE WITH TOWNSHIP STANDARDS (SEE DETAIL). ACCESS DRIVES TO BE INSTALLED CONCURRENT WITH CONSTRUCTION OF OAKWOOD HILLS DRIVE.
- FUTURE IMPROVEMENTS ARE DEFERRED UNTIL THE BOARD OF COMMISSIONERS DEEMS THE IMPROVEMENTS NECESSARY.

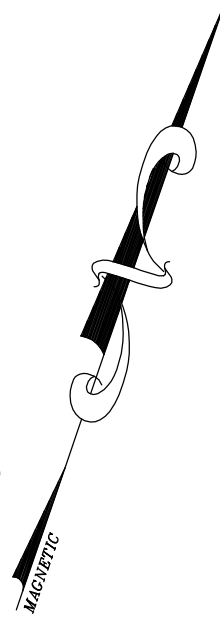
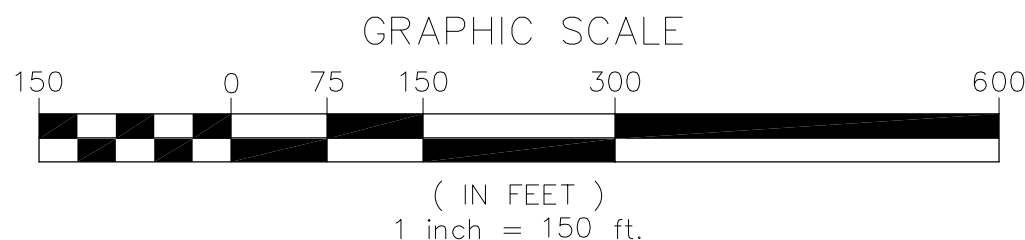
CENTERLINE CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TANGENT	CHORD	CHORD DIR.
C200	337.69	300.00	64°29'40"	189.27	320.14	S18°21'24"W
C201	457.47	400.00	65°31'40"	257.43	432.94	N17°50'24"E
C202	499.22	475.00	60°13'04"	275.45	476.56	N45°01'58"W
C203	112.74	300.00	21°31'52"	57.04	112.07	S64°22'33"E
C204	453.70	1200.00	21°39'45"	229.59	451.00	S42°46'45"E
C205	411.53	275.00	85°44'30"	255.28	374.19	N74°49'08"W
C206	308.34	275.00	64°14'28"	172.64	292.44	S85°34'08"E
C207	32.48	80.00	23°15'45"	16.47	32.26	N35°09'42"W
C208	65.48	200.00	18°45'34"	33.04	65.19	N48°40'20"E
C209	75.84	175.00	24°49'46"	38.52	75.25	S27°26'09"W
C210	14.13	200.00	4°02'53"	7.07	14.13	N73°03'08"E
C211	85.57	150.00	32°41'02"	43.98	84.41	N87°22'12"E
C214	21.15	50.00	24°14'07"	10.74	20.99	N15°50'45"E
C215	46.98	60.00	44°52'01"	24.77	45.79	N50°23'49"E
C216	92.62	102.00	52°01'33"	49.78	89.47	N80°47'25"W
C217	149.64	170.00	50°26'05"	80.06	144.86	N44°11'26"W
C218	71.93	170.00	24°14'37"	36.51	71.40	N81°31'47"W
C219	45.46	170.00	15°19'18"	22.87	45.33	S78°41'16"W
C220	14.13	200.00	4°02'57"	7.07	14.13	S73°03'05"W
C221	17.15	30.00	32°45'05"	8.82	16.92	N54°39'04"E
C222	161.59	100.00	92°35'10"	104.62	144.58	S62°40'48"E
C223	50.78	100.00	29°05'36"	25.95	50.23	N30°56'02"W
C224	124.57	110.00	64°52'59"	69.92	118.02	S13°02'20"E
C225	107.81	48.00	128°41'34"	99.94	86.54	N44°56'37"W
C226	66.27	50.00	75°56'10"	39.02	61.52	S32°44'31"W
C227	36.75	30.00	70°11'37"	21.08	34.50	N29°52'14"E
C228	21.28	197.50	6°10'21"	10.65	21.27	S35°38'55"W
C229	28.99	20.00	83°02'22"	17.71	26.52	S08°57'26"E
C230	4.19	100.00	2°24'09"	2.10	4.19	N49°16'33"W
C231	7.15	100.00	4°05'56"	3.58	7.15	S50°07'26"E
C232	35.31	35.00	57°47'56"	19.32	33.83	S81°04'23"E
C233	29.31	20.00	83°58'40"	18.00	26.76	N28°02'19"E
C234	15.82	100.00	9°04'01"	7.93	15.81	N18°29'02"W
C235	11.84	100.00	6°46'53"	5.92	11.83	S19°37'36"E
C236	32.10	35.00	52°32'55"	17.28	30.99	N42°30'36"W
C237	34.79	27.50	72°28'51"	20.16	32.51	S74°58'31"W
C238	32.40	50.00	37°07'57"	16.79	31.84	N18°20'26"W
C239	19.40	30.00	37°02'46"	10.05	19.06	S18°17'51"E
C240	56.50	72.50	44°39'03"	29.77	55.08	S59°08'45"E
C241	36.78	67.50	31°13'20"	18.86	36.33	N65°51'36"W
C242	22.64	57.50	22°33'34"	11.47	22.49	N38°58'09"W
C243	14.69	27.00	31°10'40"	7.53	14.51	N34°33'39"W
C244	18.75	1500.00	0°42'59"	9.38	18.75	N39°29'32"E



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LTD. CONTRACTORS TO CONTACT PA ONE CALL SYSTEMS, INC. (1-800-442-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

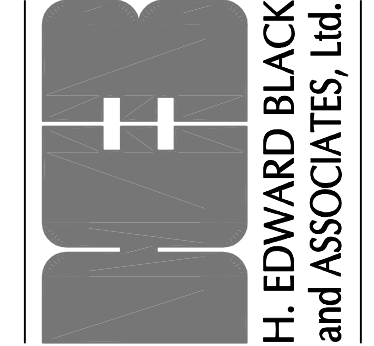


NOT FOR CONSTRUCTION

DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 150'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

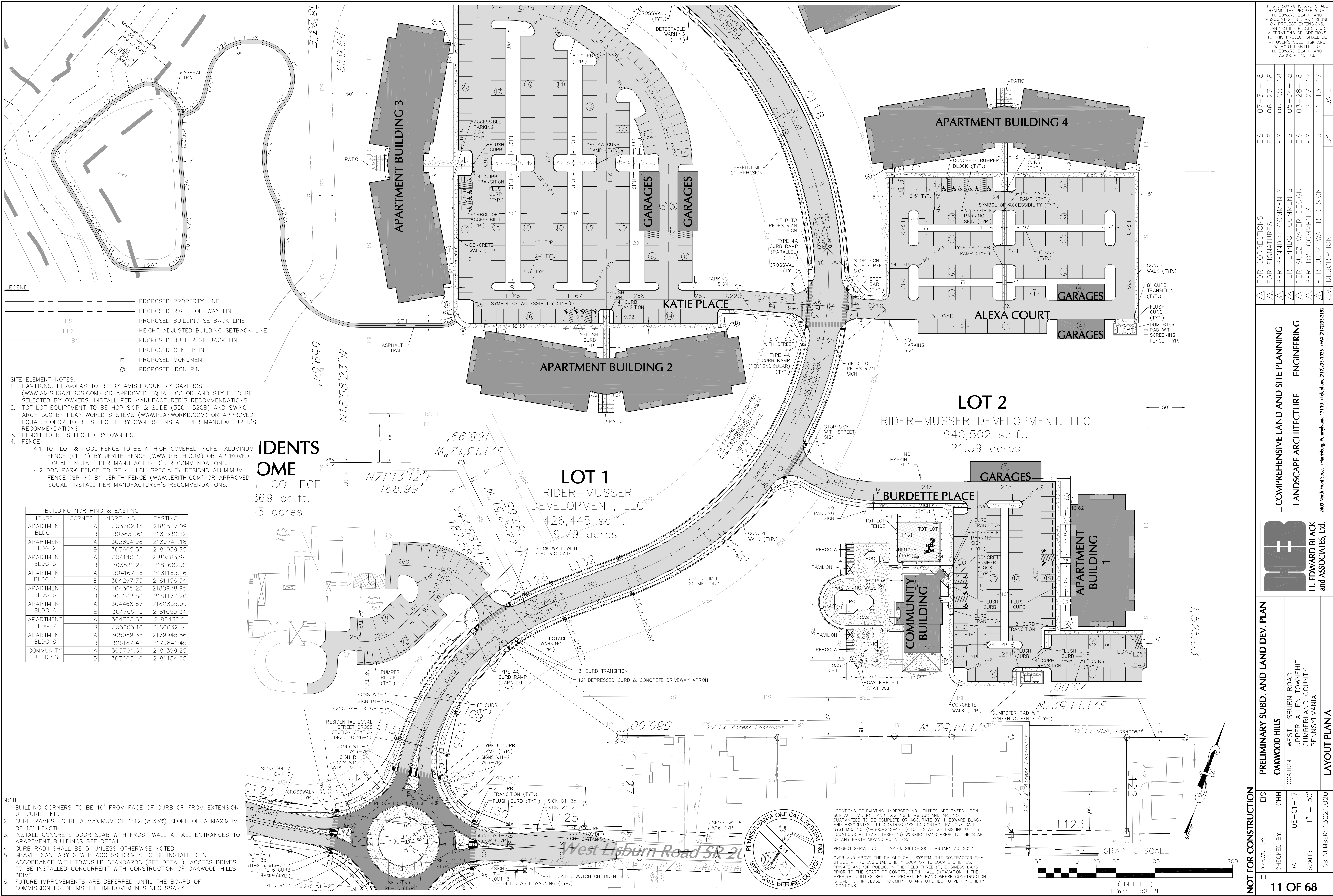
OAKWOOD HILLS	
LOCATION:	WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
OVERALL LAYOUT PLAN	



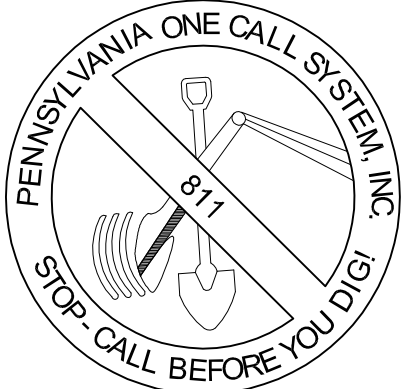
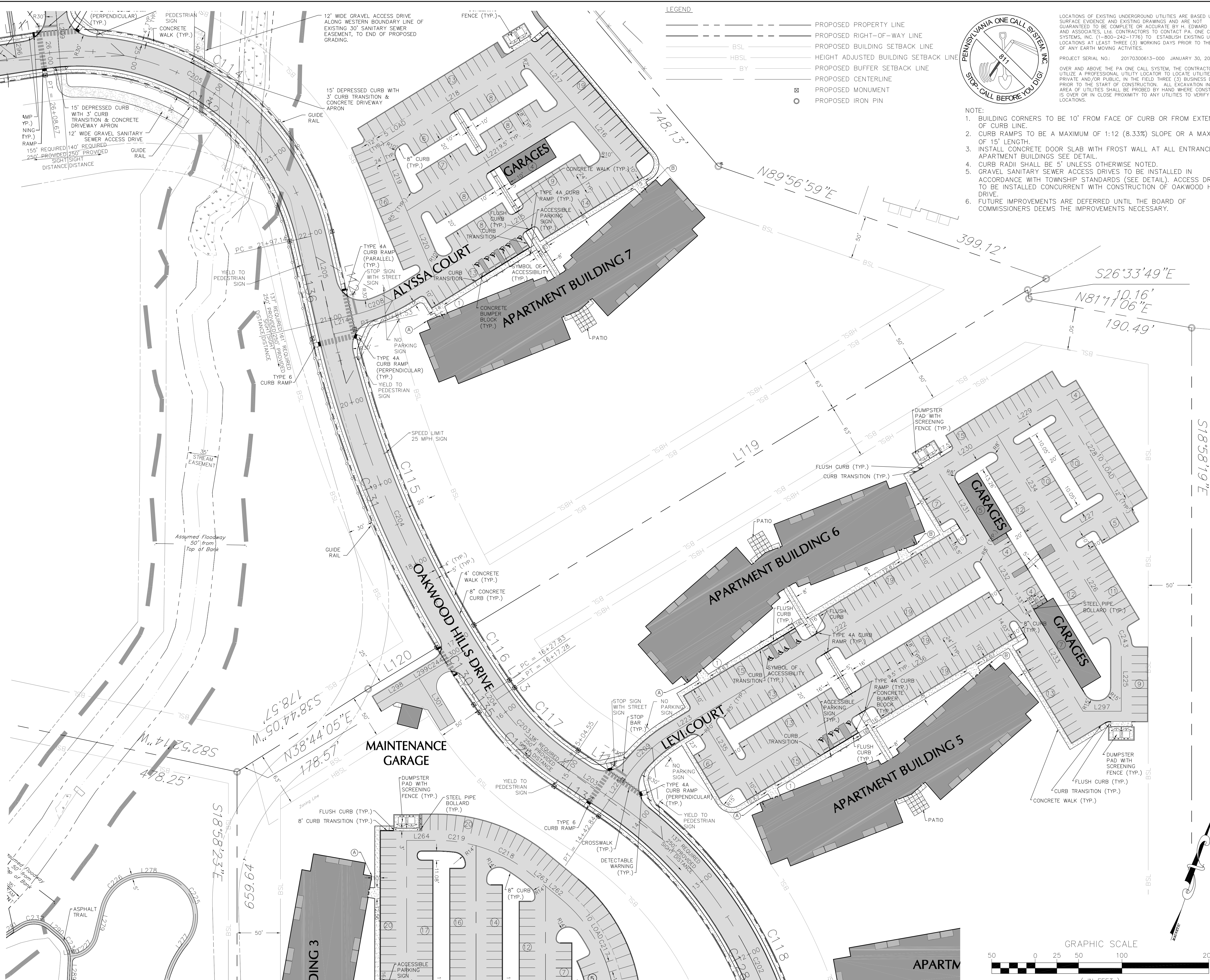
<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING	<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> ENGINEERING
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FOR CORRECTIONS	EIS	07-31-18
FOR SIGNATURES	EIS	06-27-18
FOR PENNDOT COMMENTS	EIS	06-08-18
FOR PENNDOT COMMENTS	EIS	05-04-18
FOR PENNDOT COMMENTS	EIS	03-28-18
FOR PER 105 COMMENTS	EIS	12-27-17
FOR PER SUEZ WATER DESIGN	EIS	11-13-17
REV	DESCRIPTION	DATE

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CENTERLINE LINE TABLE		
LINE	LENGTH	BEARING
L200	55.02	N13°53'26"W
L201	92.98	N50°36'14"E
L202	0.45	N14°55'26"W
L203	61.71	N75°08'30"W
L204	10.55	N53°36'37"W
L205	115.61	N31°56'53"W
L206	338.93	S62°18'38"W
L207	256.03	N53°26'54"W
L208	54.51	S46°47'34"E
L209	47.30	S23°31'49"E
L210	140.00	S46°47'34"E
L211	60.00	S43°12'26"W
L212	140.00	N46°47'34"W
L213	60.00	N43°12'26"E
L214	26.54	N58°03'07"E
L215	291.53	N39°17'33"E
L216	80.85	N59°00'13"W
L217	80.85	N59°00'13"W
L218	204.04	S39°17'33"W
L219	80.94	S41°56'46"E
L220	80.94	S41°56'46"E
L221	228.03	N39°17'33"E
L222	380.00	S39°51'02"W
L223	36.93	S39°51'02"W
L224	28.93	S15°01'16"W
L225	74.18	N18°58'19"W
L226	129.46	N50°08'58"W
L227	80.00	N39°51'02"E
L228	139.10	N50°08'58"W
L229	80.00	S39°51'02"W
L230	80.00	S39°51'02"W
L231	100.00	S50°08'58"E
L232	80.00	S50°08'58"E
L233	143.20	S50°08'58"E
L234	139.10	N50°08'58"W
L235	80.00	S50°08'58"E
L236	380.00	N39°51'02"E
L237	55.84	N75°04'34"E
L238	312.58	N71°01'41"E
L239	70.00	N18°58'19"W
L240	70.00	N18°58'19"W
L241	290.50	S71°01'41"W
L242	70.00	S18°58'19"E
L243	70.00	S18°58'19"E
L244	290.50	N71°01'41"E
L245	133.42	S71°01'41"W
L246	48.35	N76°17'17"W
L247	215.00	N18°58'19"W
L248	70.00	S71°01'41"W
L249	131.00	S71°01'41"W
L250	215.00	N18°58'19"W
L251	70.00	S71°01'41"W
L252	16.00	S71°01'41"W
L253	16.08	S03°43'42"W
L254	60.04	S27°57'49"W
L255	28.65	S72°49'49"W
L256	50.29	N54°46'39"W
L257	42.14	S73°11'48"W
L258	172.46	N18°58'23"W
L259	23.72	N69°24'28"W
L260	21.58	N69°24'28"W
L261	35.08	S71°01'37"W
L262	371.31	S18°58'23"E
L263	80.00	N71°01'37"E
L264	80.00	N71°01'37"E
L265	77.24	N71°01'37"E
L266	113.23	N75°04'34"E
L267	318.61	N18°58'23"W
L268	365.27	S18°58'23"E
L269	2.53	S38°16'32"W
L270	104.86	S71°01'37"W
L271	9.68	N16°23'14"W
L272	3.83	N45°28'49"W
L273	3.91	N19°24'10"E
L274	10.18	S70°42'36"W
L275	33.62	S05°13'34"E
L276	3.57	S64°58'03"W
L277	24.74	S38°44'05"W
L278	78.90	S32°33'44"W
L279	74.54	S50°28'37"E
L280	28.23	S48°04'28"E
L281	24.03	S52°10'25"E
L282	42.85	N70°01'39"E
L283	29.41	N13°57'01"W
L284	92.38	N23°01'02"W
L285	25.94	N16°14'09"W
L286	15.47	N68°47'04"W
L287	0.62	S36°54'24"E
L288	6.93	S00°13'33"W
L289	183.02	S36°49'14"E
L290	5.87	S81°28'16"E
L291	212.70	S50°14'56"E
L292	51.23	S27°41'22"E
L293	44.06	N71°01'41"E
L294	56.36	N39°51'02"E
L295	16.51	N39°51'02"E
L296	25.82	N39°08'03"E
L300	64.00	S50°08'58"E



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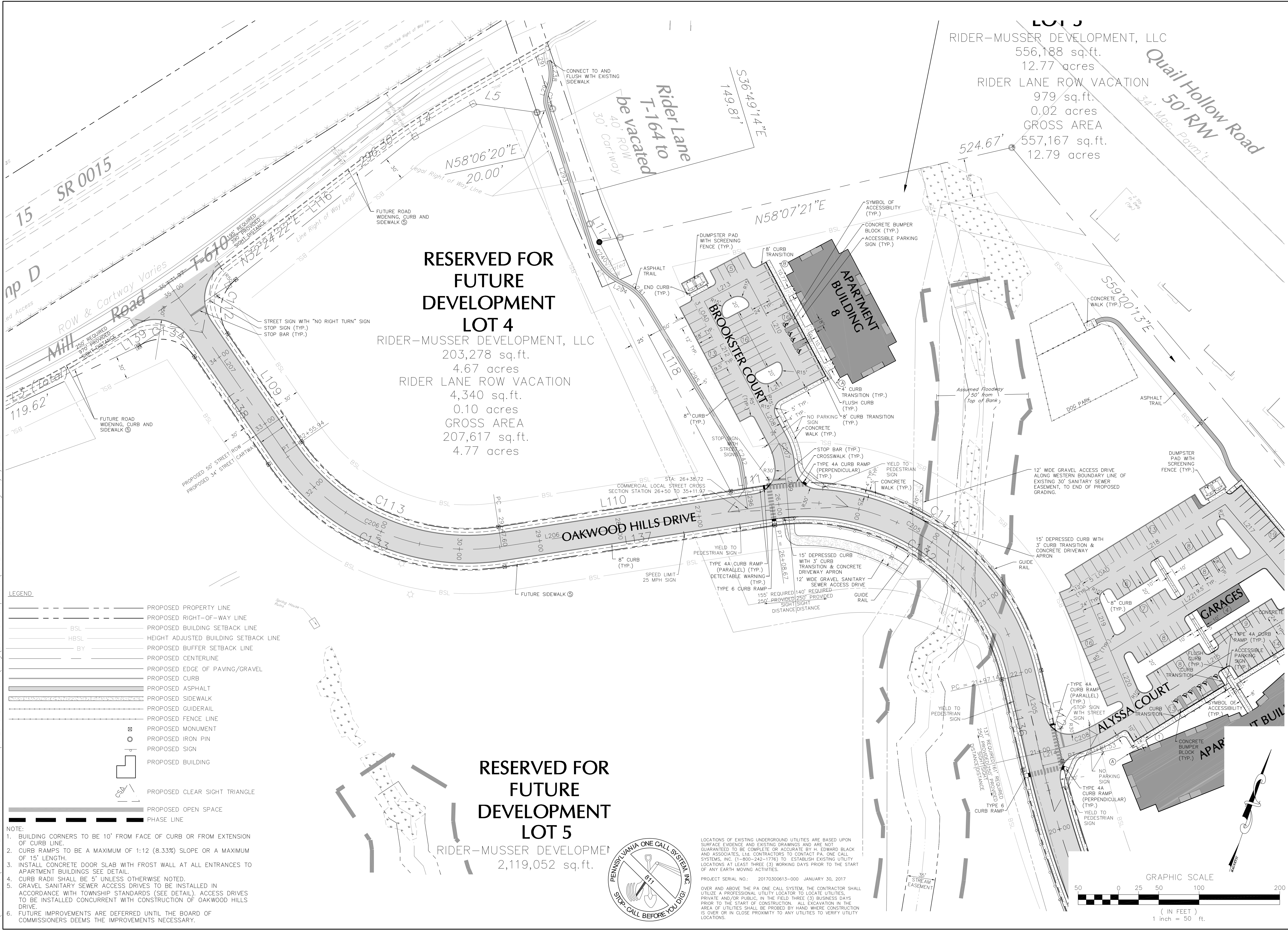
PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

- NOTE:
- BUILDING CORNERS TO BE 10' FROM FACE OF CURB OR FROM EXTENSION OF CURB LINE.
 - CURB RAMP TO BE A MAXIMUM OF 1:12 (8.33%) SLOPE OR A MAXIMUM OF 15' LENGTH.
 - INSTALL CONCRETE DOOR SLAB WITH FROST WALL AT ALL ENTRANCES TO APARTMENT BUILDINGS SEE DETAIL.
 - CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.
 - GRAVEL SANITARY SEWER ACCESS DRIVES TO BE INSTALLED IN ACCORDANCE WITH TOWNSHIP STANDARDS (SEE DETAIL). ACCESS DRIVES TO BE INSTALLED CONCURRENT WITH CONSTRUCTION OF OAKWOOD HILLS DRIVE.
 - FUTURE IMPROVEMENTS ARE DEFERRED UNTIL THE BOARD OF COMMISSIONERS DEEMS THE IMPROVEMENTS NECESSARY.

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FOR CORRECTIONS	
EIS	07-31-18
EIS	08-27-18
EIS	08-08-18
EIS	05-04-18
EIS	03-28-18
EIS	12-23-17
EIS	11-13-17
BY	DATE
REV DESCRIPTION	
COMPREHENSIVE LAND AND SITE PLANNING	
LANDSCAPE ARCHITECTURE	
ENGINEERING	
2403 North Front Street - Harrisburg, Pennsylvania 17110 - Telephone 717/233-1026 - FAX 717/233-2192	
H. EDWARD BLACK AND ASSOCIATES, LTD.	
PRELIMINARY SUBD. AND LAND DEV. PLAN	
OAKWOOD HILLS	
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	
LAYOUT PLAN B	
NOT FOR CONSTRUCTION	
DRAWN BY: EIS	
CHECKED BY: CHH	
DATE: 05-01-17	
SCALE: 1" = 50'	
JOB NUMBER: 13021.020	
SHEET 12 OF 68	

W:\PROJECTS\13021.020 Oakwood Hills Rev Apt Land Dev Plans\dwg\Land Development\13021.020-Base.dwg 8/1/2018 2:11:56 PM EDT



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EIS	07-31-18	FOR CORRECTIONS	BY	DATE
A	06-27-18	FOR SIGNATURES	BY	DATE
A	06-08-18	PER PENNDOT COMMENTS	BY	DATE
A	05-04-18	PER PENNDOT COMMENTS	BY	DATE
A	03-28-18	PER SUEZ WATER DESIGN	BY	DATE
A	12-27-17	PER 105 COMMENTS	BY	DATE
A	11-13-17	PER SUEZ WATER DESIGN	BY	DATE
REV	DESCRIPTION			

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK AND ASSOCIATES, LLC.

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/233-1026 • FAX 717/233-2192

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

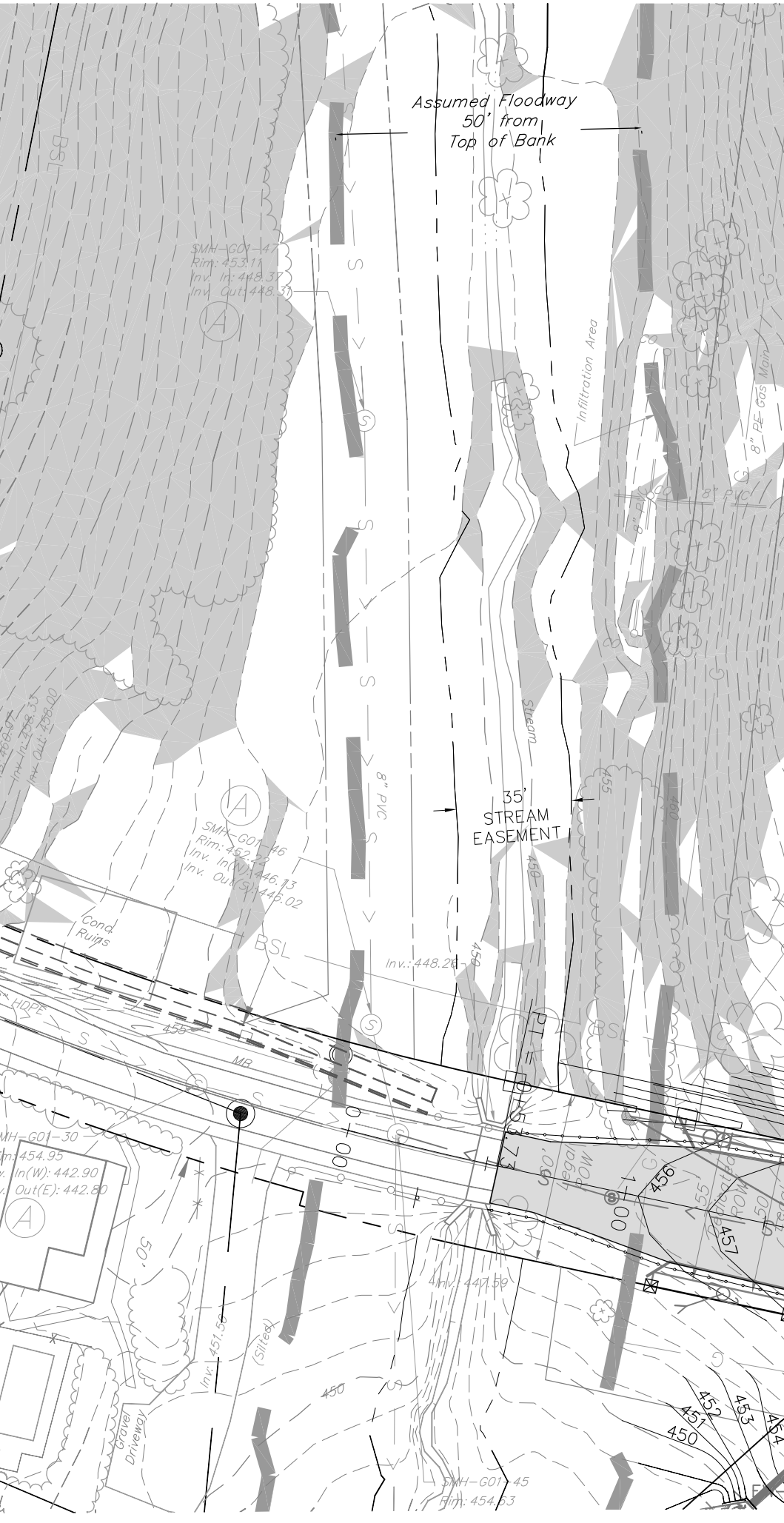
LAYOUT PLAN C

NOT FOR CONSTRUCTION

SHEET

13 OF 68

SANITARY SEWER ELEVATION NOTES:					
A. EXISTING SANITARY SEWER MH RIM AND INVERT ELEVATIONS FROM 2017 TWP. AS-BUILT SEWER SURVEY WHICH IS BASED ON NAVD 88 DATUM. PLAN TOPOGRAPHY IS BASED ON NGVD 29 DATUM.					
B. EXISTING SANITARY SEWER MH RIM ELEVATIONS FROM 2017 SURVEY BY DIFFENBAUGH, WADEL, INC. WHICH IS BASED ON NGVD 29 DATUM. INVERTS ARE CALCULATED BY SUBTRACTING THE DIMENSION BETWEEN RIM AND INVERT ON 2017 TWP. AS-BUILT SEWER SURVEY (SEE CHART).					
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		441.28 INV. IN (W)		442.10 INV. IN (W)	
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		494.64 INV. OUT		495.36 INV. OUT	



RESIDENTS HOME

LOT 1

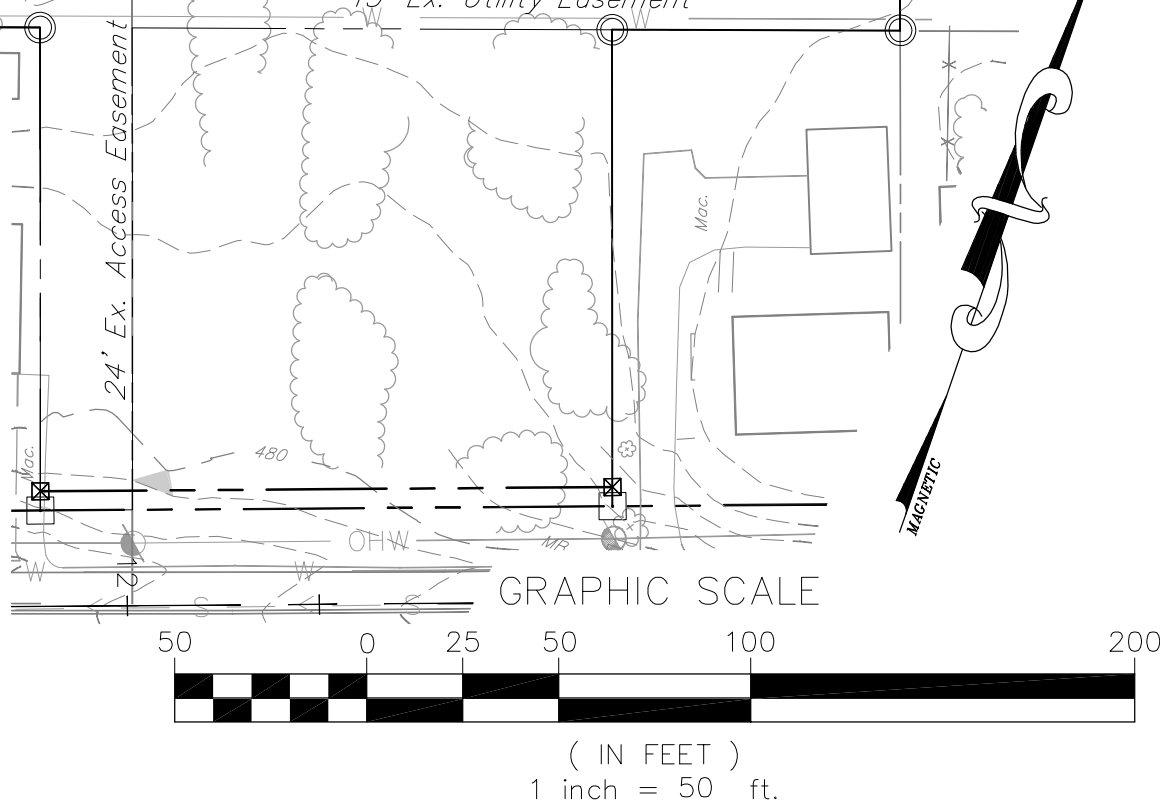
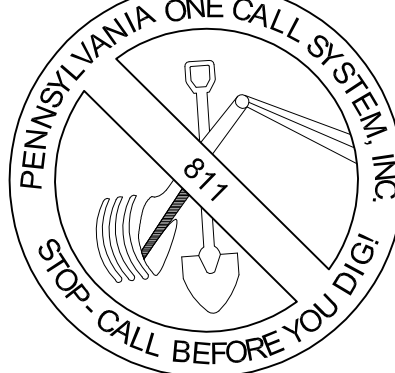
LOT 2

- NOTES:
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 3. ALL UNGRADED AREAS TO BE GRADED TO PROVIDE POSITIVE DRAINAGE AT A MINIMUM SLOPE OF TWO PERCENT (2%). MINIMUM SLOPE AWAY FROM BUILDINGS TO BE TWO PERCENT (2%) UNLESS OTHERWISE NOTED IN PAVED AREAS.

LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LTD. CONTRACTORS TO CONTACT PA. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

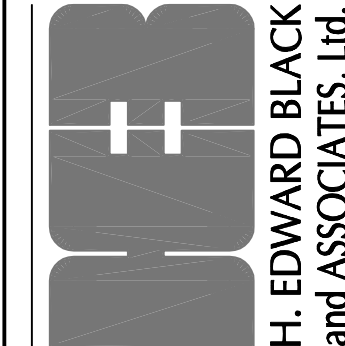
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NOT FOR CONSTRUCTION

DRAWN BY:	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN
CHECKED BY:	CHH	OAKWOOD HILLS
DATE:	05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
SCALE:	1" = 50'	GRADING PLAN A
JOB NUMBER:	13021.020	

- ☐ COMPREHENSIVE LAND AND SITE PLANNING
- ☐ LANDSCAPE ARCHITECTURE
- ☐ ENGINEERING

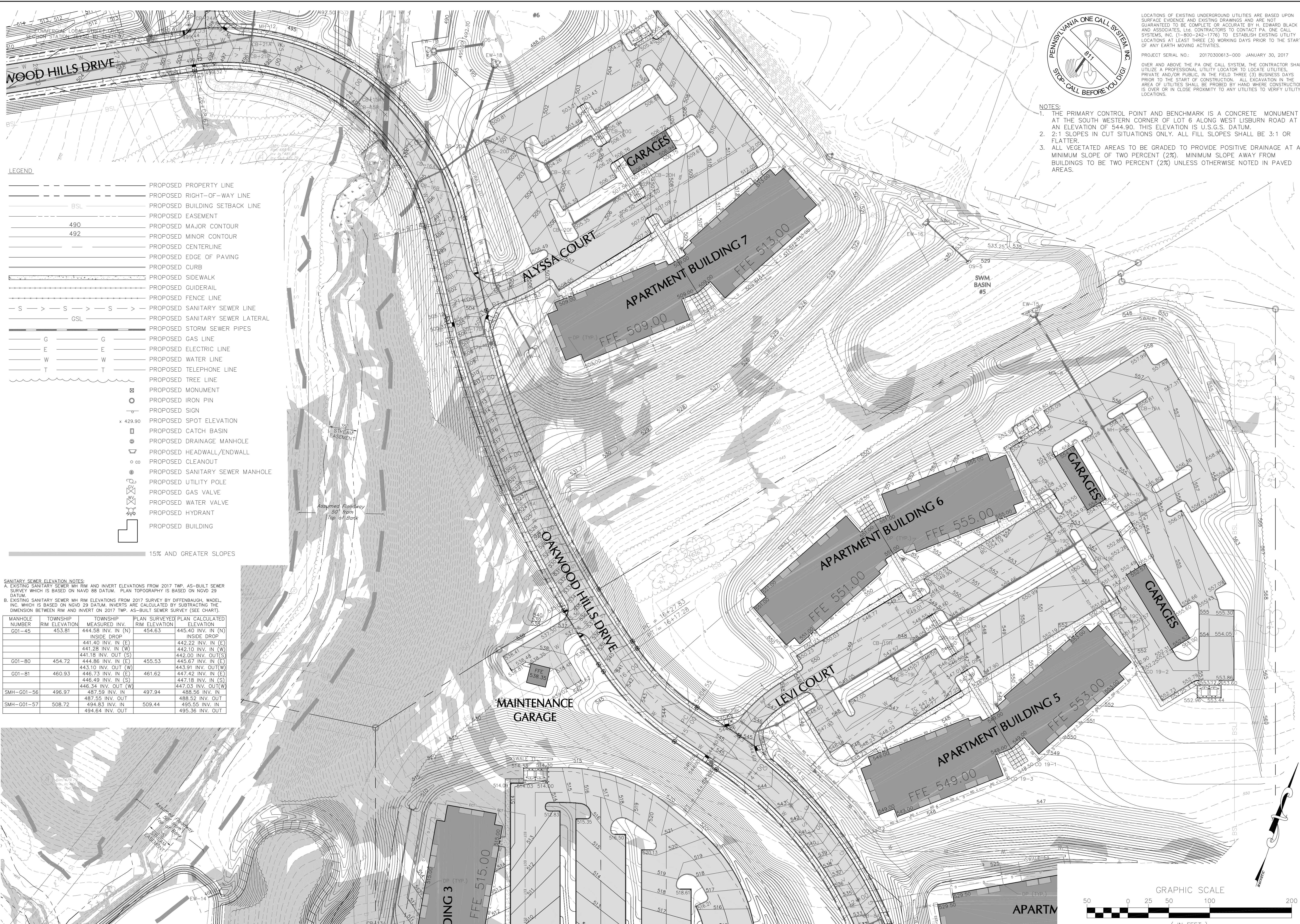


H. EDWARD BLACK
and ASSOCIATES, LTD.

2403 North Front Street - Harrisburg, Pennsylvania 17110 - Telephone 717/333-0256 - FAX 717/333-2192

FOR CORRECTIONS	EIS	07-31-18	DATE
FOR SIGNATURES	EIS	06-27-18	
PER PENNDOT COMMENTS	EIS	06-08-18	
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REV	DESCRIPTION	BY	DATE

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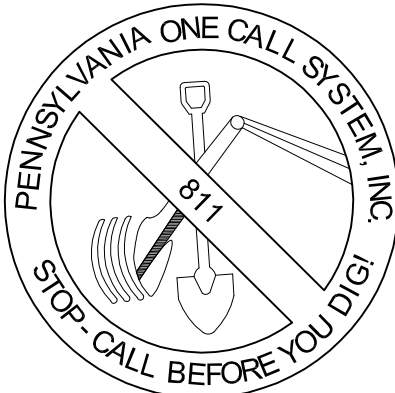


LEGEND

- PROPOSED PROPERTY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED BUILDING SETBACK LINE
- PROPOSED EASEMENT
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED CENTERLINE
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- PROPOSED CURB
- PROPOSED SIDEWALK
- PROPOSED GUIDERAIL
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- PROPOSED SANITARY SEWER LINE
- PROPOSED SANITARY SEWER LATERAL
- PROPOSED STORM SEWER PIPES
- PROPOSED GAS LINE
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- PROPOSED CLEANOUT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED UTILITY POLE
- PROPOSED GAS VALVE
- PROPOSED WATER VALVE
- PROPOSED HYDRANT
- PROPOSED BUILDING
- 15% AND GREATER SLOPES

SANITARY SEWER ELEVATION NOTES:
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SMH-G01-56	496.97	487.59 INV. IN	497.94	488.56 INV. IN
		487.55 INV. OUT		488.52 INV. OUT
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PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

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NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 50'

JOB NUMBER: 13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

GRADING PLAN B

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

EIS

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12-27-17

11-13-17

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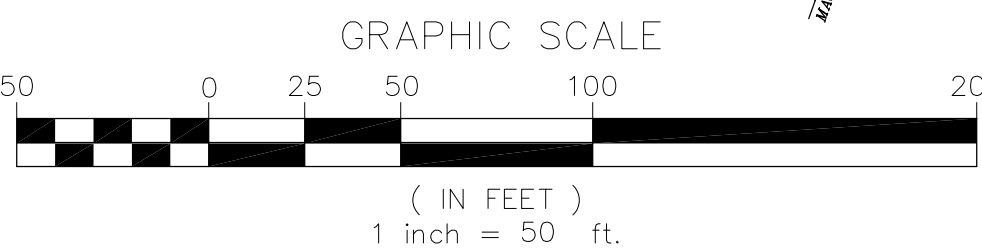
COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

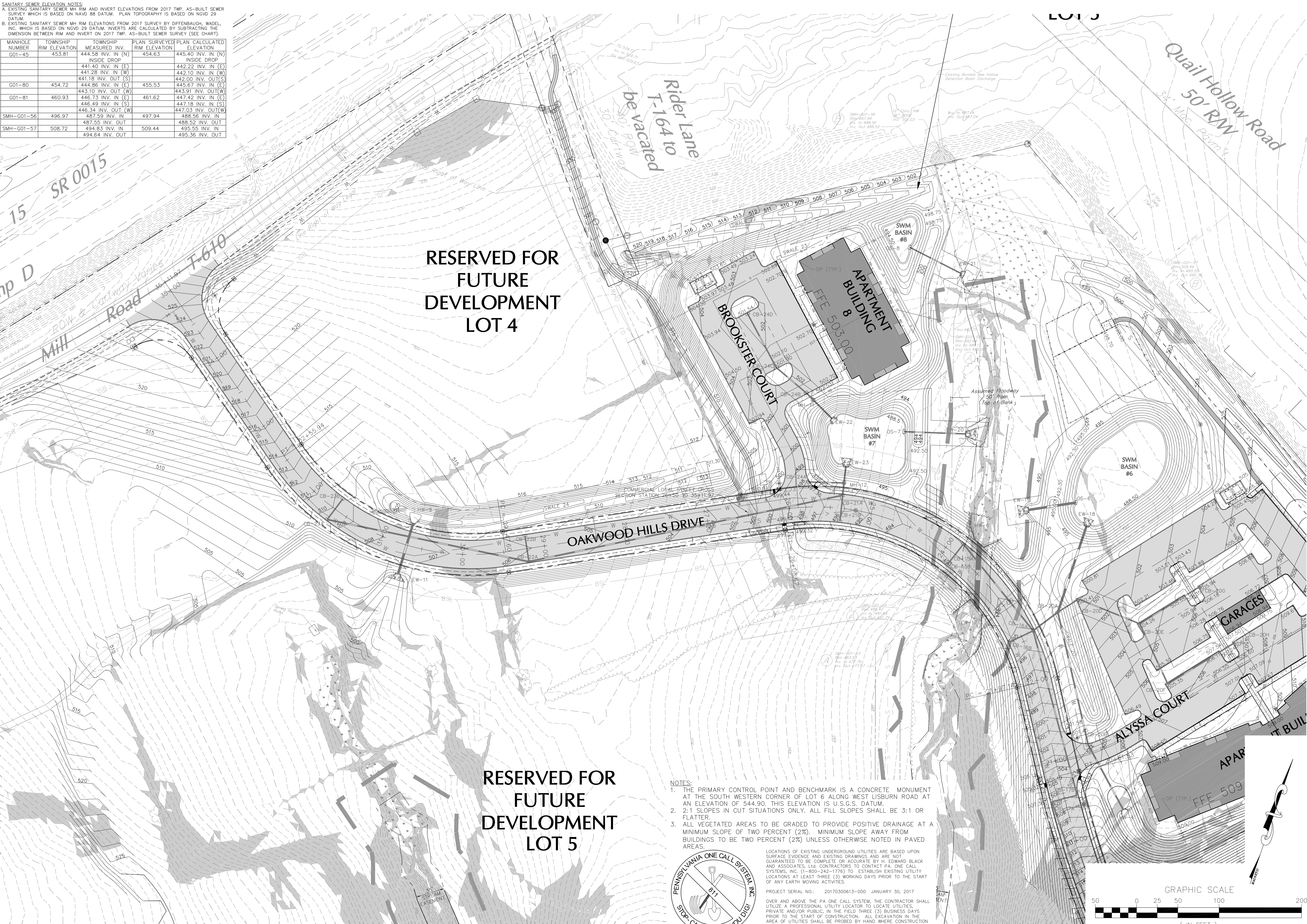
H. EDWARD BLACK
and ASSOCIATES, Ltd.

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/233-1026 • FAX 717/233-2192



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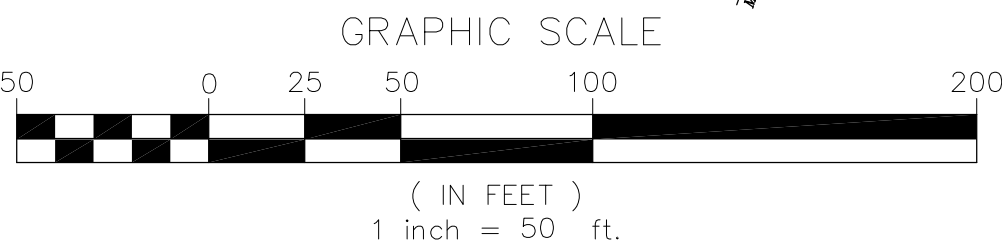
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PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

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PENNSYLVANIA ONE CALL SYSTEM, INC.
STOP CALL BEFORE YOU DIG



NOT FOR CONSTRUCTION

EIS

CHH

05-01-17

1" = 50'

13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

GRADING PLAN C

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUZ WATER DESIGN

PER 105 COMMENTS

PER SUZ WATER DESIGN

EIS

EIS

EIS

EIS

EIS

EIS

EIS

DATE

H. EDWARD BLACK AND ASSOCIATES, LTD.

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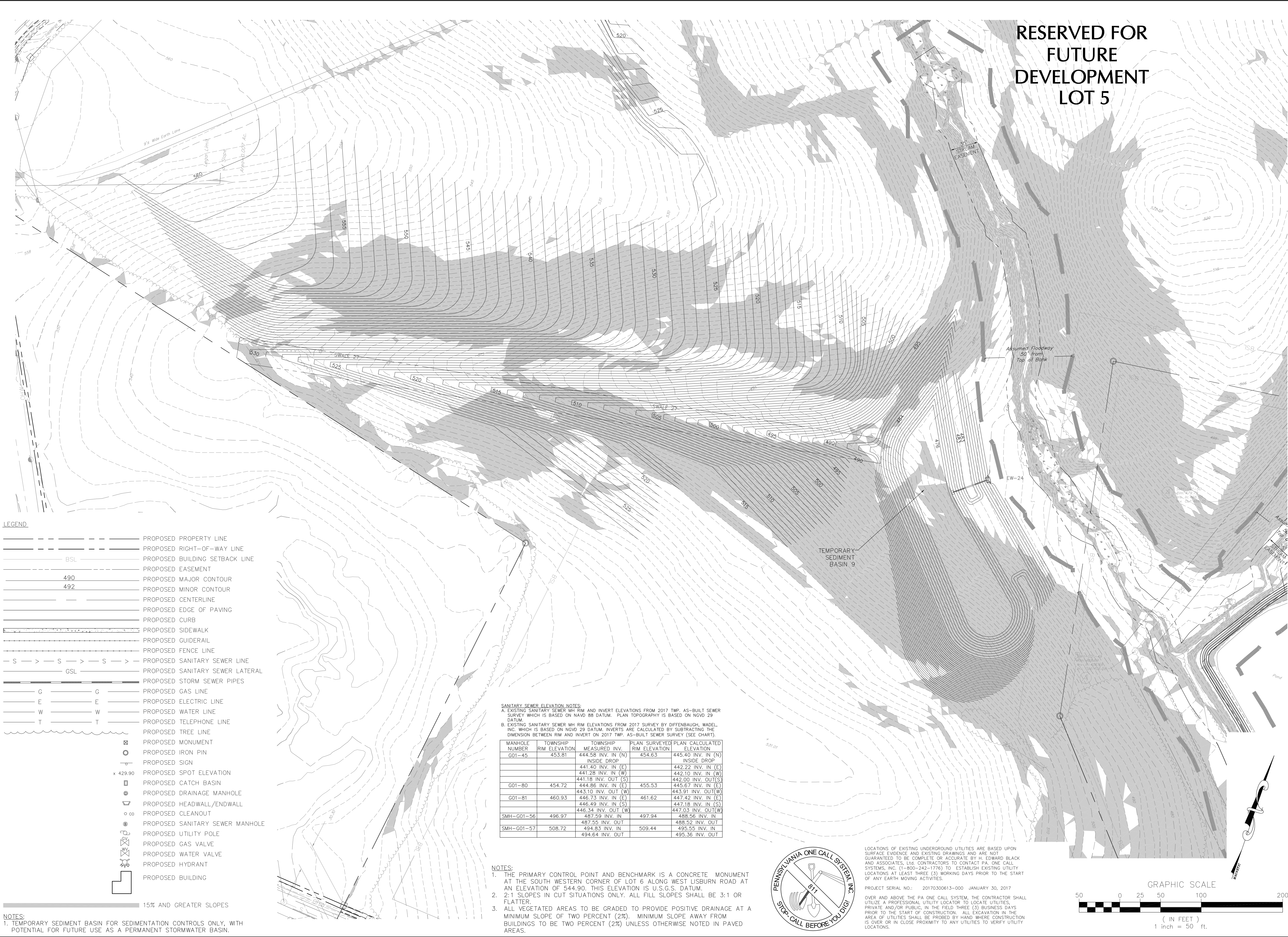
COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

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17 OF 68



LEGEND

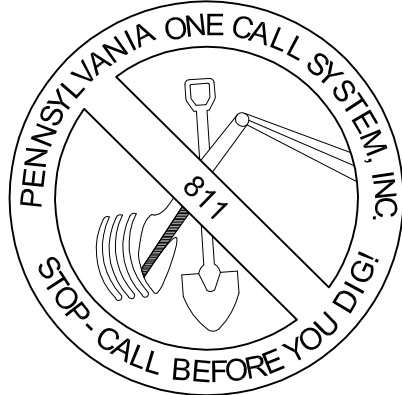
---	---	PROPOSED PROPERTY LINE
---	---	PROPOSED RIGHT-OF-WAY LINE
---	---	PROPOSED BUILDING SETBACK LINE
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---	---	PROPOSED WATER VALVE
---	---	PROPOSED HYDRANT
---	---	PROPOSED BUILDING

NOTES:
1. TEMPORARY SEDIMENT BASIN FOR SEDIMENTATION CONTROLS ONLY, WITH POTENTIAL FOR FUTURE USE AS A PERMANENT STORMWATER BASIN.

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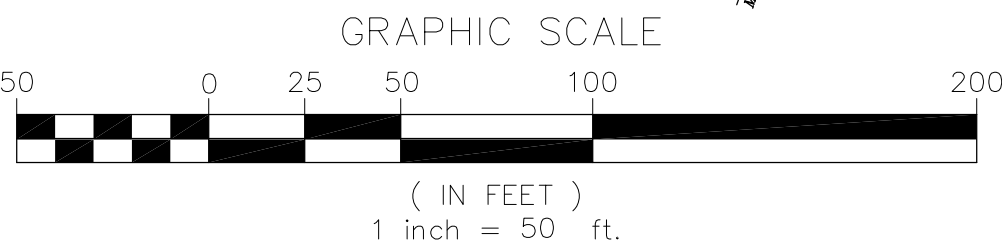
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NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 50'

SHEET

18 OF 68

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
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CUMBERLAND COUNTY
PENNSYLVANIA

GRADING PLAN D

**H. EDWARD BLACK
and ASSOCIATES, Ltd.**
















☐ COMPREHENSIVE LAND AND SITE PLANNING
☐ LANDSCAPE ARCHITECTURE
☐ ENGINEERING

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/733-026 • FAX 717/733-2192

FOR CORRECTIONS	EIS	07-31-18
AA FOR SIGNATURES	EIS	06-27-18
AA FOR PENNDOT COMMENTS	EIS	06-08-18
AA PER PENNDOT COMMENTS	EIS	05-04-18
AA PER SUEZ WATER DESIGN	EIS	03-28-18
AA PER 105 COMMENTS	EIS	12-27-17
AA PER SUEZ WATER DESIGN	EIS	11-13-17
REV DESCRIPTION	BY	DATE

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LEGEND

_____	PROPOSED PROPERTY LINE
_____	PROPOSED RIGHT-OF-WAY LINE
_____ BSL _____	PROPOSED BUILDING SETBACK LINE
_____	PROPOSED EASEMENT
_____ 490 _____	PROPOSED MAJOR CONTOUR
_____ 492 _____	PROPOSED MINOR CONTOUR
_____	PROPOSED CENTERLINE
_____	PROPOSED EDGE OF PAVING/GRAVEL
_____	PROPOSED CURB
	PROPOSED SIDEWALK
_____	PROPOSED GUIDERAIL
_____	PROPOSED FENCE LINE
— S — > — S — > — S — > —	PROPOSED SANITARY SEWER LINE
_____ FM _____ FM _____	PROPOSED SANITARY SEWER FORCE MAIN
_____ CSL _____	PROPOSED SANITARY SEWER LATERAL
	PROPOSED STORM SEWER PIPES
_____ G _____ G _____	PROPOSED GAS LINE
_____ ECT _____ ECT _____	PROPOSED ELECTRIC, TELEPHONE & CABLE TV
_____ W _____ W _____	PROPOSED WATER LINE
	PROPOSED MONUMENT
	PROPOSED IRON PIN
	PROPOSED SIGN
	PROPOSED CATCH BASIN
	PROPOSED DRAINAGE MANHOLE
	PROPOSED HEADWALL/ENDWALL
 ∞	PROPOSED CLEANOUT
	PROPOSED SANITARY SEWER MANHOLE
	PROPOSED UTILITY POLE
	PROPOSED GAS VALVE
	PROPOSED WATER VALVE
	PROPOSED HYDRANT
	PROPOSED BUILDING

SANITARY SEWER ELEVATION NOTES:

A. EXISTING SANITARY SEWER MH RIM AND INVERT ELEVATIONS FROM 2017 TWP. AS-BUILT SEWER SURVEY WHICH IS BASED ON NAVD 88 DATUM. PLAN TOPOGRAPHY IS BASED ON NGVD 29 DATUM.

B. EXISTING SANITARY SEWER MH RIM ELEVATIONS FROM 2017 SURVEY BY DIFFENBAUGH, WADEL, INC. WHICH IS BASED ON NGVD 29 DATUM. INVERTS ARE CALCULATED BY SUBTRACTING THE DIMENSION BETWEEN RIM AND INVERT ON 2017 TWP, AS-BUILT SEWER SURVEY (SEE CHART).

MANHOLE NUMBER	TOWNSHIP RIM ELEVATION	TOWNSHIP MEASURED INV.	PLAN SURVEYED RIM ELEVATION	PLAN CALCULATED ELEVATION
G01-45	453.81	444.58 INV. IN (N) INSIDE DROP	454.63	445.40 INV. IN (N) INSIDE DROP
		441.40 INV. IN (E)		442.22 INV. IN (E)
		441.28 INV. IN (W)		442.10 INV. IN (W)
G01-80	454.72	441.18 INV. OUT (S)		442.00 INV. OUT (S)
		444.86 INV. IN (E)	455.53	445.67 INV. IN (E)
G01-81	460.93	443.10 INV. OUT (W)		443.91 INV. OUT (W)
		446.73 INV. IN (E)	461.62	447.42 INV. IN (E)
		446.49 INV. IN (S)		447.18 INV. IN (S)
		446.34 INV. OUT (W)		447.03 INV. OUT (W)
SMH-G01-56	496.97	487.59 INV. OUT (S)	497.94	488.55 INV. IN (S)
		485.96 INV. OUT (S)		488.52 INV. OUT (S)
SMH-G01-57	508.72	494.83 INV. IN	509.44	495.55 INV. IN
		494.64 INV. OUT		495.36 INV. OUT

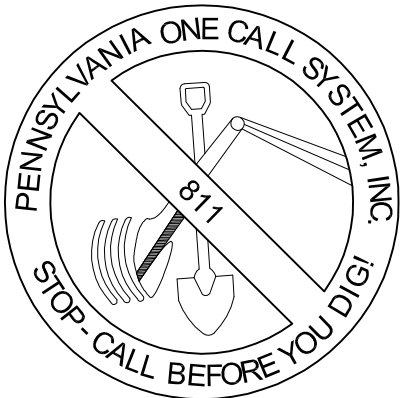
NOTES:

1. THE PRIMARY CONTROL POINT AND BENCHMARK IS A CONCRETE MONUMENT AT THE SOUTH WESTERN CORNER OF LOT 6 ALONG WEST LISBURN ROAD AT AN ELEVATION OF 544.90. THIS ELEVATION IS U.S.G.S. DATUM.
2. PROPOSED SANITARY SEWER LINES OUTSIDE PUBLIC RIGHT-OF-WAY ARE PRIVATELY OWNED UNLESS OTHERWISE NOTED.
3. ALL SANITARY SEWER CLEANOUTS SHALL BE A TWO WAY CLEANOUT.
4. GARAGES TO BE SUPPLIED WITH ELECTRIC SERVICE AS DETAILED ON ARCHITECTURAL DRAWINGS.



NOTES:

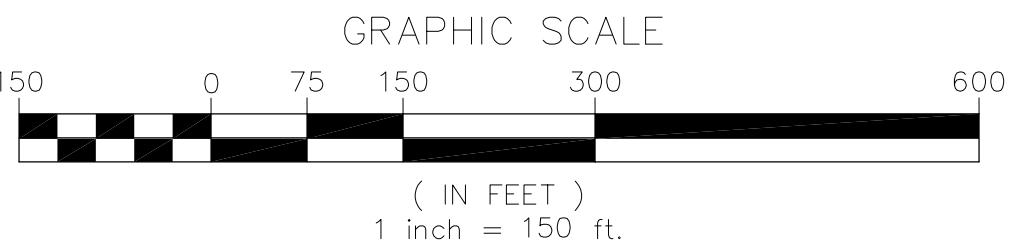
1. LOCATION OF UTILITY POLES TO BE DETERMINED BY PPL



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, Ltd. CONTRACTORS TO CONTACT P.A. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.



NOT FOR CONSTRUCTION

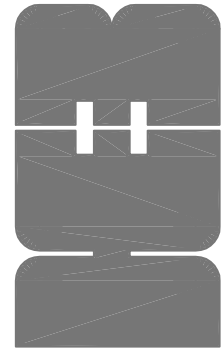
DRAWN BY: EIS
 CHECKED BY: CHH
 DATE: 05-01-17
 SCALE: 1" = 150'
 JOB NUMBER: 13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

OVERALL UTILITY PLAN



H. EDWARD BLACK
and ASSOCIATES, Ltd.

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2403 North Front Street □ Harrisburg, Pennsylvania 17110 □ Telephone (717)233-1026 □ FAX (717)233-2192

<u>A</u>	FOR CORRECTIONS	EIS	07-31-18
<u>A</u>	FOR SIGNATURES	EIS	06-27-18
<u>A</u>	PER PENNDOT COMMENTS	EIS	06-08-18
<u>A</u>	PER PENNDOT COMMENTS	EIS	05-04-18
<u>A</u>	PER SUEZ WATER DESIGN	EIS	03-28-18
<u>A</u>	PER 105 COMMENTS	EIS	12-27-17
<u>A</u>	PER SUEZ WATER DESIGN	EIS	11-13-17
<u>REV</u>	DESCRIPTION	BY	DATE

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	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN	A FOR CORRECTIONS A FOR CONSTRUCTION EIS	07-31-18	A
DRAWN BY:	EIS		A FOR CORRECTIONS A FOR CONSTRUCTION EIS	06-07-18	A
SHEET NO.	EIS		A FOR CORRECTIONS A FOR CONSTRUCTION EIS	06-07-18	A


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8
 PENNSYLVANIA
 H. EDWARD BLACK
 AND ASSOCIATES, Ltd.
 2403 North Front Street - Harrisburg, Pennsylvania 17110 - Telephone 717/233-1026 - FAX 717/233-2192
 PER SUZ WATER DESIGN
 E/S
 11-13-17

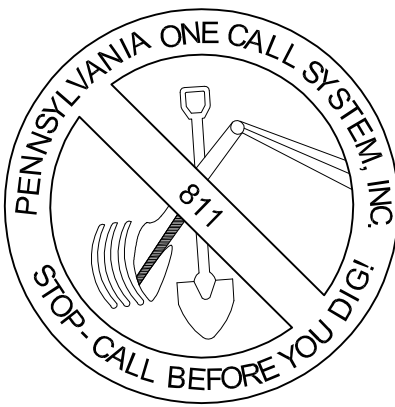
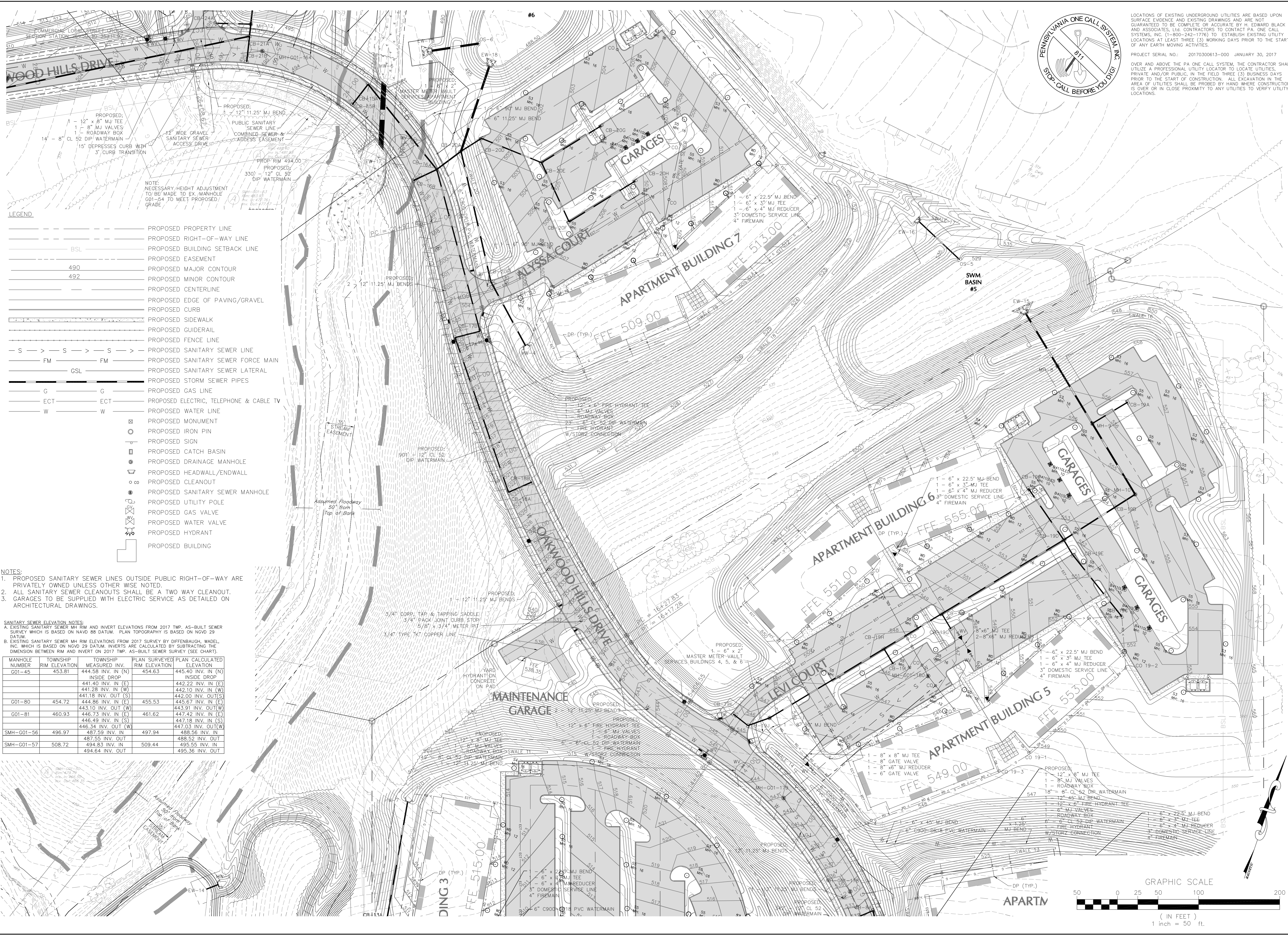
JOB NUMBER: 150211.020	REV: DESCRIPTION	BY	DATE
UTILITY PLAN A			

DRAWN BY: EIS CHECKED BY: CHH DATE: 05-01-17 SCALE: 1" = 50' JOB NUMBER: 13021-020		PRELIMINARY SUBD. AND LAND DEV. PLAN OAKWOOD HILLS LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA		UTILITY PLAN A	
 H. EDWARD BLACK and ASSOCIATES, Ltd.		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
A FOR CORRECTIONS A FOR SIGNATURES A PER PENNDOT COMMENTS A PER PENNDOT COMMENTS A PER SUZ WATER DESIGN A PER 105 COMMENTS A PER SUZ WATER DESIGN		EIS EIS EIS EIS EIS EIS		07-31-18 06-27-18 06-08-18 05-04-18 03-28-18 12-27-17 11-13-17	
REV. DESCRIPTION BY DATE					

DRAWN BY: EIS CHECKED BY: CHH DATE: 05-01-17 SCALE: 1" = 50' JOB NUMBER: 13021-020		PRELIMINARY SUBD. AND LAND DEV. PLAN OAKWOOD HILLS LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA		UTILITY PLAN A	
 H. EDWARD BLACK and ASSOCIATES, Ltd.		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
A FOR CORRECTIONS A FOR SIGNATURES A PER PENNDOT COMMENTS A PER PENNDOT COMMENTS A PER SUZ WATER DESIGN A PER 105 COMMENTS A PER SUZ WATER DESIGN		EIS EIS EIS EIS EIS EIS		07-31-18 06-27-18 06-08-18 05-04-18 03-28-18 12-27-17 11-13-17	
REV. DESCRIPTION BY DATE					

DRAWN BY: EIS CHECKED BY: CHH DATE: 05-01-17 SCALE: 1" = 50' JOB NUMBER: 13021-020		PRELIMINARY SUBD. AND LAND DEV. PLAN OAKWOOD HILLS LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA		UTILITY PLAN A	
 H. EDWARD BLACK and ASSOCIATES, Ltd.		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
A FOR CORRECTIONS A FOR SIGNATURES A PER PENNDOT COMMENTS A PER PENNDOT COMMENTS A PER SUZ WATER DESIGN A PER 105 COMMENTS A PER SUZ WATER DESIGN		EIS EIS EIS EIS EIS EIS		07-31-18 06-27-18 06-08-18 05-04-18 03-28-18 12-27-17 11-13-17	
REV. DESCRIPTION BY DATE					

DRAWN BY: EIS CHECKED BY: CHH DATE: 05-01-17 SCALE: 1" = 50' JOB NUMBER: 13021-020		PRELIMINARY SUBD. AND LAND DEV. PLAN OAKWOOD HILLS LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA		UTILITY PLAN A	
 H. EDWARD BLACK and ASSOCIATES, Ltd.		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING		2403 North Front Street • Harrisburg, Pennsylvania 17110 • FAX (717) 233-2192			
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REV. DESCRIPTION BY DATE					



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PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

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FOR CORRECTIONS

EIS

07-31-18

FOR SIGNATURES

EIS

06-27-18

PER PENNDOT COMMENTS

EIS

06-08-18

PER PENNDOT COMMENTS

EIS

05-04-18

PER SUZ WATER DESIGN

EIS

03-28-18

PER 105 COMMENTS

EIS

12-27-17

PER SUZ WATER DESIGN

EIS

11-13-17

REV

DESCRIPTION

DATE

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK AND ASSOCIATES, Ltd.

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PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

UTILITY PLAN B

NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

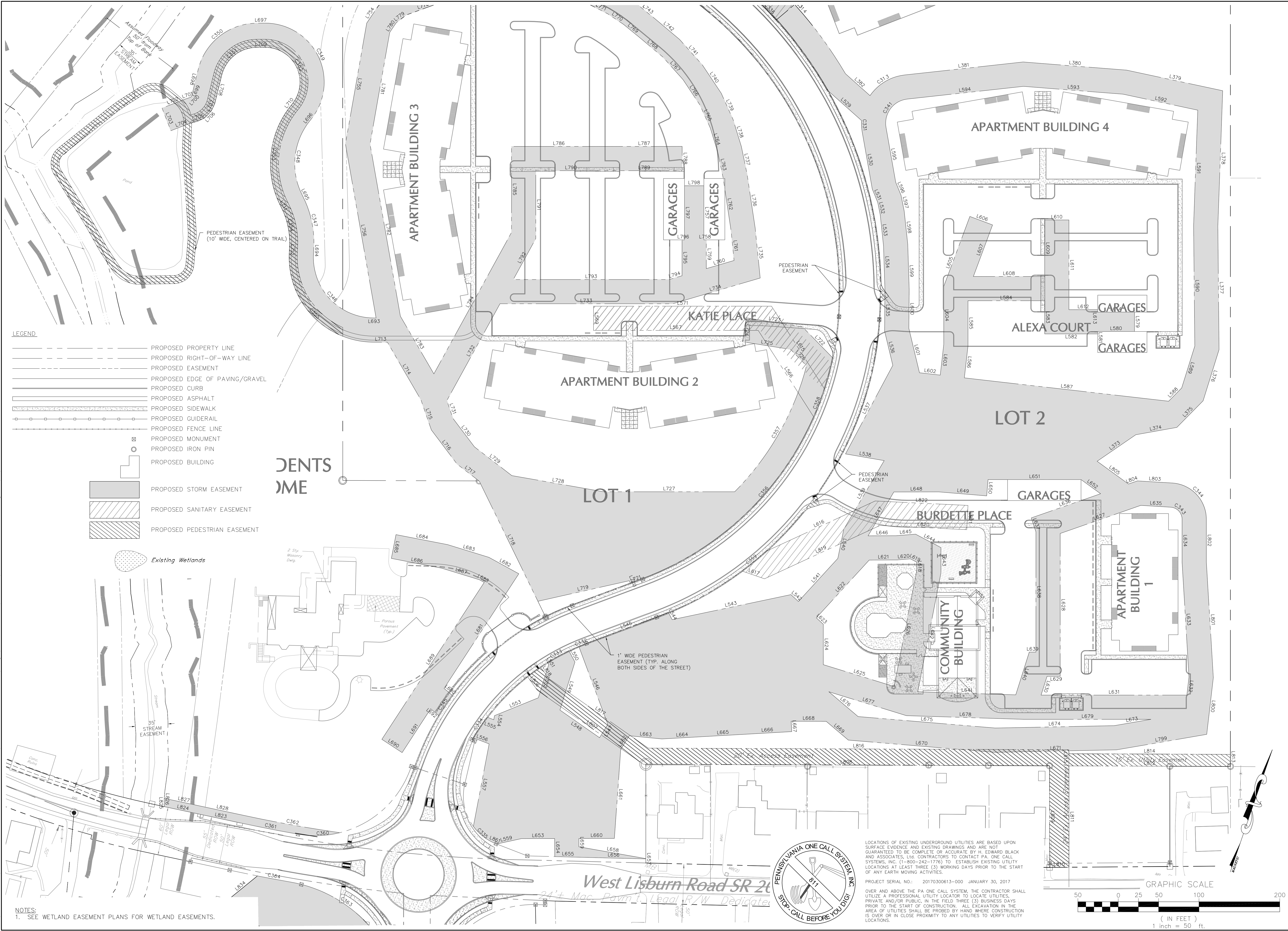
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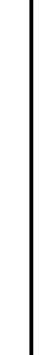
JOB NUMBER: 13021.020

21 OF 68

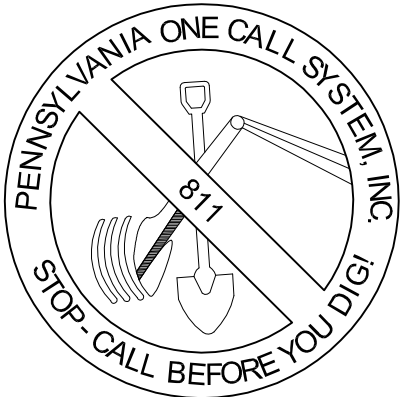
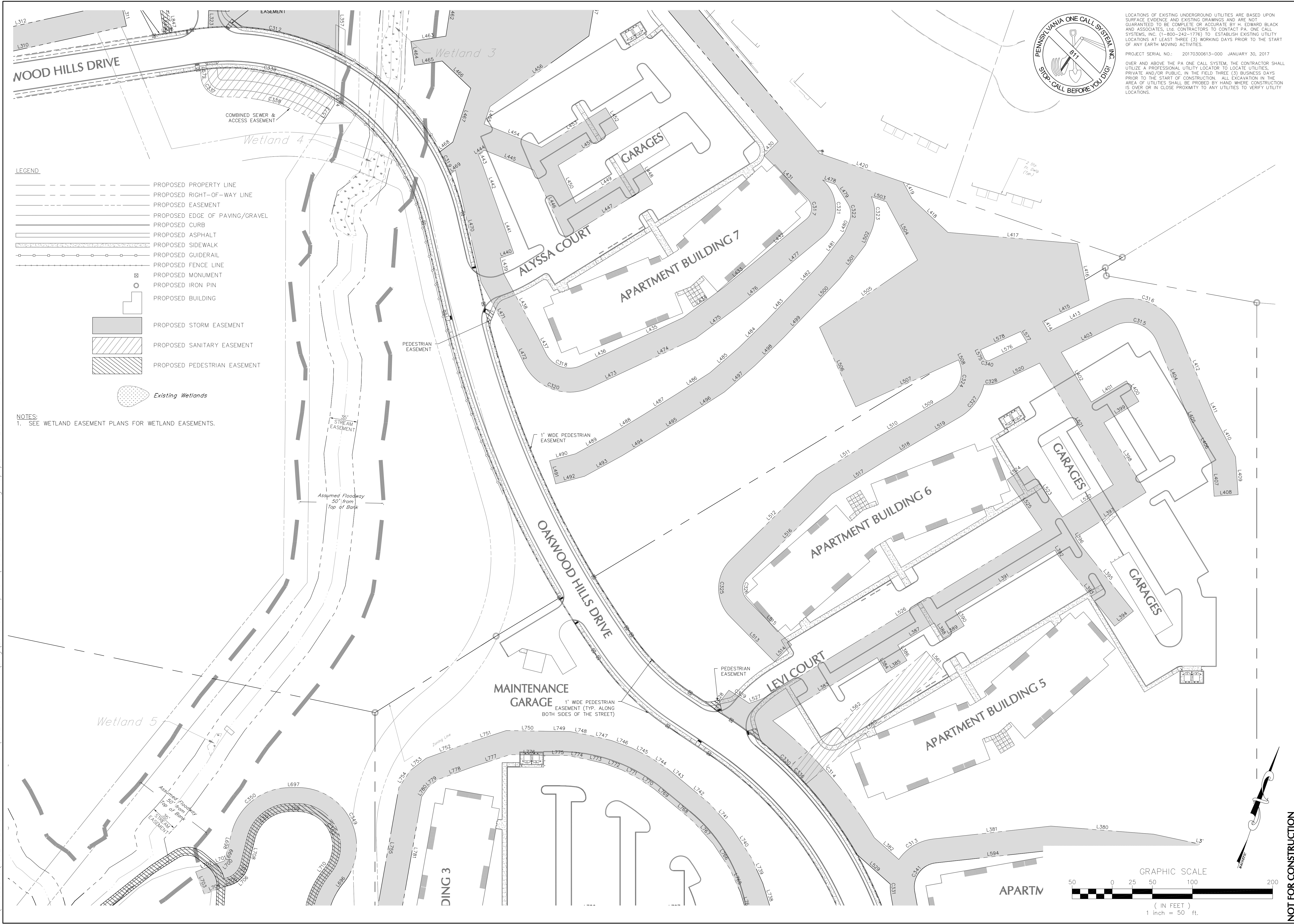
DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

SHEET
22 OF 68



<div>NOT FOR CONSTRUCTION</div>		<div>PRELIMINARY SUBD. AND LAND DEV. PLAN</div>		<div> H. EDWARD BLACK and ASSOCIATES, Ltd.</div>		<div><input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING</div>		<div>THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.</div>	
DRAWN BY:	EIS	OAKWOOD HILLS				FOR CORRECTIONS		EIS	07-31-18
CHECKED BY:	CHH	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA				FOR SIGNATURES		EIS	06-27-18
DATE:	05-01-17					PER PENNDOT COMMENTS		EIS	06-08-18
SCALE:	1" = 50'					PER PENNDOT COMMENTS		EIS	05-04-18
						PER SUEZ WATER DESIGN		EIS	03-28-18
						PER 105 COMMENTS		EIS	12-27-17
						PER SUEZ WATER DESIGN		EIS	11-13-17
JOB NUMBER:	13021.020	EASEMENT PLAN A				REV. DESCRIPTION		BY	DATE

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LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LTD. CONTRACTORS TO CONTACT PA. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

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NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 50'

JOB NUMBER: 13021.020

SHEET

25 OF 68

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

EASEMENT PLAN B

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK
and ASSOCIATES, Ltd.

2403 North Front Street
Harrisburg, Pennsylvania 17110
Telephone 717/233-1026
FAX 717/233-2192

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

EIS

EIS

EIS

EIS

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07-31-18

06-27-18

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05-04-18

03-28-18

12-27-17

11-13-17

DATE

BY

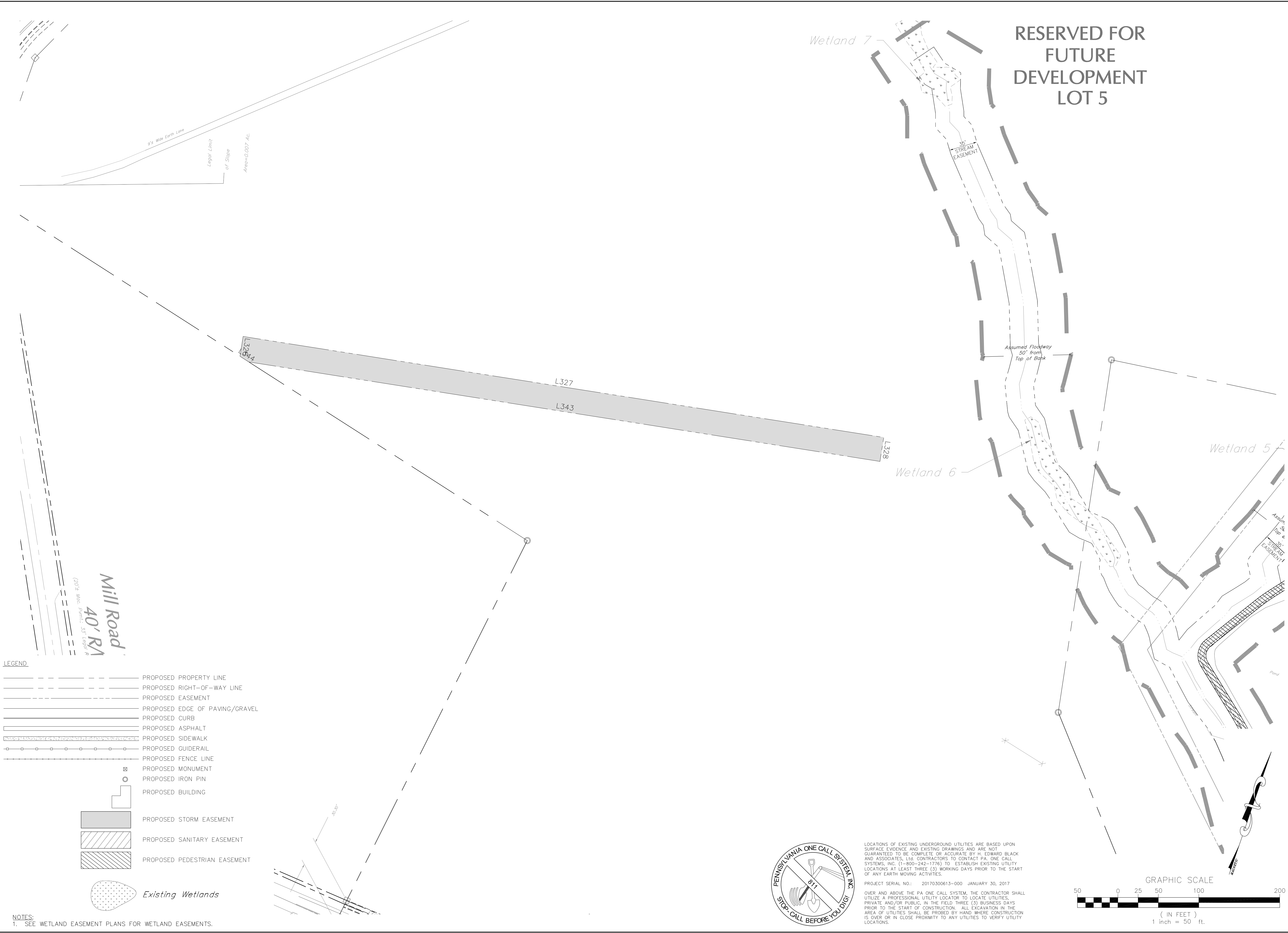
REV

DESCRIPTION

26 OF 68	CHECKED BY: CHH DATE: 05-01-17 SCALE: 1" = 50' JOB NUMBER: 13021.020	OAKWOOD HILLS LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	EASEMENT PLAN C
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✓	FOR CORRECTIONS	EIS	07-31-18
✓	FOR SIGNATURES	EIS	06-27-18
✓	PER PENNDOT COMMENTS	EIS	06-08-18
✓	PER PENNDOT COMMENTS	EIS	05-04-18
✓	PER SUZ WATER DESIGN	EIS	03-28-18
✓	PER 105 COMMENTS	EIS	12-27-17
✓	PER SUZ WATER DESIGN	EIS	11-13-17
REV.	DESCRIPTION	BY	

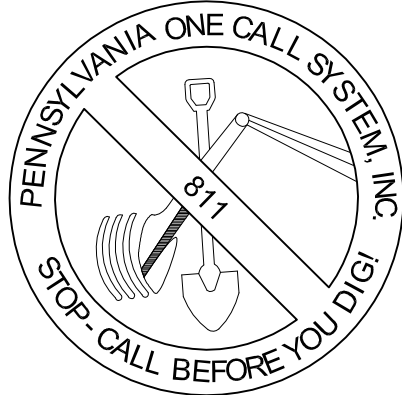
W:\PROJECTS\13021.020 Oakwood Hills Rev Apt Land Dev Plans\Dwg\Land Development\13021.020-Base.dwg 8/1/2018 2:34:57 PM EDT



- LEGEND
- PROPOSED PROPERTY LINE
 - PROPOSED RIGHT-OF-WAY LINE
 - PROPOSED EASEMENT
 - PROPOSED EDGE OF PAVING/GRAVEL
 - PROPOSED CURB
 - PROPOSED ASPHALT
 - PROPOSED SIDEWALK
 - PROPOSED GUIDERAIL
 - PROPOSED FENCE LINE
 - PROPOSED MONUMENT
 - PROPOSED IRON PIN
 - PROPOSED BUILDING
 - PROPOSED STORM EASEMENT
 - PROPOSED SANITARY EASEMENT
 - PROPOSED PEDESTRIAN EASEMENT

Existing Wetlands

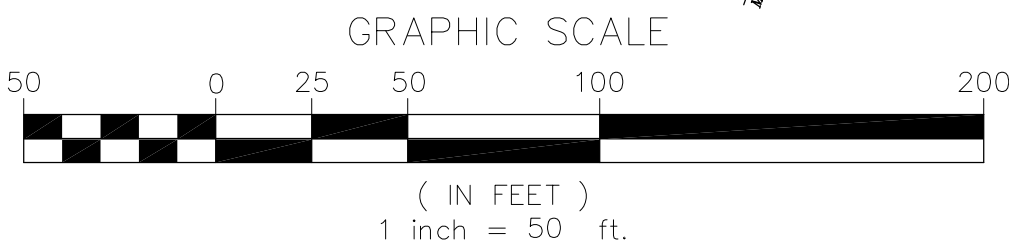
NOTES:
1. SEE WETLAND EASEMENT PLANS FOR WETLAND EASEMENTS.



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PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

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NOT FOR CONSTRUCTION	
DRAWN BY: EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN
CHECKED BY: CHH	OAKWOOD HILLS
DATE: 05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
SCALE: 1" = 50'	EASEMENT PLAN D
JOB NUMBER: 13021.020	

H. EDWARD BLACK
and ASSOCIATES, Ltd.

☐ COMPREHENSIVE LAND AND SITE PLANNING
☐ LANDSCAPE ARCHITECTURE
☐ ENGINEERING

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FOR CORRECTIONS	EIS	07-31-18
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EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L300	25.82	N39°08'03"E
L301	64.00	S50°08'58"E
L310	261.97	N58°34'15"E
L311	30.00	N31°25'45"W
L312	254.48	S58°34'15"W
L313	47.29	S65°01'32"W
L314	53.37	S79°41'04"W
L315	19.25	N84°31'34"W
L316	7.64	N77°15'55"W
L317	64.76	N58°28'26"W
L318	30.00	S31°31'34"W
L319	72.46	S58°28'26"E
L320	26.69	S02°24'10"E
L321	30.00	S87°35'50"W
L322	26.69	N02°24'10"W
L323	21.65	N17°27'50"W
L324	25.61	N72°32'10"E
L325	72.40	N28°59'46"W
L326	24.79	N10°01'04"W
L327	801.32	N79°58'56"E
L328	30.00	S10°01'04"E
L343	789.45	S79°58'56"W
L344	12.96	N76°17'57"W
L345	15.74	N63°59'27"W
L346	49.68	N68°44'24"W
L347	91.63	N47°01'21"W
L348	30.00	N42°58'39"W
L349	85.89	S47°01'21"E
L350	45.17	S68°44'44"E
L351	22.59	S63°59'27"E
L352	126.28	N66°14'52"E
L353	38.97	S18°11'04"E
L354	69.83	N73°06'20"E
L355	30.00	S16°53'40"W
L356	69.15	S73°06'20"W
L357	83.29	S18°11'04"E
L358	137.92	S46°47'34"E
L359	76.27	N00°13'32"E
L360	48.68	S81°57'59"E
L361	30.00	N08°02'01"E
L362	52.79	N81°57'59"W
L363	31.29	N00°13'32"E
L364	75.57	N32°46'10"W
L365	238.51	S58°07'21"W
L366	166.16	S54°24'15"W
L367	30.01	S36°50'22"E
L368	164.54	N54°24'15"E
L369	118.18	N58°07'21"E
L370	90.64	S52°55'45"W
L371	30.00	S37°04'15"E
L372	99.72	N52°55'45"E
L373	58.06	N36°32'55"E
L374	51.63	N60°54'56"E
L375	46.22	N25°41'20"E
L376	66.41	N01°36'56"W
L377	153.01	N19°32'28"W
L378	167.61	N16°54'38"W
L379	121.79	S83°06'28"W
L380	128.45	S75°31'29"W
L381	147.66	S64°46'28"W
L382	40.78	N67°15'48"W
L383	152.20	N39°51'02"E
L384	22.24	S50°08'58"E
L385	30.00	N39°51'02"E
L386	22.24	N50°08'58"W
L387	53.39	N39°51'02"E
L388	22.24	S50°08'58"E
L389	30.00	N39°51'02"E
L390	22.24	N50°08'58"W
L391	145.73	N39°51'02"E
L392	8.21	S50°08'58"E
L393	112.41	S57°31'40"E
L394	30.00	N32°28'20"E
L395	110.48	N57°31'40"W
L396	6.62	N50°08'58"W
L397	104.41	N38°30'22"E
L398	101.64	N50°08'58"W
L399	51.12	N39°51'02"E
L400	30.00	N50°08'58"W
L401	51.12	S39°51'02"W
L402	72.47	N50°08'58"W
L403	74.83	N44°34'26"E
L404	93.95	S41°37'08"E
L405	20.89	S41°37'08"E
L406	52.72	S46°42'57"E
L407	40.96	S22°53'40"E
L408	30.00	N67°06'20"E
L409	47.28	N22°53'40"W
L410	57.71	N46°42'57"W
L411	19.56	N41°37'08"W
L412	93.95	N41°37'08"W
L413	77.31	S44°34'26"W
L414	14.88	N50°08'58"W
L415	63.68	N46°29'24"E
L416	72.06	N30°29'09"W
L417	162.26	S75°59'59"W
L418	61.05	N65°51'56"W
L419	23.77	N47°07'50"W
L420	110.07	S89°56'59"W
L421	508.06	N59°00'13"W
L422	43.48	N75°02'10"W
L423	31.99	N82°11'53"W
L424	56.34	S81°07'32"W
L425	30.00	S08°52'28"E
L426	51.95	N81°07'32"E
L427	25.71	S82°11'53"E
L428	37.38	S75°02'10"E
L429	459.12	S59°00'13"E
L430	24.73	S25°51'31"W
L431	76.32	S64°08'29"E

EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L432	83.53	S31°21'15"W
L433	49.91	S31°35'47"W
L434	63.63	S34°21'16"W
L435	82.93	S45°51'31"W
L436	58.03	S45°51'31"W
L437	23.59	N44°52'52"W
L438	88.28	N47°21'32"W
L439	20.34	N31°51'01"W
L440	17.91	N51°34'02"E
L441	65.90	N38°25'58"W
L442	51.33	N38°25'58"W
L443	14.10	N41°40'37"W
L444	9.41	N38°54'32"E
L445	66.28	S86°57'50"E
L446	93.43	S43°56'07"E
L447	128.11	N39°17'33"E
L448	30.00	N50°42'27"W
L449	94.34	S39°17'33"W
L450	52.24	N43°56'07"W
L451	88.18	N39°17'33"E
L452	30.00	N50°42'27"W
L453	93.90	S39°17'33"W
L454	77.15	N86°57'50"W
L455	23.14	N00°34'53"W
L456	151.55	N35°51'31"E
L457	70.71	N09°28'29"W
L458	50.16	N54°28'29"W
L459	70.71	S80°31'31"W
L460	72.37	S35°31'31"W
L461	33.64	S25°42'26"W
L462	57.16	S10°24'51"E
L463	44.22	S62°16'17"W
L464	30.00	S27°43'43"E
L465	34.86	N62°16'17"E
L466	49.10	S65°22'57"E
L467	70.83	S00°34'53"E
L468	20.89	S34°10'14"W
L469	8.37	N34°10'14"E
L470	143.71	S31°51'01"E
L471	91.71	S47°21'32"E
L472	22.94	S44°52'52"E
L473	58.03	N45°51'31"E
L474	85.95	N45°51'31"E
L475	67.37	N34°21'16"E
L476	50.70	N31°35'47"E
L477	83.60	N31°21'15"E
L478	17.48	N89°56'59"E
L479	27.54	S51°07'35"E
L480	14.99	S04°08'50"W
L481	47.43	S18°27'25"W
L482	49.27	S24°29'02"W
L483	49.84	S24°41'25"W
L484	48.53	S26°40'21"W
L485	47.52	S30°08'33"W
L486	48.59	S38°24'12"W
L487	49.10	S39°02'42"W
L488	48.82	S39°54'14"W
L489	49.19	S42°20'23"W
L490	33.51	S56°09'10"W
L491	30.00	S33°50'50"E
L492	37.14	N56°09'10"E
L493	53.46	N42°20'23"E
L494	49.69	N39°54'14"E
L495	49.49	N39°02'42"E
L496	50.92	N38°24'12"E
L497	50.59	N30°08'33"E
L498	49.96	N26°40'21"E
L499	50.42	N24°41'25"E
L500	50.91	N24°29'02"E
L501	52.78	N18°27'25"E
L502	18.76	N04°08'50"E
L503	19.80	N89°56'59"E
L504	82.39	S47°07'50"E
L505	148.26	S36°33'52"W
L506	108.88	S43°30'36"E
L507	140.82	N46°29'24"E
L508	0.96	S43°30'36"E
L509	52.15	S40°41'56"W
L510	50.29	S40°42'25"W
L511	87.96	S39°12'30"W
L512	150.78	S26°25'03"W
L513	78.89	S63°34'57"E
L514	30.00	N26°25'03"E
L515	78.89	N63°34'57"W
L516	147.42	N26°25'03"E
L517	84.20	N39°12'30"E
L518	49.89	N40°42'25"E
L519	52.16	N40°41'56"E
L520	54.68	N45°22'46"E
L521	177.33	S50°08'58"E
L522	75.28	S38°30'22"W
L523	77.41	N53°30'02"W
L524	30.00	S36°29'58"W
L525	75.99	S53°30'02"E
L526	406.44	S39°51'02"W
L527	18.14	S51°32'31"W
L528	30.22	S19°05'41"W
L529	58.16	S67°15'48"E
L530	72.23	S28°58'19"E
L531	17.78	S41°20'30"E
L532	15.73	S30°19'22"E
L533	38.82	S25°02'36"E
L534	54.19	S20°47'54"E
L535	51.18	S18°29'10"E
L536	43.64	S32°26'35"E
L537	124.33	S09°09'01"W
L538	48.66	N80°47'46"E
L539	98.73	S11°31'03"W
L540	36.75	S07°30'22"E
L541	72.29	S23°32'05"W

EASEMENT LINE TABLE		
LINE	LENGTH	BEARING
L542	12.57	N66°31'08"W
L543	150.28	S59°08'05"W
L544	10.25	N46°55'40"W
L545	108.54	S50°15'28"W
L546	102.95	S39°23'46"E
L547	19.49	S12°44'36"W
L548	59.87	N74°04'23"W
L549	62.26	N01°35'03"W
L550	15.81	N47°25'22"W
L551	3.13	S47°25'22"E
L552	43.10	S01°35'03"E
L553	58.55	S48°53'29"W
L554	5.17	S08°08'39"E
L555	8.88	N87°39'53"W
L556	21.22	S87°39'53"E
L557	103.97	S08°08'39"E
L559	31.52	N58°47'53"E
L560	222.34	N30°50'49"E
L561	30.00	N59°09'11"W
L562	224.25	S30°50'49"W
L566	108.55	N66°25'22"W
L567	339.16	S71°01'37"W
L569	30.00	N71°01'37"E
L571	320.84	N71°01'37"E
L572	9.85	S23°32'32"E
L573	30.58	N13°51'03"E
L574	7.54	N18°11'04"W
L575	11.72	S43°30'36"E
L576	51.77	N45°22'46"E
L577	15.82	N50°08'58"W
L578	55.03	S46°29'24"W
L579	24.00	S18°58'19"E
L580	45.50	S71°01'41"W
L581	3.00	S18°58'19"E
L582	65.61	S71°01'41"W
L583	41.12	N18°58'19"W
L584	95.00	S71°01'41"W
L585	55.85	S18°58'19"E
L586	39.93	S12°27'29"E
L587	254.63	N77°32'31"E
L588	23.00	N25°41'20"E
L589	54.40	N01°36'56"W
L590	148.97	N19°32'28"W
L591	143.13	N16°54'38"W
L592	94.64	S83°06'28"W
L593	123.64	S75°31'29"W
L594	144.83	S64°46'28"W
L595	68.98	S28°58'19"E
L596	17.42	S41°20'30"E
L597	20.01	S30°19'22"E
L598	41.31	S25°02'36"E
L599	55.91	S20°47'54"E
L600	48.11	S18°29'10"E
L601	56.57	S32°26'35"E
L602	25.90	N77°32'31"E
L603	38.22	N12°27'29"W
L604	71.85	N18°58'19"W
L605	92.42	N01°29'13"W
L606	30.00	S88°30'47"E
L607	68.11	S01°29'13"W
L608	88.39	N71°01'41"E
L609	70.00	N18°58'19"W
L610	30.00	N71°01'41"E
L611	111.12	S18°58'19"E
L612	35.61	N71°01'41"E
L613	3.00	S18°58'19"E
L614	45.50	N71°01'41"E
L615	104.95	S66°25'22"E
L616	149.67	S46°16'29"W
L617	29.71	S89°55'48"E
L618	10.47	N18°58'19"W
L619	8.75	N81°07'39"W
L620	16.36	S66°30'16"W
L621	34.77	S70°43'25"W
L622	97.00	S23°32'05"W
L623	11.80	S66°31'08"E
L624	50.03	S18°58'19"E
L625	91.68	N88°09'58"E
L626	146.14	N07°54'30"W
L627	105.75	S51°48'22"W
L628	176.82	S18°58'19"E
L629	16.26	S71°01'41"W
L630	24.41	S01°23'18"E
L631	180.56	N71°01'41"E
L632	22.64	N12°20'12"W
L633	141.99	N22°24'20"W
L634	53.48	N18°58'19"W
L635	37.15	S74°27'54"W
L636	90.92	S51°48'22"W
L637	18.26	S37°22'31"E
L638	148.80	S18°58'19"E
L639	8.22	S71°01'41"W
L640	55.51	S01°23'18"E
L641	121.44	S72°49'31"W
L642	149.84	N07°54'30"W
L643	31.46	N18°58'19"W
L644	35.54	N81°07'39"W
L645	23.96	S66°30'16"W
L646	34.96	S70°43'25"W
L647	62.99	N11°31'03"E
L648	55.80	N70°53'12"E
L649	59.35	N75°49'22"E
L650	20.30	N14°10'38"W
L651	115.17	N71°01'41"E
L652	29.90	S73°00'38"E
L653	41.13	N70°53'23"E
L654	22.38	S19°06'37"E
L655	32.85	N72°28'19"E
L656	80.03	N72°28'19"E
L657	0.40	N19°00'37"W

EASEMENT LINE TABLE		
LINE	LENGTH	

§220-26.D(7) - A MINIMUM OF TWO CANOPY TREES SHALL BE PROVIDED FOR EVERY 100 FEET OF PUBLIC RIGHT-OF-WAY.

BUFFER YARD TYPES:

REQUIRED:

- §220--26.B(1)(g)[5] WHEN STORMWATER MANAGEMENT FACILITIES ADJOIN OR ARE ADJACENT TO PUBLIC ROADWAYS. (WAIVER)
- §245-156.C. ANY LOT USED FOR OTHER THAN A SINGLE-FAMILY DETACHED OR SEMIDETACHED RESIDENCE IN A RESIDENTIAL OR MIXED-USE ZONE AND ABUTTING AN EXISTING OR PLANNED SINGLE-FAMILY DETACHED OR SEMIDETACHED RESIDENCE.

REQUIRED:

- §245-156.F. WITHIN THE FRONT SETBACK AREA OF ALL PROPERTIES LOCATED ADJACENT TO MINOR ARTERIAL OR ALONG A COLLECTOR ROADWAY.

REQUIRED:

- §220--26.B(1)(g)[5] WHEN STORMWATER MANAGEMENT FACILITIES ADJOIN OR ARE ADJACENT TO RESIDENTIALLY ZONED DISTRICTS.

BUFFER A: (TYPE 1 + 2)
 145 LF X (1 TREE/50 LF + 1 TREE/40 LF) = 6.52 = 7 TREES
 145 LF X (1 EVERGREEN/40 LF + 1 EVERGREEN/30) = 8.45 = 9 EVERGREENS
 145 LF X (1 SHRUB/20) = 7.25 8 SHRUBS
 (60% OF 8 = 4.8 = 5 EVERGREEN SHRUBS & 3 DECIDUOUS SHRUBS)

BUFFER C: (TYPE 1)

285 LF X (1 TREE/50 LF) = 5.7 =	6 TREES
285 LF X (1 EVERGREEN/40 LF) = 7.12 =	8 EVERGREENS

BUFFER E: (TYPE 1)
 191 LF X (1 TREE/50 LF) = 3.82 = 4 TREES
 191 LF X (1 EVERGREEN/40 LF) = 4.77 = 5 EVERGREENS

BUFFER G: (TYPE 1)







109 LF X (1 TREE/50 LF) = 2.18 =	3 TREES
109 LF X (1 EVERGREEN/40 LF) = 2.72 =	3 EVERGREENS

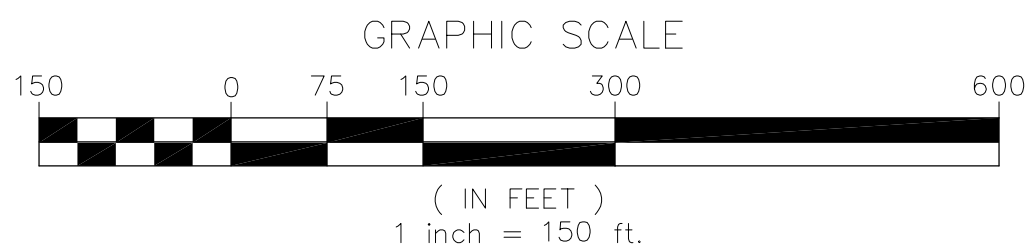
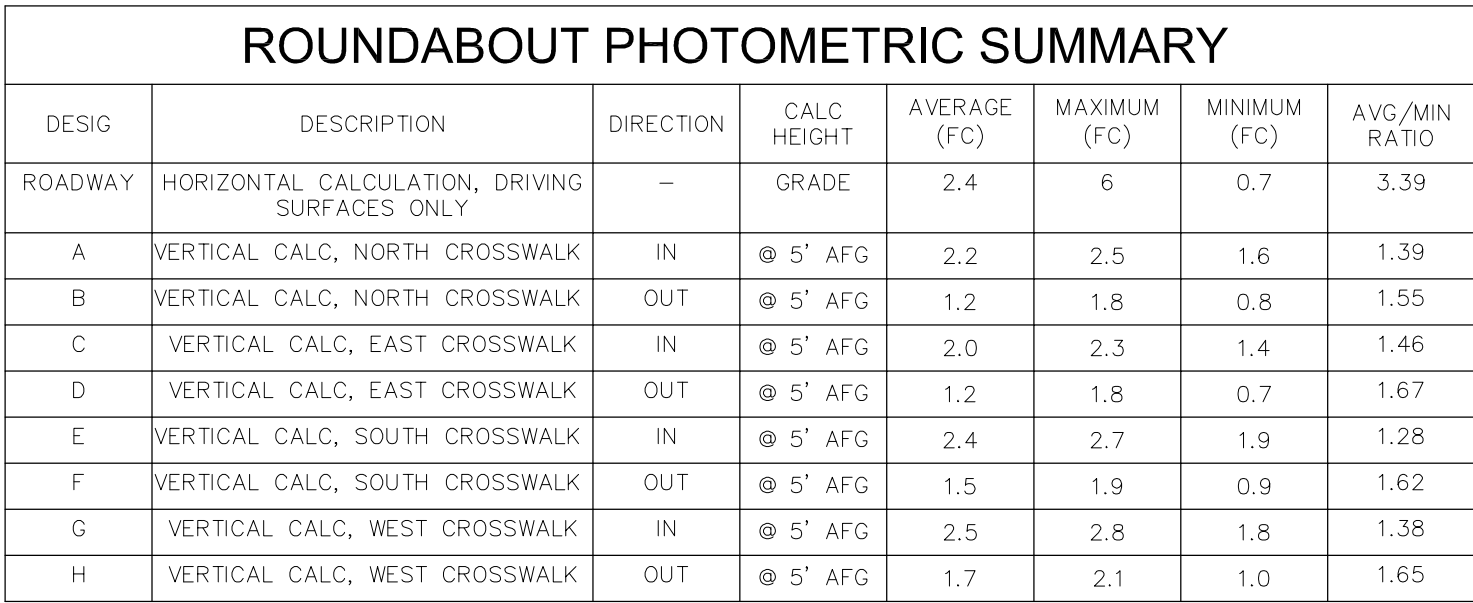
BUFFER I: (TYPE 1)
 233 LF X (1 TREE/50 LF) = 4.66 = 5 TREES
 233 LF X (1 EVERGREEN/40 LF) = 5.22 = 6 EVERGREENS

BUFFER K: (TYPE 1)
 292 LF X (1 TREE/50 LF) = 5.84 = 6 TREES
 292 LF X (1 EVERGREEN/40 LF) = 7.3 = 8 EVERGREENS



FEET LIGHTS:
LED ACORN STREET LIGHT ON 14' ROUND BLACK STEEL POLE OR APPROVED EQUAL.

PHILIPS Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Manufacturer	Description	Lum. Lumens	Lum. Watts	LLF	BUG Rating
	26	B4110LED	SINGLE	HANOVER LANTERN	TR09Q36I @ 10"	899	11	0.850	B0-U3-G1
	37	S3	SINGLE	Philips Lumec	MPTR-110W64LED4K-T-LE3 @ 16"	9498	105	0.850	B2-U0-G2
	12	S4	SINGLE	Philips Lumec	MPTR-110W64LED4K-T-LE4 @ 16"	9468	105	0.850	B2-U0-G2
	93	S5	SINGLE	Philips Lumec	MPTR-110W64LED4K-T-LE5 @ 16"	9536	105	0.850	B4-U0-G2
	1	WA	SINGLE	Philips Lumec	MPTR-72W32LED4K-T-LE3 @ 12"	6050	73	0.850	B1-U0-G2
	49	WD	SINGLE	Philips Lumec	MPTR-72W32LED4K-T-LE4 @ 12"	5773	73	0.850	B1-U0-G2



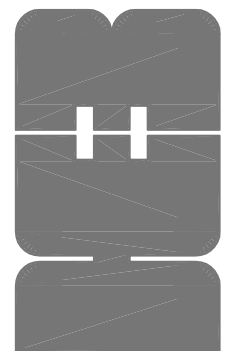
LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL CONTACT THE CITY OF BLACK AND ASSOCIATES, LLC, CONTRACTORS TO CONTACT PA. ONE CALL SYSTEMS, INC. (1-800-242-2276) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, INCLUDING BUT NOT LIMITED TO, THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION ACTIVITIES ARE IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

NOT FOR CONSTRUCTION	SHEET		29 OF 68
	DRAWN BY:	EIS	
	CHECKED BY:	CHH	
	DATE:	05-01-17	
	SCALE:	1" = 150'	
JOB NUMBER: 13021.020			

□ □ COMPREHENSIVE LAND AND SITE PLANNING
□ □ LANDSCAPE ARCHITECTURE □ ENGINEERING

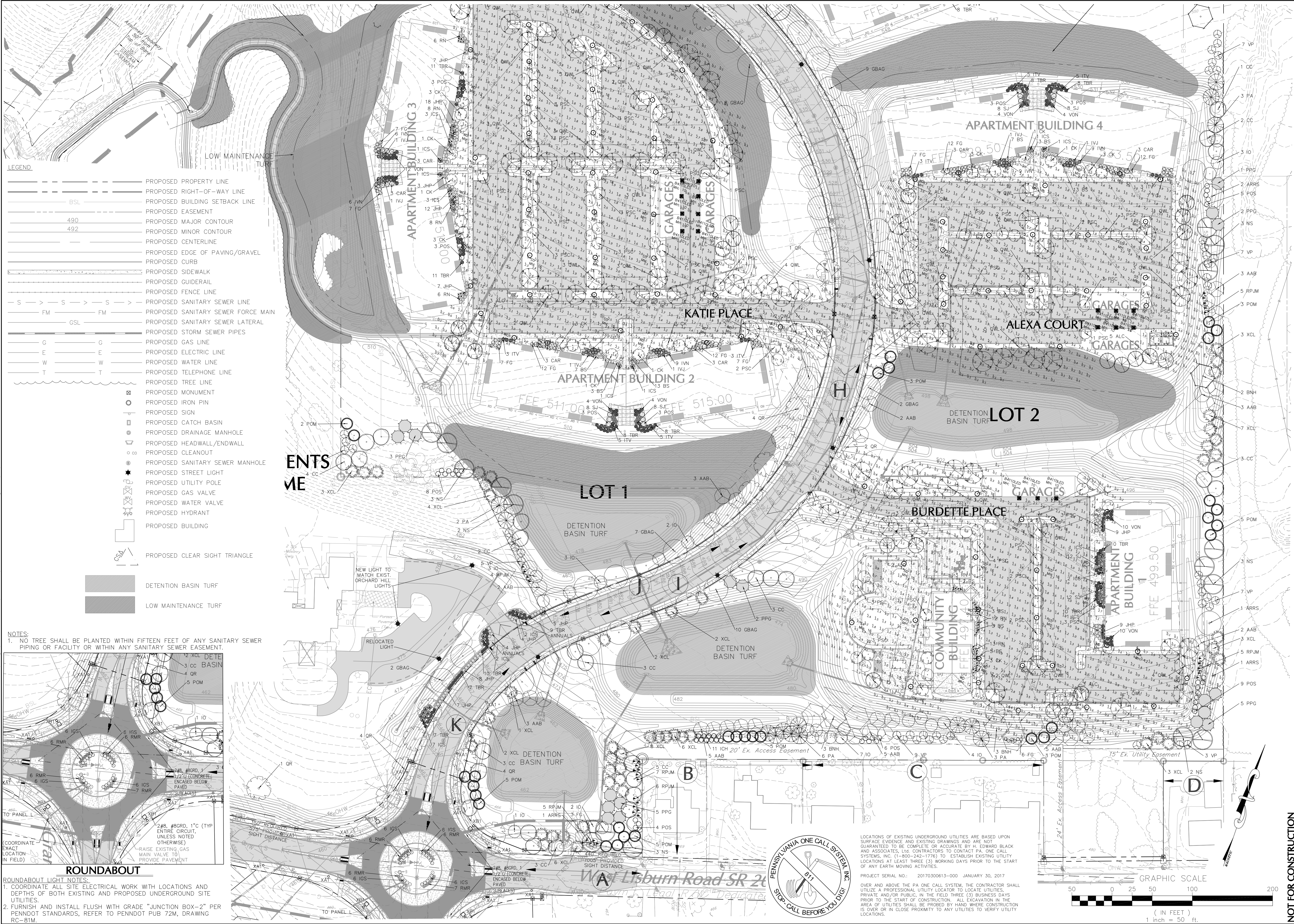


H. EDWARD BLACK
and ASSOCIATES, Ltd.

2403 North Front Street □ Harrisburg, Pennsylvania 17110 □ Telephone (717)233-1026 □ FAX (717)233-2192

<u>A</u>	FOR CORRECTIONS	EIS	07-31-18
<u>A</u>	FOR SIGNATURES	EIS	06-27-18
<u>A</u>	PER PENNDOT COMMENTS	EIS	06-08-18
<u>A</u>	PER PENNDOT COMMENTS	EIS	05-04-18
<u>A</u>	PER SUEZ WATER DESIGN	EIS	03-28-18
<u>A</u>	PER 105 COMMENTS	EIS	12-27-17
<u>A</u>	PER SUEZ WATER DESIGN	EIS	11-13-17
REV	DESCRIPTION	BY	DATE

THIS DRAWING IS AND SHALL
REMAIN THE PROPERTY OF
H. EDWARD BLACK AND
ASSOCIATES, Ltd. ANY REUSE
ON PROJECT EXTENSIONS,
ANY OTHER PROJECT, OR
ALTERATIONS OR ADDITIONS
TO THIS PROJECT SHALL BE
AT USER'S SOLE RISK AND
WITHOUT LIABILITY TO
H. EDWARD BLACK AND
ASSOCIATES, Ltd.



LEGEND

---	PROPOSED PROPERTY LINE
---	PROPOSED RIGHT-OF-WAY LINE
---	PROPOSED BUILDING SETBACK LINE
---	PROPOSED EASEMENT
---	PROPOSED MAJOR CONTOUR
---	PROPOSED MINOR CONTOUR
---	PROPOSED CENTERLINE
---	PROPOSED EDGE OF PAVING/GRAVEL
---	PROPOSED CURB
---	PROPOSED SIDEWALK
---	PROPOSED GUIDERAIL
---	PROPOSED FENCE LINE
---	PROPOSED SANITARY SEWER LINE
---	PROPOSED SANITARY SEWER FORCE MAIN
---	PROPOSED SANITARY SEWER LATERAL
---	PROPOSED STORM SEWER PIPES
---	PROPOSED GAS LINE
---	PROPOSED ELECTRIC LINE
---	PROPOSED WATER LINE
---	PROPOSED TELEPHONE LINE
---	PROPOSED TREE LINE
---	PROPOSED MONUMENT
---	PROPOSED IRON PIN
---	PROPOSED SIGN
---	PROPOSED CATCH BASIN
---	PROPOSED DRAINAGE MANHOLE
---	PROPOSED HEADWALL/ENDWALL
---	PROPOSED CLEANOUT
---	PROPOSED SANITARY SEWER MANHOLE
---	PROPOSED STREET LIGHT
---	PROPOSED UTILITY POLE
---	PROPOSED GAS VALVE
---	PROPOSED WATER VALVE
---	PROPOSED HYDRANT
---	PROPOSED BUILDING
---	PROPOSED CLEAR SIGHT TRIANGLE
---	DETENTION BASIN TURF
---	LOW MAINTENANCE TURF

NOTES:

1. NO TREE SHALL BE PLANTED WITHIN FIFTEEN FEET OF ANY SANITARY SEWER PIPING OR FACILITY OR WITHIN ANY SANITARY SEWER EASEMENT.

ROUNDABOUT

ROUNDABOUT LIGHT NOTES:

1. COORDINATE ALL SITE ELECTRICAL WORK WITH LOCATIONS AND DEPTHS OF BOTH EXISTING AND PROPOSED UNDERGROUND SITE UTILITIES.

2. FURNISH AND INSTALL FLUSH WITH GRADE "JUNCTION BOX-2" PER PENNDOT STANDARDS, REFER TO PENNDOT PUB 72M, DRAWING RC-81M.

NOT FOR CONSTRUCTION	EIS	07-31-18	EIS	FOR CORRECTIONS	07-31-18	DATE
	CHH	06-27-18	EIS	FOR SIGNATURES	06-27-18	DATE
	DATE:	05-01-17	EIS	PER PENNDOT COMMENTS	06-08-18	DATE
	SCALE:	1" = 50'	EIS	PER PENNDOT COMMENTS	05-04-18	DATE
PRELIMINARY SUBD. AND LAND DEV. PLAN	CHH	05-01-17	EIS	PER SUZ WATER DESIGN	03-28-18	DATE
	DATE:	05-01-17	EIS	PER SUZ WATER DESIGN	03-28-18	DATE
	SCALE:	1" = 50'	EIS	PER 105 COMMENTS	12-27-17	DATE
	JOB NUMBER:	13021.020	EIS	PER SUZ WATER DESIGN	11-13-17	DATE

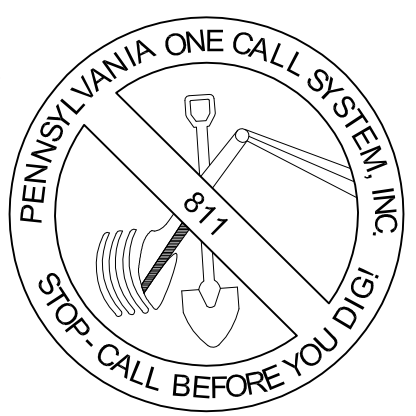
COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK AND ASSOCIATES, Ltd.

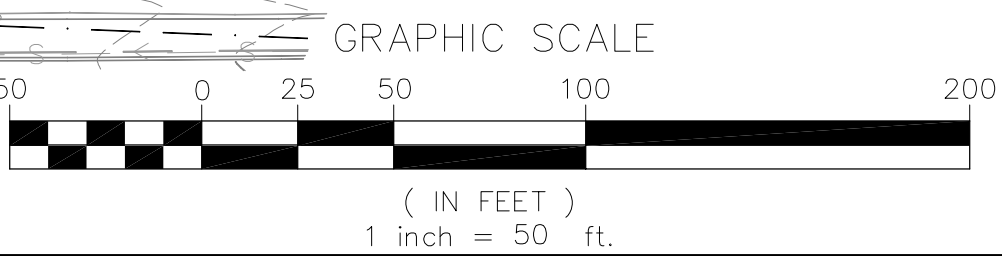
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LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, Ltd. CONTRACTORS TO CONTACT PA. ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017

OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHEN CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.





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DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN	LANDSCAPE/LIGHTING PLAN B
OAKWOOD HILLS	
LOCATION:	WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA

H. EDWARD BLACK
and ASSOCIATES, Ltd.

☐ COMPREHENSIVE LAND AND SITE PLANNING

☐ LANDSCAPE ARCHITECTURE

☐ ENGINEERING

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FOR CORRECTIONS	EIS	07-31-18	DATE
FOR SIGNATURES	EIS	06-27-18	
PER PENNDOT COMMENTS	EIS	06-08-18	
PER PENNDOT COMMENTS	EIS	05-04-18	
PER SUZ WATER DESIGN	EIS	03-28-18	
PER 105 COMMENTS	EIS	12-27-17	
PER SUZ WATER DESIGN	EIS	11-13-17	
REV	DESCRIPTION	BY	DATE

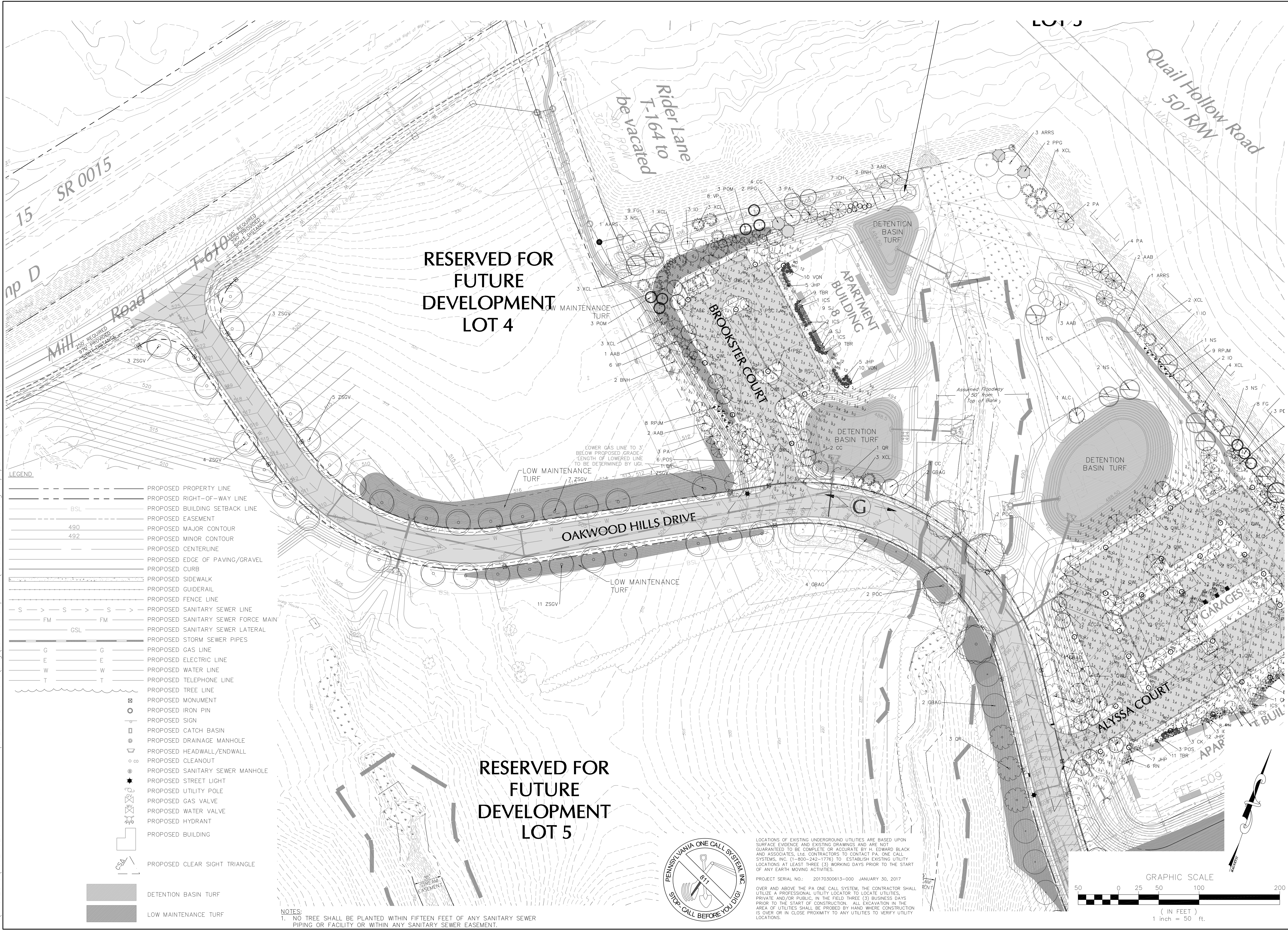


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W:\PROJECTS\13021.020 Oakwood Hills Rev Apt Land Dev Plans\Dwg\Land Development\13021.020-Base.dwg 8/1/2018 2:34:57 PM EDT



NOT FOR CONSTRUCTION

EIS

CHH

05-01-17

1" = 50'

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CHECKED BY:

DATE:

SCALE:

JOB NUMBER: 13021.020

SHEET

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

LANDSCAPE/LIGHTING PLAN C

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUZ WATER DESIGN

PER 105 COMMENTS

PER SUZ WATER DESIGN

DATE

BY

REV

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

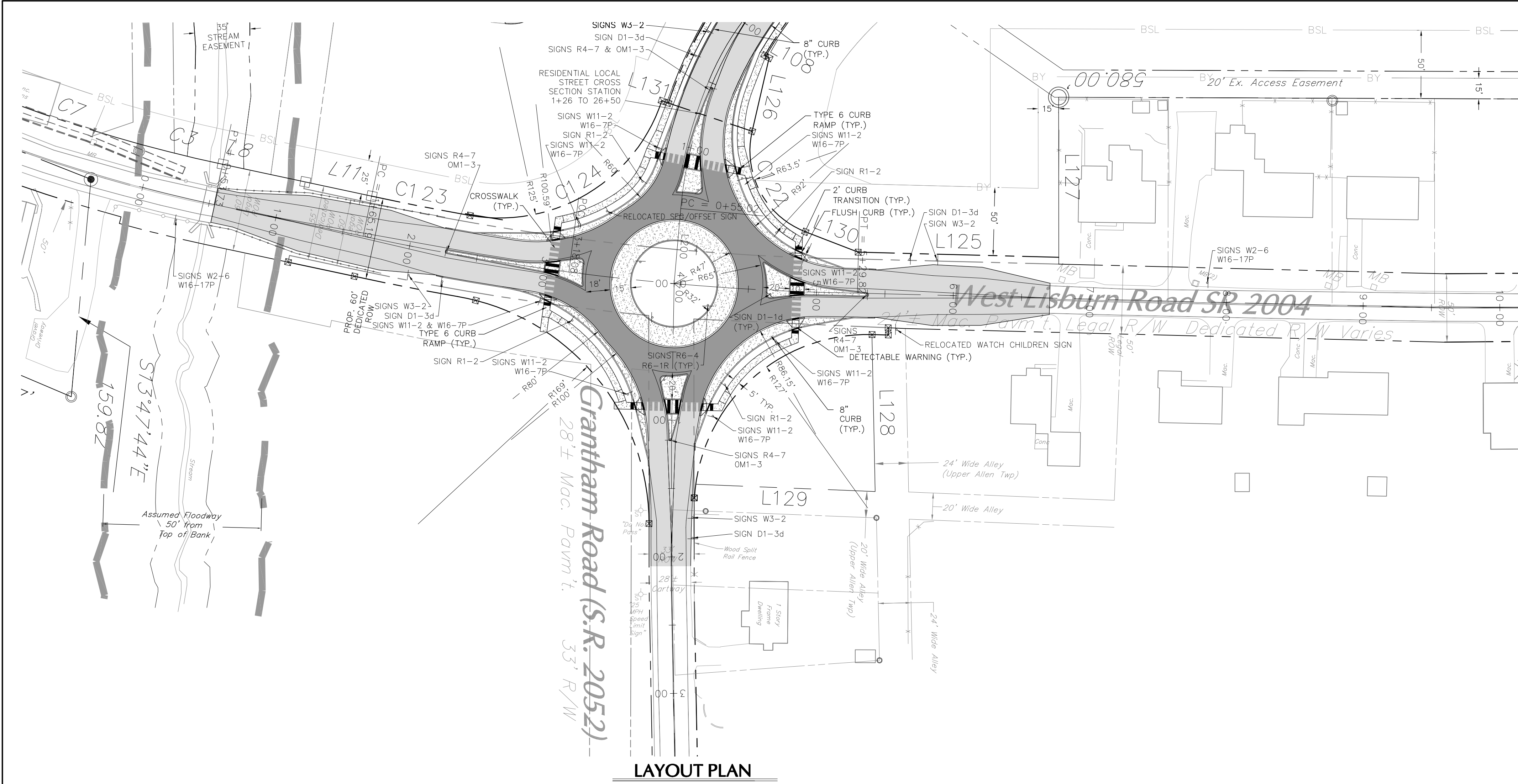
ENGINEERING

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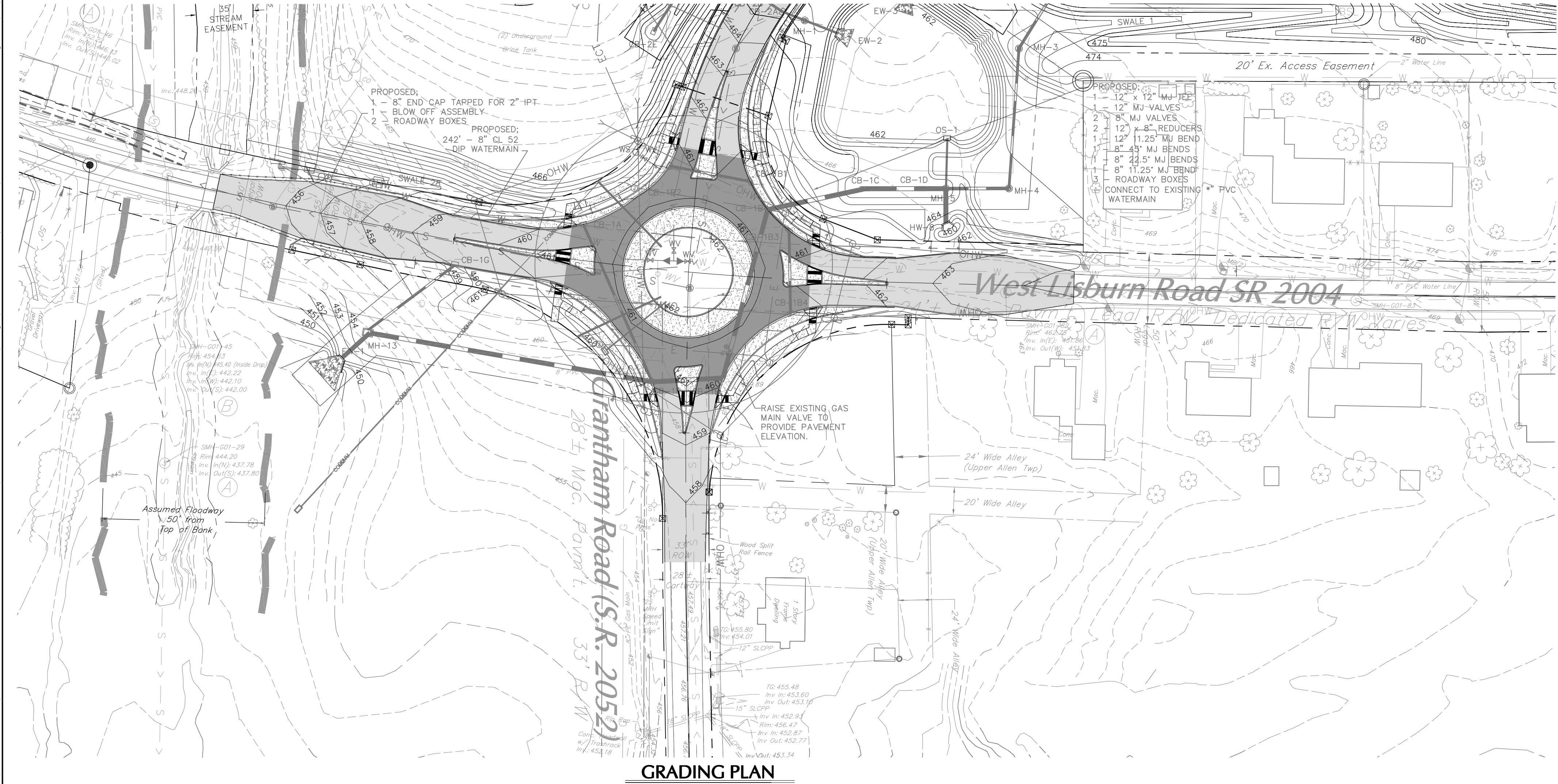
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32 OF 68



LAYOUT PLAN

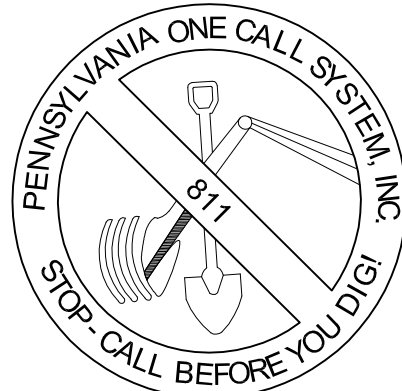


GRADING PLAN

SANITARY SEWER ELEVATION NOTES:
A. EXISTING SANITARY SEWER MH RIM AND INVERT ELEVATIONS FROM 2017 TWP. AS-BUILT SEWER SURVEY WHICH IS BASED ON NAVD 88 DATUM. PLAN TOPOGRAPHY IS BASED ON NVD 29 DATUM.
B. EXISTING SANITARY SEWER MH RIM ELEVATIONS FROM 2017 SURVEY BY DIFFENBAUGH, WADEL, INC. WHICH IS BASED ON NVD 29 DATUM. INVERTS ARE CALCULATED BY SUBTRACTING THE DIMENSION BETWEEN RIM AND INVERT ON 2017 TWP. AS-BUILT SEWER SURVEY (SEE CHART).

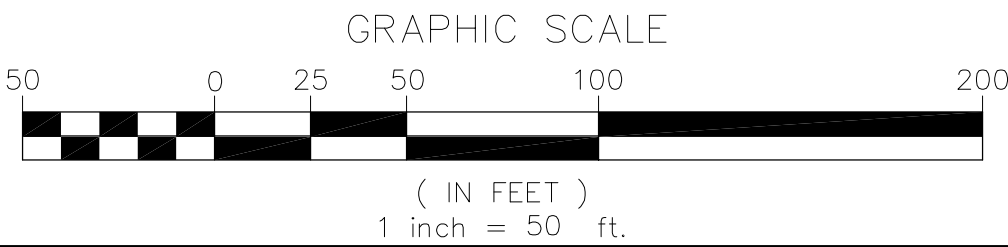
MANHOLE NUMBER	TOWNSHIP RIM ELEVATION	TOWNSHIP MEASURED INV.	PLAN SURVEYED PLAN CALCULATED RIM ELEVATION	PLAN CALCULATED ELEVATION
G01-45	453.81	444.58 INV. IN (N)	454.63	445.40 INV. IN (N)
		INSIDE DROP		INSIDE DROP
		441.40 INV. IN (E)		442.22 INV. IN (E)
		441.28 INV. IN (W)		442.10 INV. IN (W)
		441.18 INV. OUT (S)		442.00 INV. OUT(S)
G01-80	454.72	444.86 INV. IN (E)	455.53	445.67 INV. IN (E)
		443.10 INV. OUT (W)		443.91 INV. OUT(W)
G01-81	460.93	446.73 INV. IN (E)	461.62	447.42 INV. IN (E)
		446.49 INV. IN (S)		447.18 INV. IN (S)
		446.34 INV. OUT (W)		447.03 INV. OUT(W)
SMH-G01-56	496.97	487.59 INV. OUT	497.94	488.56 INV. IN
		487.55 INV. OUT		488.52 INV. OUT
SMH-G01-57	508.72	494.83 INV. IN	509.44	495.55 INV. IN
		494.64 INV. OUT		495.36 INV. OUT

- NOTES:
1. THE PRIMARY CONTROL POINT AND BENCHMARK IS A CONCRETE MONUMENT AT THE SOUTH WESTERN CORNER OF LOT 6 ALONG WEST LISBURN ROAD AT AN ELEVATION OF 544.90. THIS ELEVATION IS U.S.G.S. DATUM.
 2. PROPOSED SANITARY SEWER LINES OUTSIDE PUBLIC RIGHT-OF-WAY ARE PRIVATELY OWNED UNLESS OTHERWISE NOTED.
 3. ALL SANITARY SEWER CLEANOUTS SHALL BE A TWO WAY CLEANOUT.
 4. GARAGES TO BE SUPPLIED WITH ELECTRIC SERVICE AS DETAILED ON ARCHITECTURAL DRAWINGS.



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR ACCURATE BY H. EDWARD BLACK AND ASSOCIATES, LTD. CONTRACTORS TO CONTACT PA ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

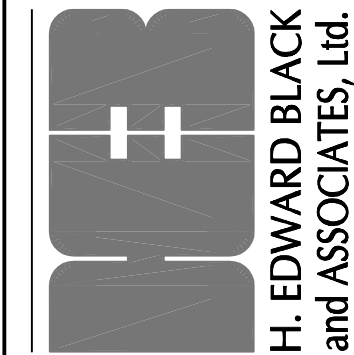
PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017
OVER AND ABOVE THE PA ONE CALL SYSTEM, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, PRIVATE AND/OR PUBLIC, IN THE FIELD THREE (3) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS OVER OR IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.



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DRAWN BY:	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN
CHECKED BY:	CHH	OAKWOOD HILLS
DATE:	05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
SCALE:	1" = 50'	
JOB NUMBER:	13021.020	ROUNDABOUT PLAN

- ☐ COMPREHENSIVE LAND AND SITE PLANNING
☐ LANDSCAPE ARCHITECTURE
☐ ENGINEERING

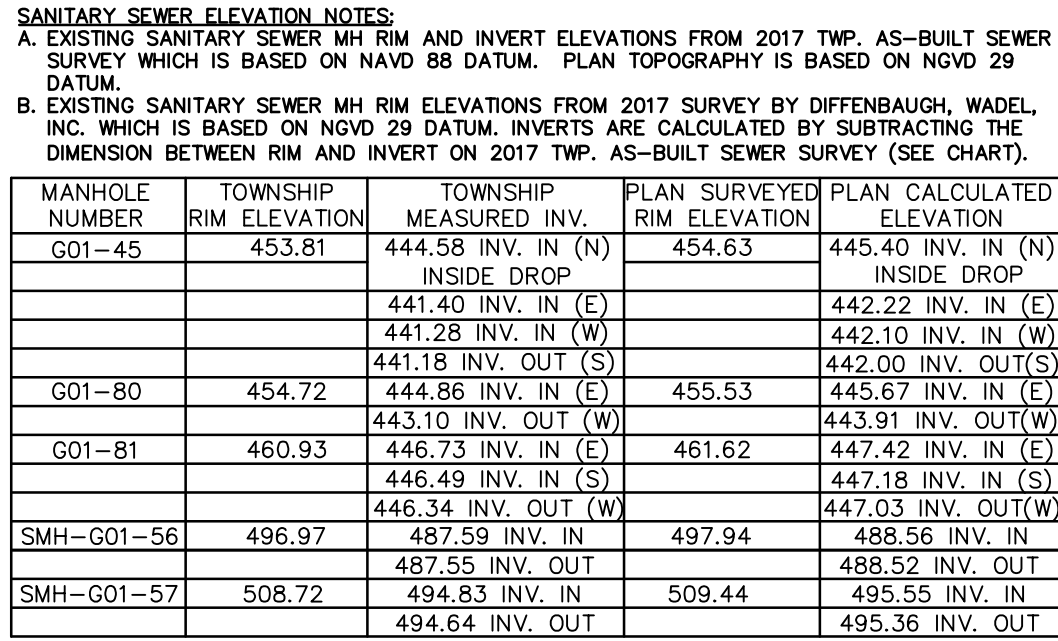


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FOR CORRECTIONS	EIS	07-31-18	DATE
PER SIGNATURES	EIS	06-27-18	
PER PENNDOT COMMENTS	EIS	06-08-18	
PER PENNDOT COMMENTS	EIS	05-04-18	
PER SUEZ WATER DESIGN	EIS	03-28-18	
PER 105 COMMENTS	EIS	12-27-17	
PER SUEZ WATER DESIGN	EIS	11-13-17	
REV DESCRIPTION	BY		

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SHEET
3

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

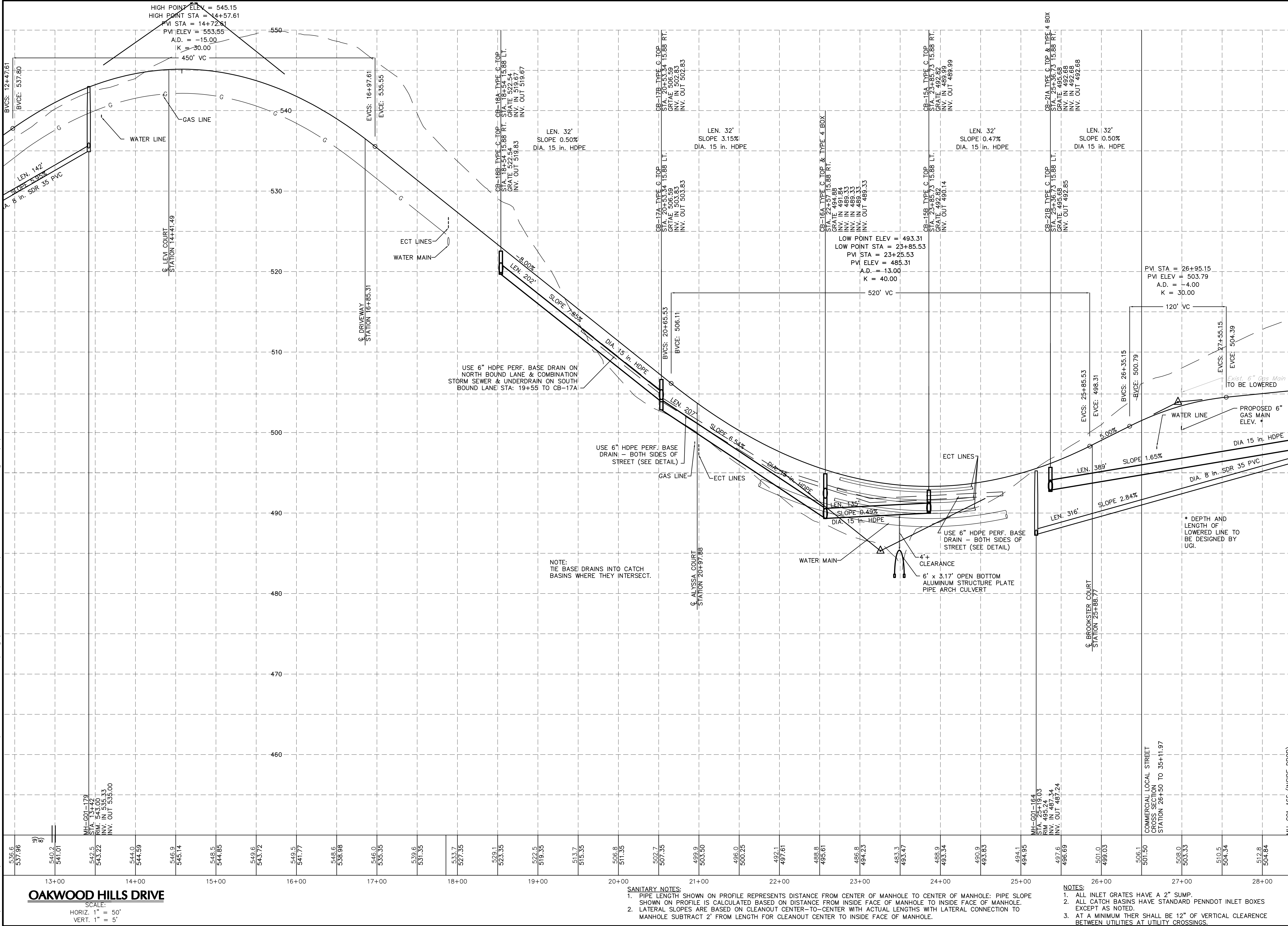
OAKWOOD HILLS
LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

and ASSOCIATES, Ltd.

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7	PER SUEZ W.
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IER DESIGN	EIS	11-13-17



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PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

PROFILES

35 OF 68

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

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FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUZ WATER DESIGN

PER 105 COMMENTS

PER SUZ WATER DESIGN

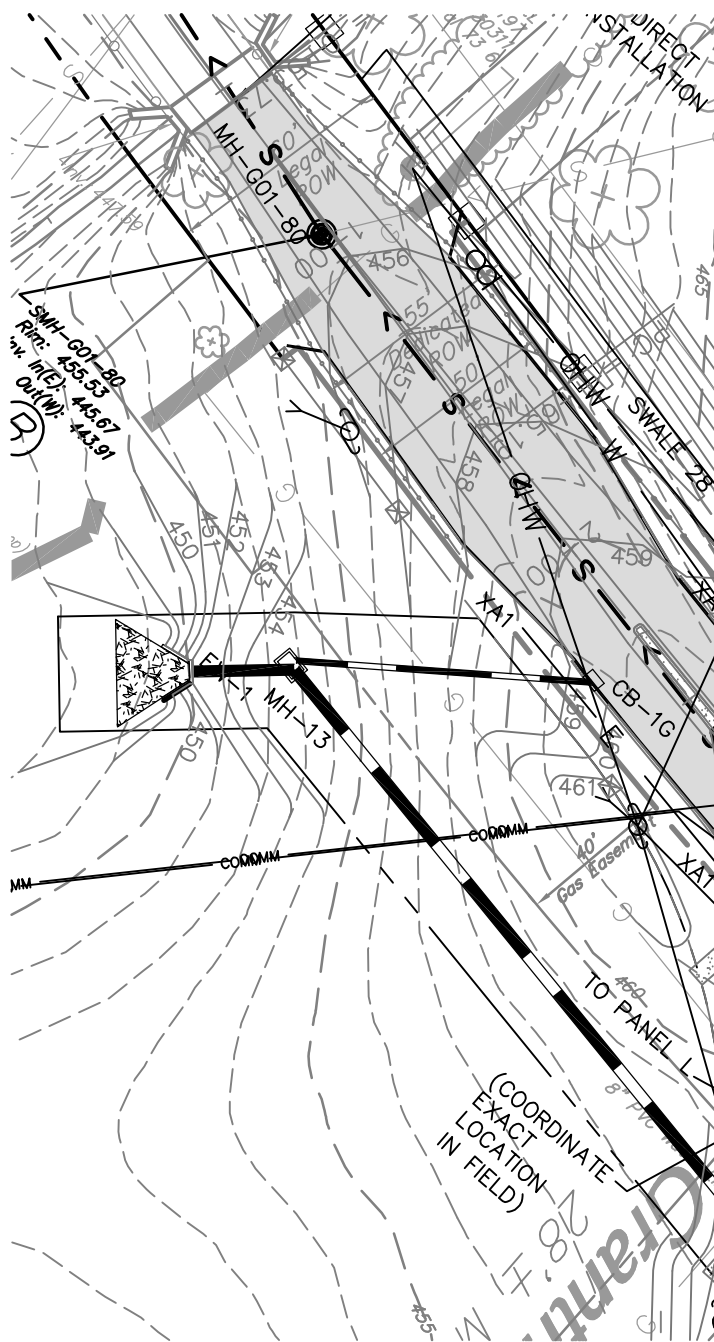
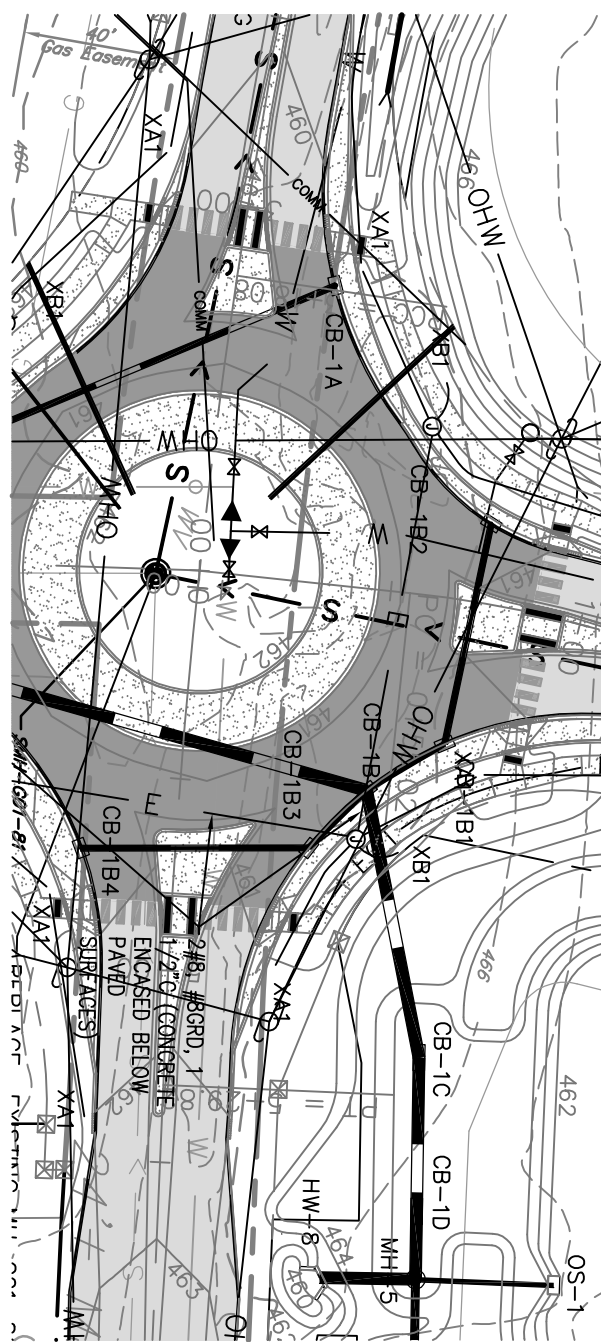
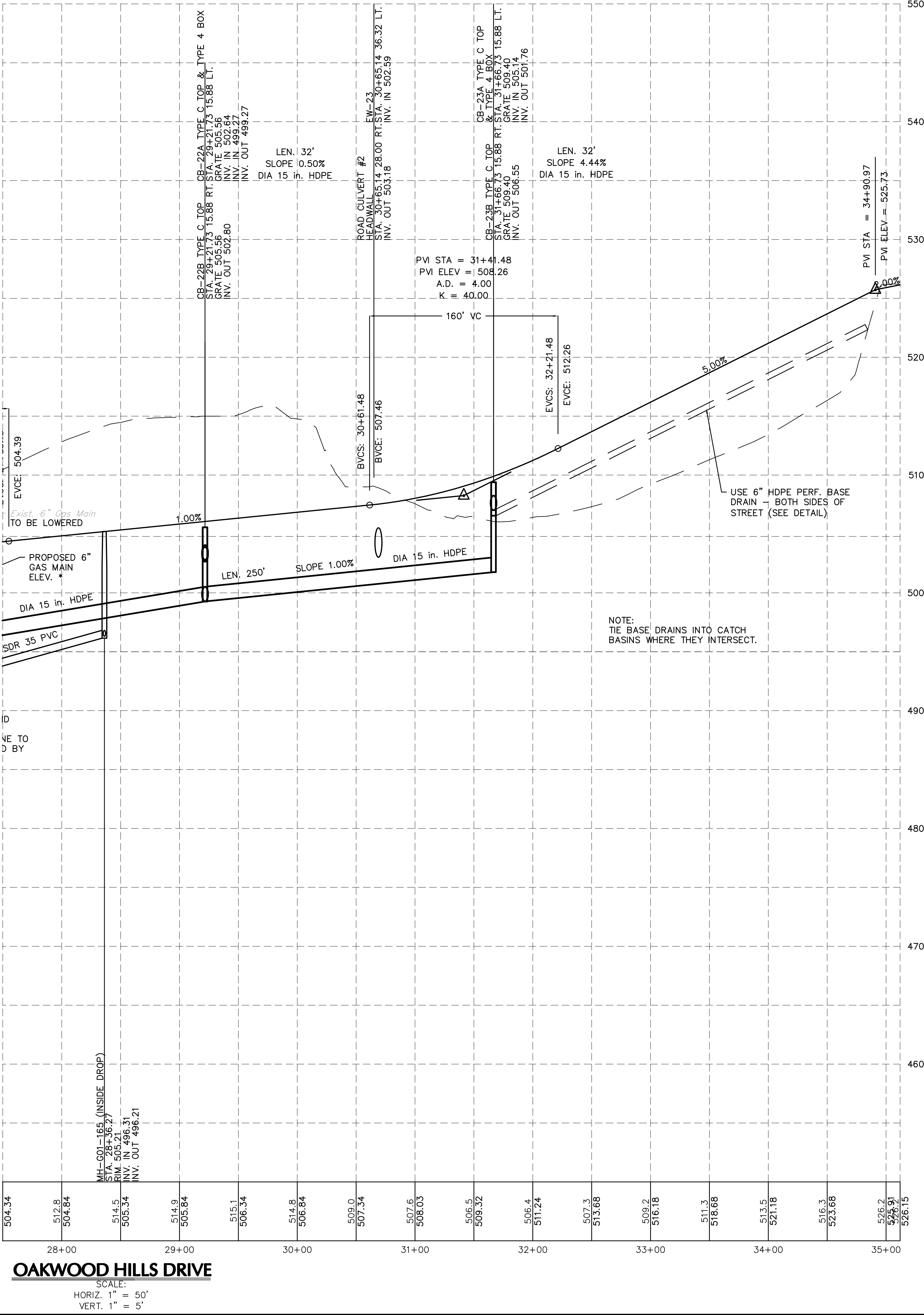
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DATE

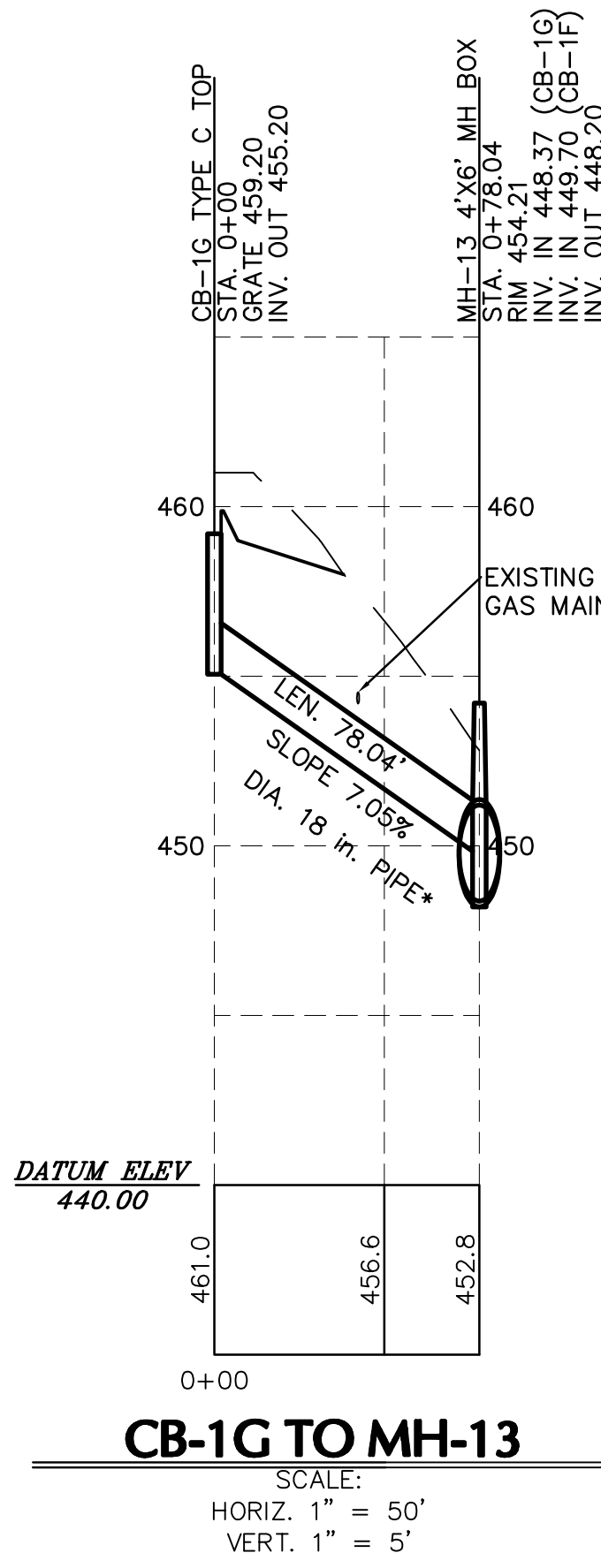
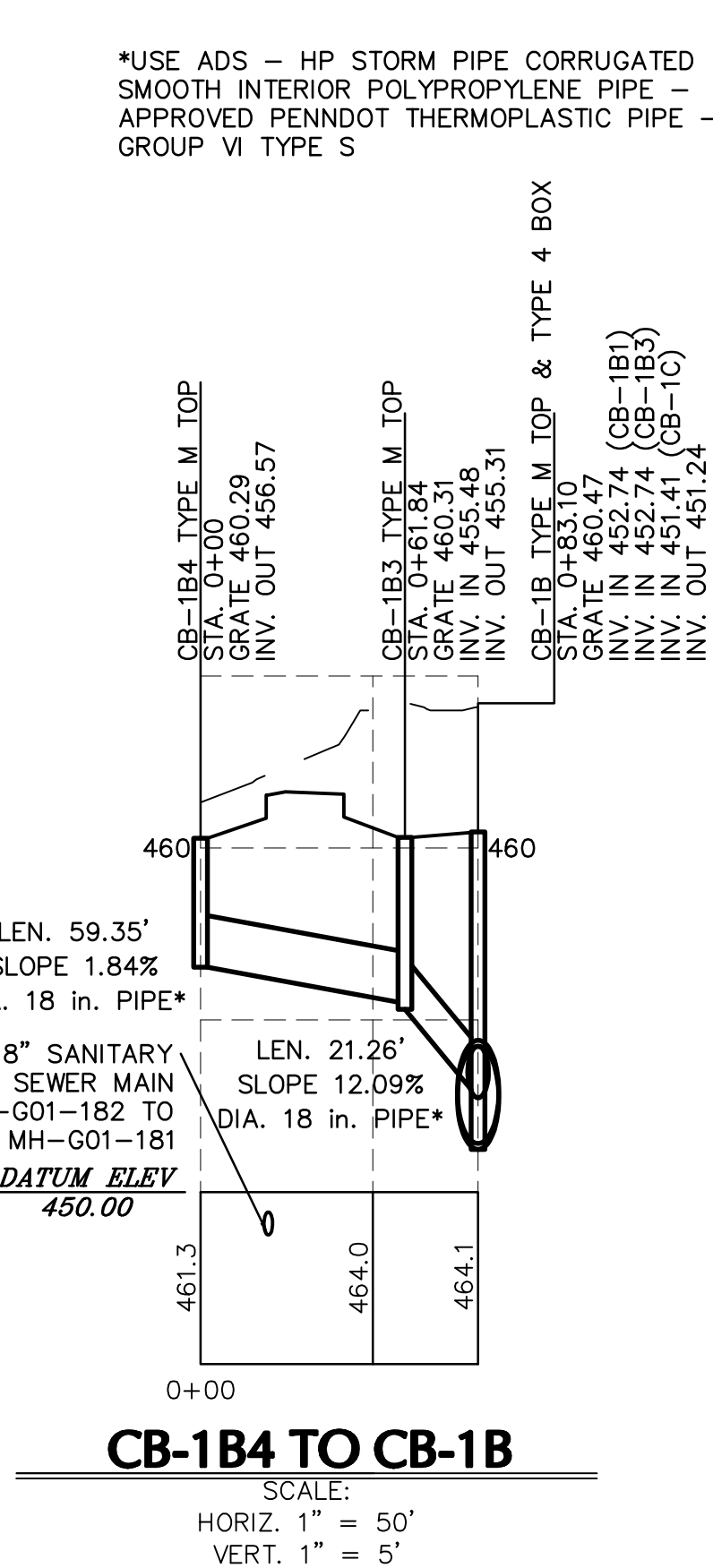
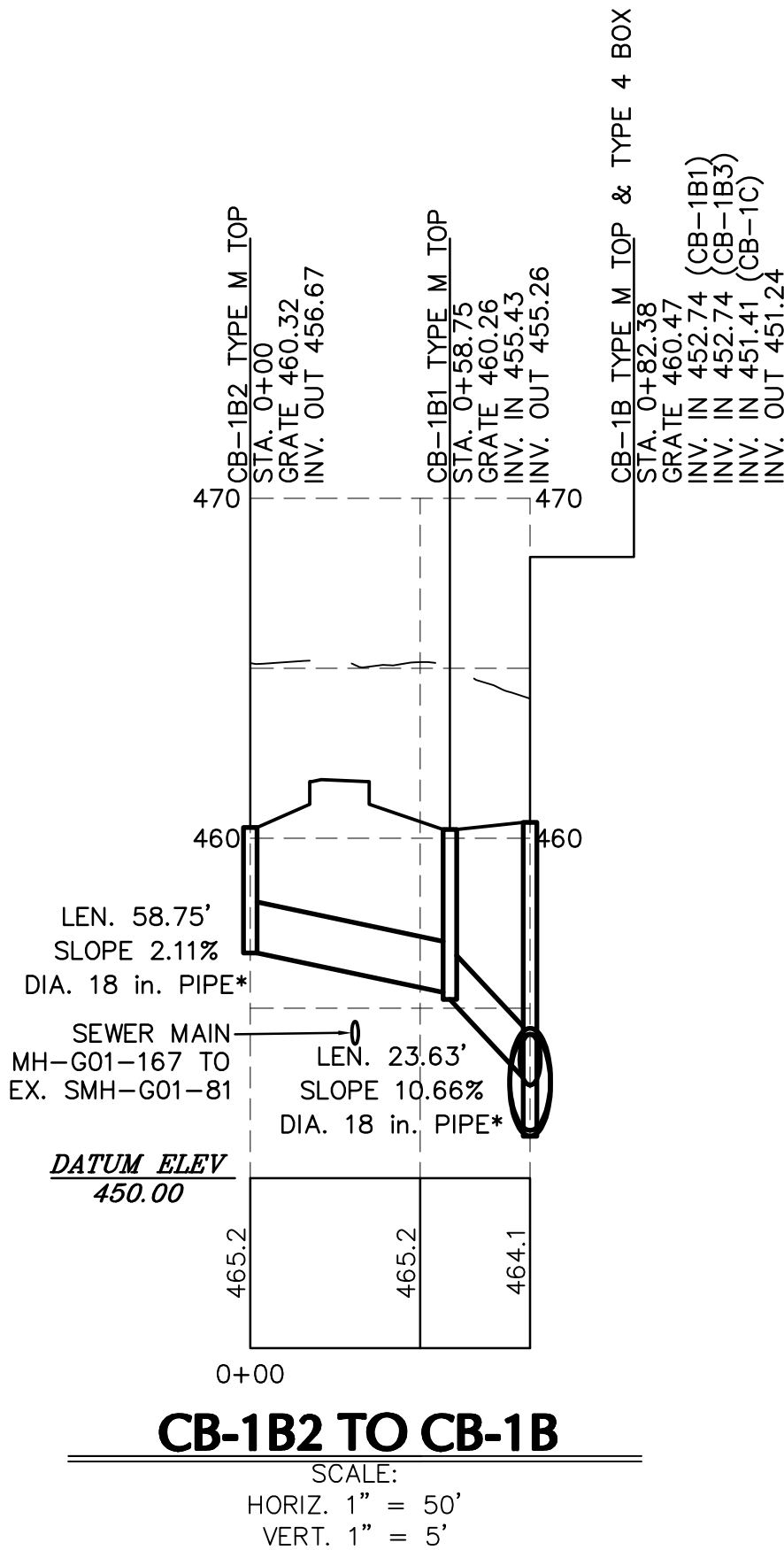
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*USE ADS - HP STORM PIPE CORRUGATED
SMOOTH INTERIOR POLYPROPYLENE PIPE -
APPROVED PENNDOT THERMOPLASTIC PIPE -
GROUP VI TYPE S

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OAKWOOD HILLS	
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	
PROFILES	

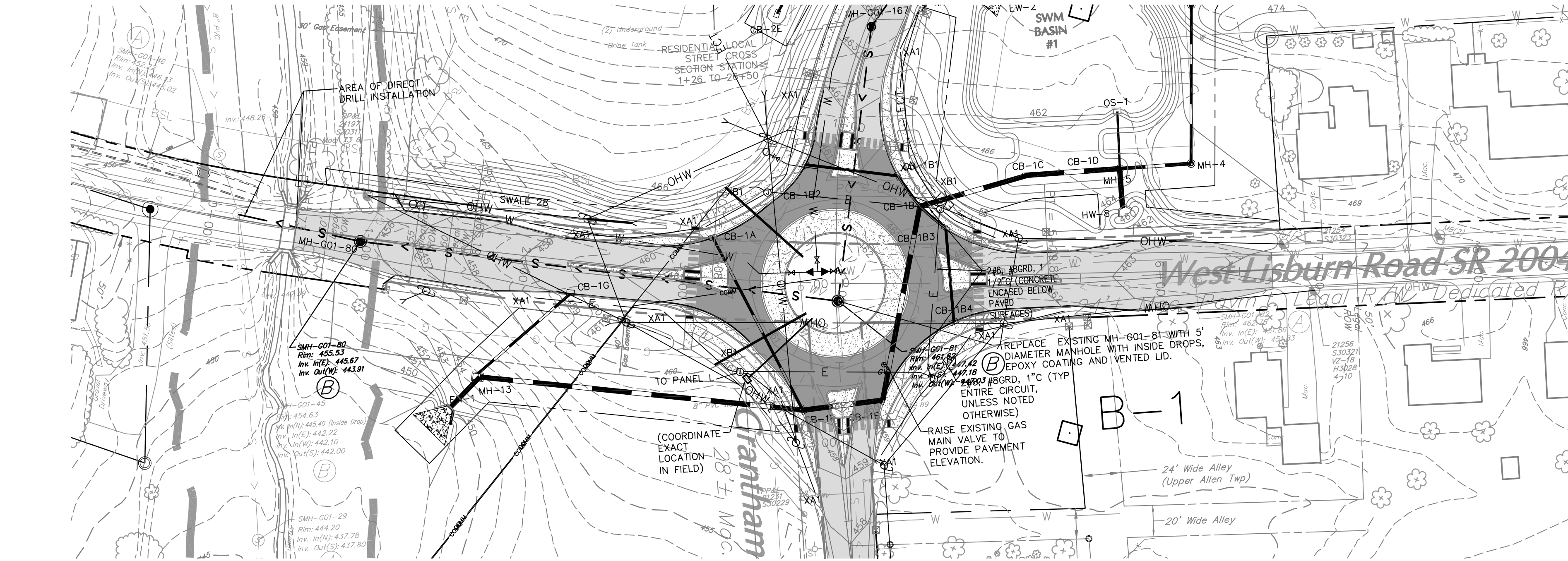
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☐ LANDSCAPE ARCHITECTURE
☒ ENGINEERING

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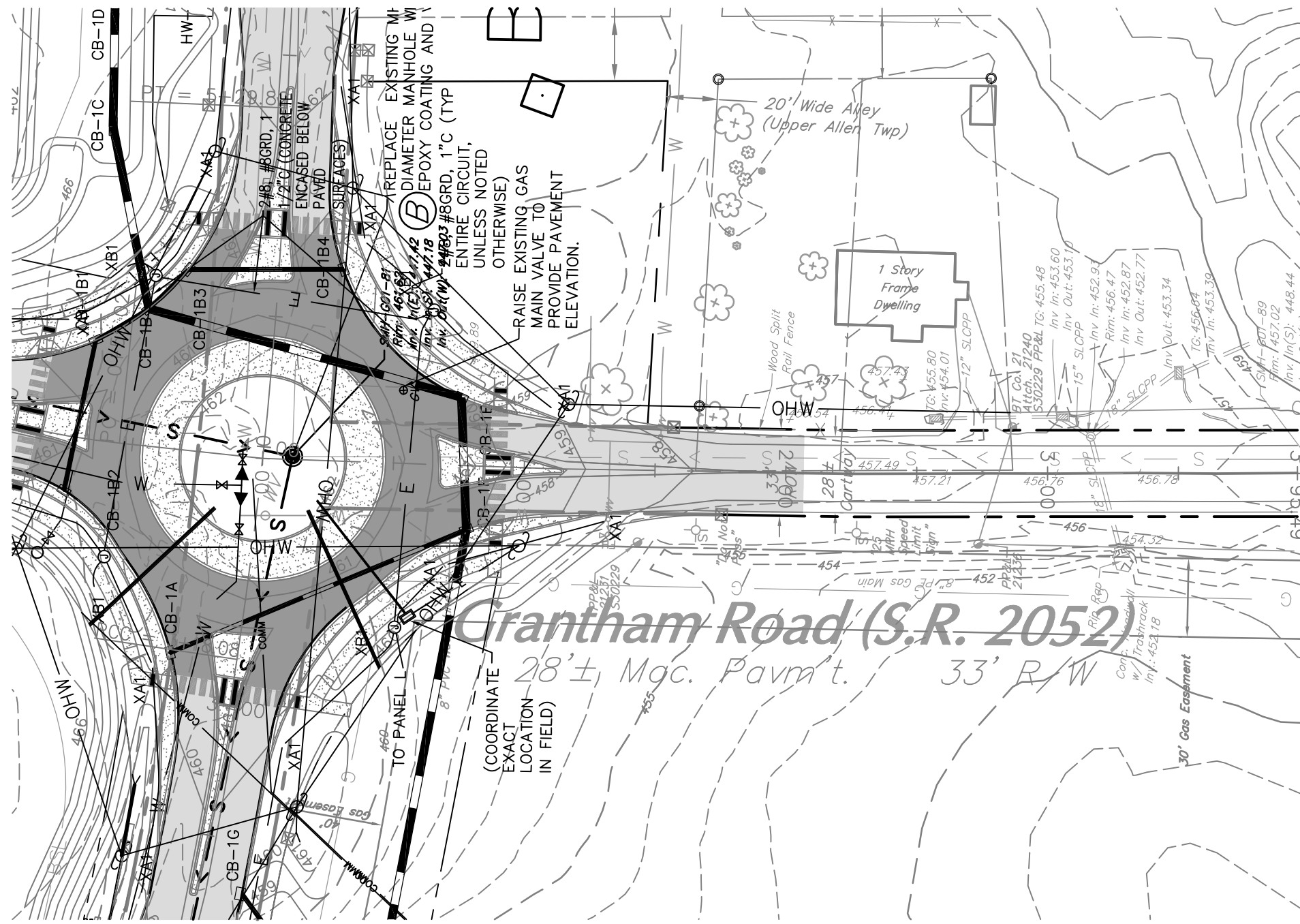
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PER SUEZ WATER DESIGN	EIS	03-28-18
PER 105 COMMENTS	EIS	12-27-17
PER SUEZ WATER DESIGN	EIS	11-13-17
DESCRIPTION	BY	DATE



PLAN VIEW

SCALE:
HORIZ. 1" = 50'

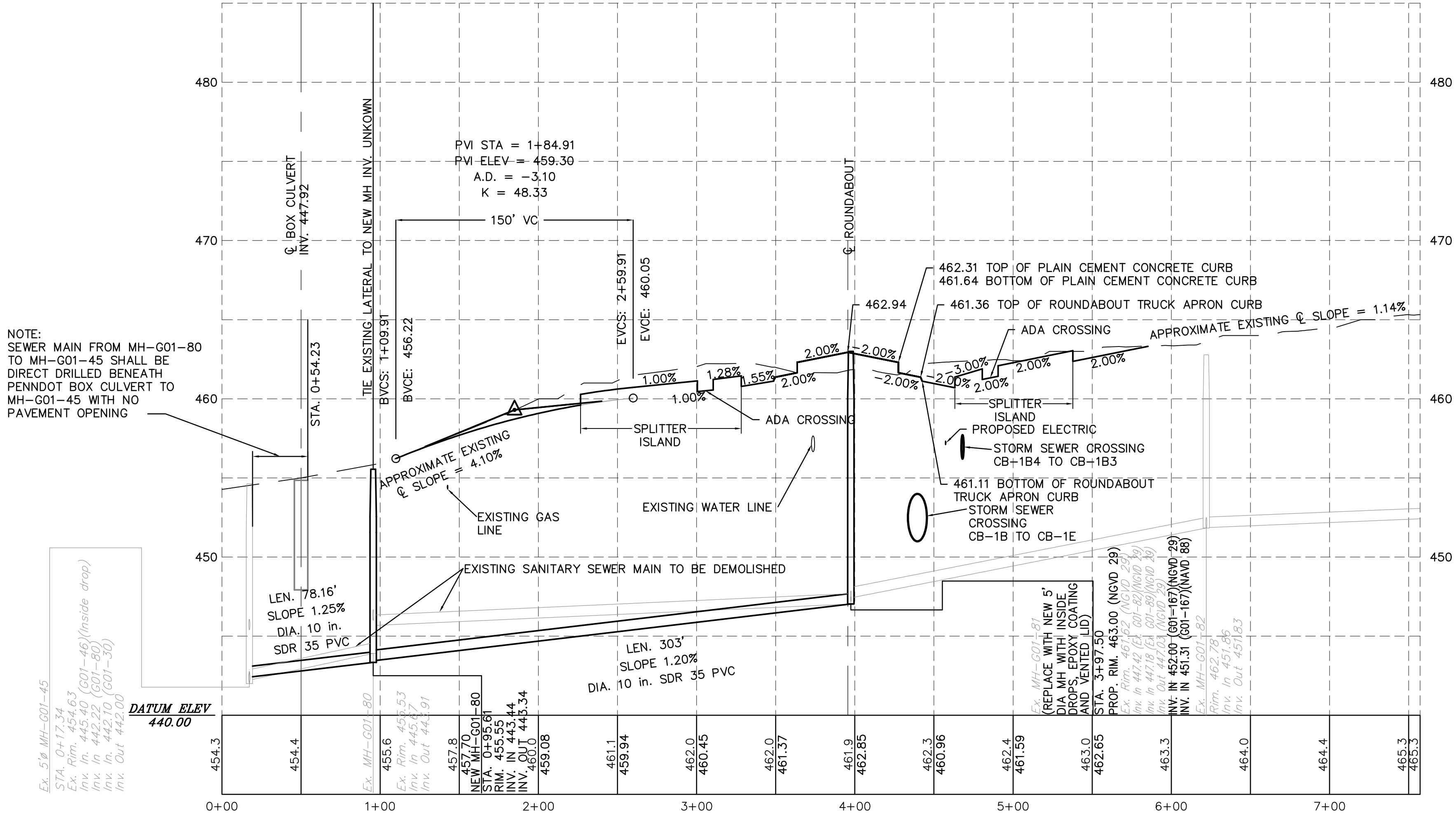


PLAN VIEW

SCALE:
HORIZ. 1" = 50'

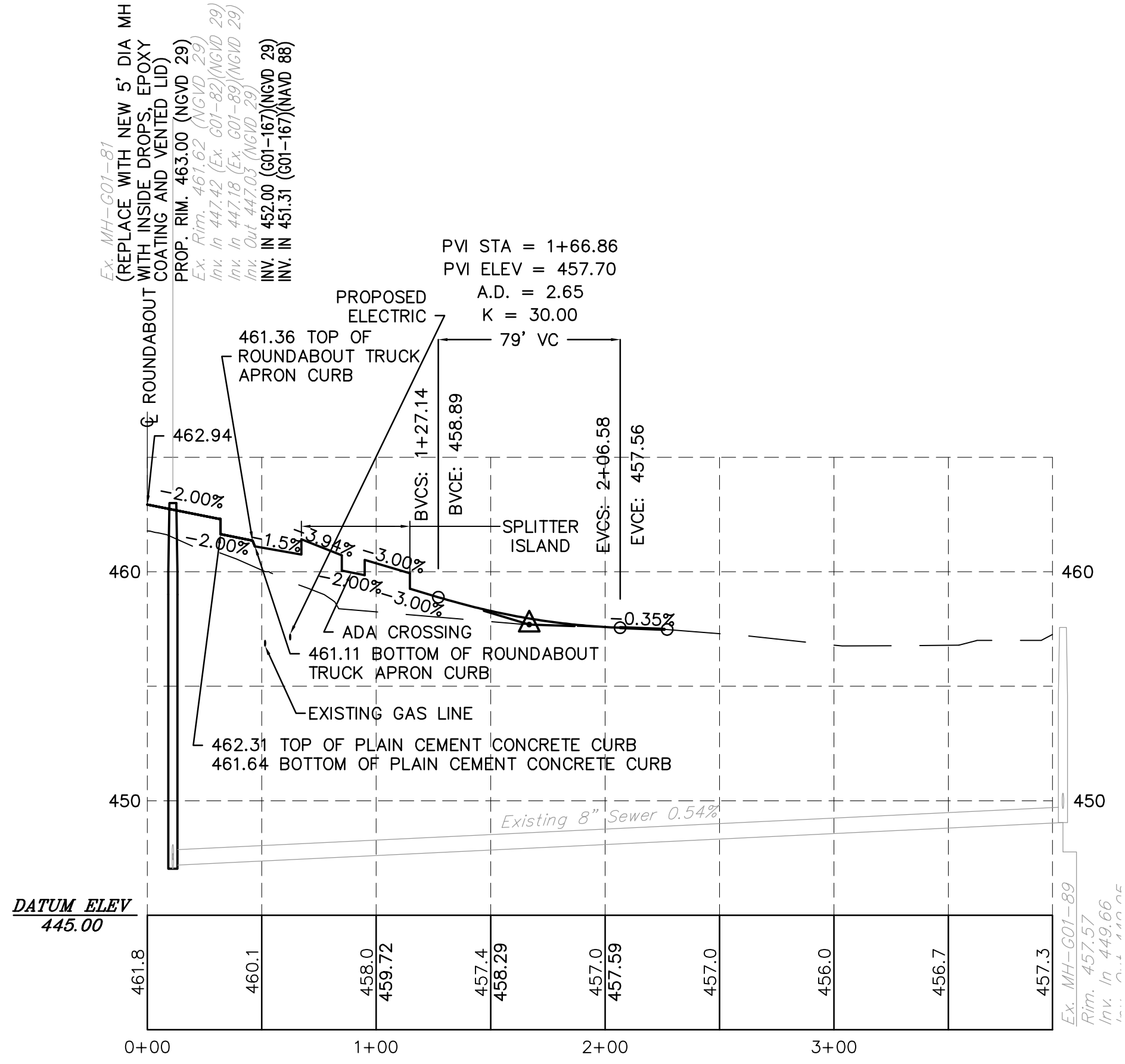
SANITARY SEWER ELEVATION NOTES:
A. EXISTING SANITARY SEWER MH RIM AND INVERT ELEVATIONS FROM 2017 TWP. AS-BUILT SEWER SURVEY WHICH IS BASED ON NAVD 88 DATUM. PLAN TOPOGRAPHY IS BASED ON NAVD 29 DATUM.
B. EXISTING SANITARY SEWER MH RIM ELEVATIONS FROM 2017 SURVEY BY OFFENBAUGH, WADEL, INC. WHICH IS BASED ON NAVD 29 DATUM. INVERTS ARE CALCULATED BY SUBTRACTING THE DIMENSION BETWEEN RIM AND INVERT ON 2017 TWP. AS-BUILT SEWER SURVEY (SEE CHART).

MANHOLE NUMBER	TOWNSHIP RIM ELEVATION	TOWNSHIP MEASURED INV. INSIDE DROP	PLAN SURVEYED RIM ELEVATION	PLAN CALCULATED ELEVATION
G01-45	453.81	444.58 INV. IN (N)	454.63	445.40 INV. IN (N)
		441.40 INV. IN (E)		442.22 INV. IN (E)
		441.28 INV. IN (W)		442.10 INV. IN (W)
		441.18 INV. OUT (S)		442.00 INV. OUT(S)
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		443.10 INV. OUT (W)		443.91 INV. OUT(W)
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		446.34 INV. OUT (W)		447.03 INV. OUT(W)
SMH-G01-56	496.97	487.55 INV. IN	497.94	488.56 INV. IN
SMH-G01-57	508.72	494.83 INV. IN	509.44	489.52 INV. OUT
		494.64 INV. OUT		495.36 INV. OUT



WEST LISBURN ROAD

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



GRANTHAM ROAD

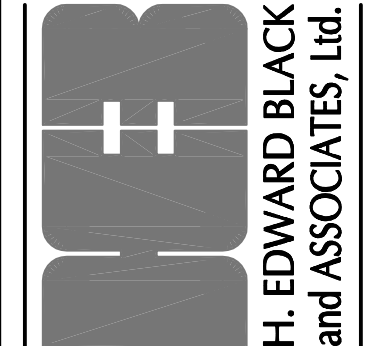
SCALE:
HORIZ. 1" = 50'
VERT. 1" = 5'

NOTES:
1. AT A MINIMUM THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.

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DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN
OAKWOOD HILLS
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
PROFILES



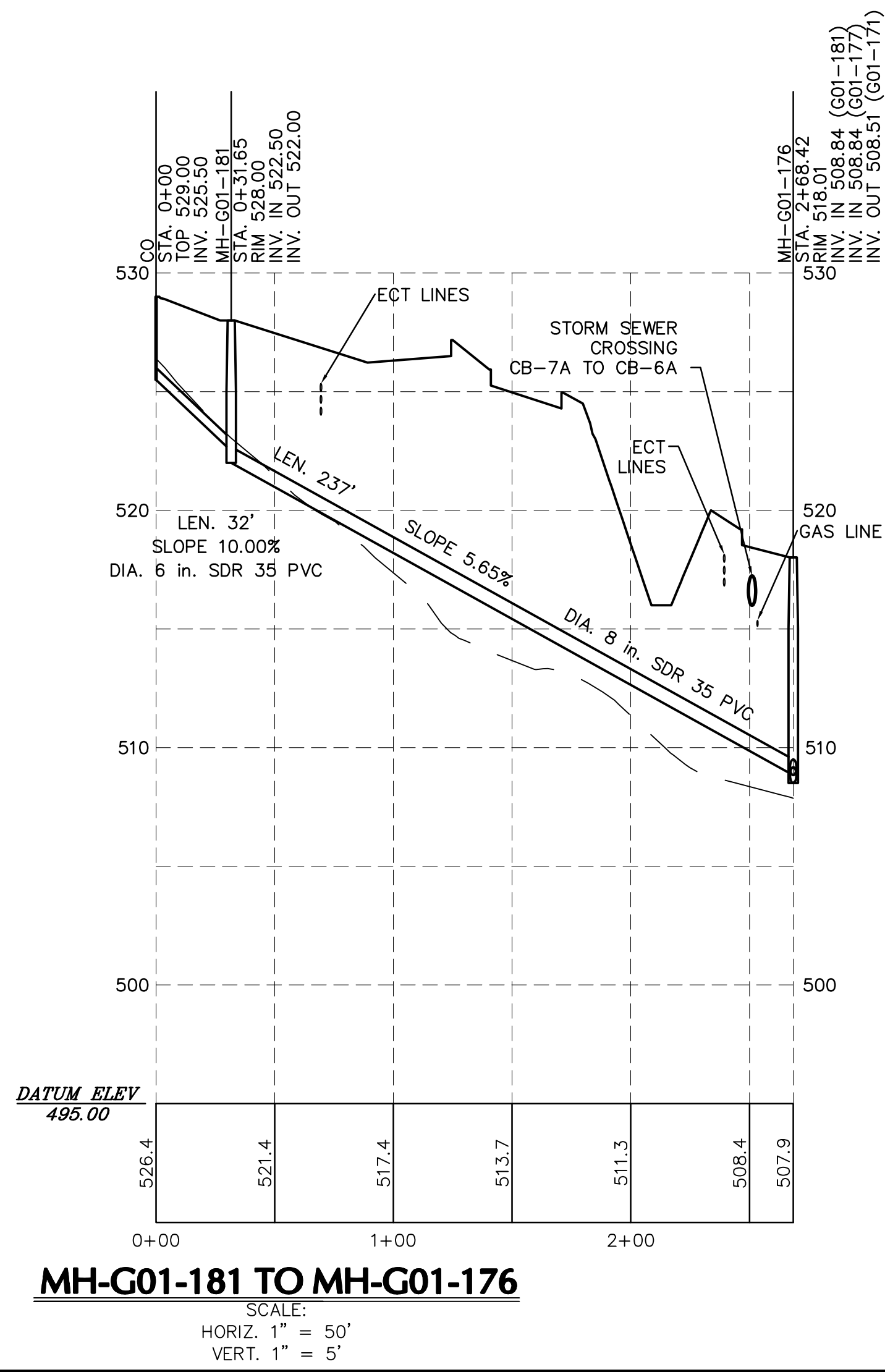
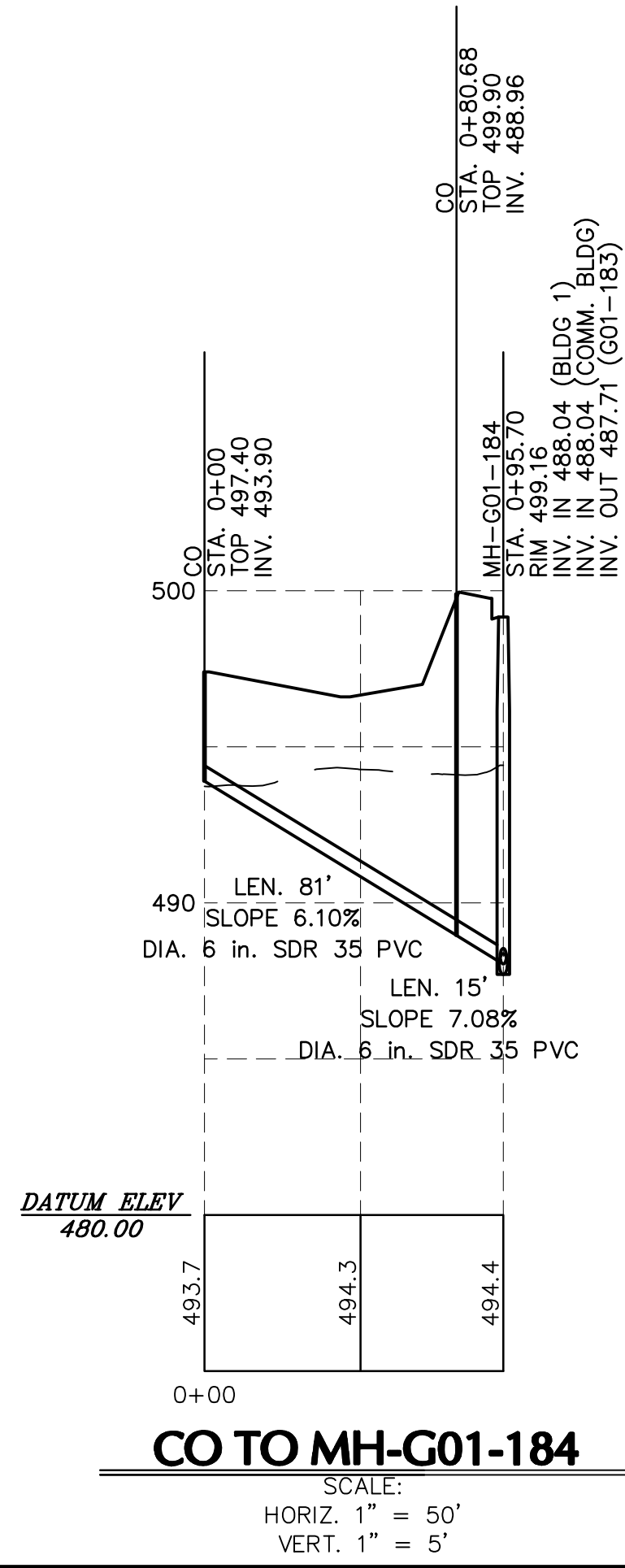
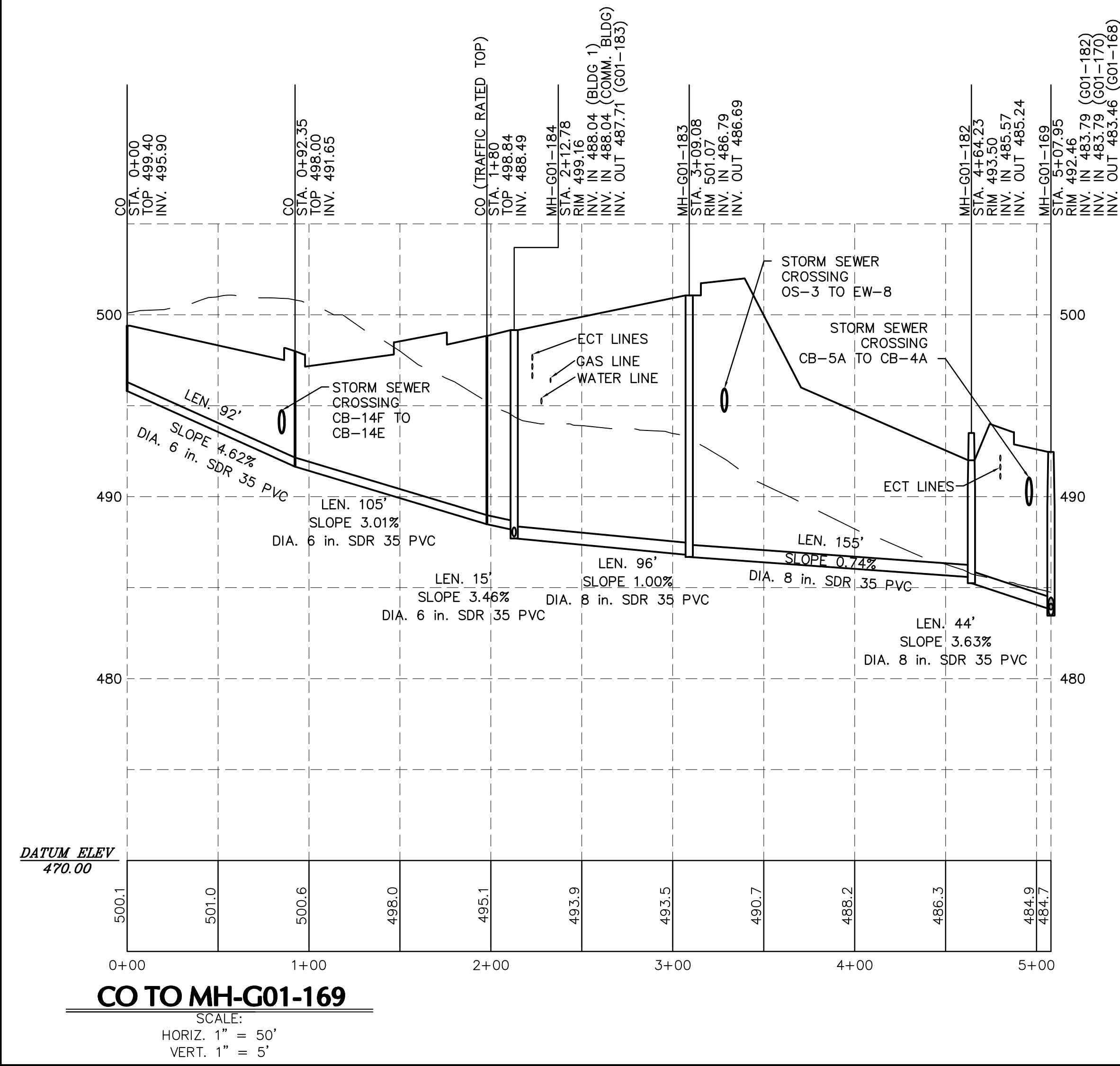
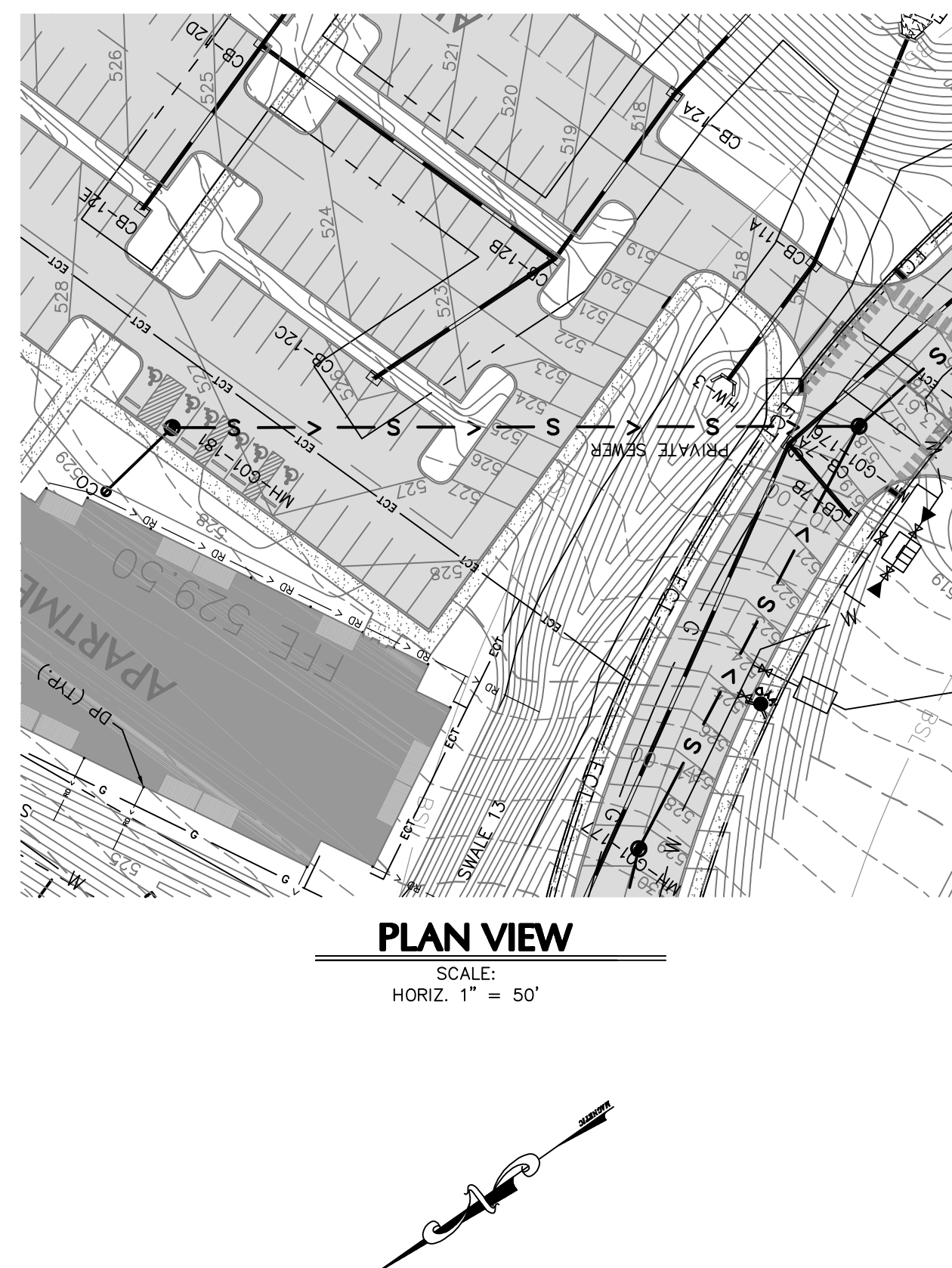
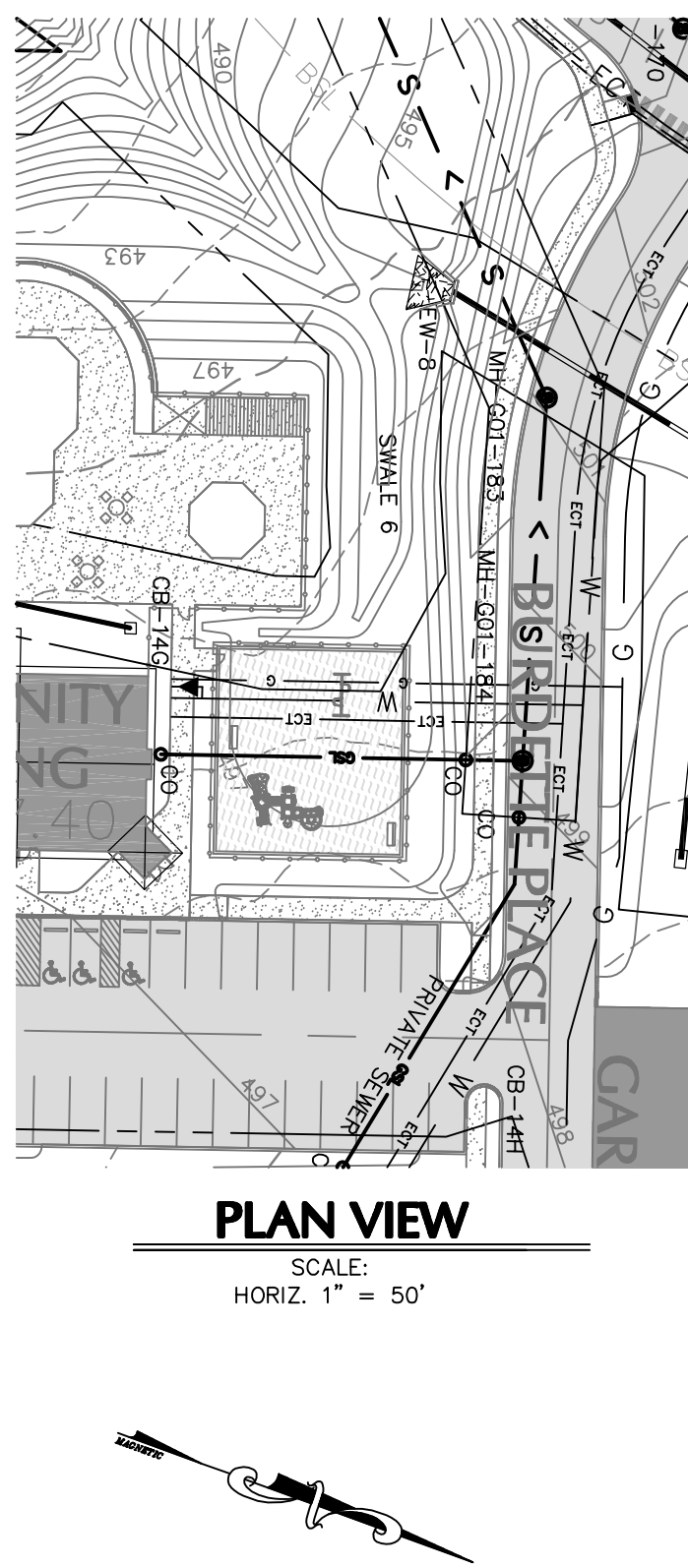
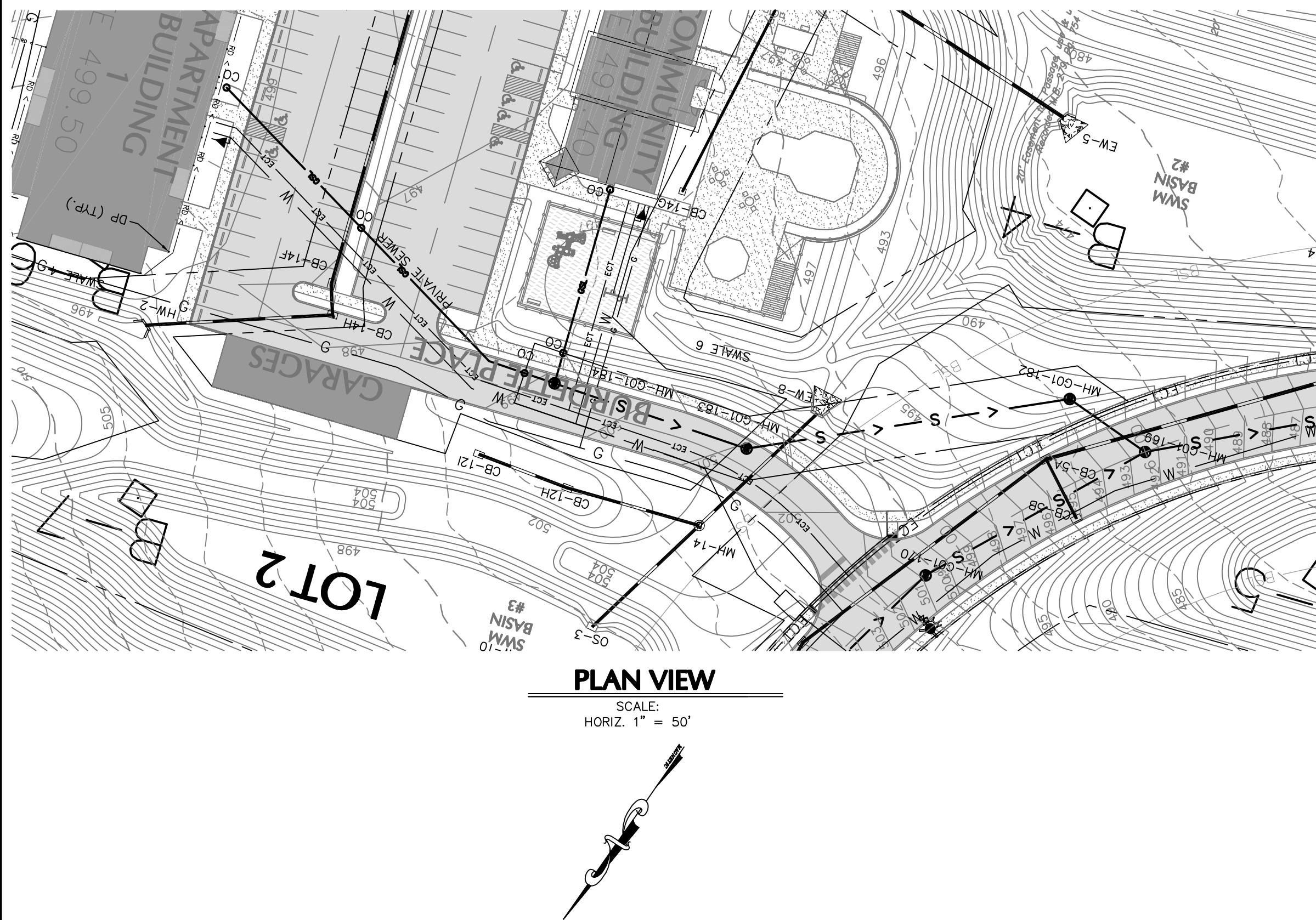
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FOR CORRECTIONS	EIS	07-31-18
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REV	DESCRIPTION	BY	DATE
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- NOTES:
1. ALL INLET GRATES HAVE A 2" SUMP.
 2. ALL CATCH BASINS HAVE STANDARD PENNDOT INLET BOXES EXCEPT AS NOTED.
 3. AT A MINIMUM THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.

- SANITARY NOTES:**
1. PIPE LENGTH SHOWN ON PROFILE REPRESENTS DISTANCE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE SLOPE SHOWN ON PROFILE IS CALCULATED BASED ON DISTANCE FROM INSIDE FACE OF MANHOLE TO INSIDE FACE OF MANHOLE.
 2. LATERAL SLOPES ARE BASED ON CLEANOUT CENTER-TO-CENTER WITH ACTUAL LENGTHS WITH LATERAL CONNECTION TO MANHOLE SUBTRACT 2' FROM LENGTH FOR CLEANOUT CENTER TO INSIDE FACE OF MANHOLE.

<div> <div>NOT FOR CONSTRUCTION</div> <div>38 OF 68</div> </div>	DRAWN BY: EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN	
	CHECKED BY: CHH	OAKWOOD HILLS	
	DATE: 05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	
	SCALE: 1" = 50'		
	JOB NUMBER: 13021.020	PROFILES	

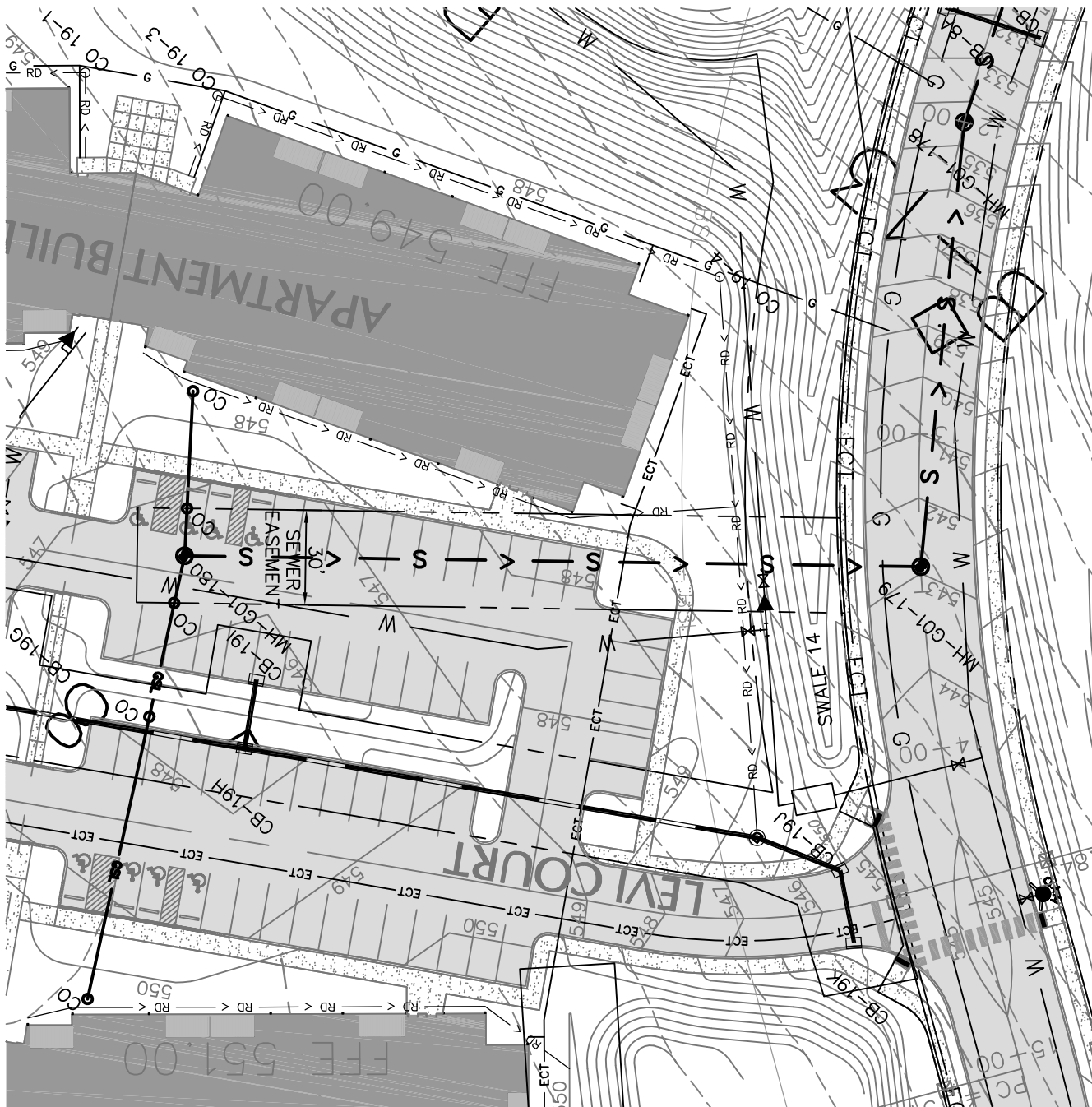
**H. EDWARD BLACK
and ASSOCIATES, Ltd.**

☐ COMPREHENSIVE LAND AND SITE PLANNING
☐ LANDSCAPE ARCHITECTURE ☐ ENGINEERING

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REV	DESCRIPTION	DATE
1	FOR CORRECTIONS	07-31-18
2	FOR SIGNATURES	06-27-18
3	PER PENNDOT COMMENTS	06-08-18
4	PER PENNDOT COMMENTS	05-04-18
5	PER SUEZ WATER DESIGN	03-28-18
6	PER 105 COMMENTS	12-27-17
7	PER SUEZ WATER DESIGN	11-13-17

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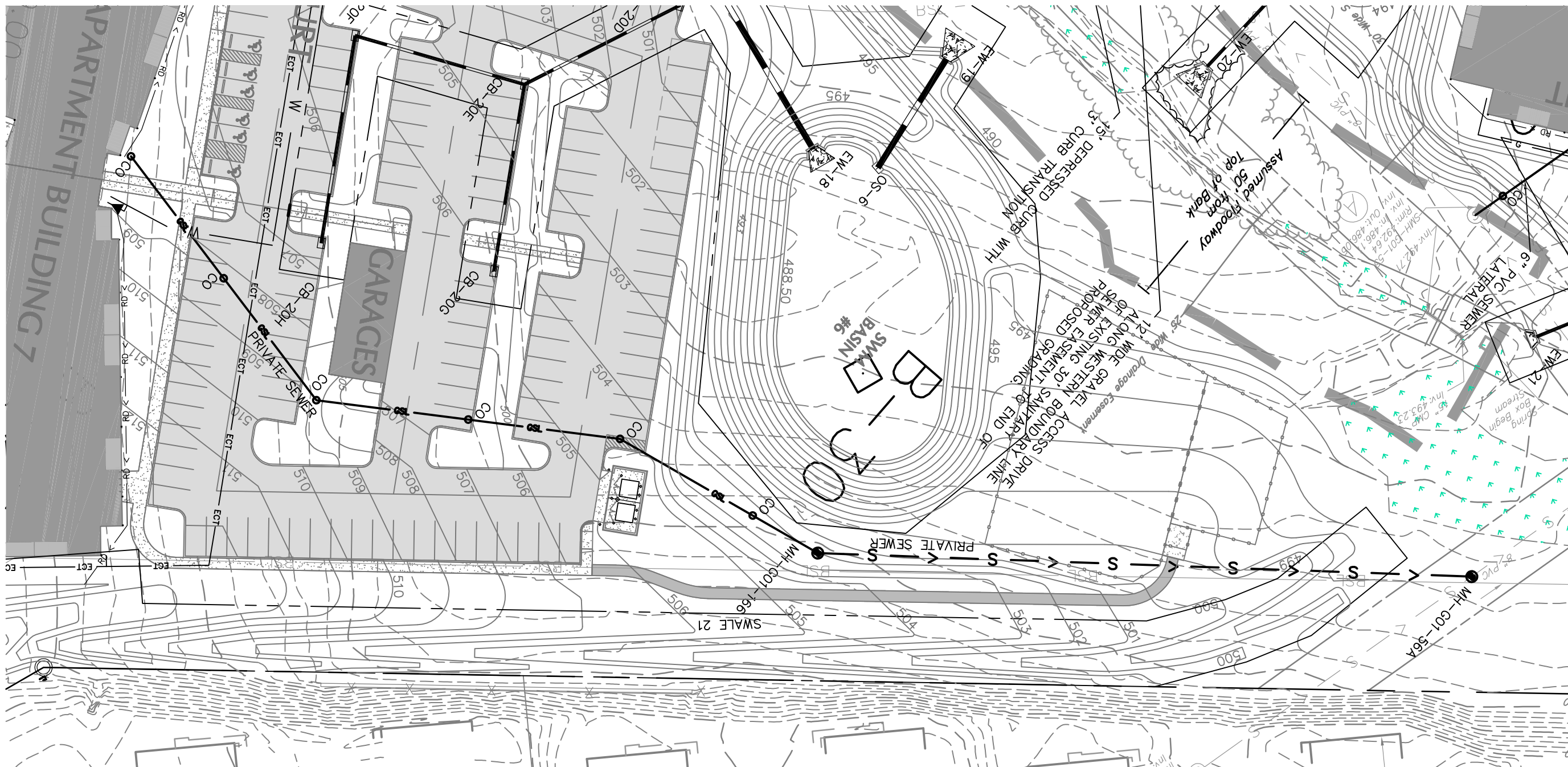
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



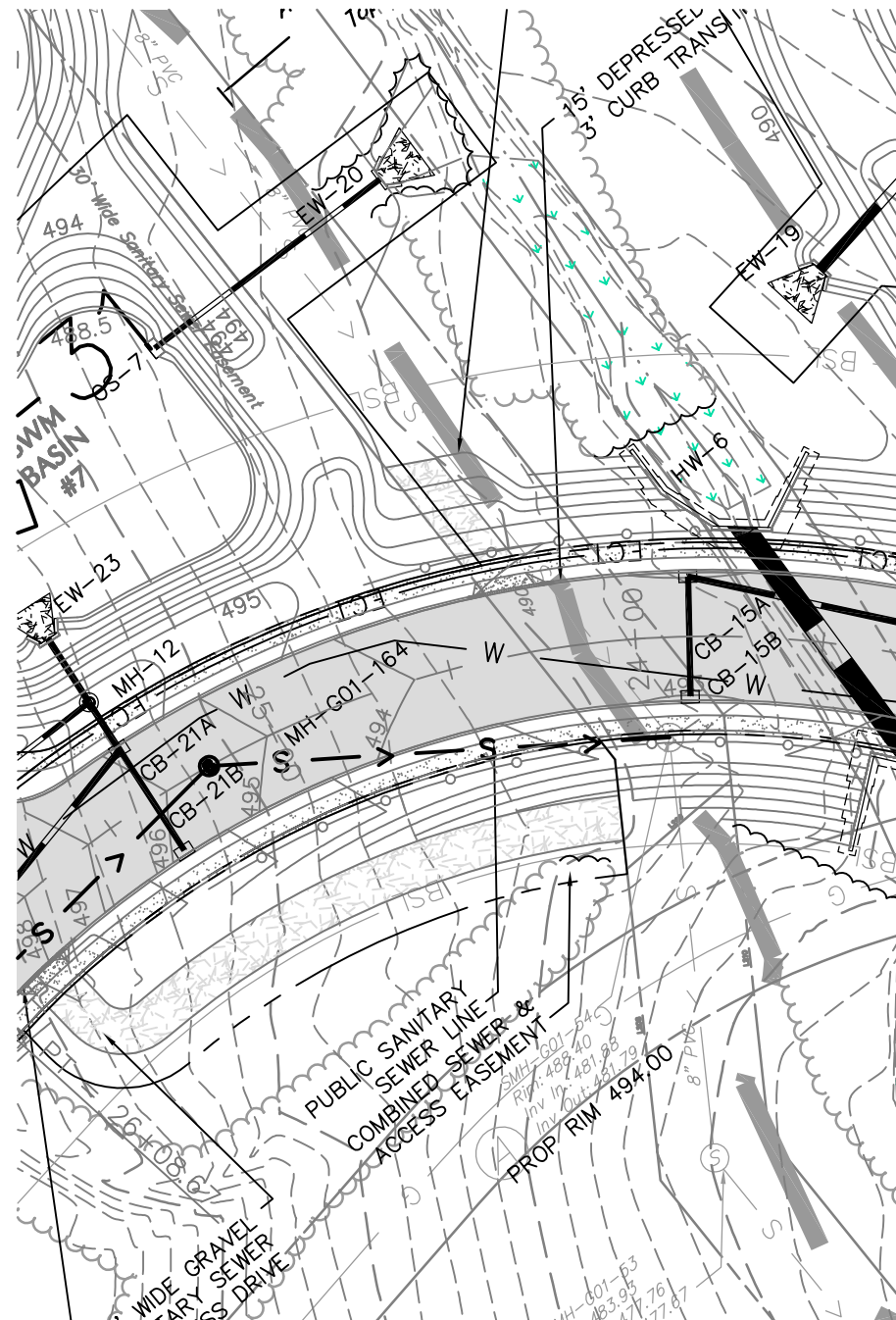
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



PLAN VIEW

SCALE:
HORIZ. 1" = 50'



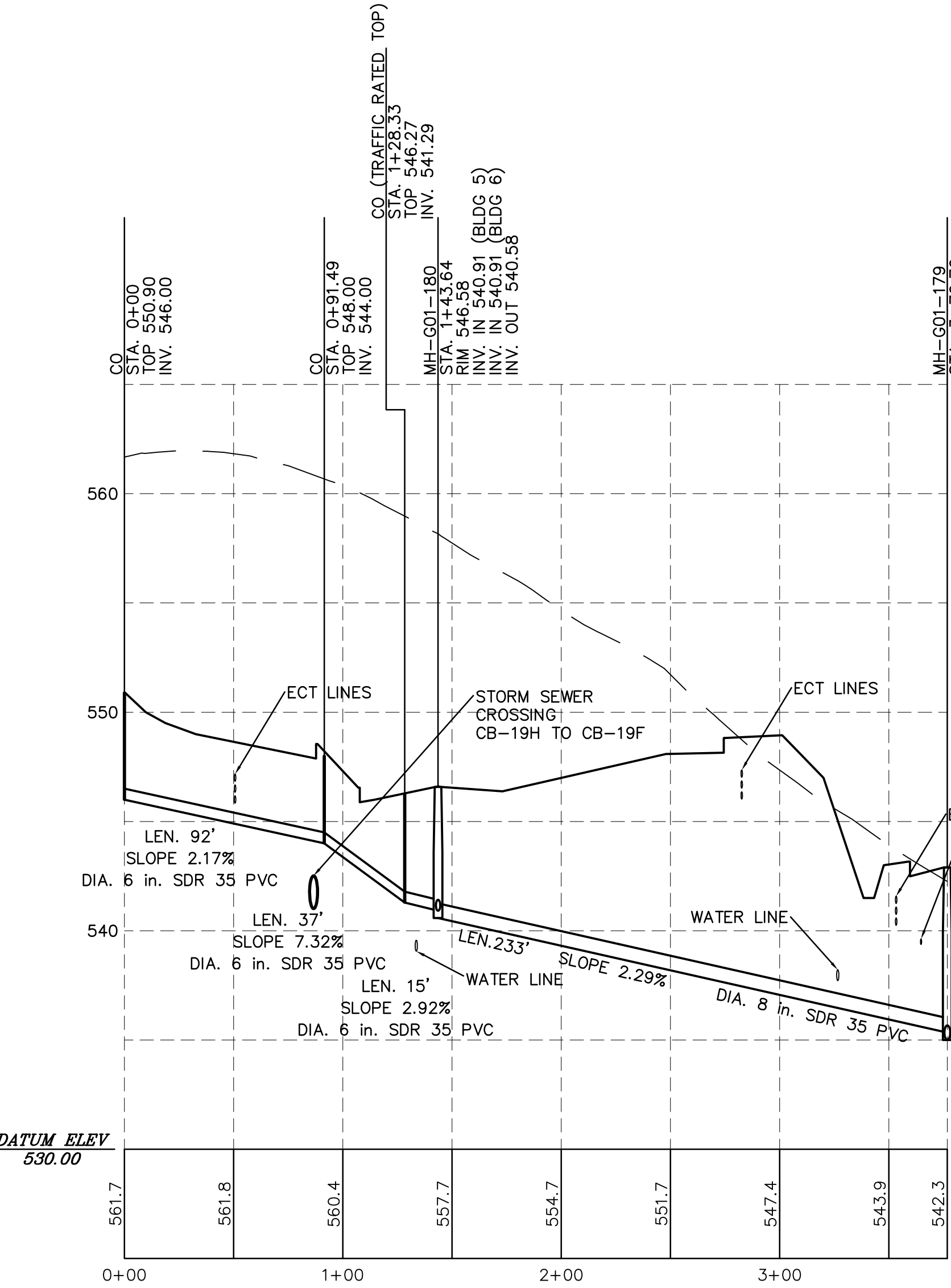
PLAN VIEW

SCALE:
HORIZ. 1" = 50'

SANITARY SEWER ELEVATION NOTES:

A. EXISTING SANITARY SEWER MH RIM AND INVERT ELEVATIONS FROM 2017 TWP. AS-BUILT SEWER SURVEY WHICH IS BASED ON NAVD 88 DATUM. PLAN TOPOGRAPHY IS BASED ON NGVD 29 DATUM.
B. EXISTING SANITARY SEWER MH RIM ELEVATIONS FROM 2017 SURVEY BY DIFFENBAUGH, WADEL, INC. WHICH IS BASED ON NGVD 29 DATUM. INVERTS ARE CALCULATED BY SUBTRACTING THE DIMENSION BETWEEN RIM AND INVERT ON 2017 TWP. AS-BUILT SEWER SURVEY (SEE CHART).

MANHOLE NUMBER	TOWNSHIP RIM ELEVATION	TOWNSHIP MEASURED INV.	PLAN SURVEYED RIM ELEVATION	PLAN CALCULATED ELEVATION
G01-45	453.81	444.58 INV. IN (N)	454.63	445.40 INV. IN (N)
		441.40 INV. IN (E)		442.22 INV. IN (E)
		441.28 INV. IN (W)		442.10 INV. IN (W)
		441.18 INV. OUT (S)		442.00 INV. OUT(S)
G01-80	454.72	444.86 INV. IN (E)	455.53	445.67 INV. IN (E)
		443.10 INV. OUT (W)		443.91 INV. OUT(W)
G01-81	460.93	446.73 INV. IN (E)	461.62	447.42 INV. IN (E)
		446.49 INV. IN (S)		447.18 INV. IN (S)
		446.34 INV. OUT (W)		447.03 INV. OUT(W)
SMH-G01-56	496.97	487.59 INV. IN	497.94	488.56 INV. IN
		487.55 INV. OUT		488.52 INV. OUT
SMH-G01-57	508.72	494.83 INV. IN	509.44	495.55 INV. IN
		494.64 INV. OUT		495.36 INV. OUT

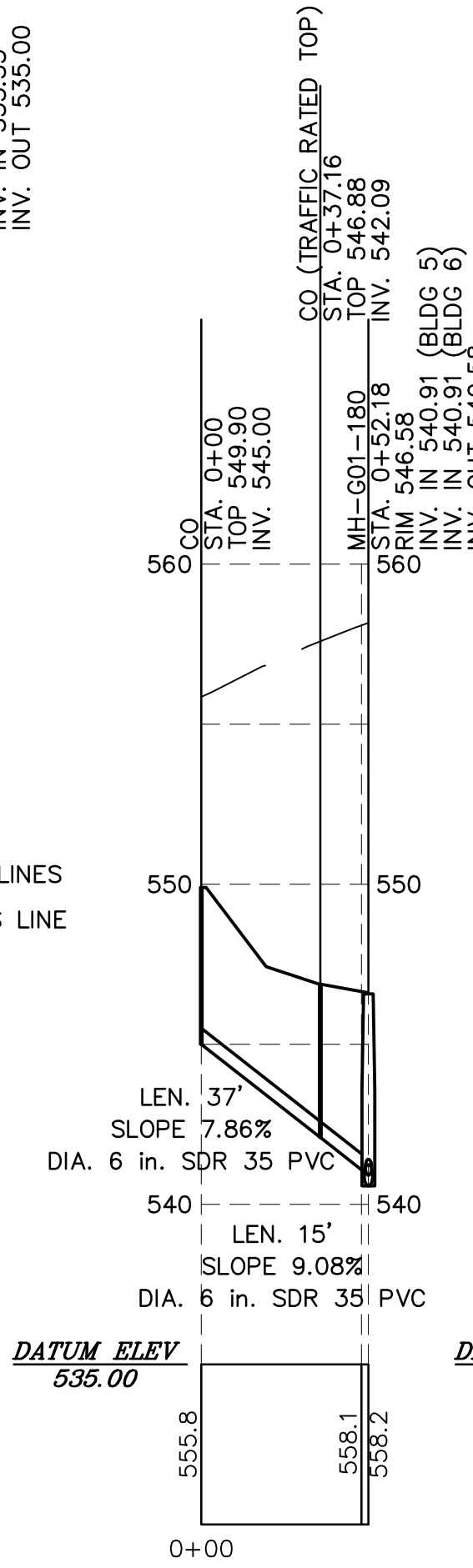


CO TO MH-G01-179

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

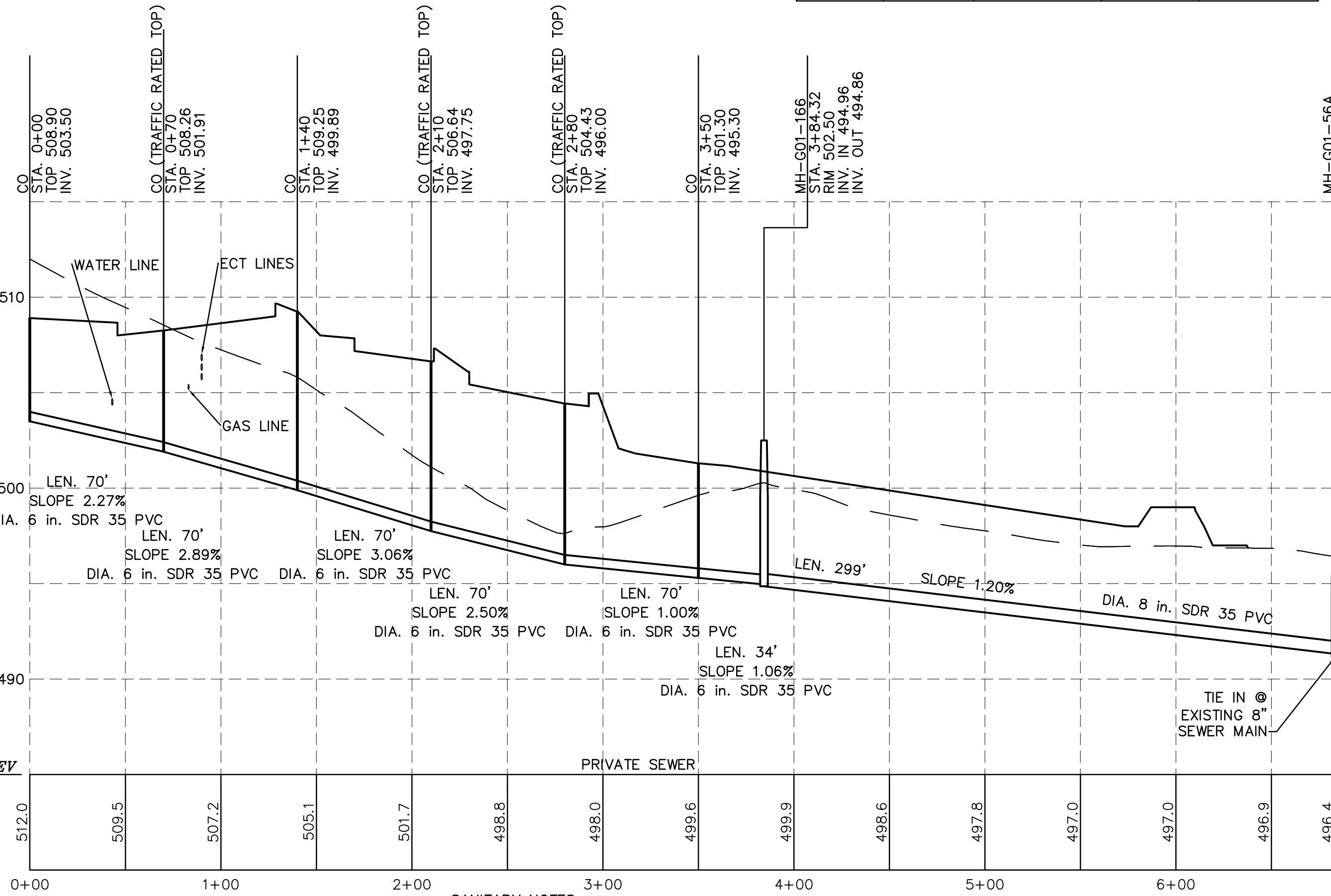
NOTES:

- AT A MINIMUM THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.



CO TO MH-G01-180

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

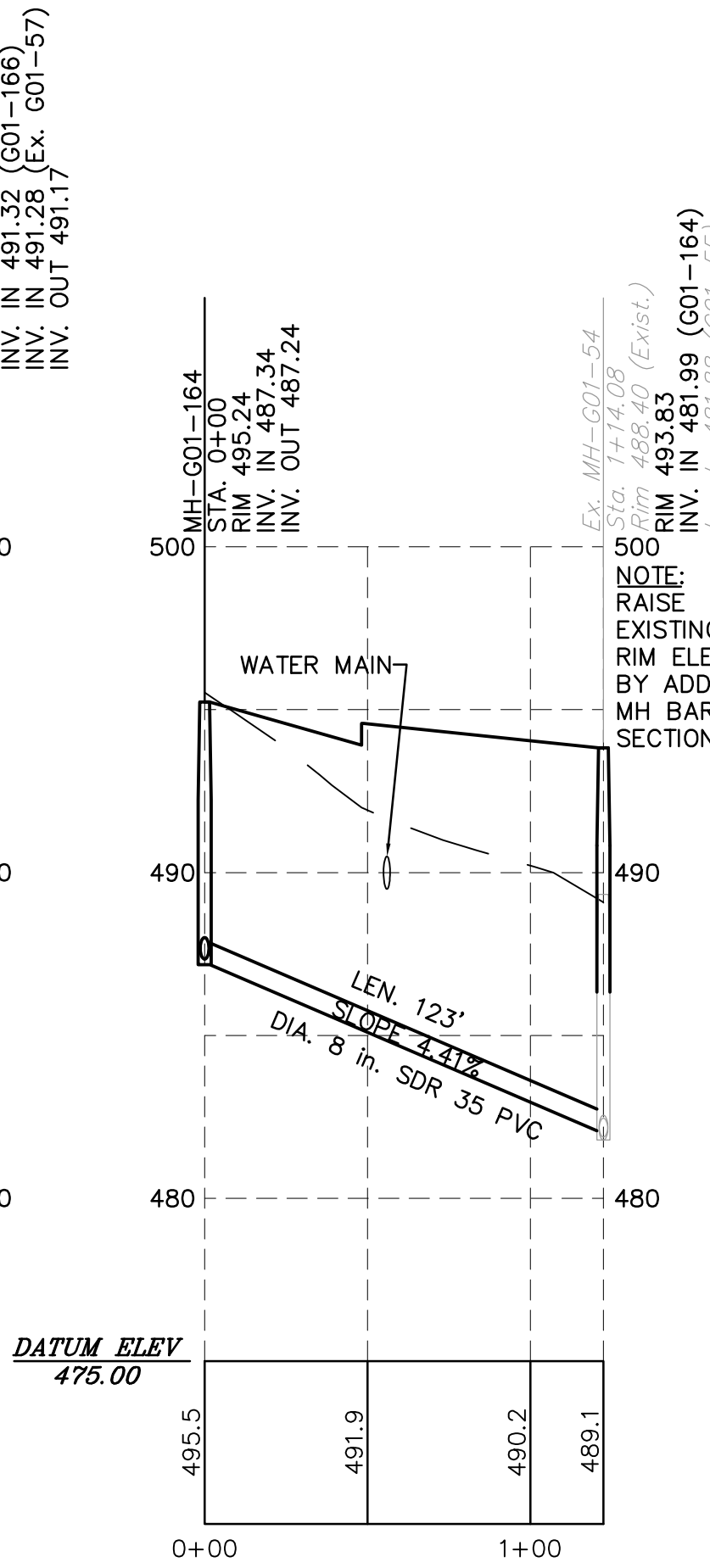


CO TO MH-G01-56A

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

SANITARY NOTES:

- PIPE LENGTH SHOWN ON PROFILE REPRESENTS DISTANCE FROM CENTER OF MANHOLE TO CENTER OF MANHOLE. PIPE SLOPE SHOWN ON PROFILE IS CALCULATED BASED ON DISTANCE FROM INSIDE FACE OF MANHOLE TO INSIDE FACE OF MANHOLE.
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MH-G01-164 TO EX. MH-G01-54

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

NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: 1" = 50'

JOB NUMBER: 13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD

UPPER ALLEN TOWNSHIP

CUMBERLAND COUNTY

PENNSYLVANIA

PROFILES

H. EDWARD BLACK

and ASSOCIATES, Ltd.

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

EIS

EIS

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07-31-18

06-27-18

06-08-18

05-04-18

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11-13-17

BY

DATE

REV

DESCRIPTION

07-31-18

06-27-18

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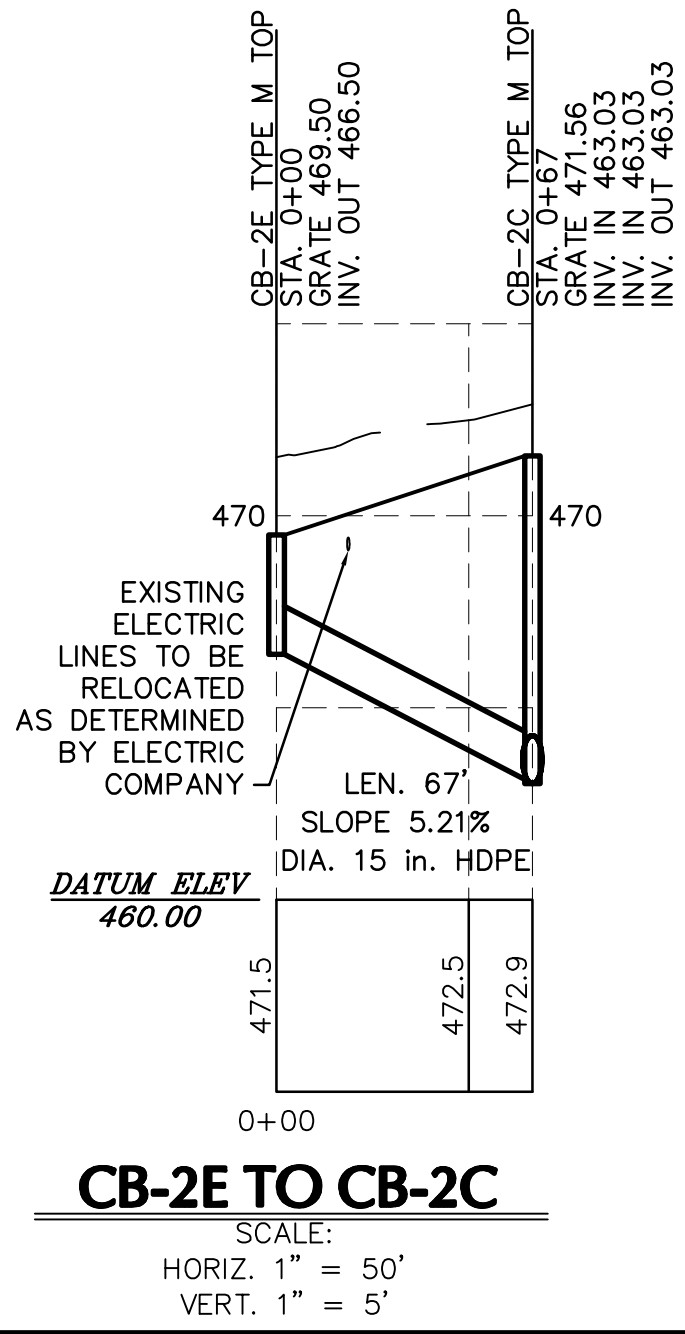
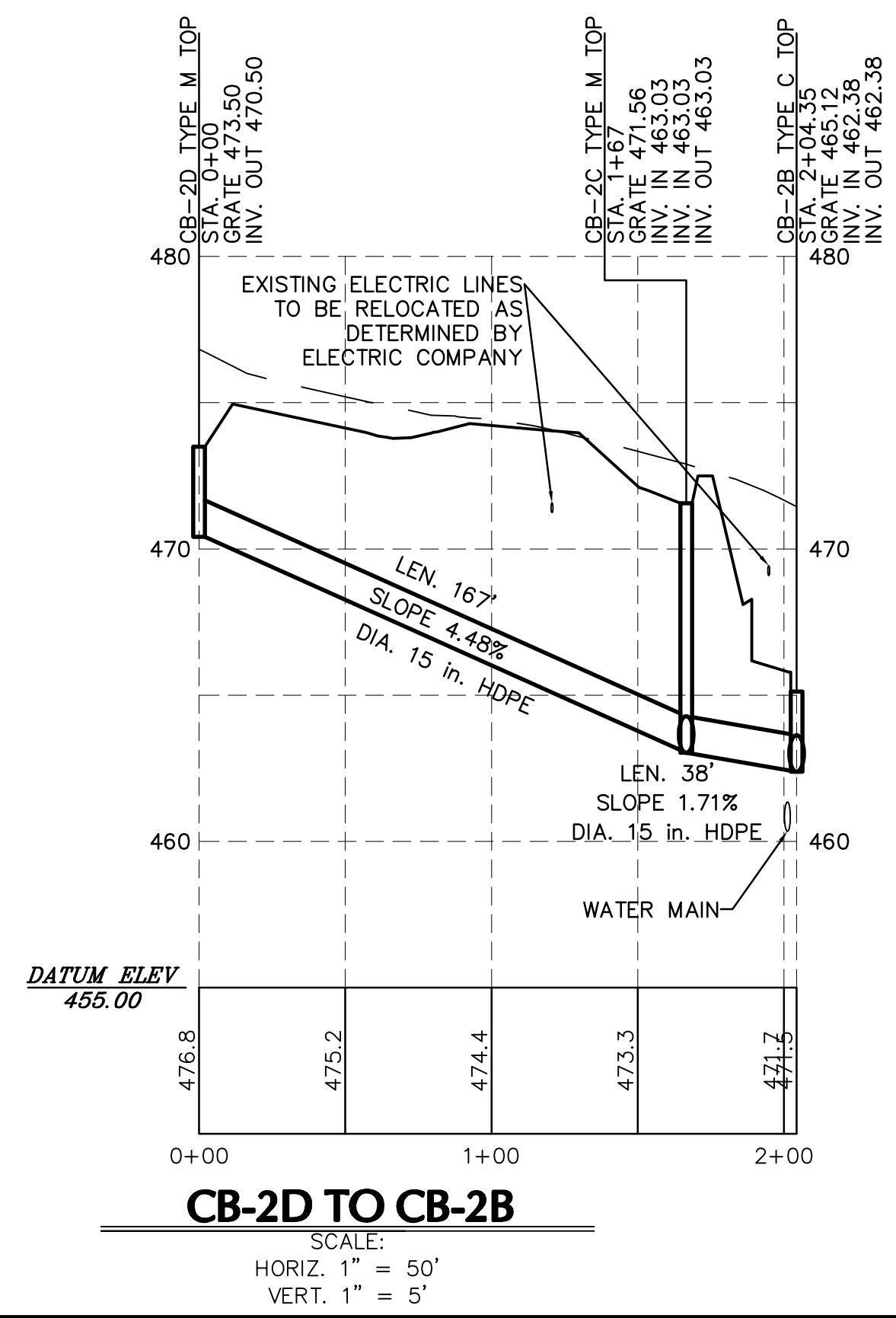
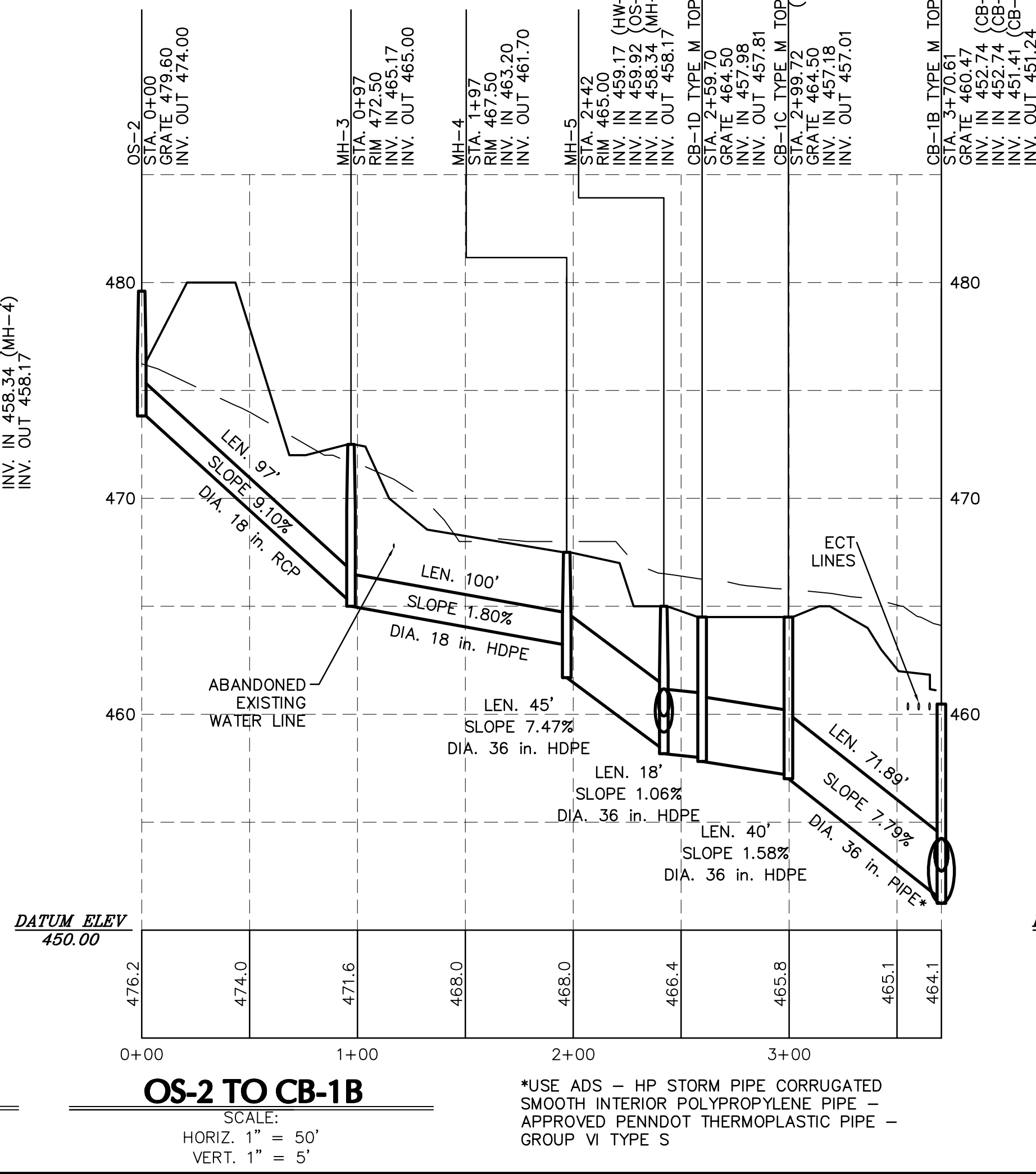
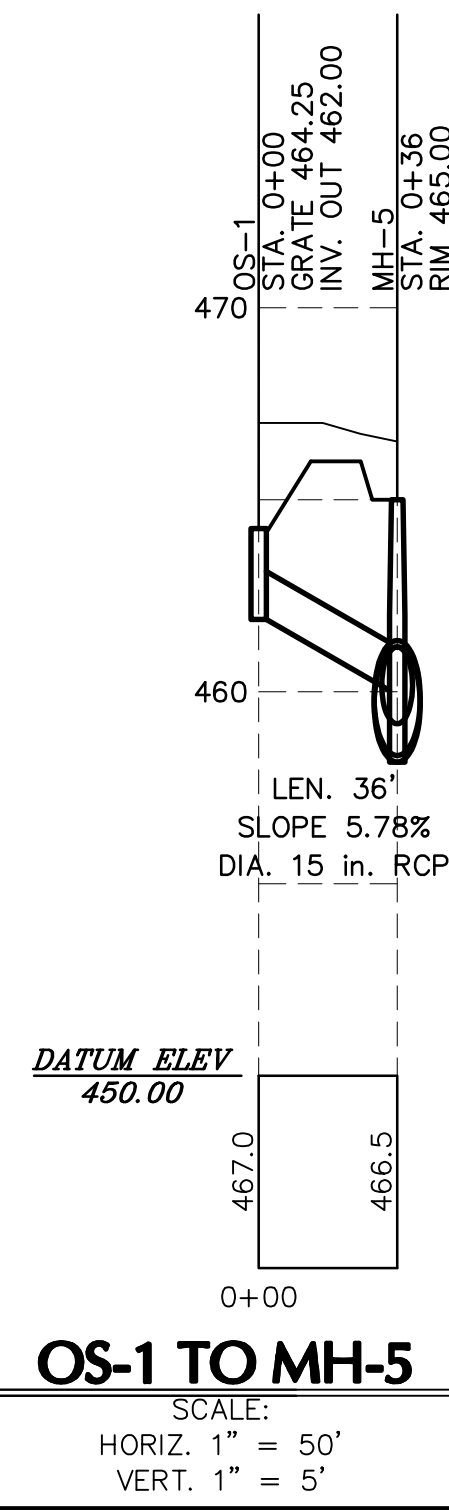
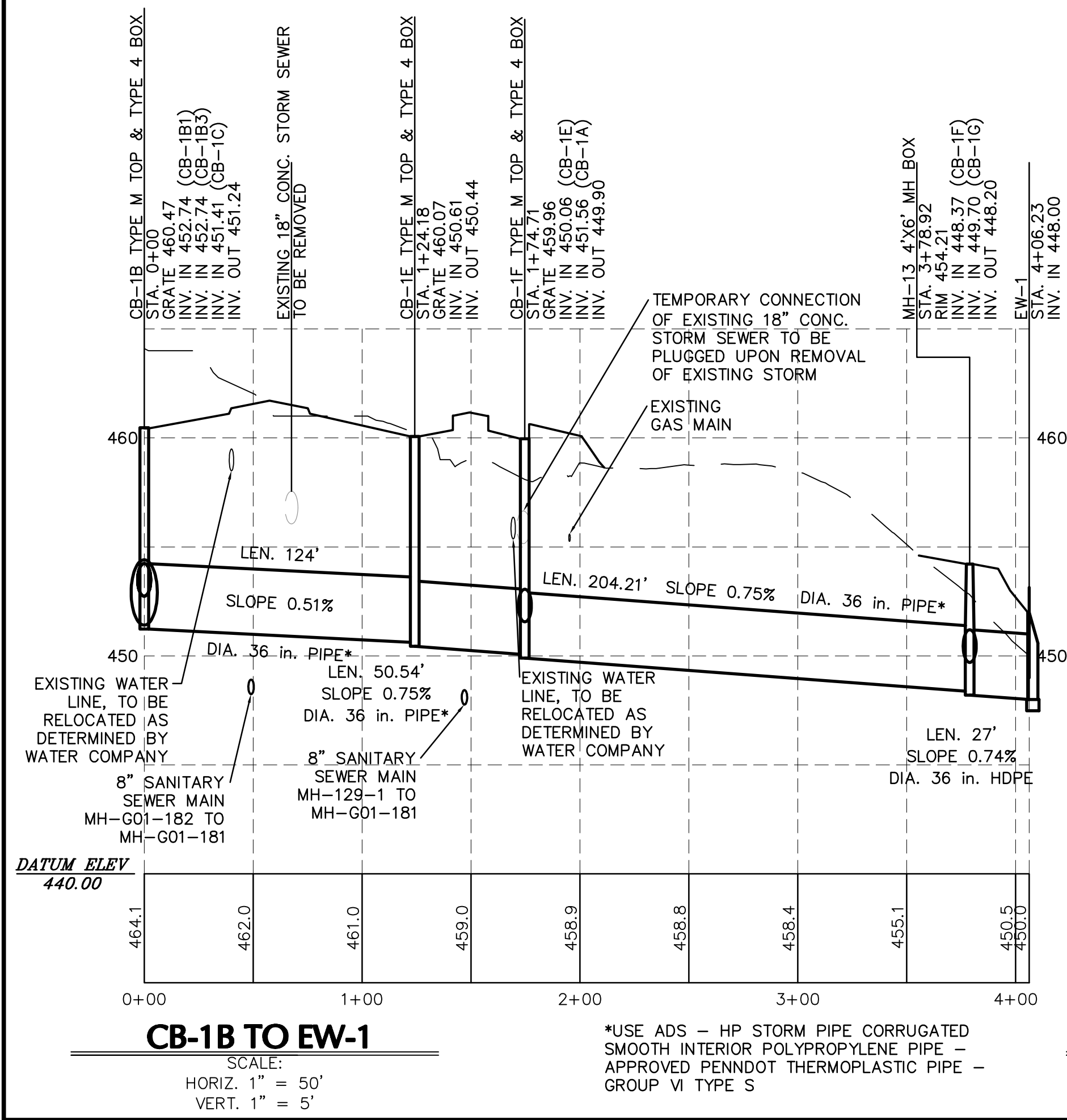
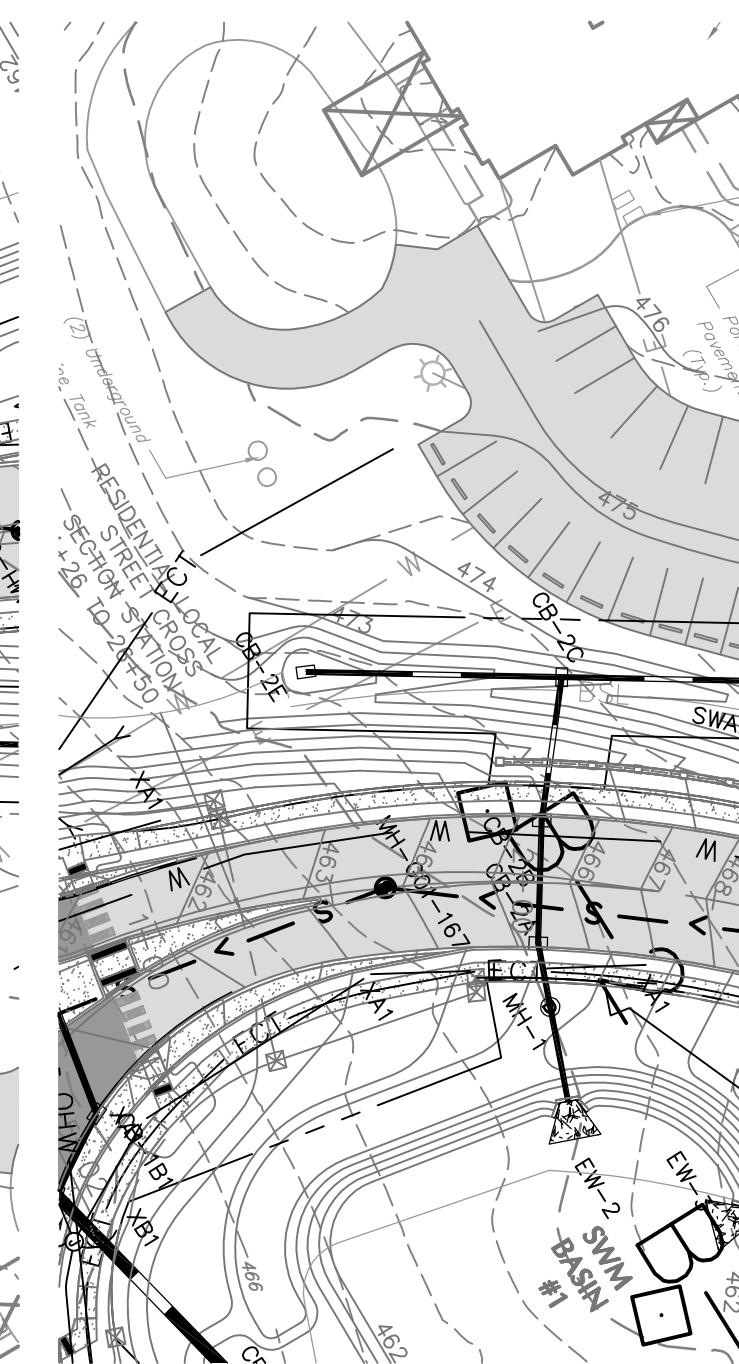
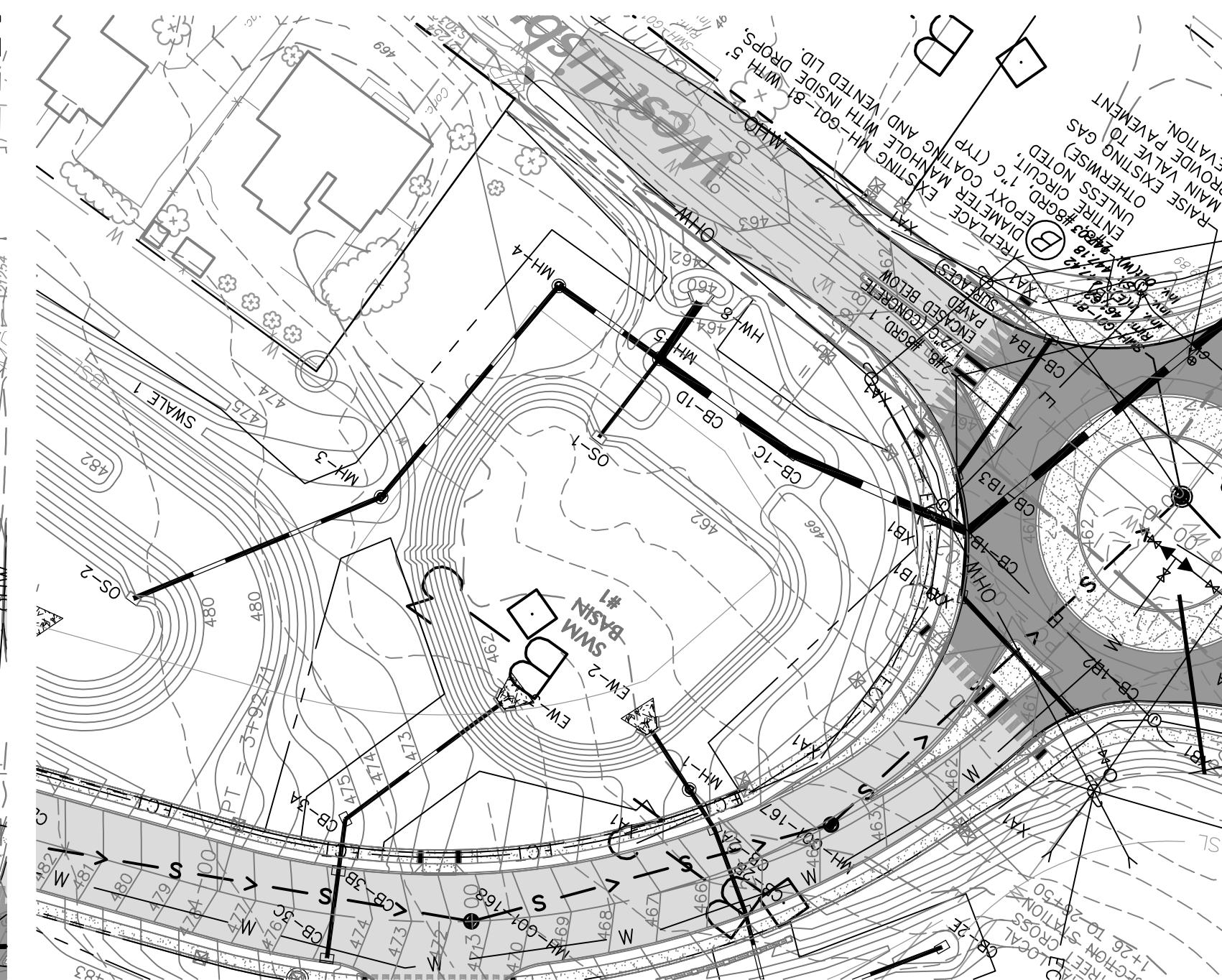
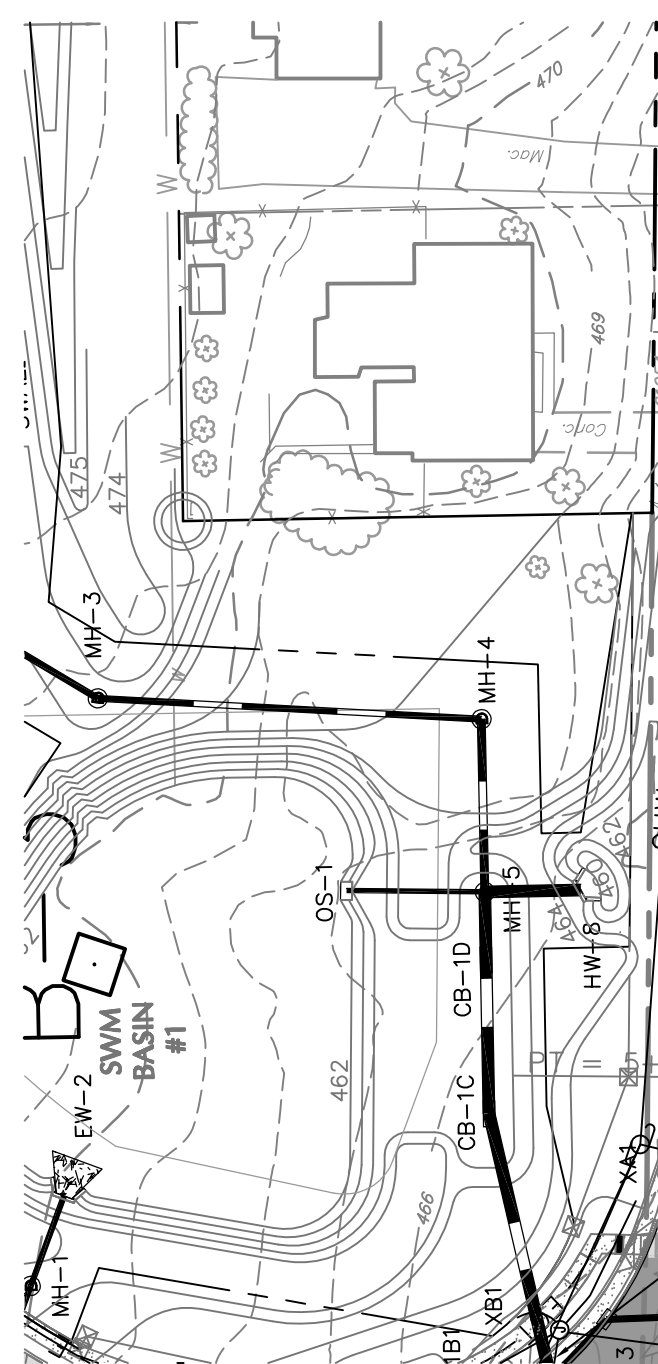
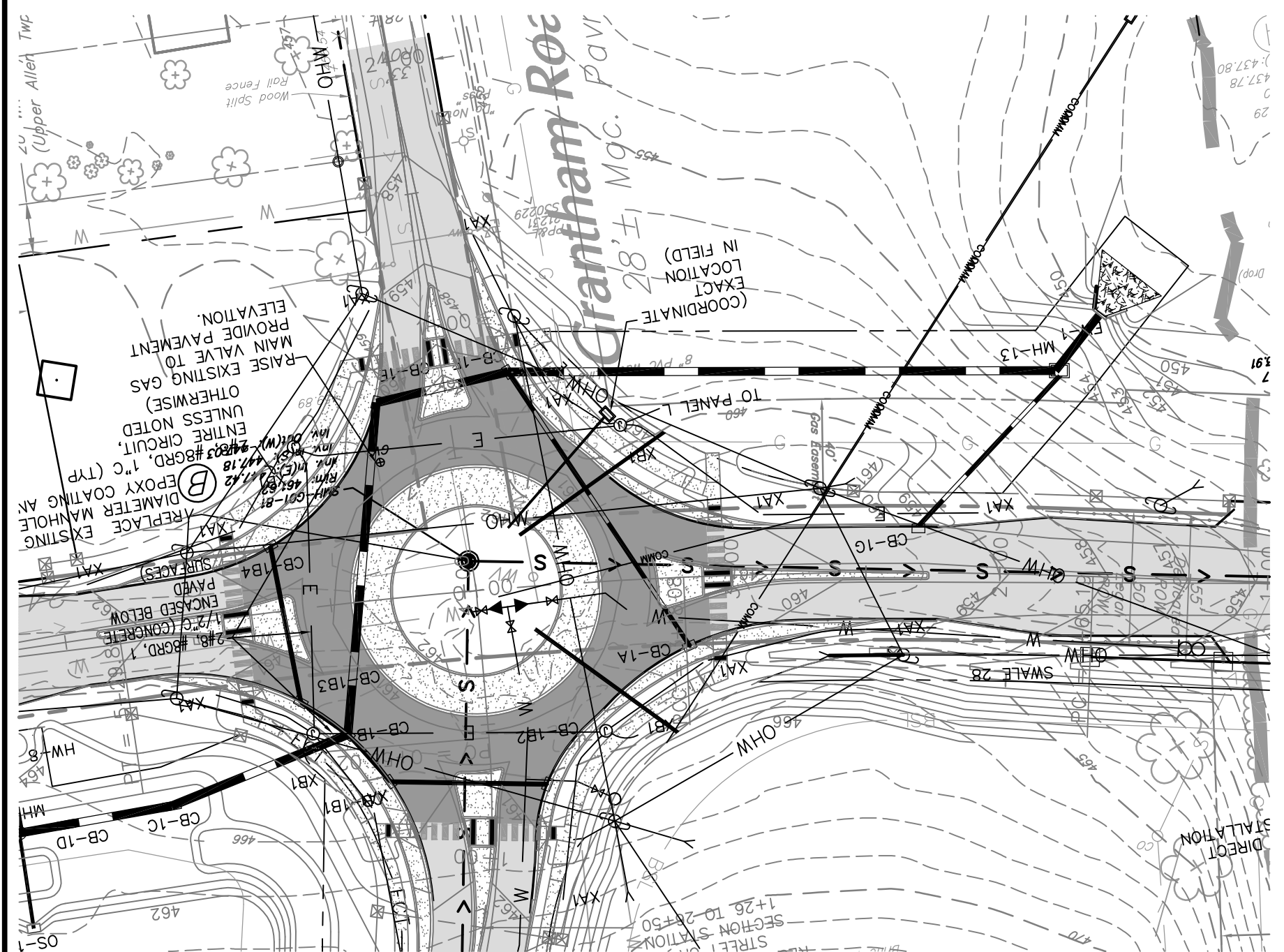
12-27-17

11-13-17

DATE

BY

DESCRIPTION



NOT FOR CONSTRUCTION

SHE	DRAWN BY:	EIS
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ET	CHECKED BY:	CHH
41		

DATE: 05-01-17

F 6

8


PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
LISBURN, ALLEN TOWNSHIP

UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY

PENNSYLVANIA

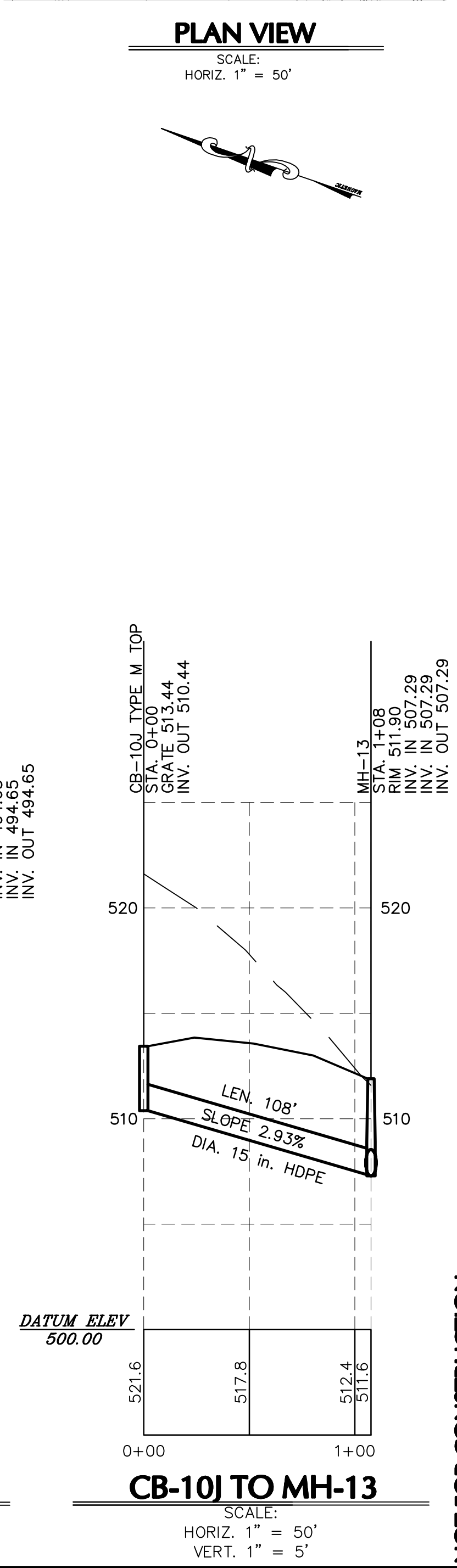
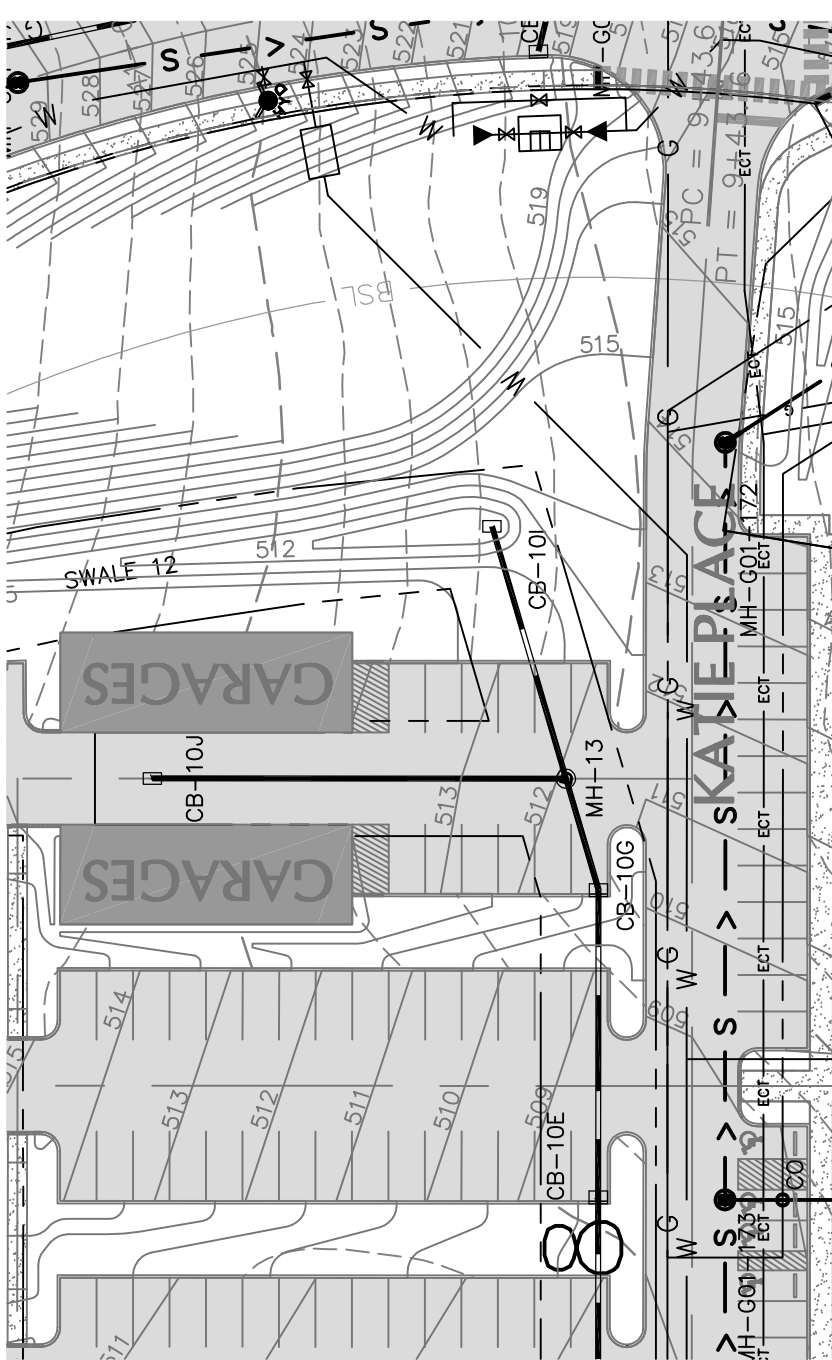
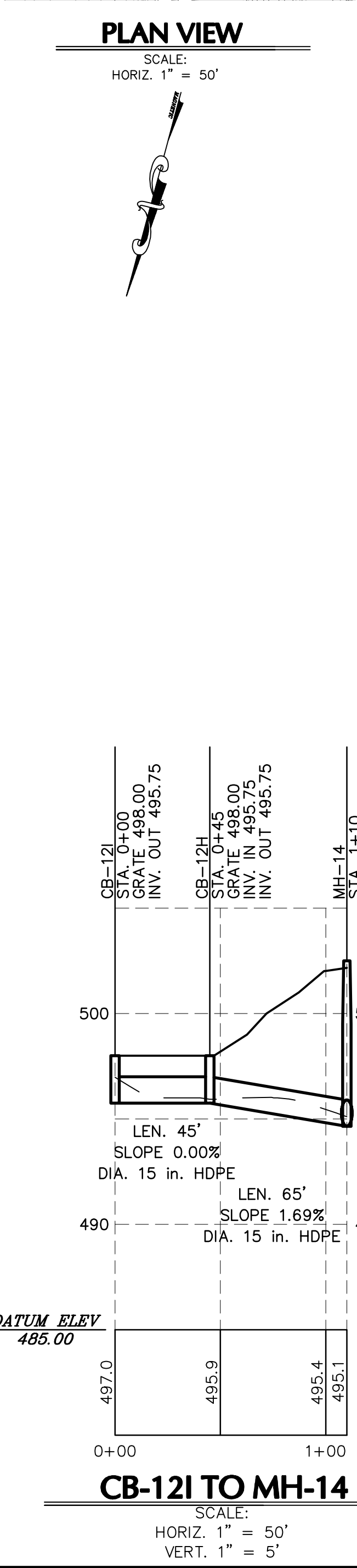
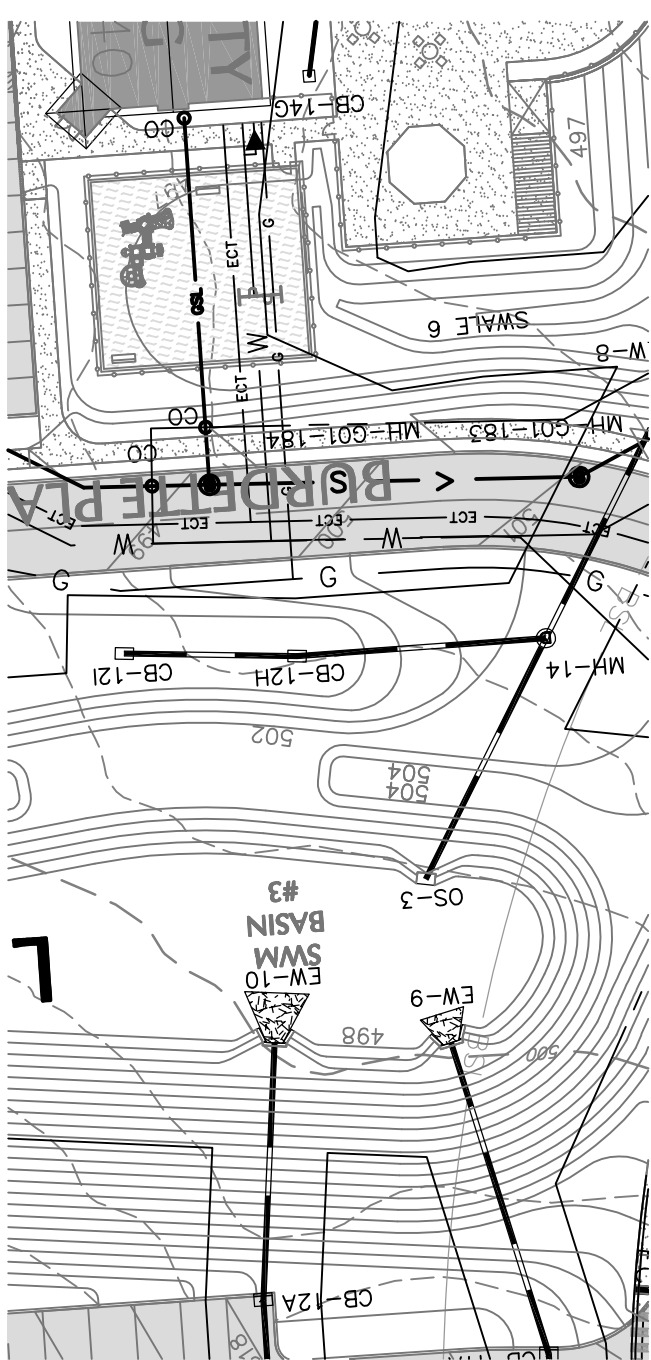
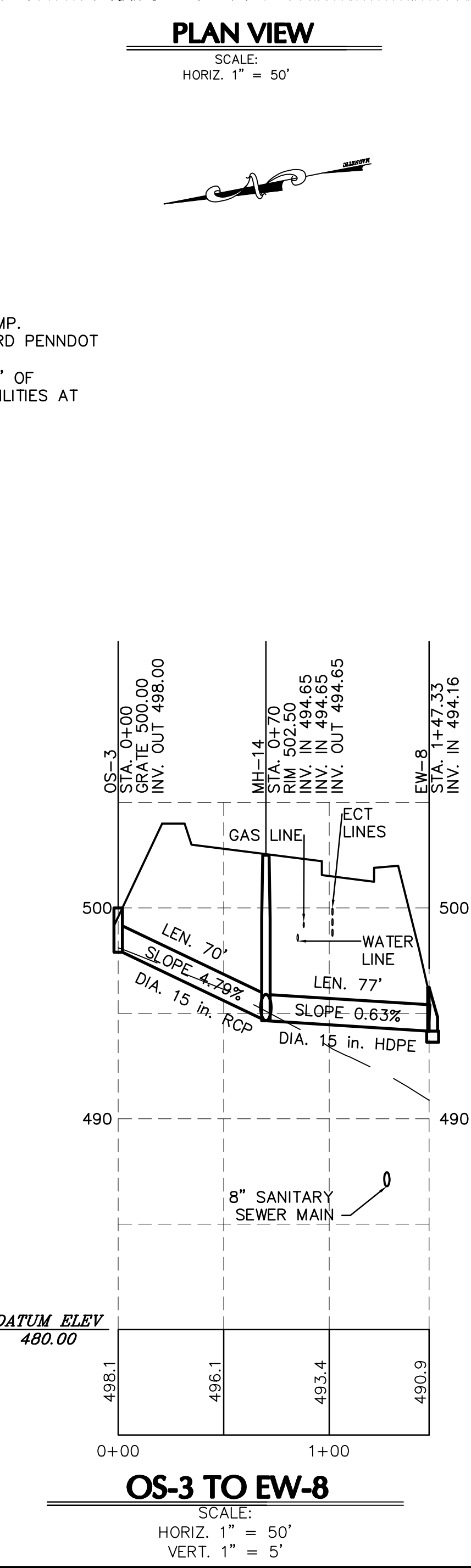
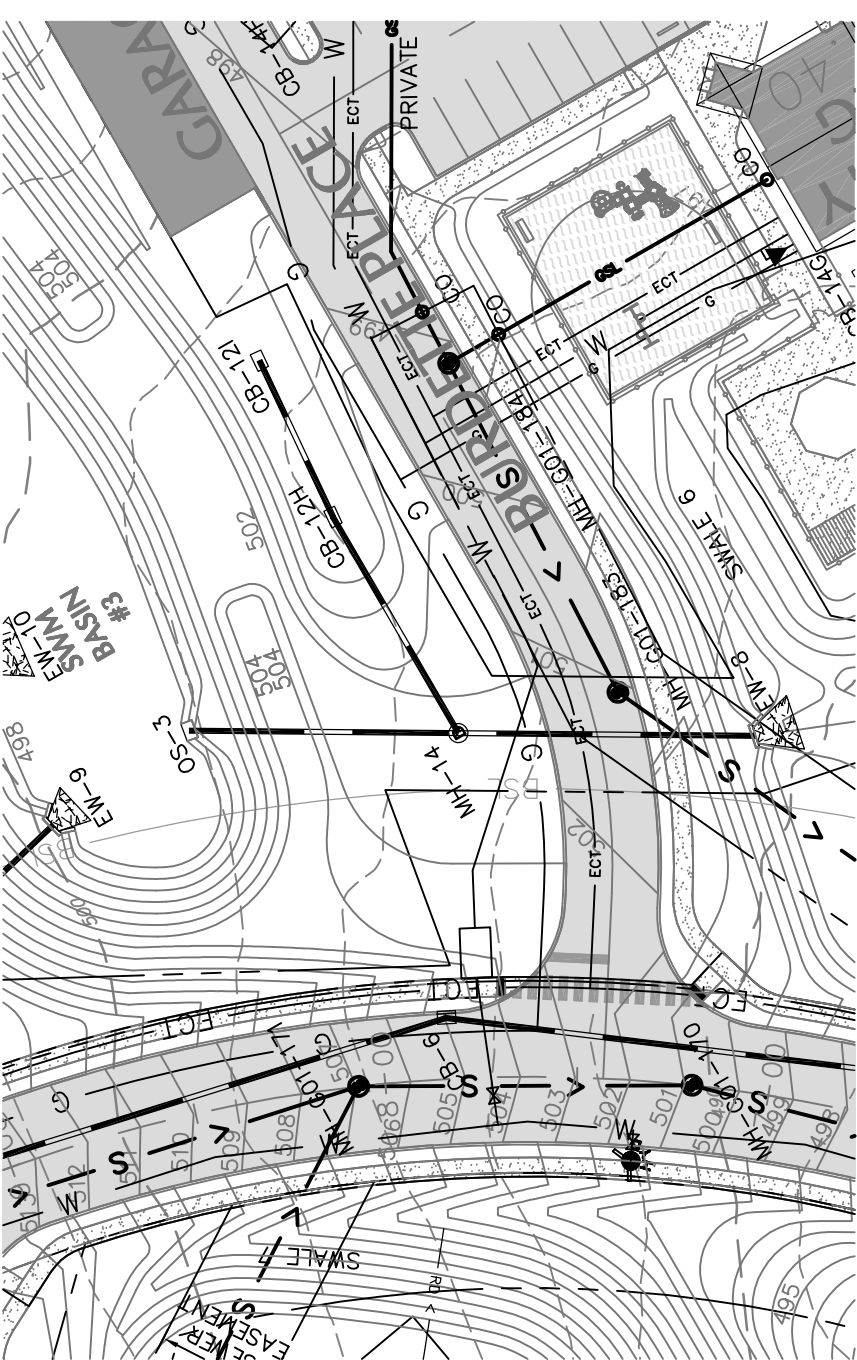
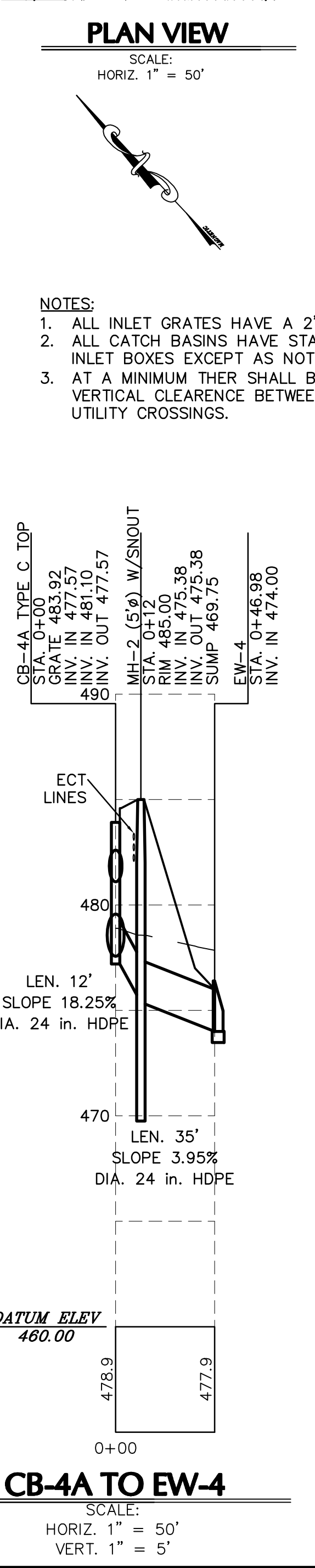
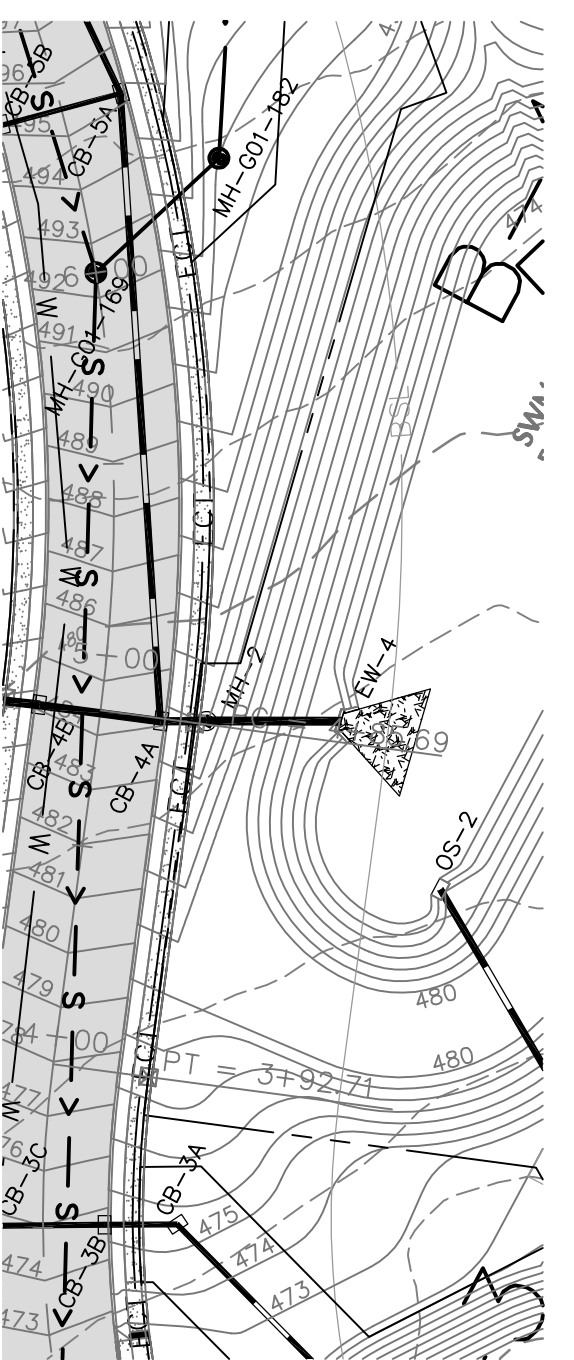
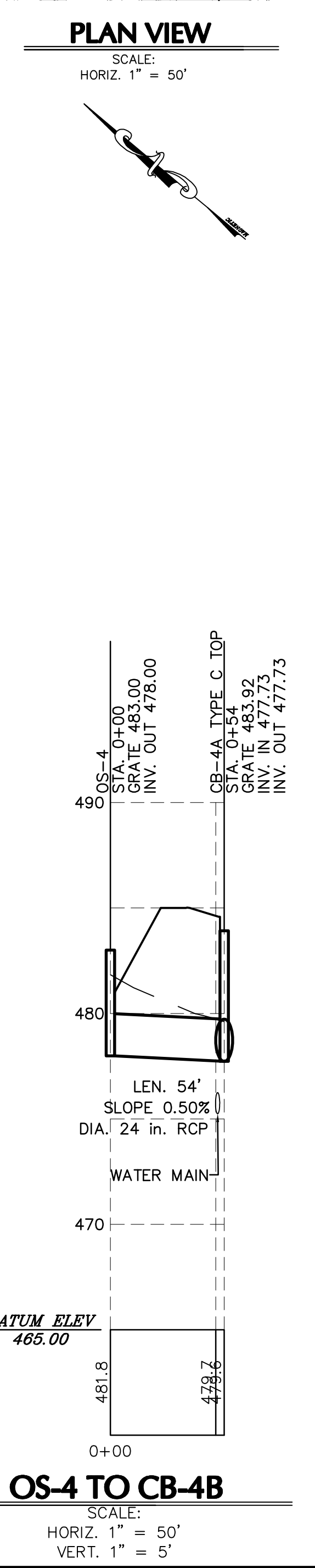
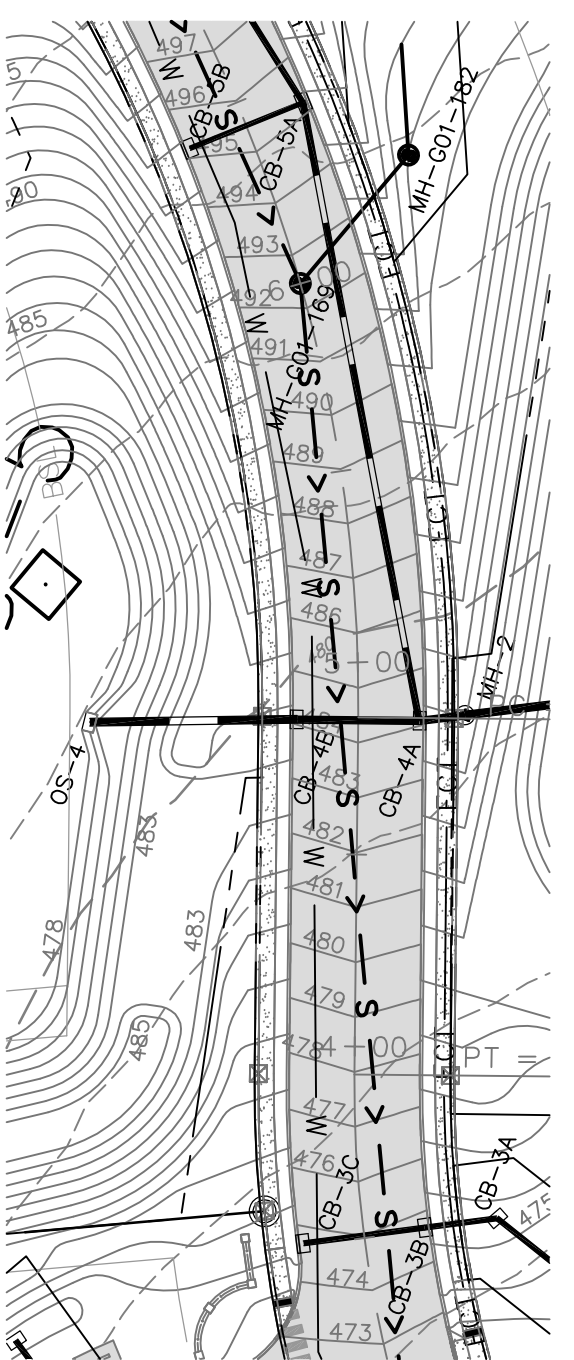
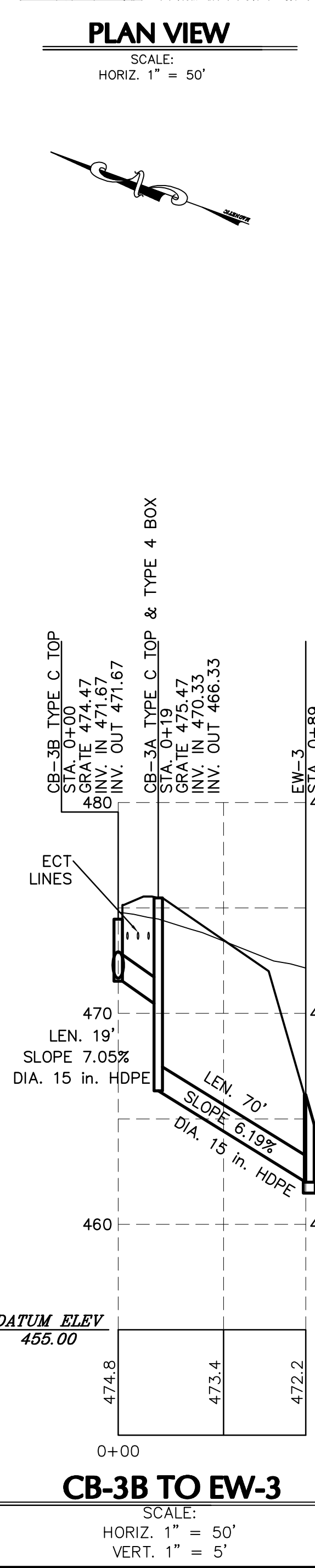
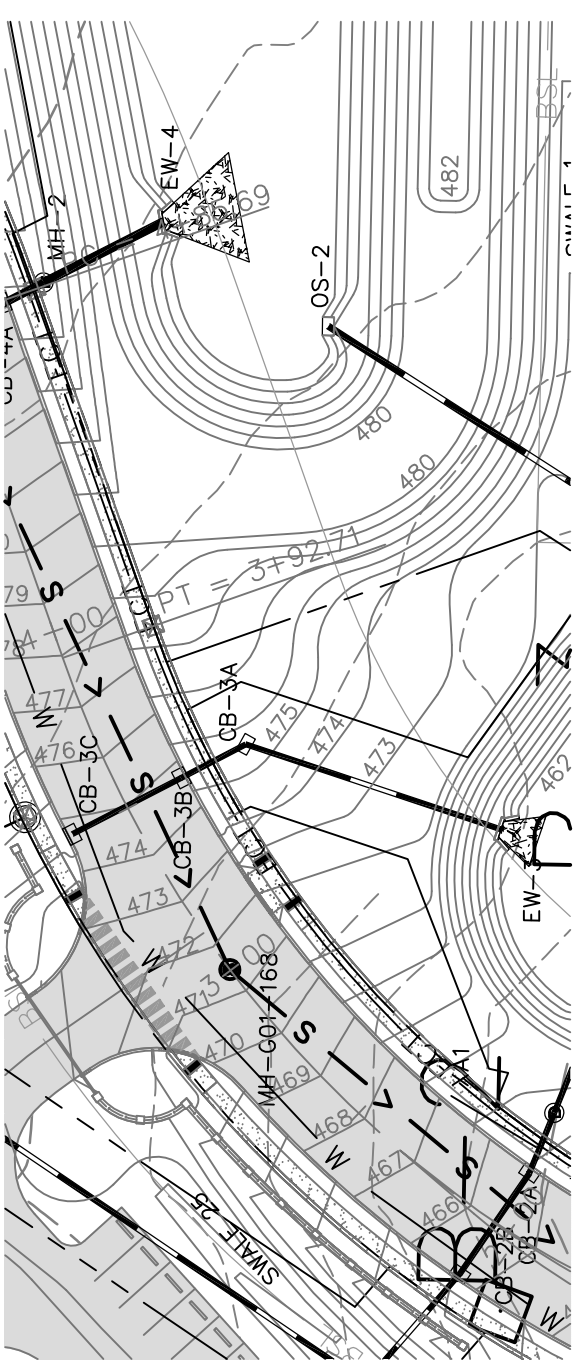
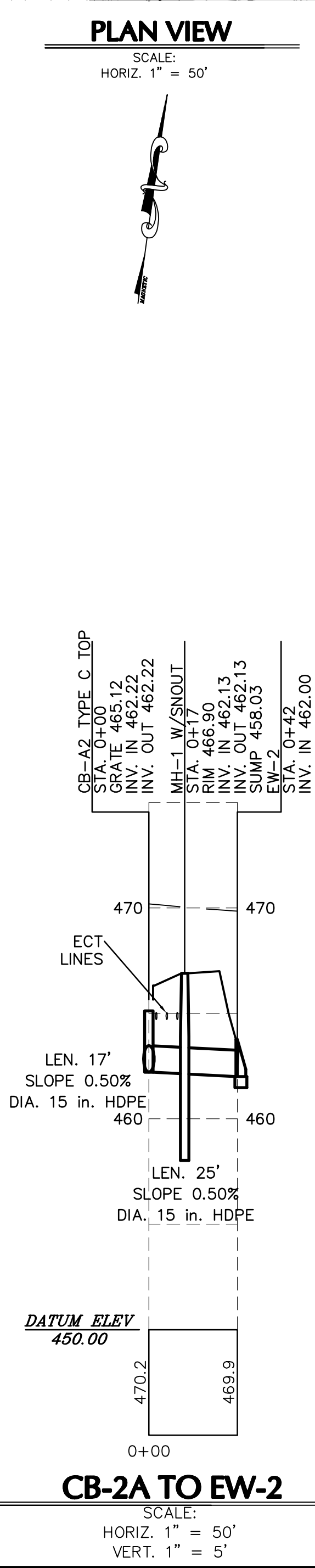
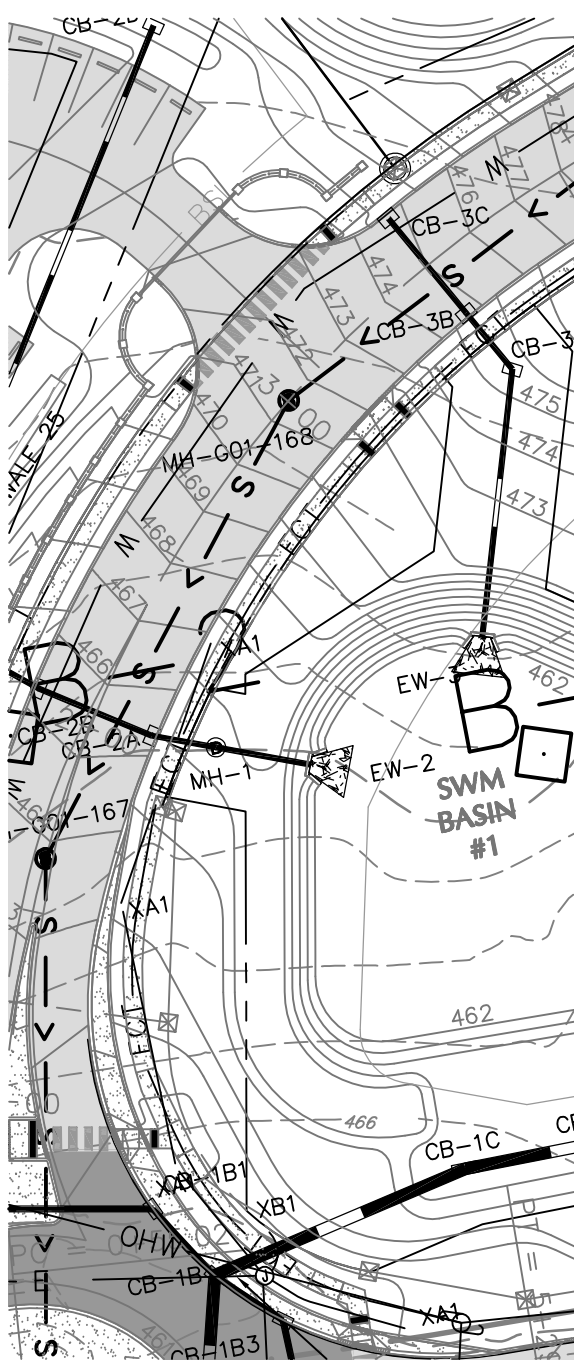
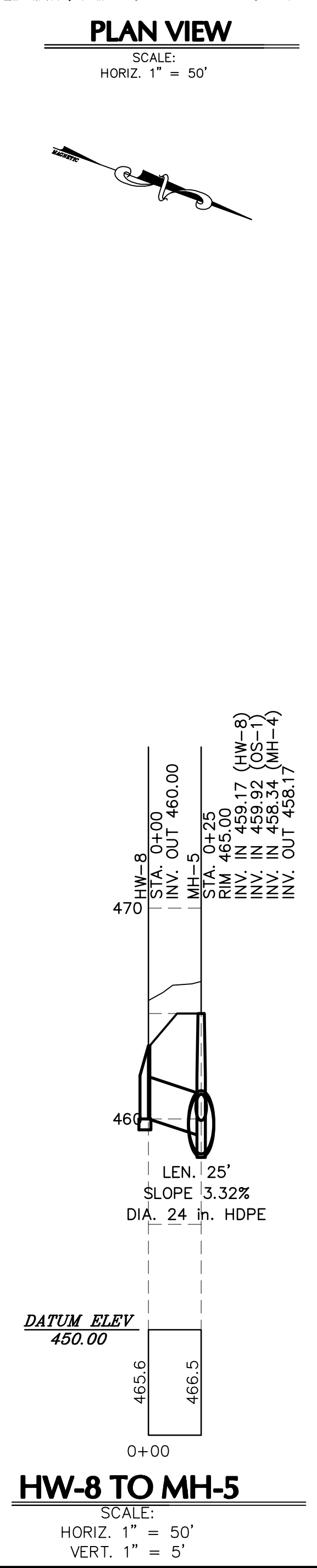
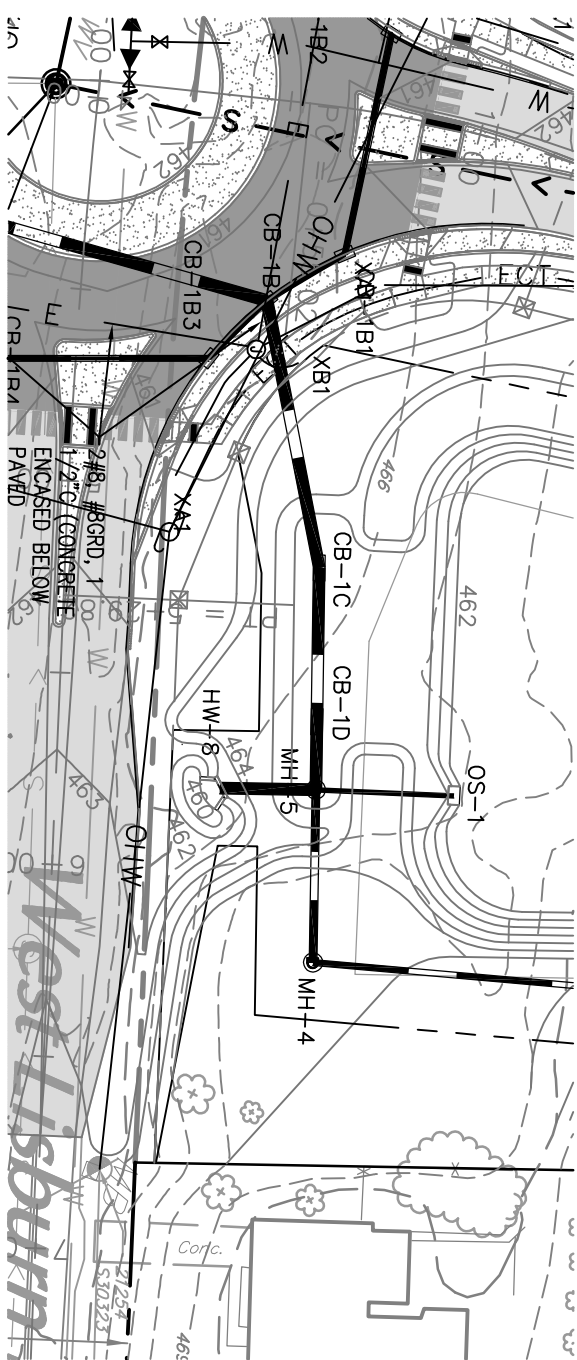


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□ LANDSCAPE ARCHITECTURE □ ENGINEERING

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A	FOR CORRECTIONS	EIS	07-31-18
A	FOR SIGNATURES	EIS	06-27-18
A	PER PENNDOT COMMENTS	EIS	06-08-18
A	PER PENNDOT COMMENTS	EIS	05-04-18
A	PER SUZ WATER DESIGN	EIS	03-28-18
A	PER 105 COMMENTS	EIS	12-27-17
A	PER SUZ WATER DESIGN	EIS	11-13-17

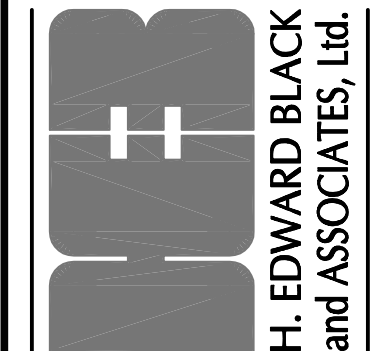


- NOTES:
1. ALL INLET GRATES HAVE A 2" SUMP.
 2. ALL CATCH BASINS HAVE STANDARD PENNDOT INLET BOXES EXCEPT AS NOTED.
 3. AT A MINIMUM THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.

NOT FOR CONSTRUCTION

DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN	
OAKWOOD HILLS	
LOCATION:	WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
PROFILES	

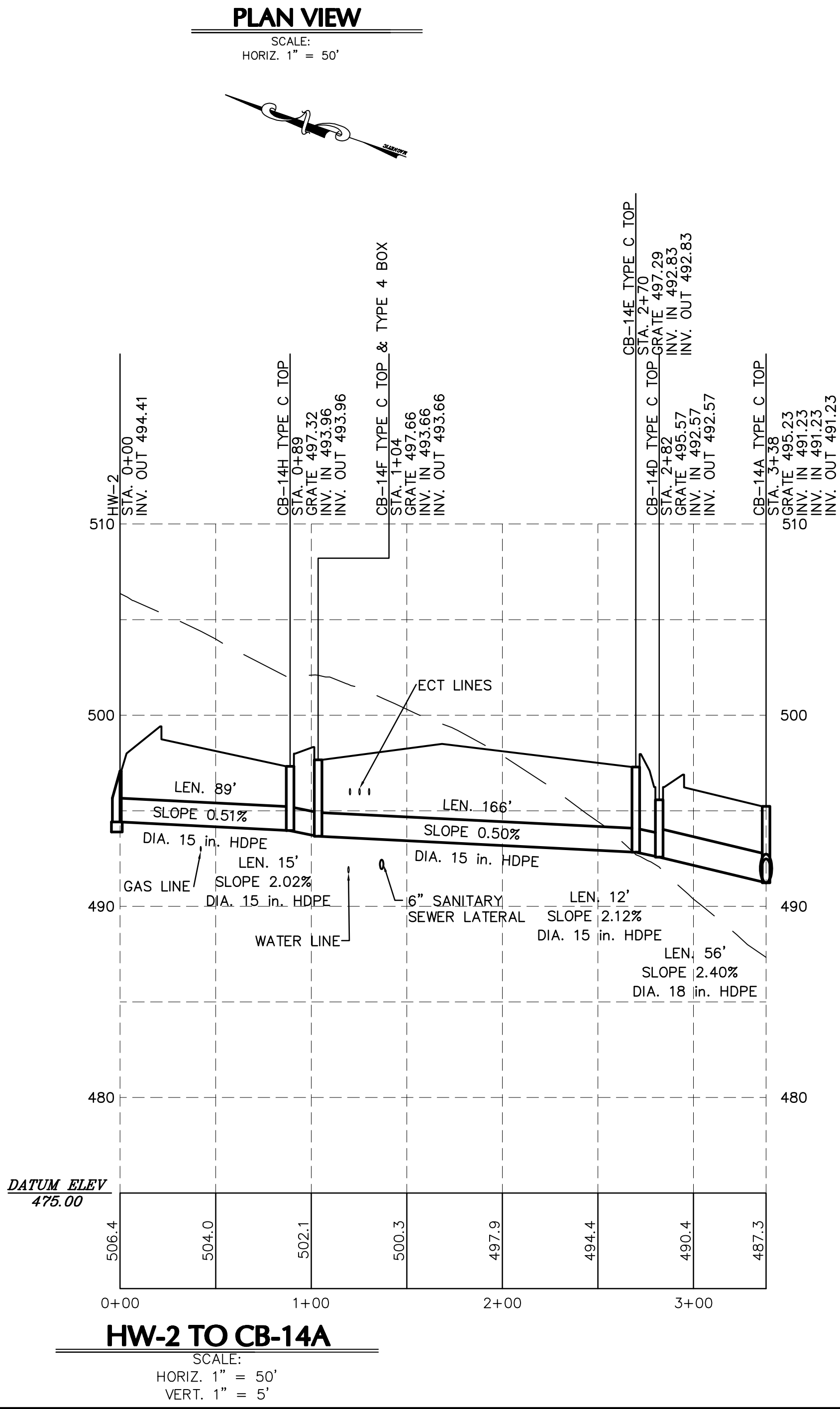
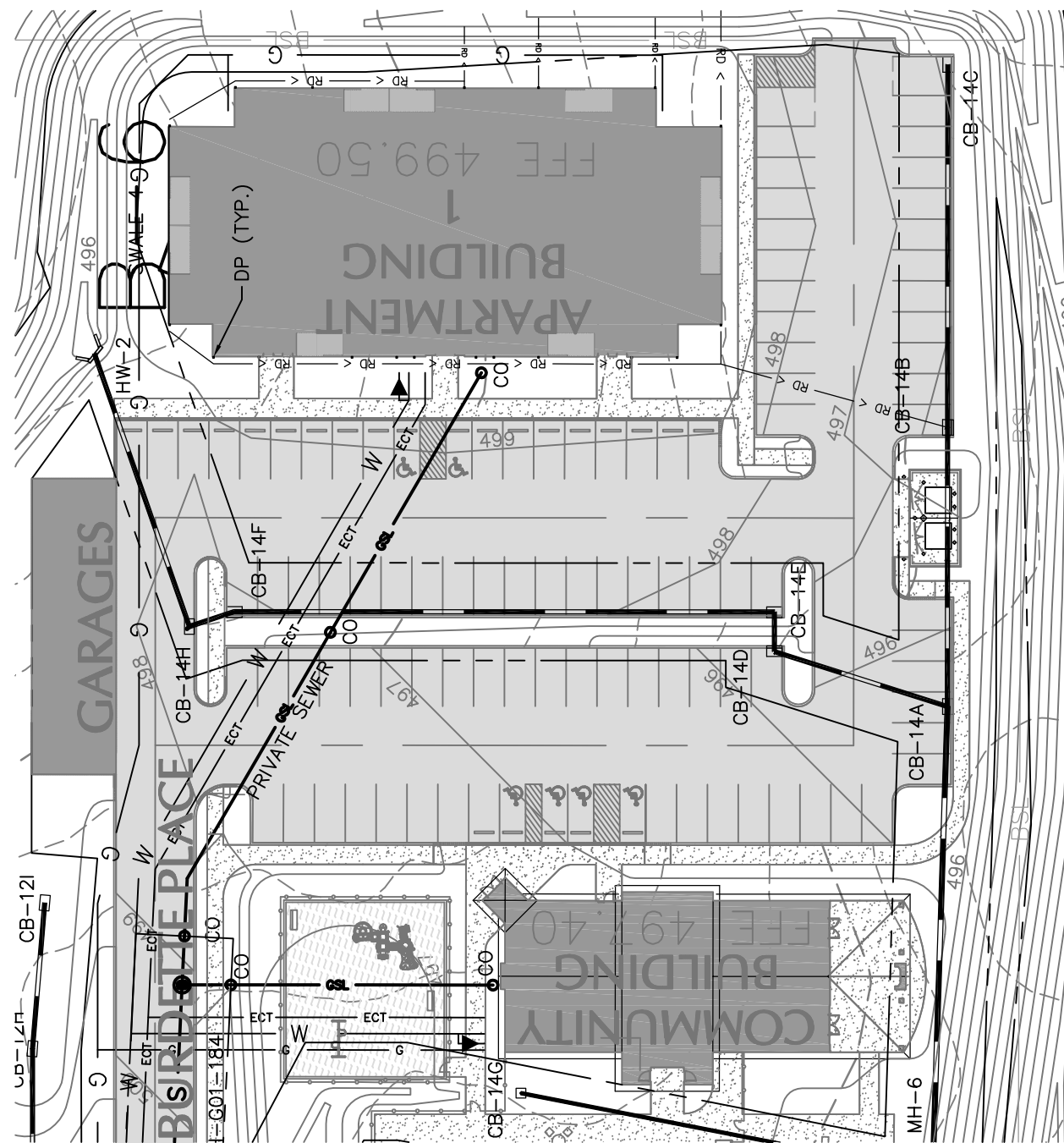
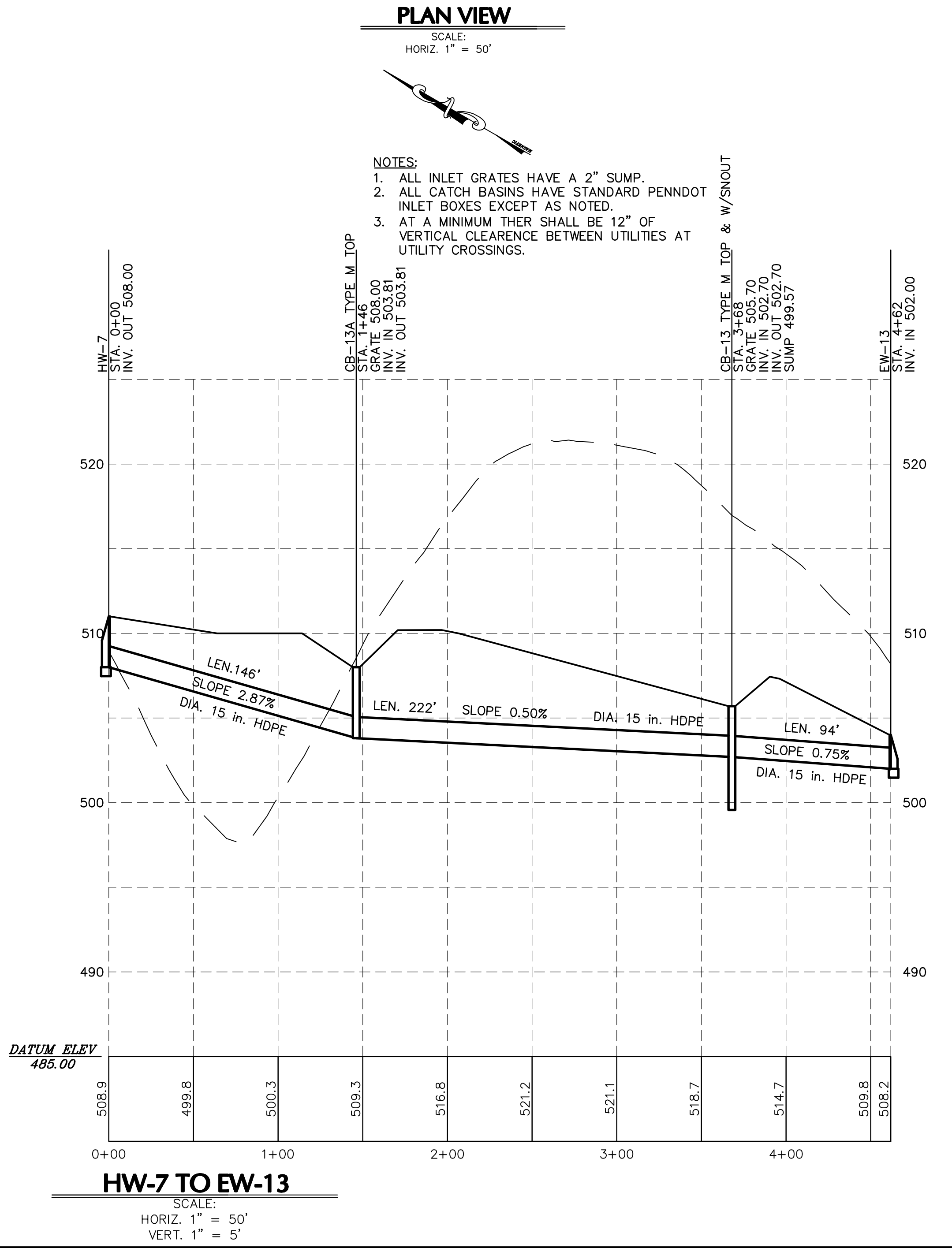
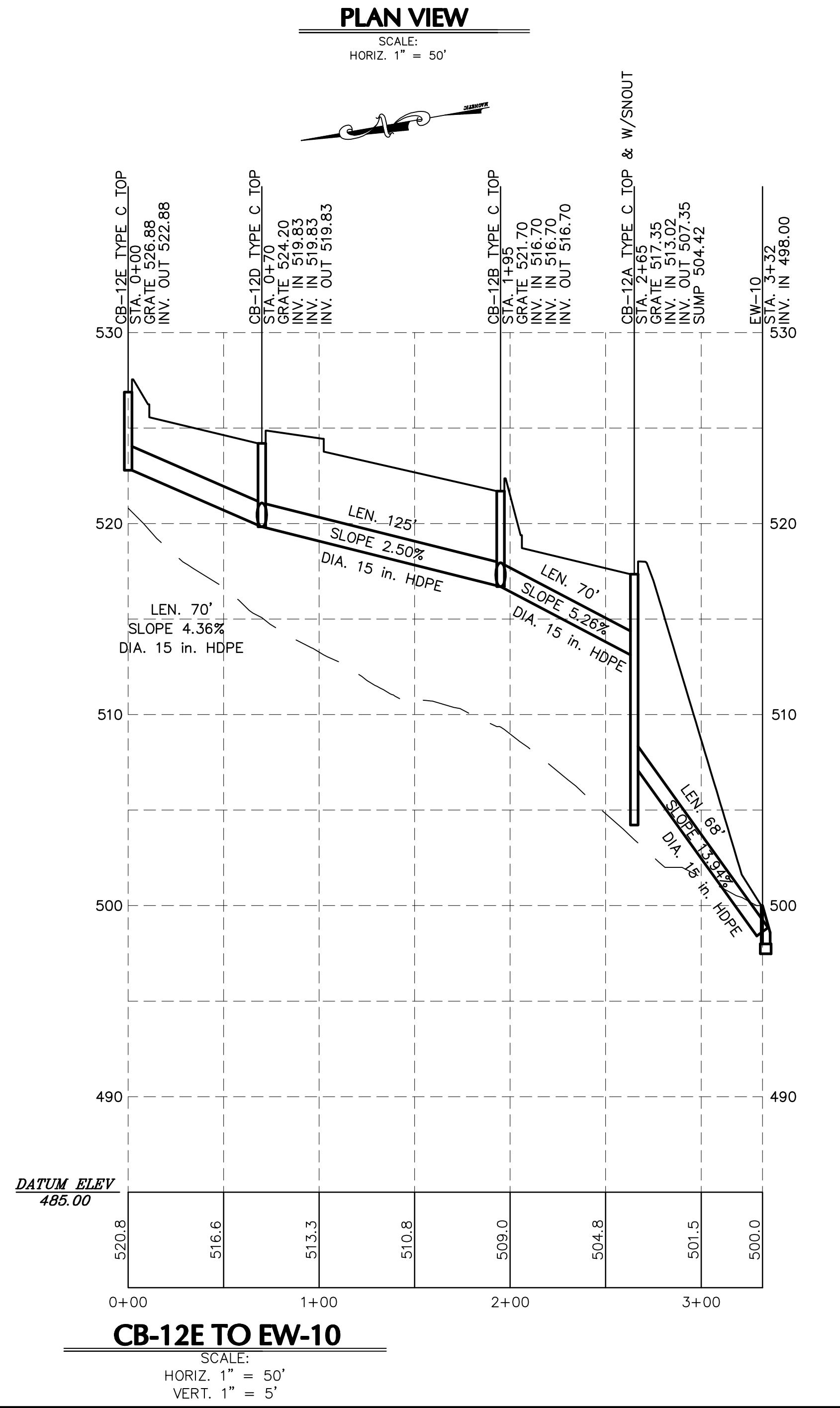


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- ☐ COMPREHENSIVE LAND AND SITE PLANNING
- ☐ LANDSCAPE ARCHITECTURE
- ☐ ENGINEERING

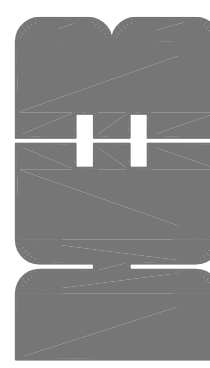
A3	FOR CORRECTIONS
A2	FOR SIGNATURES
A1	PER PENNDOT COMMENTS
A0	PER PENNDOT COMMENTS
9	PER SUEZ WATER
8	PER 105 COMMENTS
7	PER SUEZ WATER
REV	DESCRIPTION

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NOT FOR CONSTRUCTION

DRAWN BY:	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN
CHECKED BY:	CHH	OAKWOOD HILLS
DATE:	05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
SCALE:	1" = 50'	PROFILES
JOB NUMBER:	13021.020	



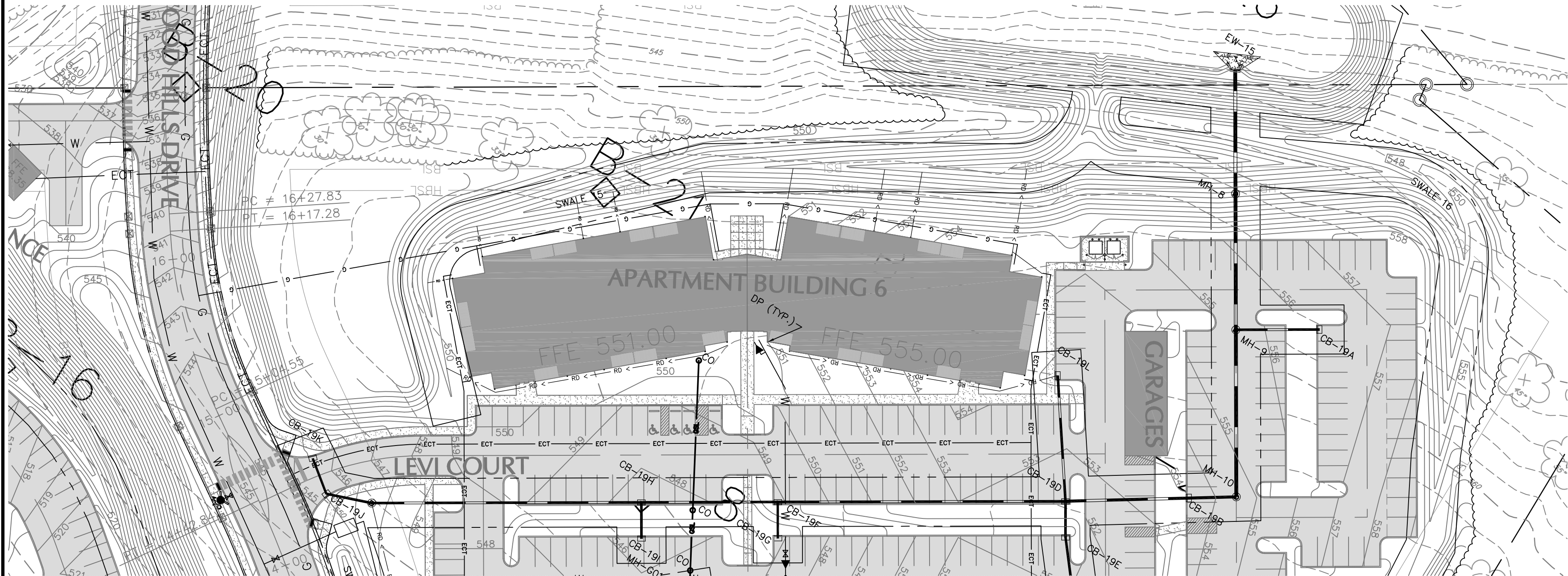
H. EDWARD BLACK
and ASSOCIATES, Ltd.

☐ COMPREHENSIVE LAND AND SITE PLANNING
☐ LANDSCAPE ARCHITECTURE
☐ ENGINEERING

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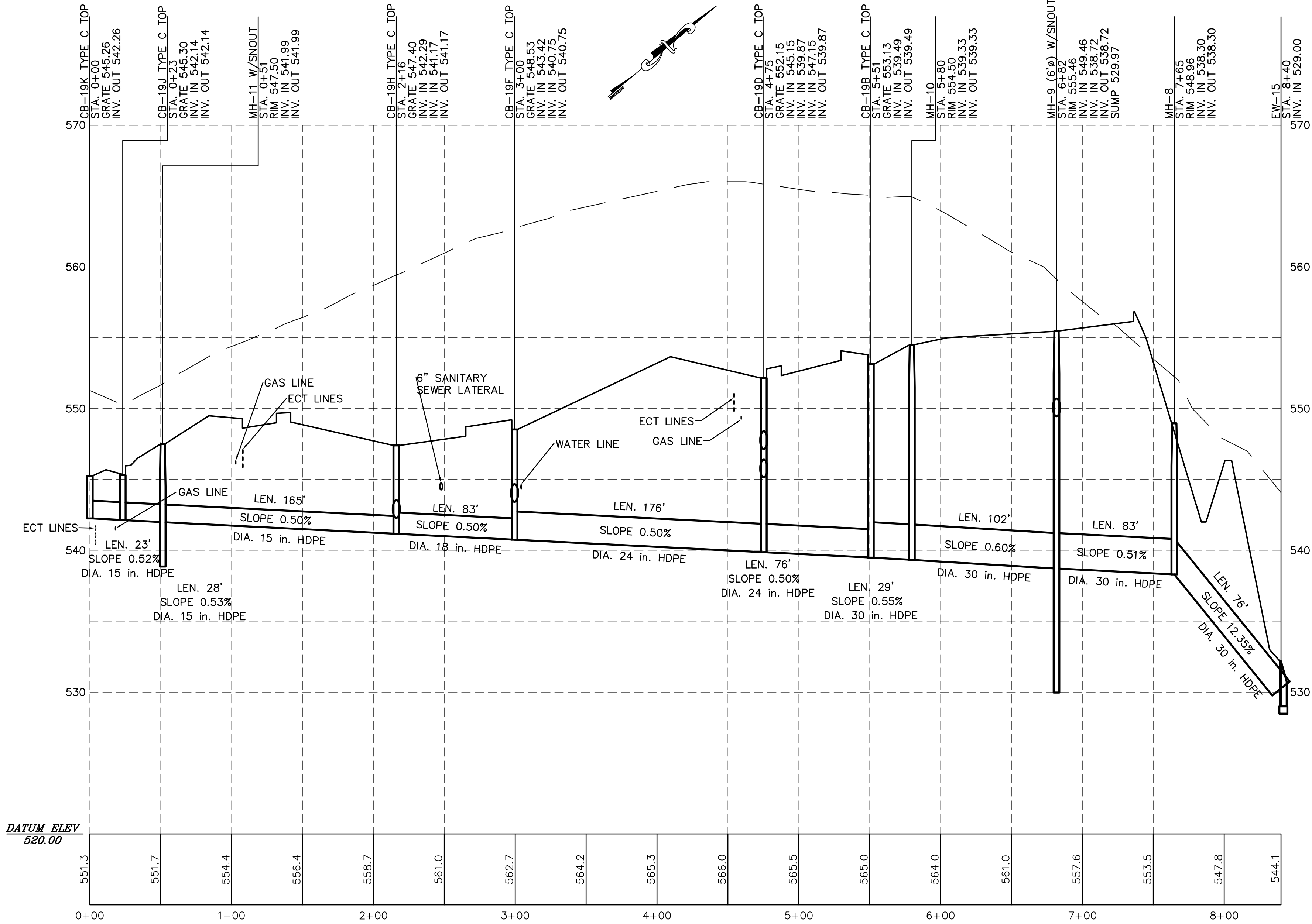
REV	DESCRIPTION	BY	DATE
A	FOR CORRECTIONS	EIS	07-31-18
A	FOR SIGNATURES	EIS	06-27-18
A	PER PENNDOT COMMENTS	EIS	06-08-18
A	PER PENNDOT COMMENTS	EIS	05-04-18
A	PER SUZ WATER DESIGN	EIS	03-28-18
A	PER 105 COMMENTS	EIS	12-27-17
A	PER SUZ WATER DESIGN	EIS	11-13-17

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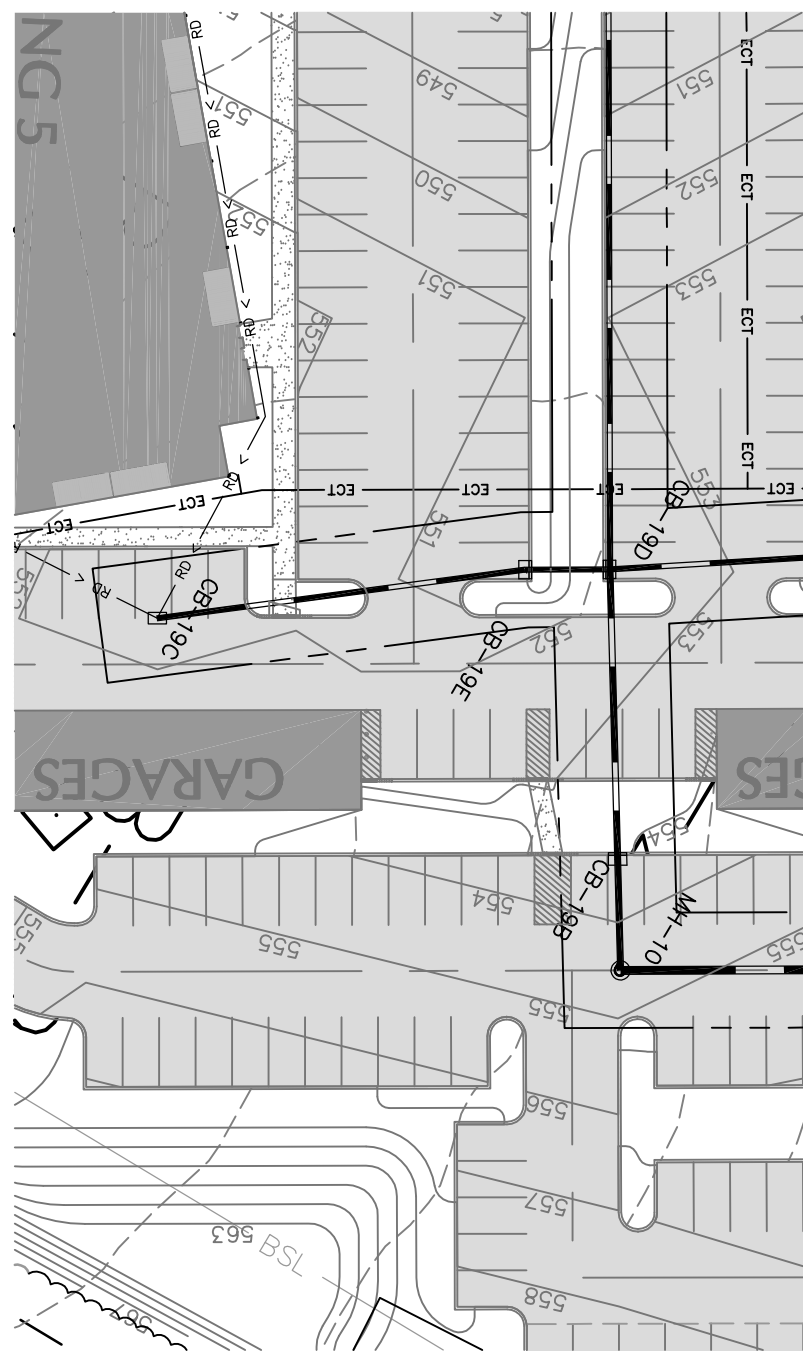
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



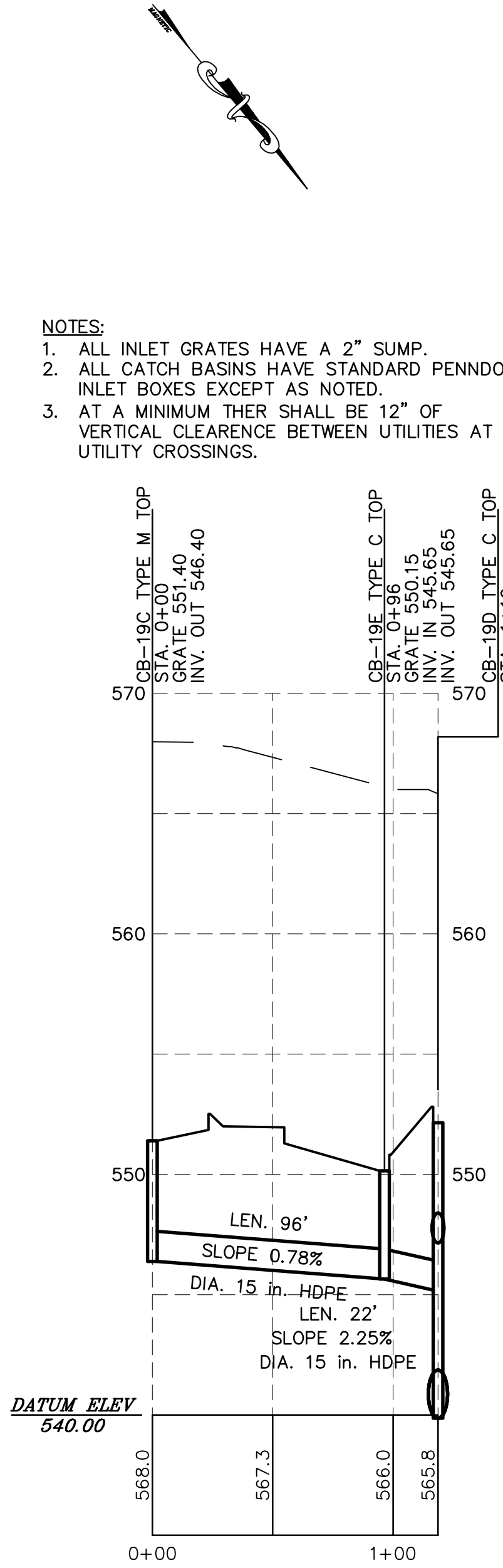
CB-19K TO EW-15

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



PLAN VIEW

SCALE:
HORIZ. 1" = 50'



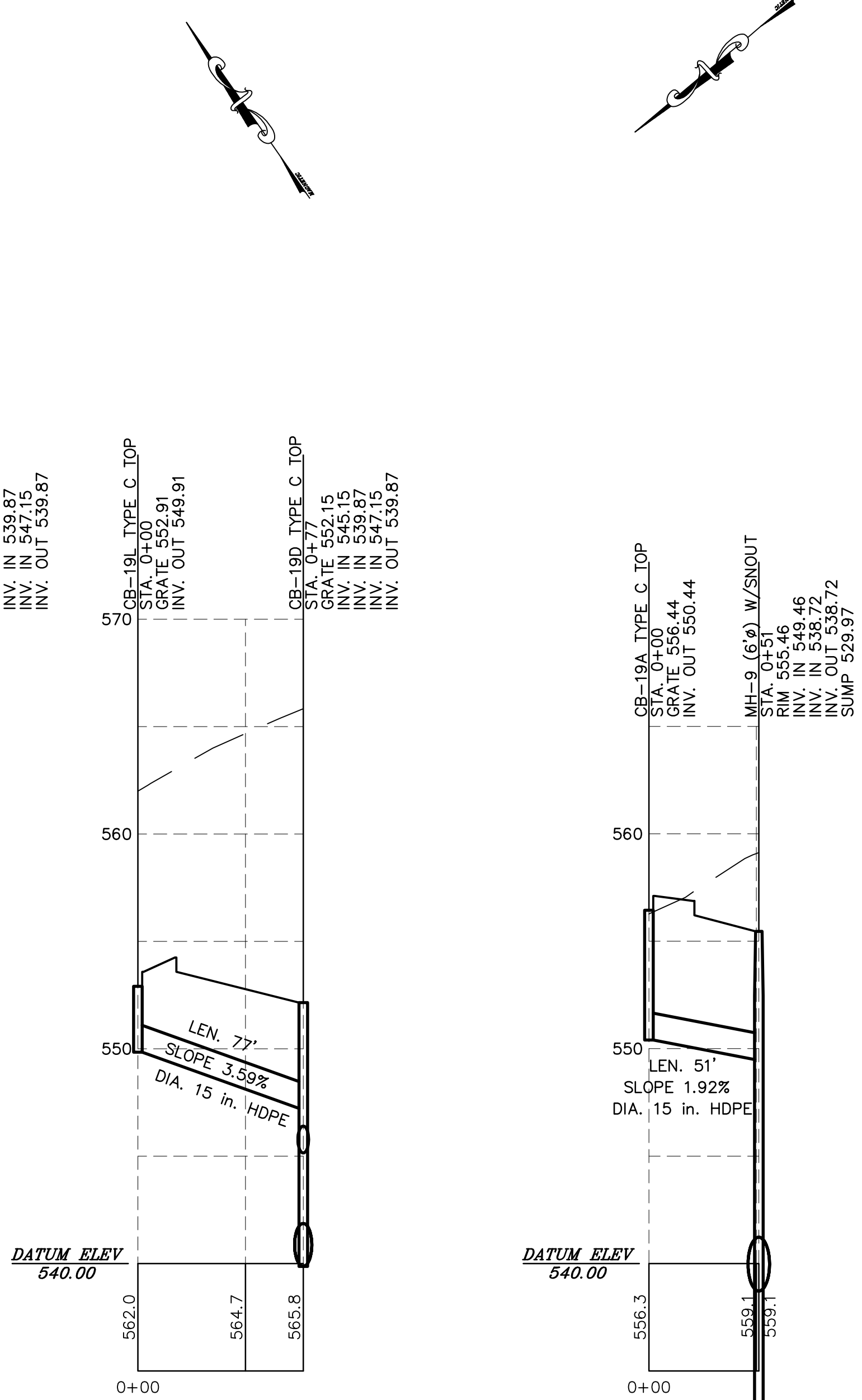
CB-19C TO CB-19D

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



PLAN VIEW

SCALE:
HORIZ. 1" = 50'



CB-19L TO CB-19D

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

CB-19A TO MH-9

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

- NOTES:
1. ALL INLET GRATES HAVE A 2" SUMP.
 2. ALL CATCH BASINS HAVE STANDARD PENNDOT INLET BOXES EXCEPT AS NOTED.
 3. AT A MINIMUM THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.

NOT FOR CONSTRUCTION

DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN
OAKWOOD HILLS
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
PROFILES

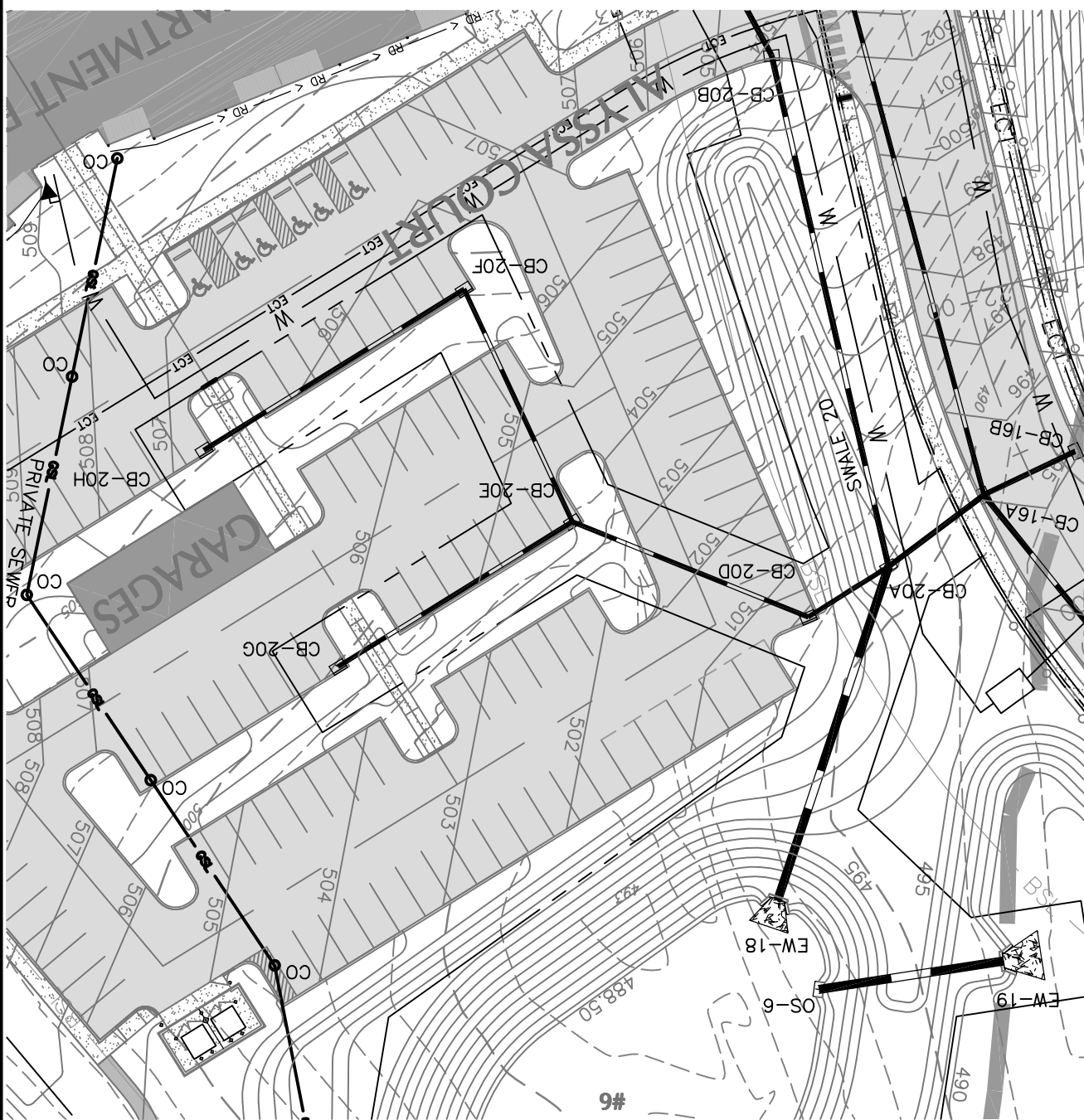
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<input type="checkbox"/> ENGINEERING

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and ASSOCIATES, Ltd.

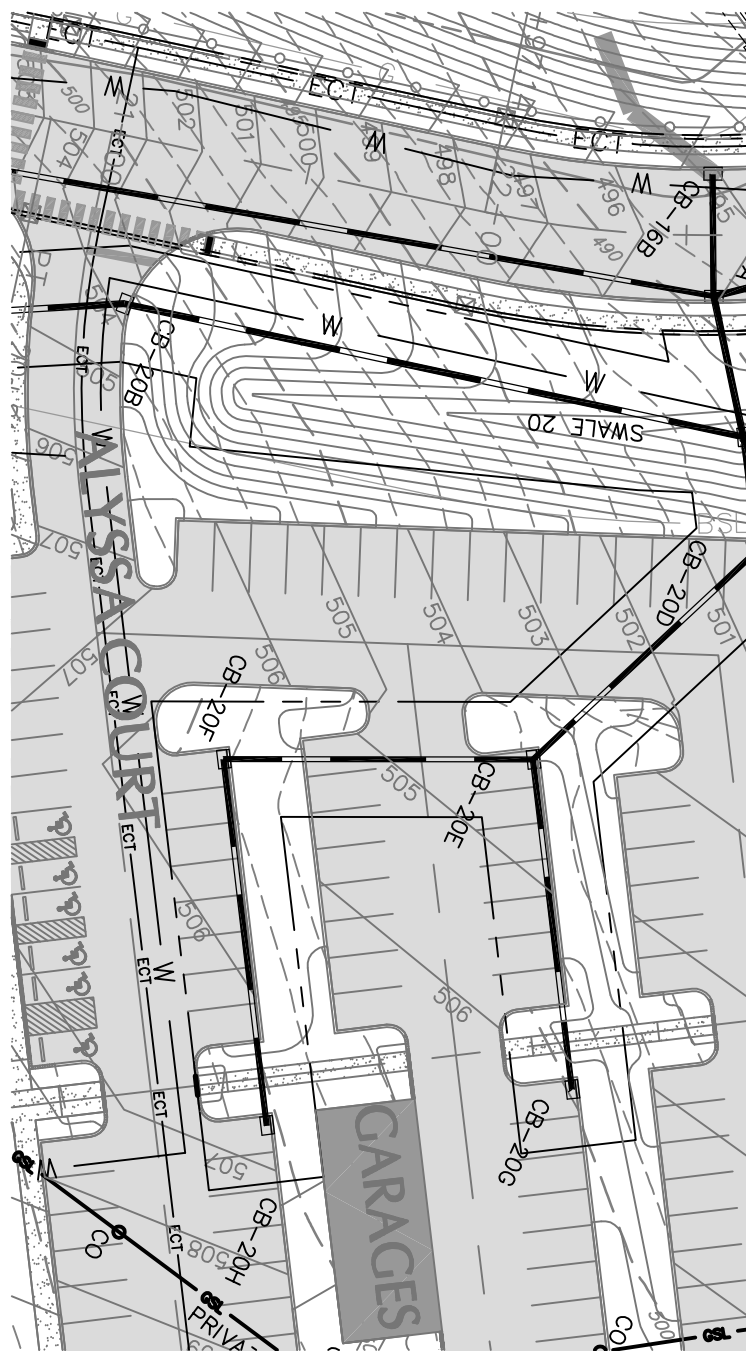
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A ₂	FOR SIGNATURES
A ₁₁	PER PENNDOT COMMENTS
A ₁₀	PER PENNDOT COMMENTS
A ₉	PER SUEZ WATER
A ₈	PER 105 COMMENTS
A ₇	PER SUEZ WATER
REV.	DESCRIPTION

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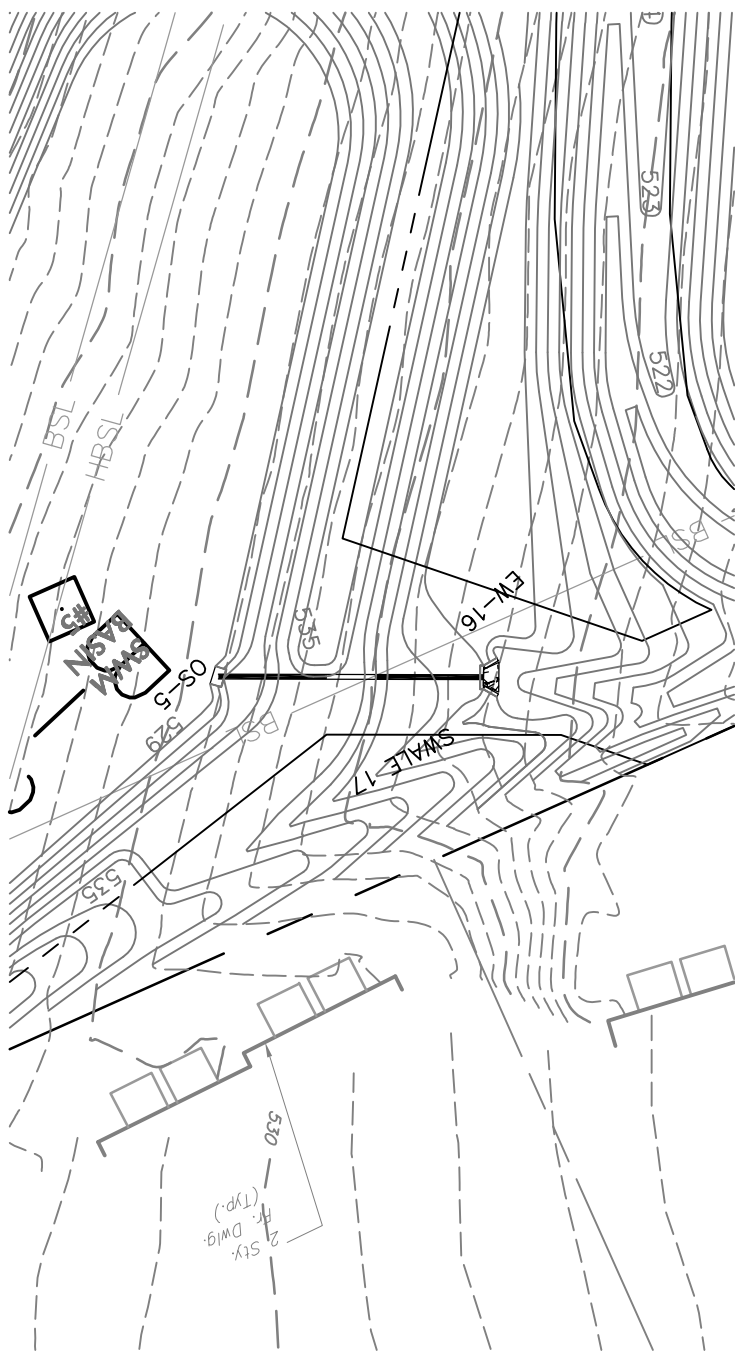
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



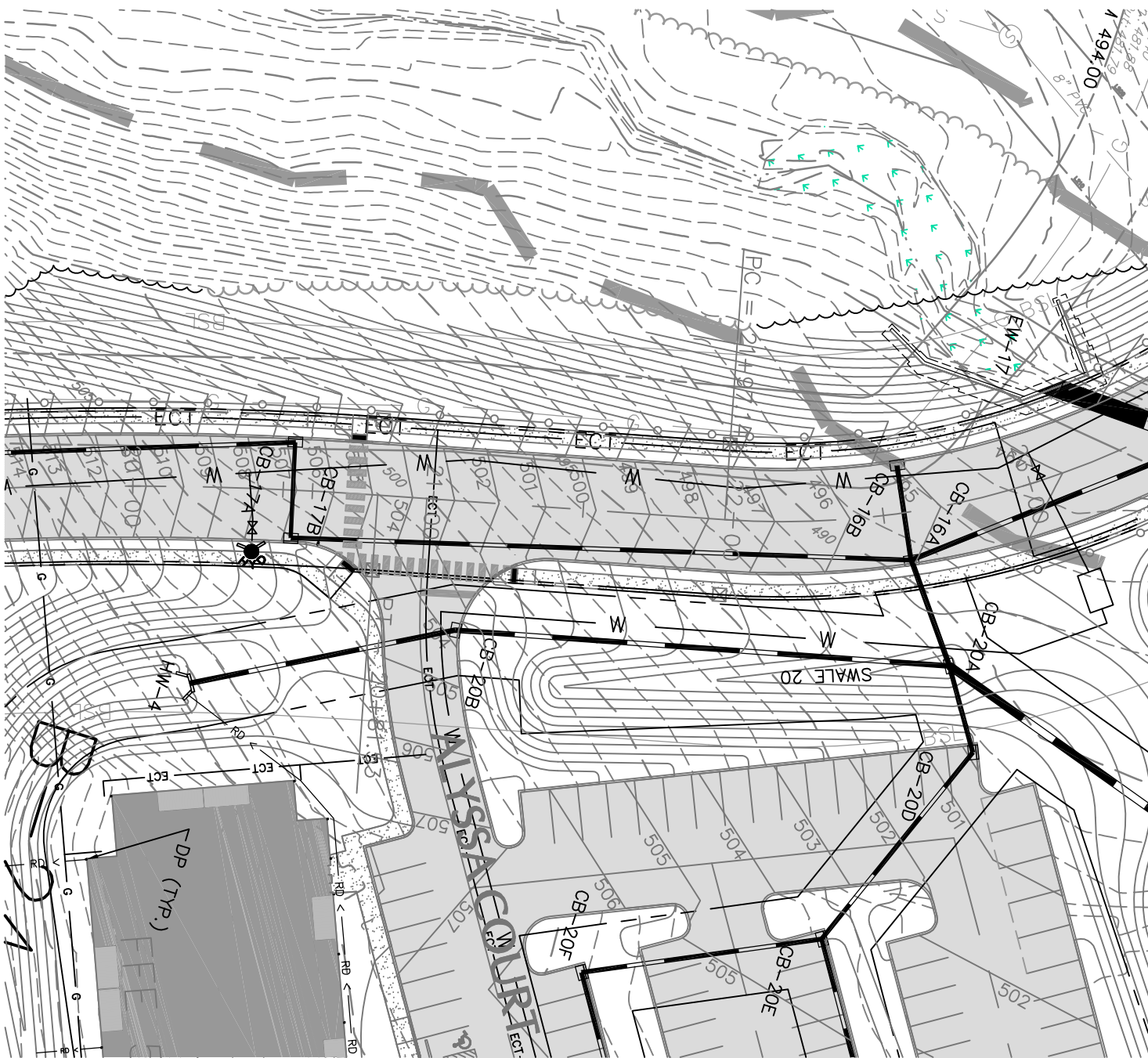
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



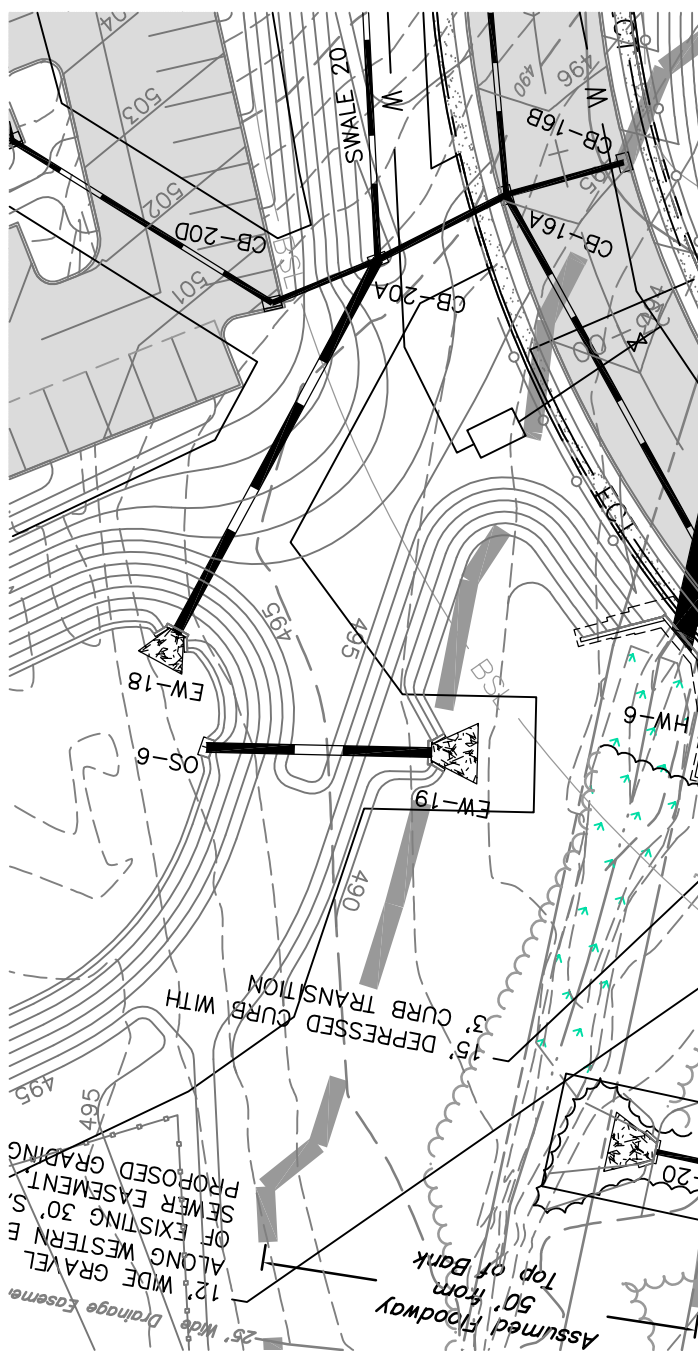
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



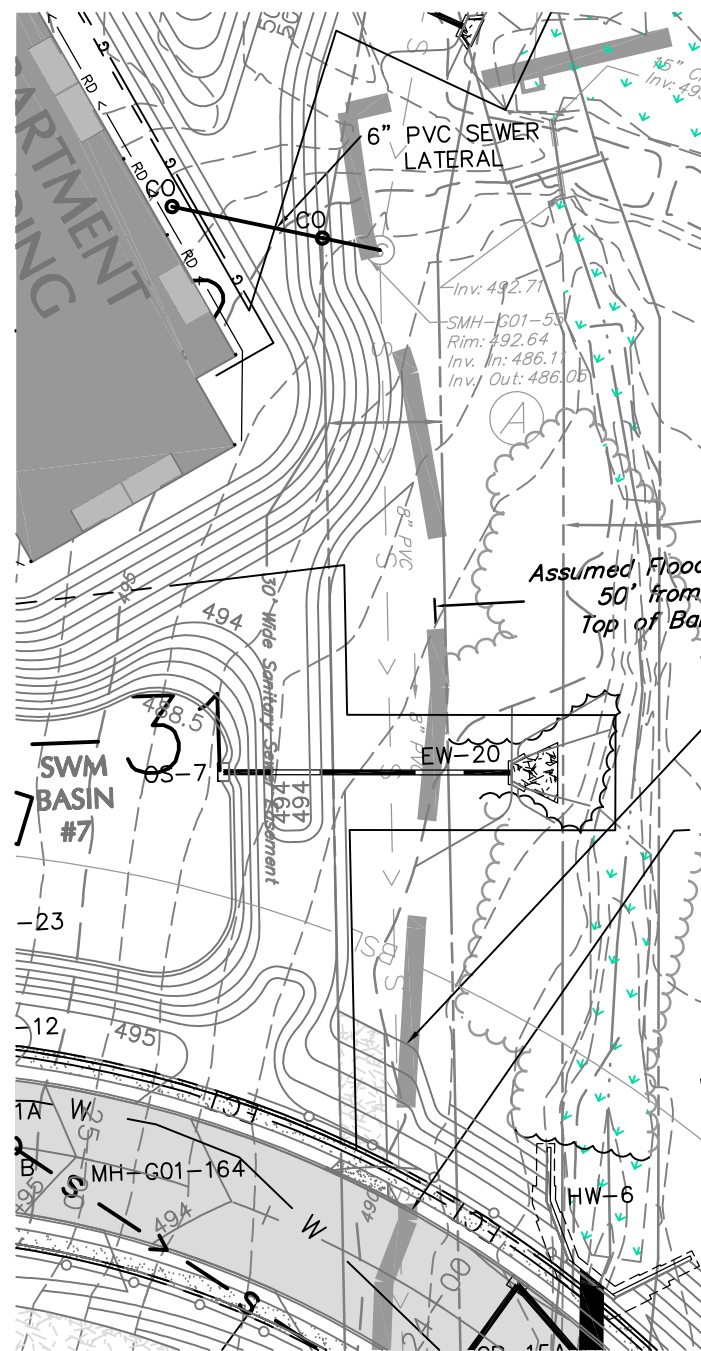
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



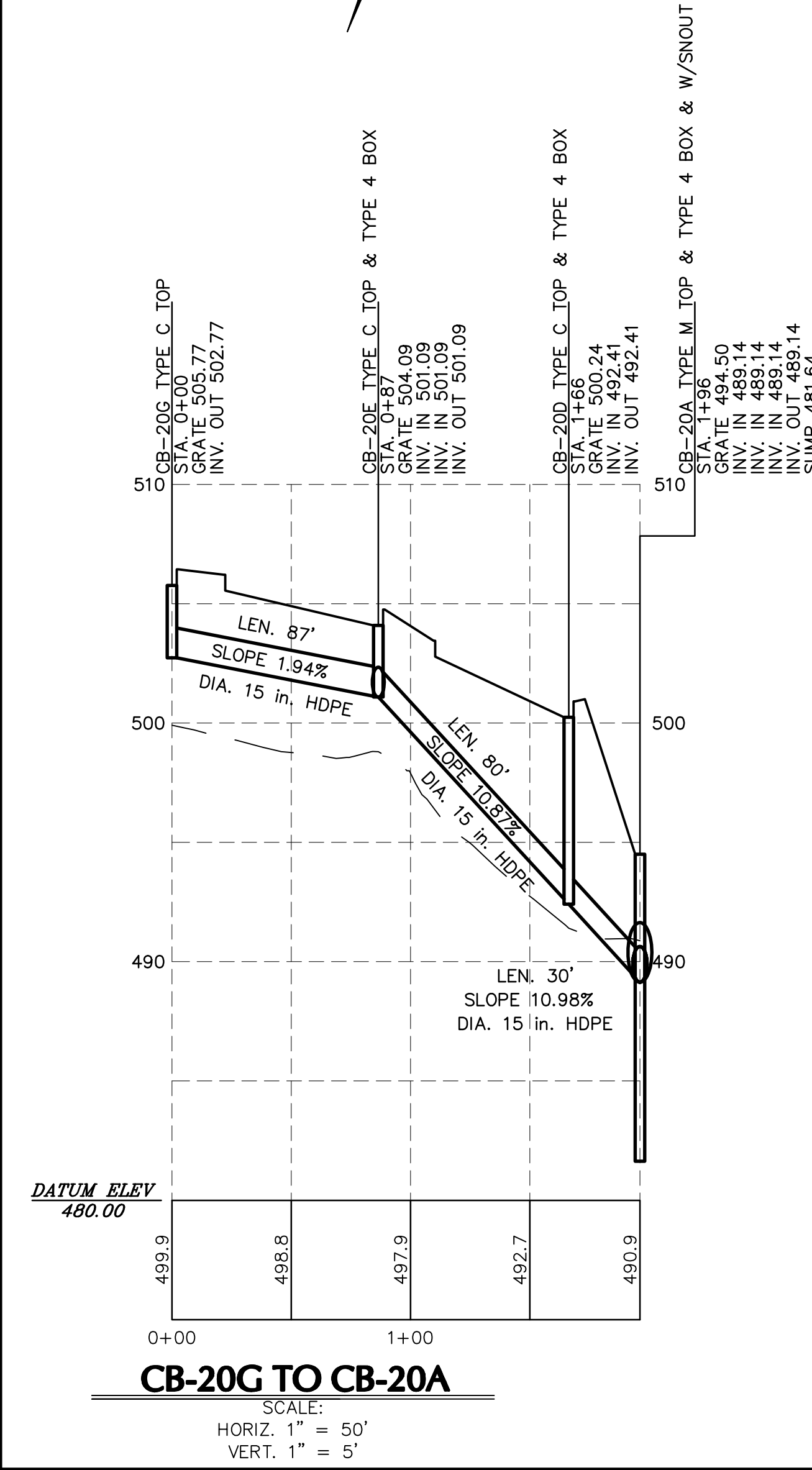
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



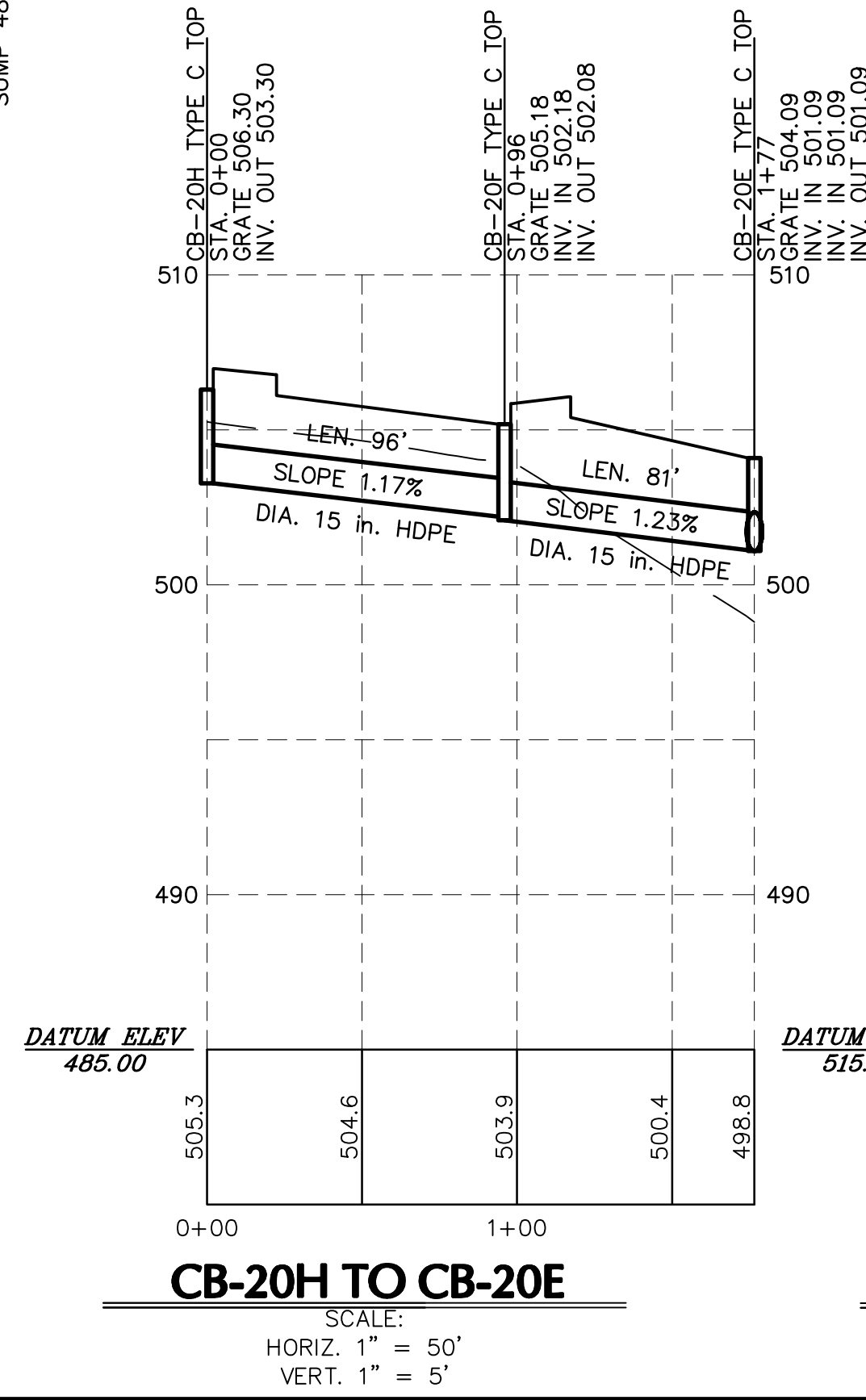
PLAN VIEW

SCALE:
HORIZ. 1" = 50'



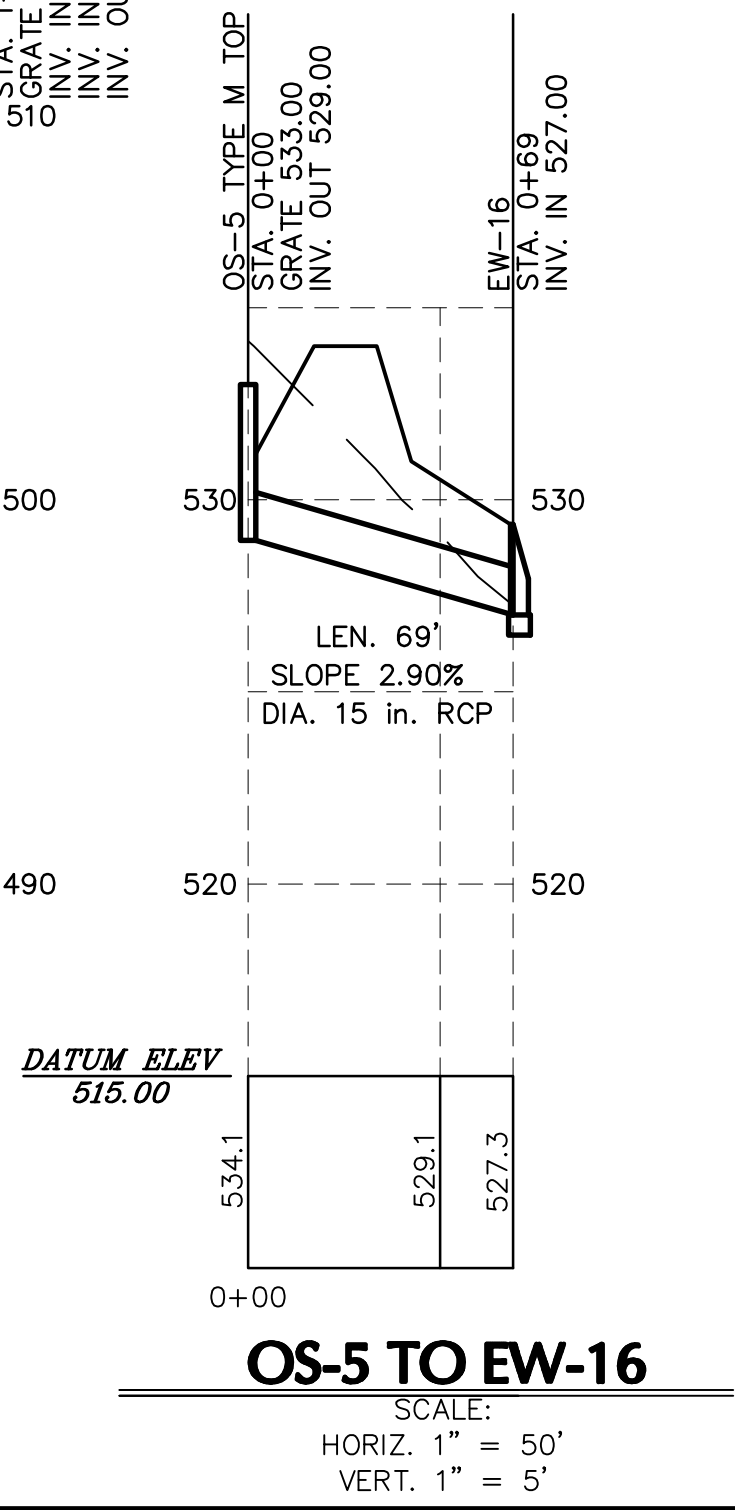
CB-20G TO CB-20A

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



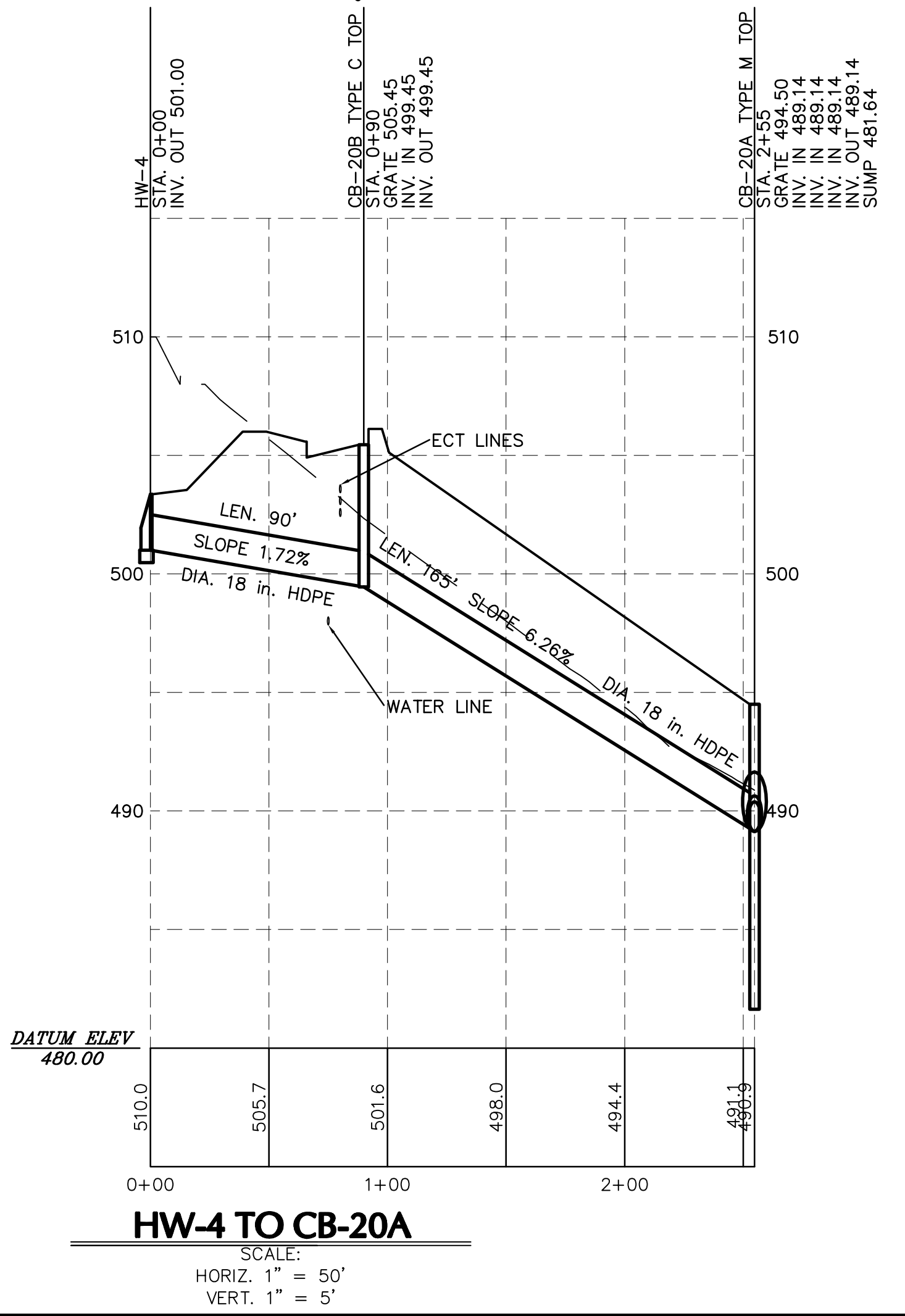
CB-20H TO CB-20E

SCALE:
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VERT. 1" = 5'



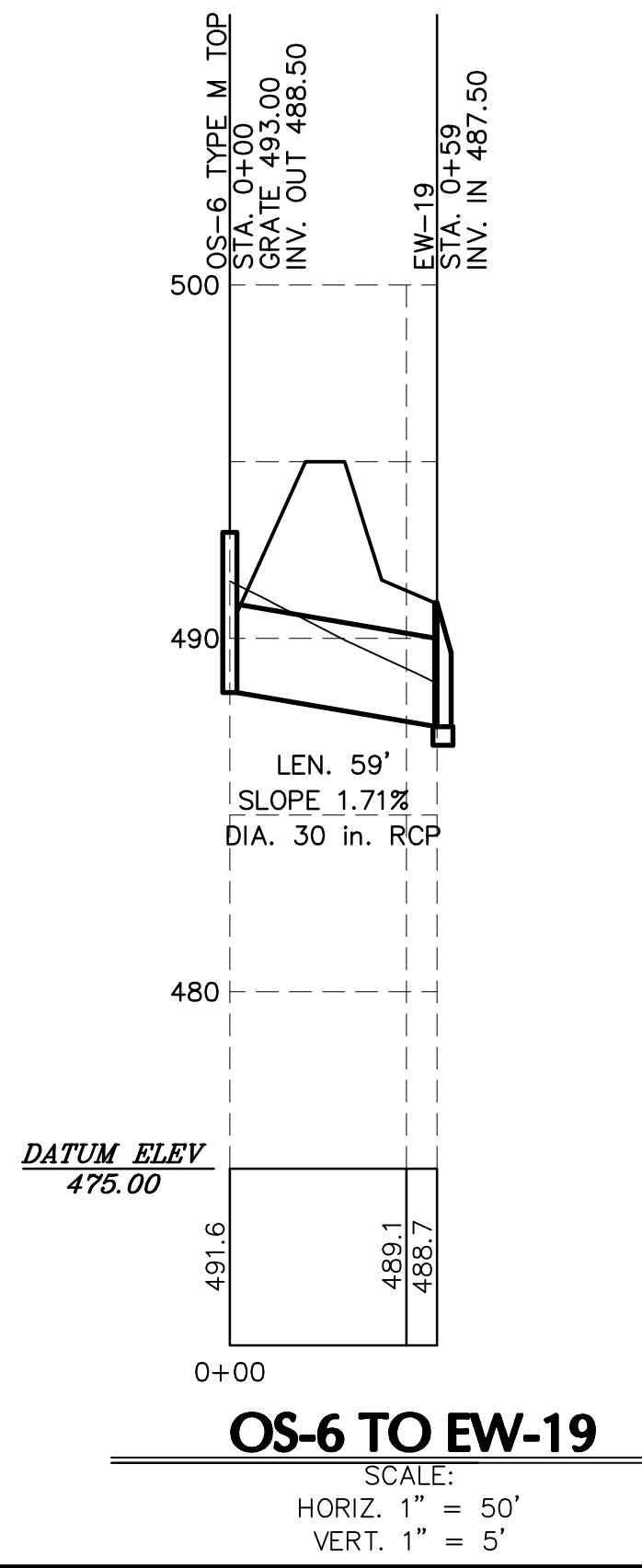
OS-5 TO EW-16

SCALE:
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VERT. 1" = 5'



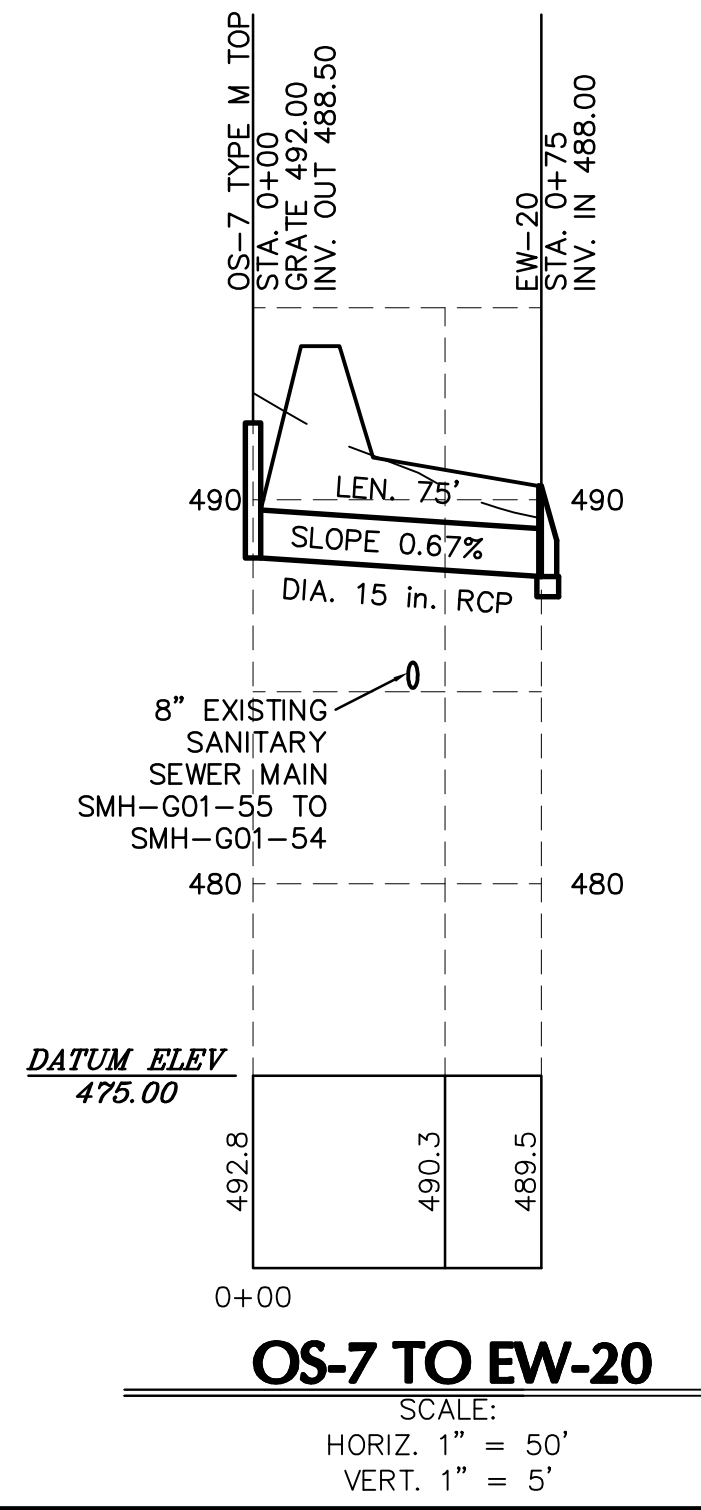
HW-4 TO CB-20A

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



OS-6 TO EW-19

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



OS-7 TO EW-20

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

- NOTES:
1. ALL INLET GRATES HAVE A 2" SUMP.
 2. ALL CATCH BASINS HAVE STANDARD PENNDOT INLET BOXES EXCEPT AS NOTED.
 3. AT A MINIMUM, THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.

NOT FOR CONSTRUCTION

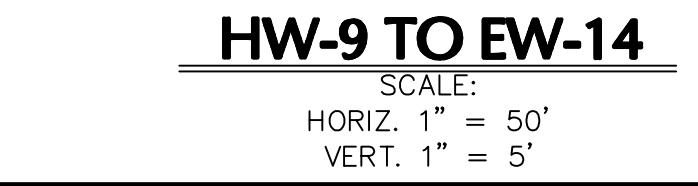
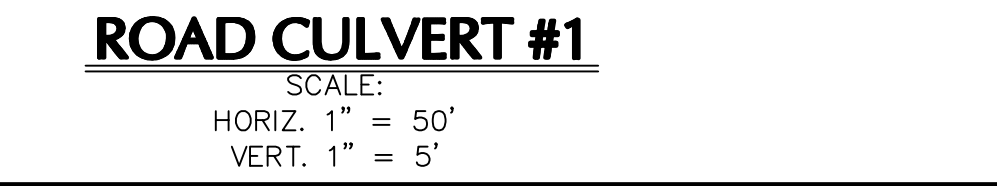
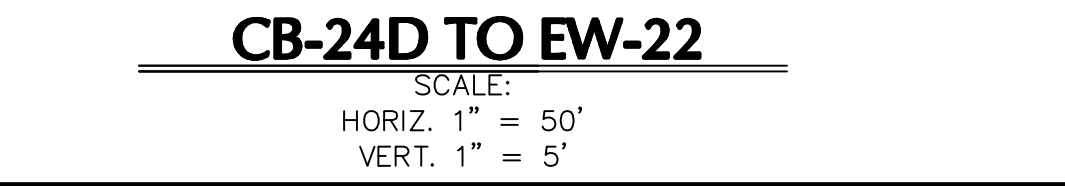
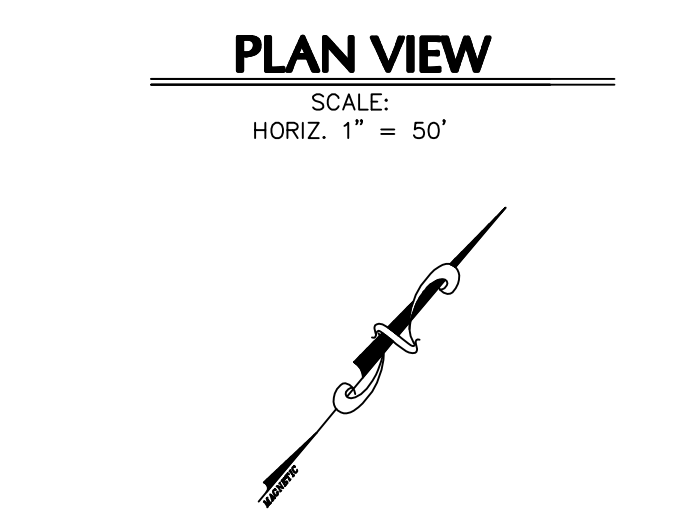
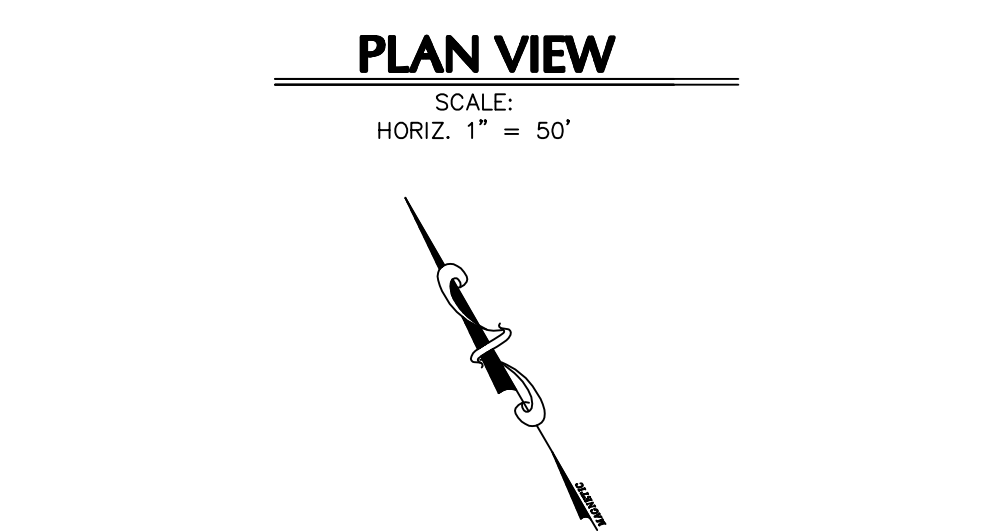
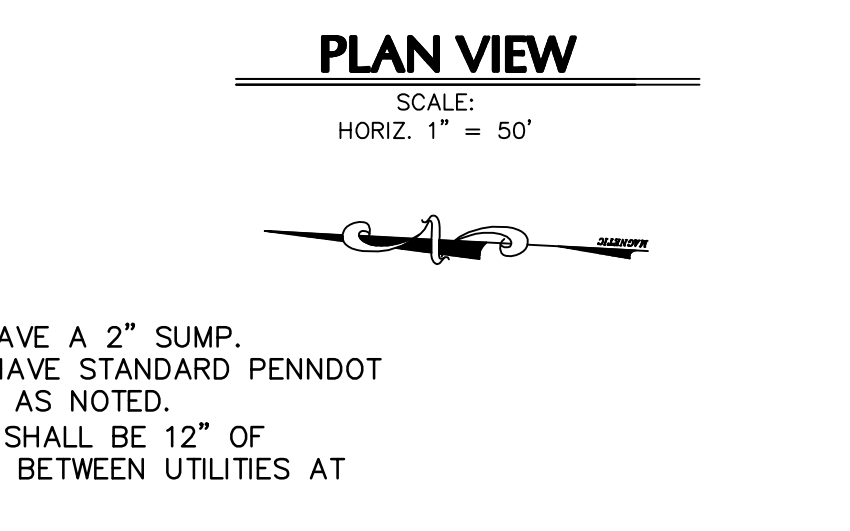
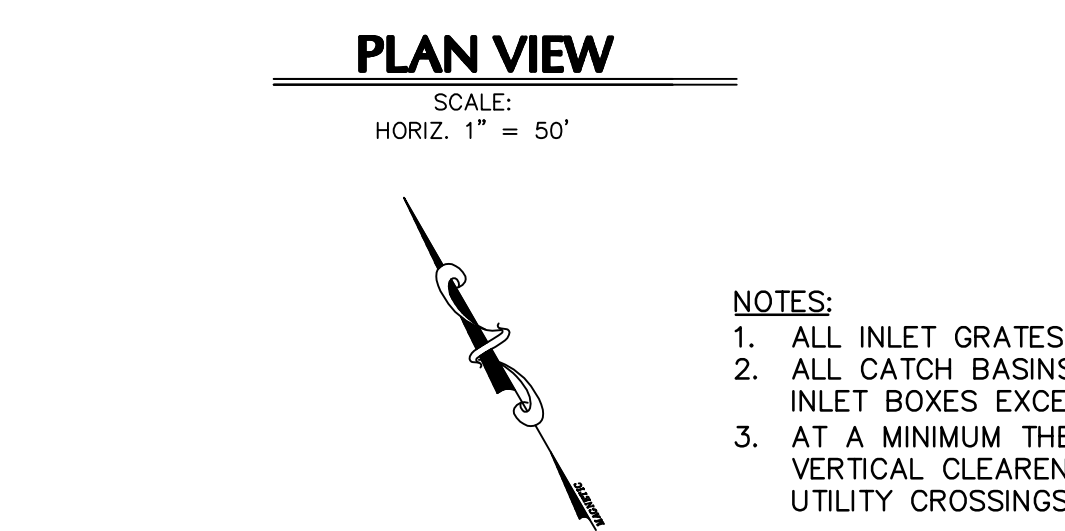
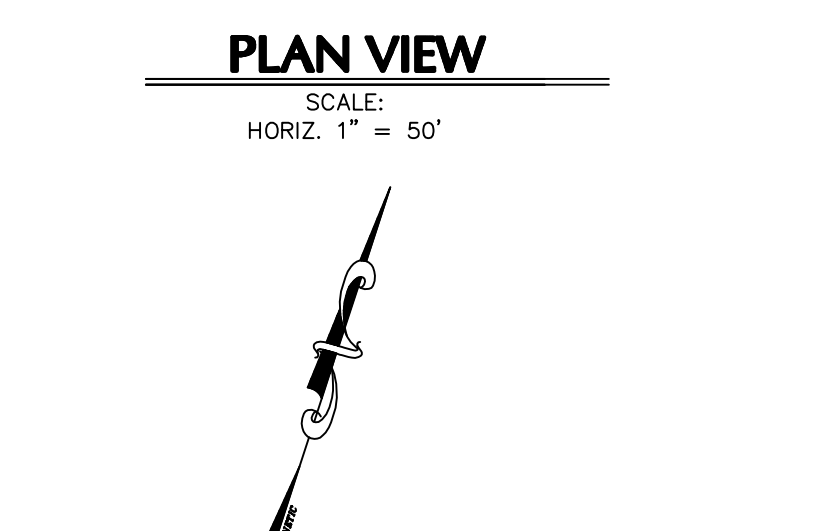
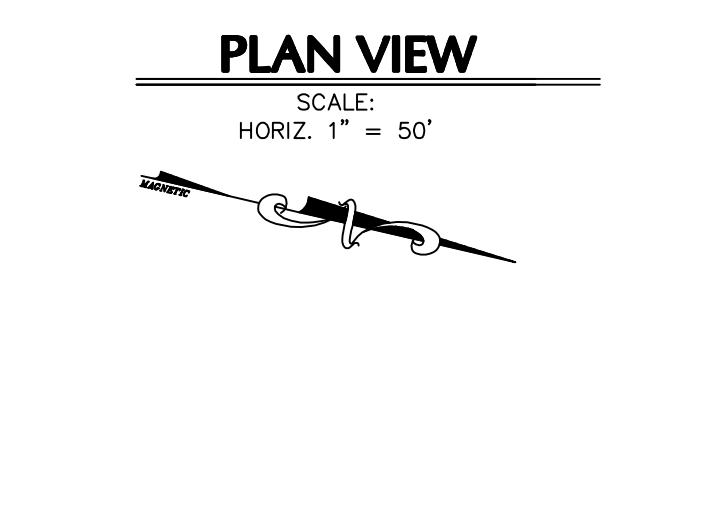
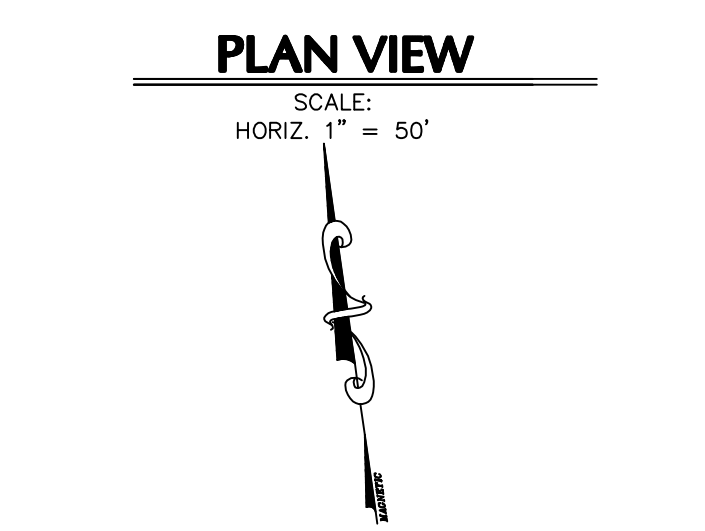
DRAWN BY:	EIS
CHECKED BY:	CHH
DATE:	05-01-17
SCALE:	1" = 50'
JOB NUMBER:	13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN
OAKWOOD HILLS
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
PROFILES


	<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING
<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> ENGINEERING
2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/7233-1026 • FAX 717/7233-2192	
H. EDWARD BLACK and ASSOCIATES, Ltd.	

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A	FOR CORRECTIONS	EIS	07-31-18
A	FOR SIGNATURES	EIS	06-27-18
A	FOR PENNDOT COMMENTS	EIS	06-08-18
A	FOR PER PENNDOT COMMENTS	EIS	05-04-18
A	FOR PER SUEZ WATER DESIGN	EIS	03-28-18
A	FOR 105 COMMENTS	EIS	12-27-17
A	FOR SUEZ WATER DESIGN	EIS	11-13-17
REV	DESCRIPTION	BY	DATE

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1. ALL INLET GRATES HAVE A 2" SUMP.
2. ALL CATCH BASINS HAVE STANDARD PENNDOT INLET BOXES EXCEPT AS NOTED.
3. AT A MINIMUM THERE SHALL BE 12" OF VERTICAL CLEARANCE BETWEEN UTILITIES AT UTILITY CROSSINGS.



**H. EDWARD BLACK
and ASSOCIATES, Ltd.**

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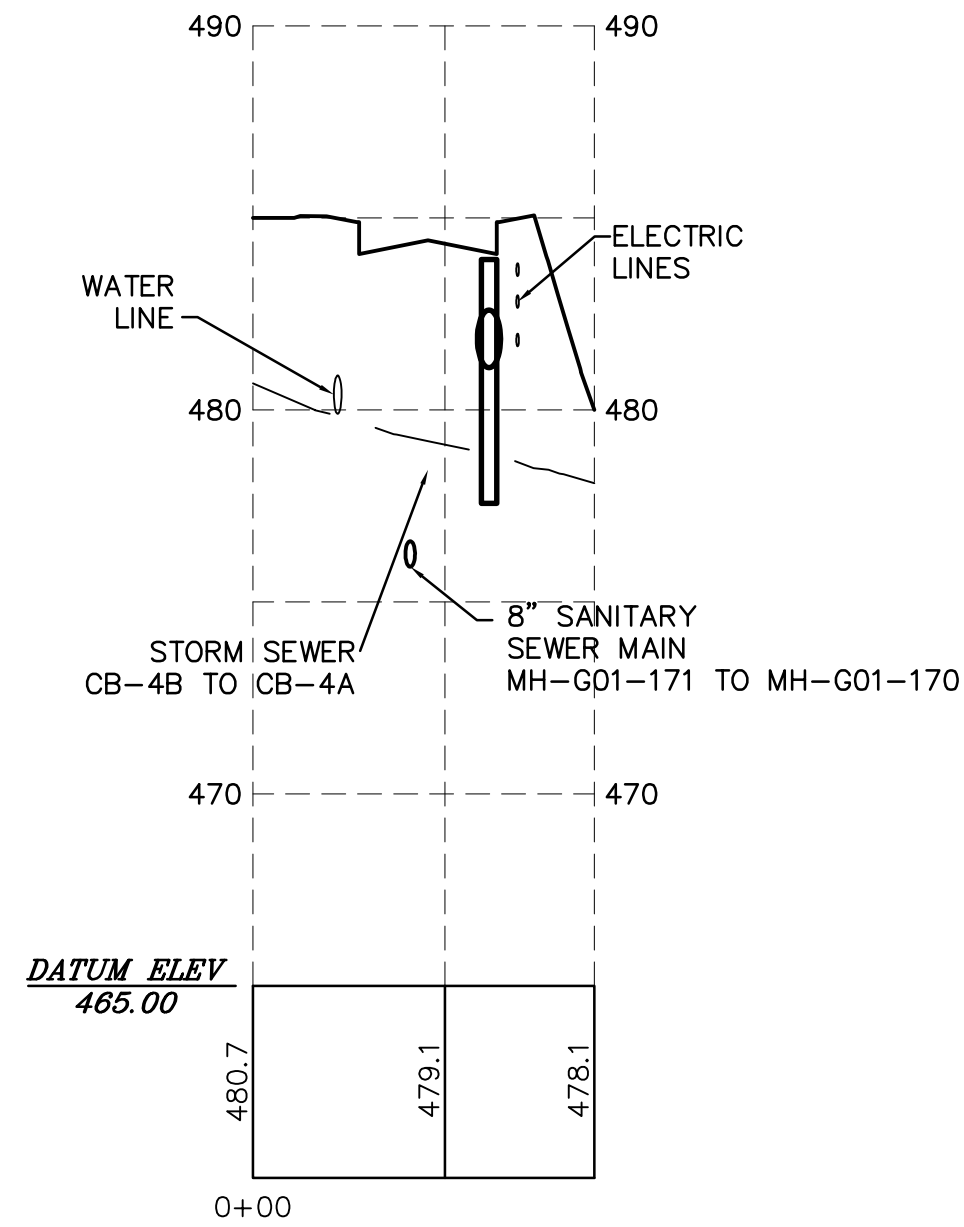
☐ COMPREHENSIVE LAND AND SITE PLANNING

☐ LANDSCAPE ARCHITECTURE ☐ ENGINEERING

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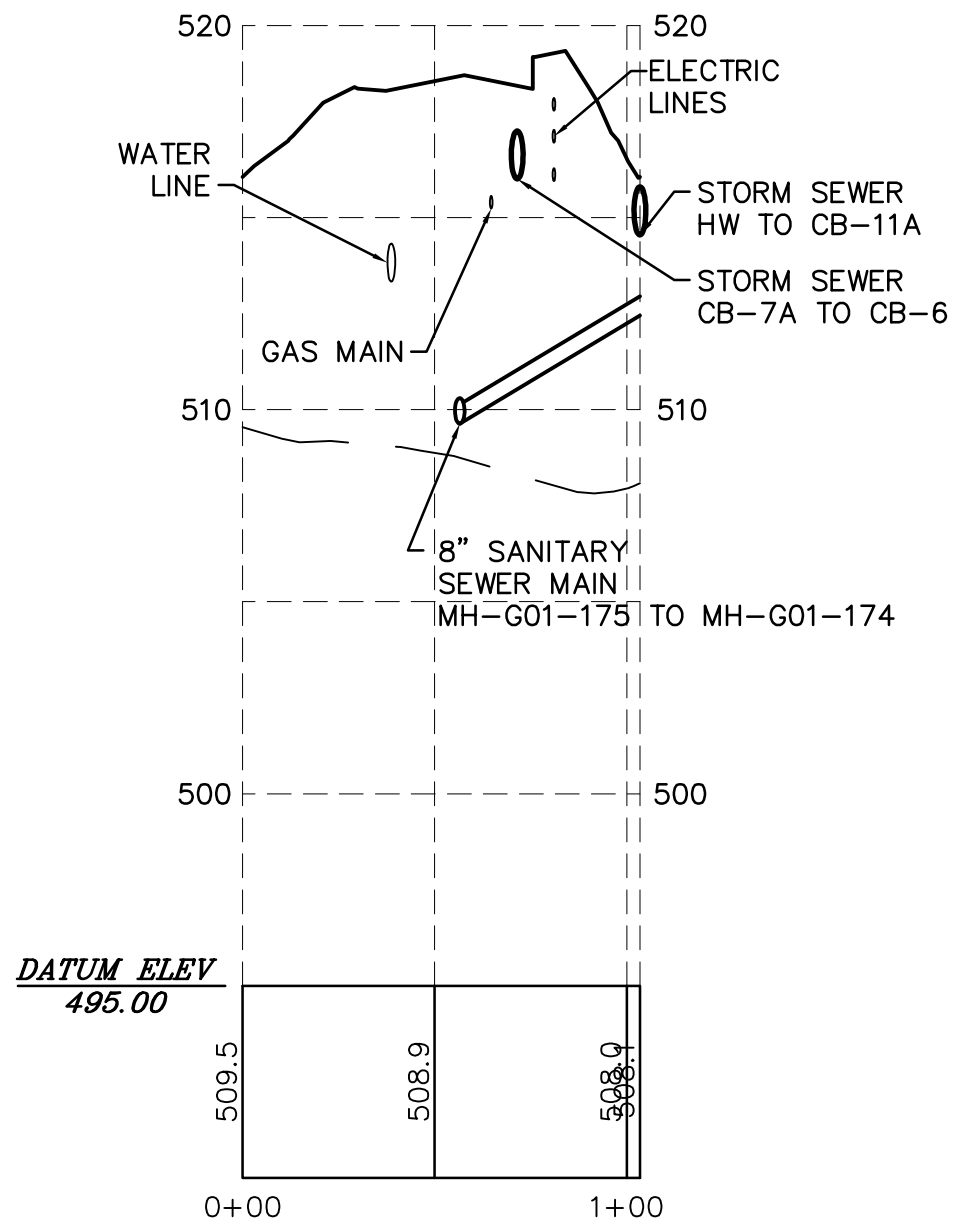
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A	FOR SIGNATURES	EIS	06-27-18
A	PER PENNDOT COMMENTS	EIS	06-08-18
A	PER PENNDOT COMMENTS	EIS	05-04-18
A	PER SUEZ WATER DESIGN	EIS	03-28-18
A	PER 105 COMMENTS	EIS	12-27-17
A	PER SUEZ WATER DESIGN	EIS	11-13-17
REV.	DESCRIPTION	BY	DATE

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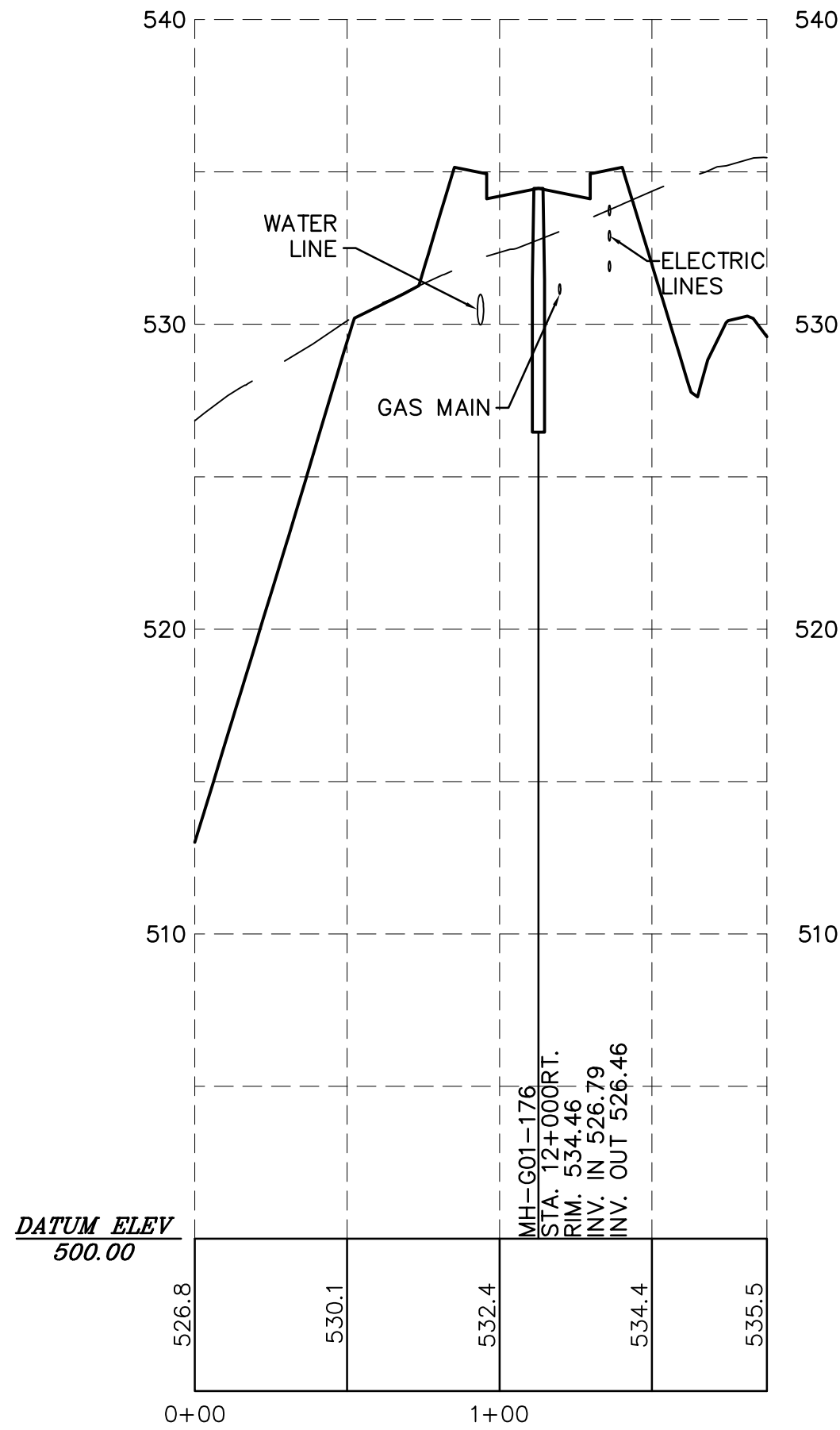
OAKWOOD HILLS DRIVE STA 4+85

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



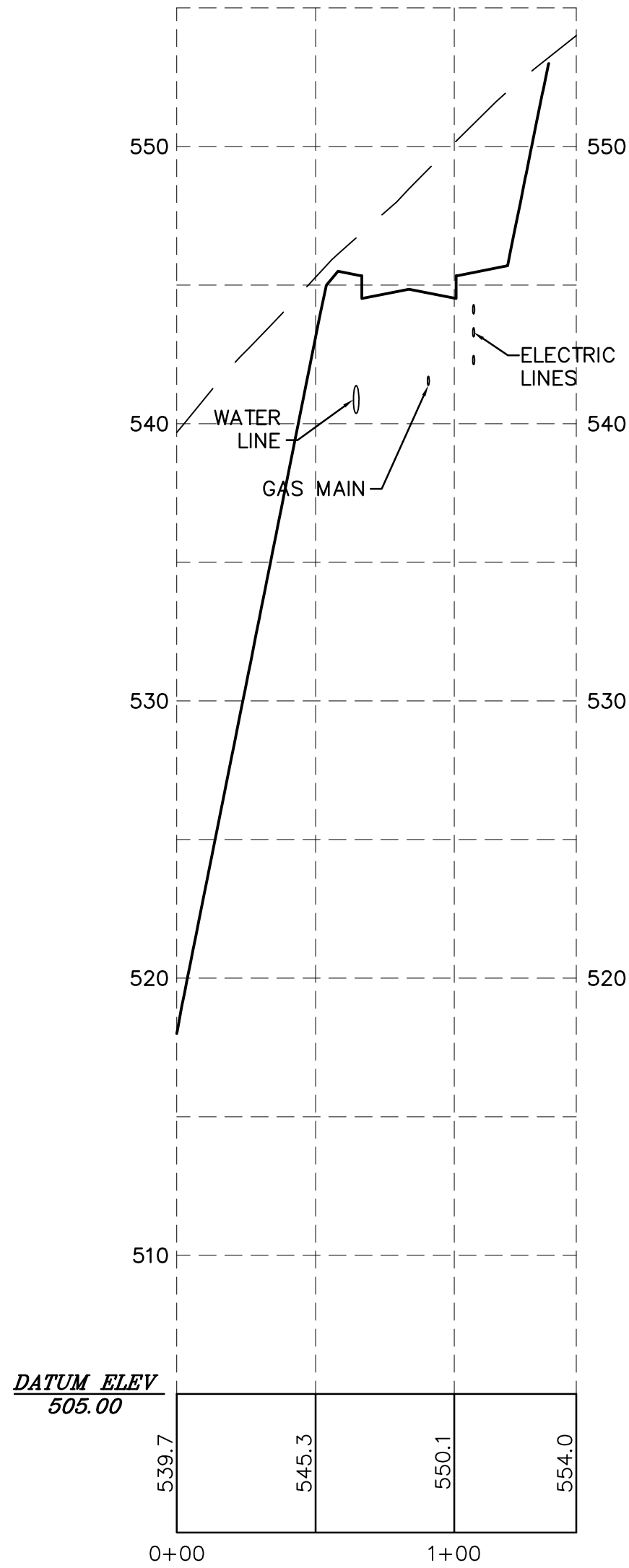
OAKWOOD HILLS DRIVE STA 9+75

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



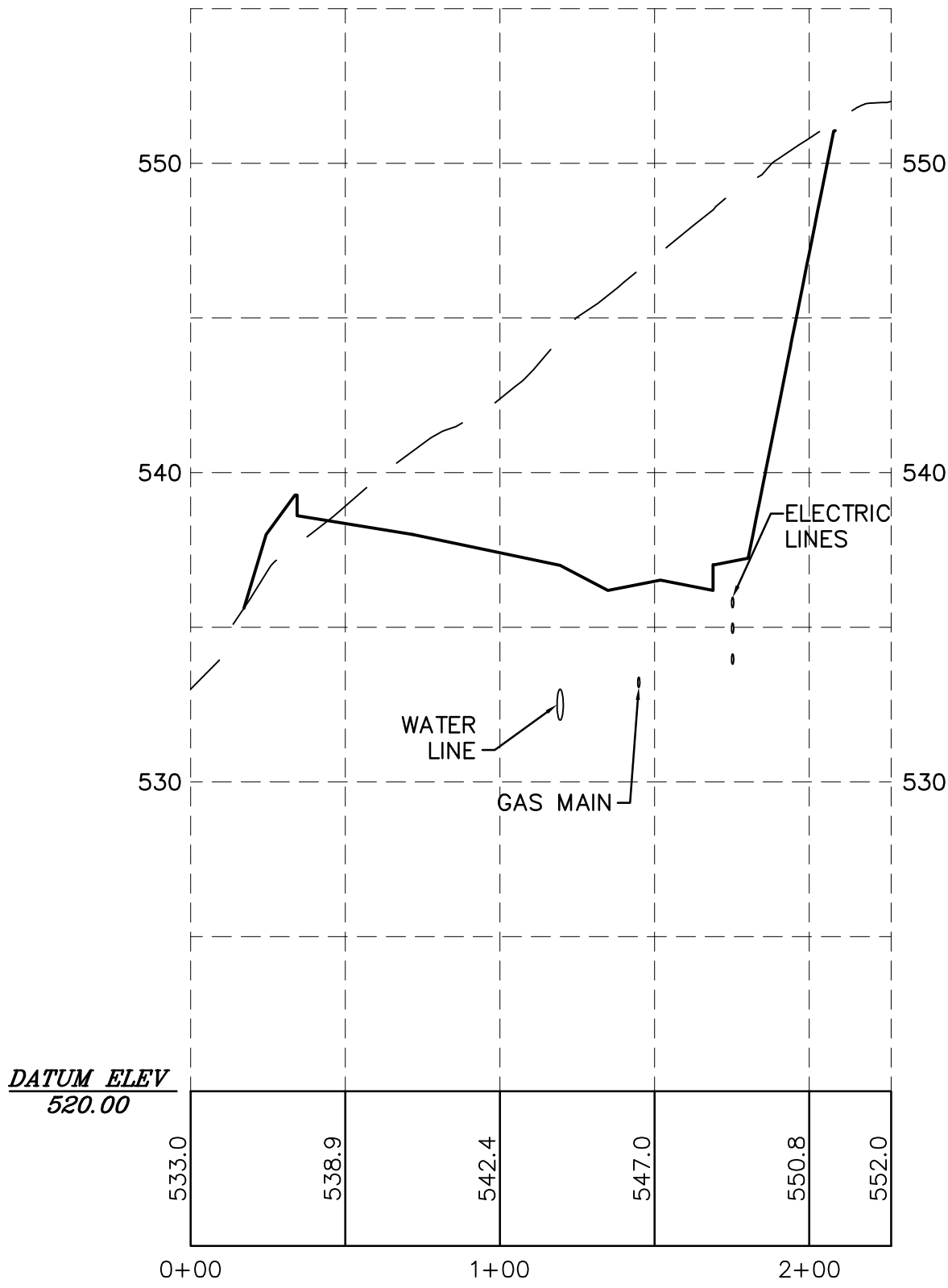
OAKWOOD HILLS DRIVE STA 12+00

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



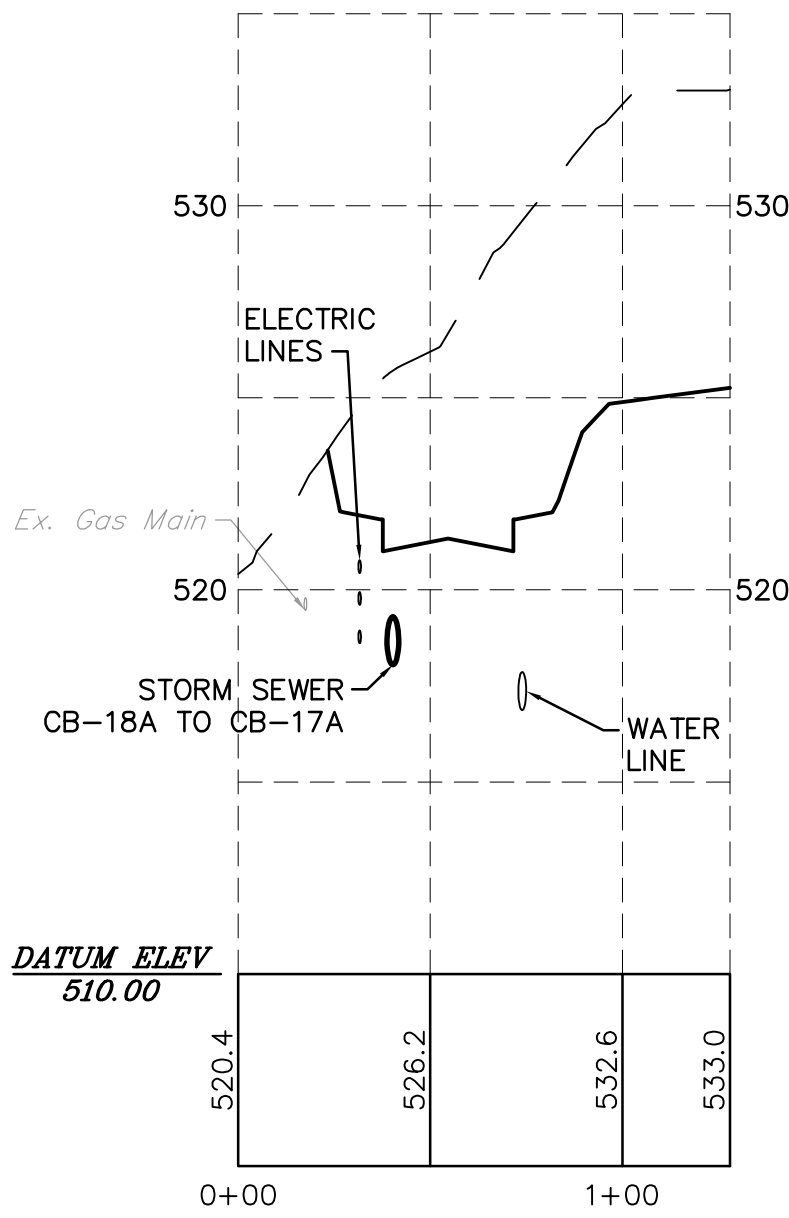
OAKWOOD HILLS DRIVE STA 15+00

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



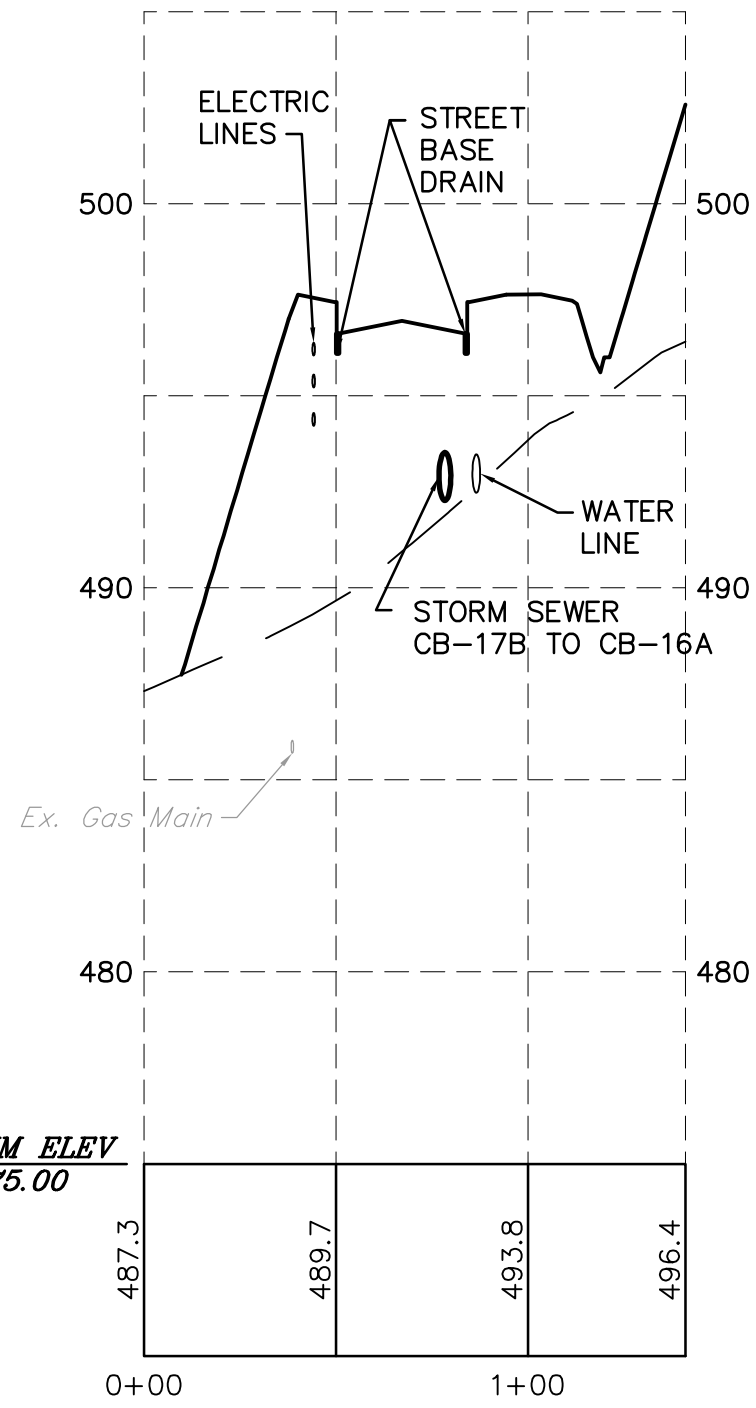
OAKWOOD HILLS DRIVE STA 16+85

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



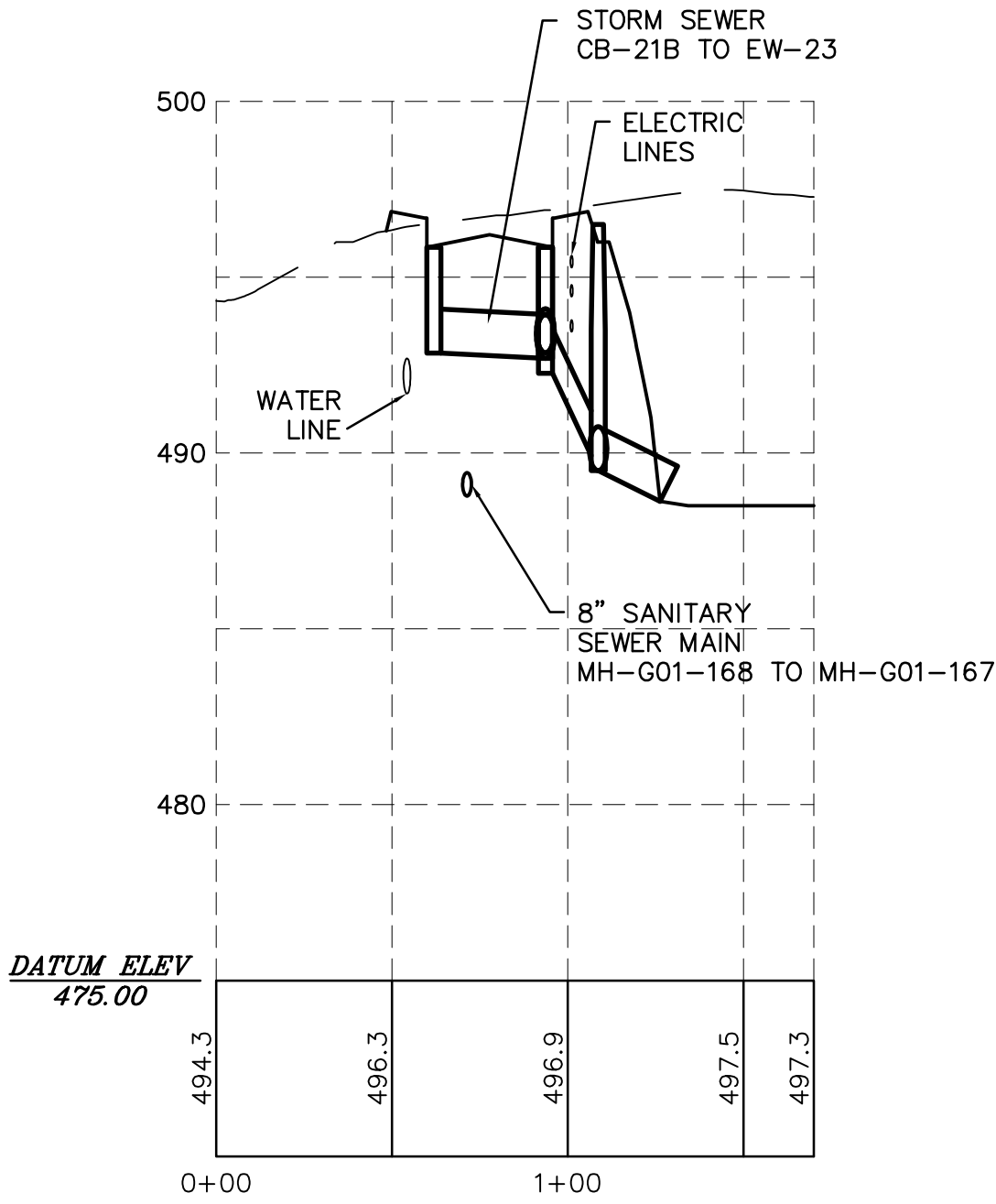
OAKWOOD HILLS DRIVE STA 18+74.10

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



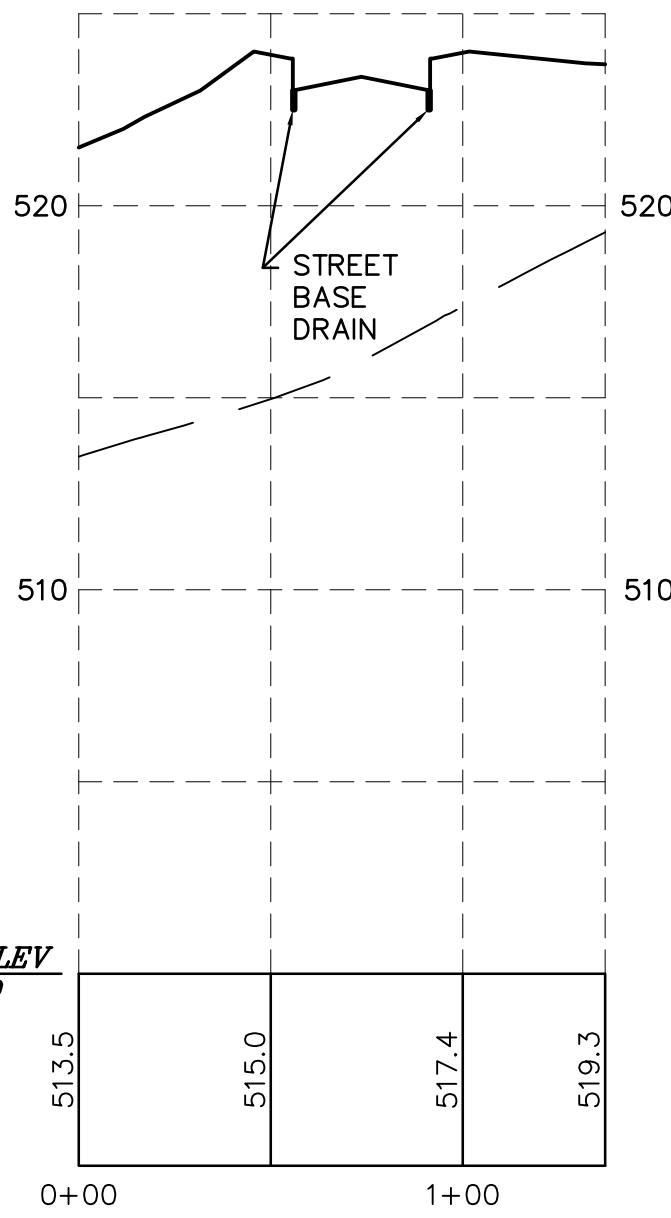
OAKWOOD HILLS DRIVE STA 22+14.87

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



OAKWOOD HILLS DRIVE STA 25+36.73

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



OAKWOOD HILLS DRIVE STA 34+43.44

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

NOT FOR CONSTRUCTION

DRAWN BY:	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN
CHECKED BY:	CHH	OAKWOOD HILLS
DATE:	05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA
SCALE:	1" = 50'	STREET CROSS SECTIONS
JOB NUMBER:	13021.020	

<input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING	
<input type="checkbox"/> LANDSCAPE ARCHITECTURE	<input type="checkbox"/> ENGINEERING
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FOR CORRECTIONS	EIS	07-31-18	DATE
FOR SIGNATURES	EIS	06-27-18	
PER PENNDOT COMMENTS	EIS	06-08-18	
PER PENNDOT COMMENTS	EIS	05-04-18	
PER SUEZ WATER DESIGN	EIS	03-28-18	
PER 105 COMMENTS	EIS	12-27-17	
PER SUEZ WATER DESIGN	EIS	11-13-17	

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W:\PROJECTS\13021.020 Oakwood Hills Rev Apt Land Dev Plans\dwg\Land Development\13021.020-Details.dwg 8/1/2018 4:26:53 PM EDT

- NOTES:
- ONLY THE NECESSARY DIMENSIONS, FOR UNIFORMITY AND INTERCHANGEABILITY OF ROTATING BRACKETS, ARE INDICATED. PROVIDE ROTATING BRACKETS SUPPLIED BY A MANUFACTURER AS LISTED IN BULLETIN 15.
 - MEASURE OFFSETS FROM THE PROJECTED FRONT FACE OF THE GUIDE RAIL TO THE FRONT FACE OF THE POST.
 - TYPE 2 STRONG POST END TREATMENTS CAN NOT BE USED TO TERMINATE THE APPROACH END OF:
a) ANY GUIDE RAIL ON THE NHS, OR b) ANY GUIDE RAIL ON NON-NHS HIGH-SPEED, HIGH-VOLUME ROUTES. USE CRASHWORTHY END TREATMENTS ON ALL NHS ROUTES AND ON NON-NHS ROADWAYS WITH 70 km/h (45 mph) POSTED SPEED LIMIT & ABOVE AND WITH CURRENT TRAFFIC VOLUMES 4000 VEHICLES PER DAY & ABOVE. ON 2-LANE ROADWAYS WHERE CRASHWORTHY END TREATMENTS ARE REQUIRED, USE ON BOTH THE APPROACH AND TRAILING ENDS. TYPE 2 STRONG POST END TREATMENTS MAY BE USED ON THE TRAILING END OF GUIDE RAIL FOR HIGH SPEED NHS DIVIDED ROADWAYS.

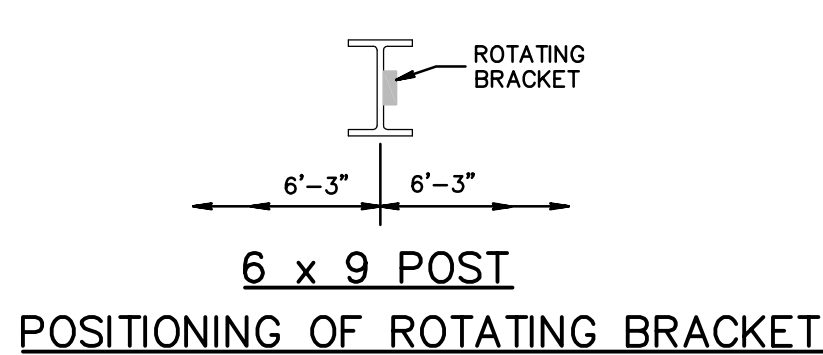
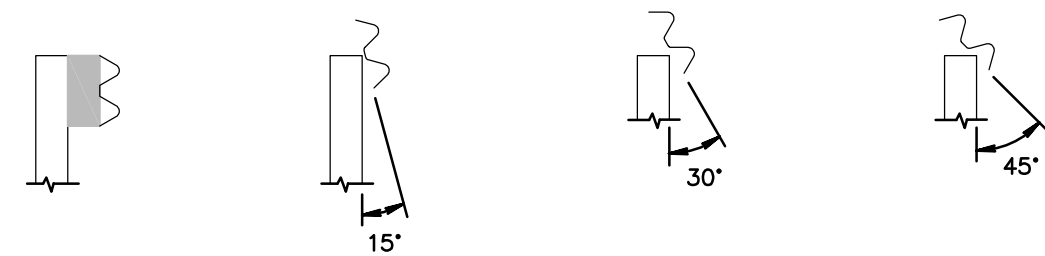
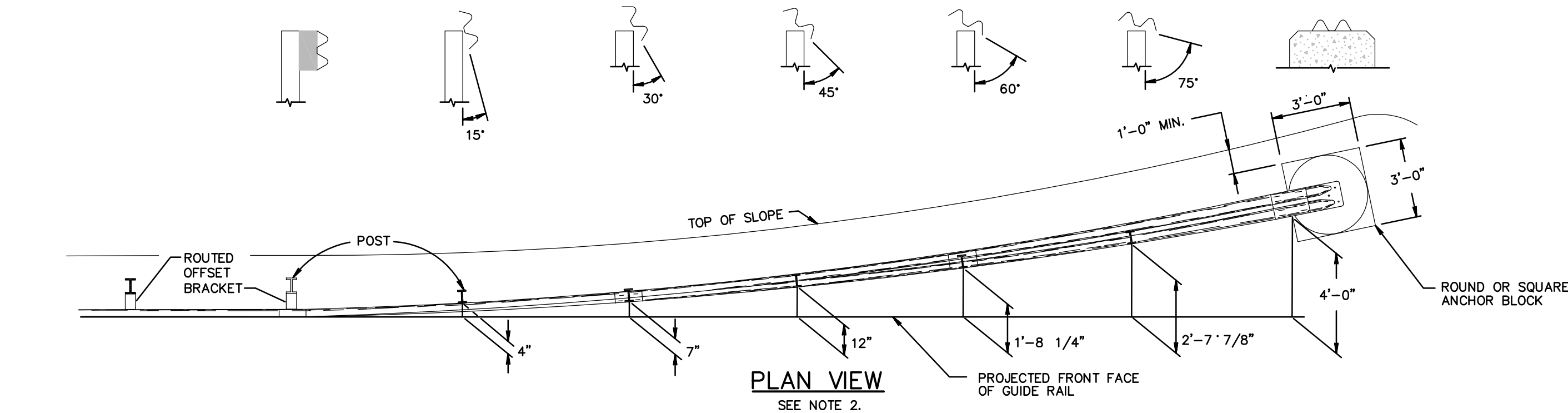
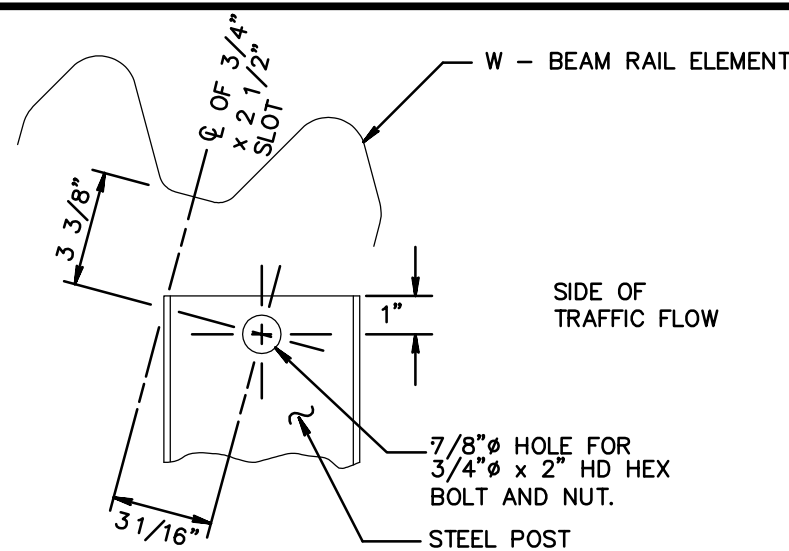


TABLE A

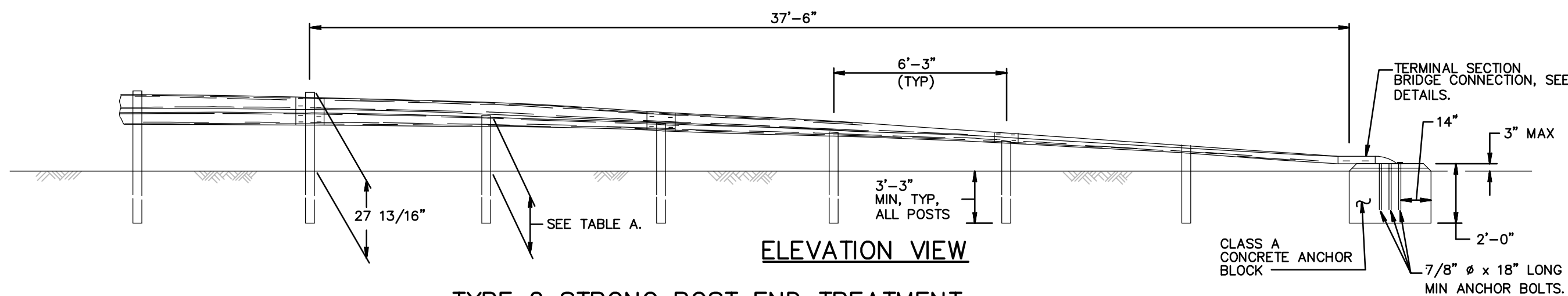
HEIGHT OF POST	17"	14 1/2"	11 3/4"	8 1/2"	4 1/2"
ROTATION ANGLES	15°	30°	45°	60°	75°



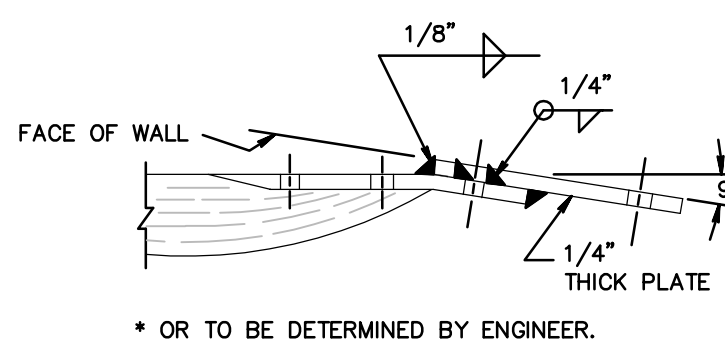
TYPICAL FOR
15° THRU 75° POSITIONS
ROTATING BRACKET



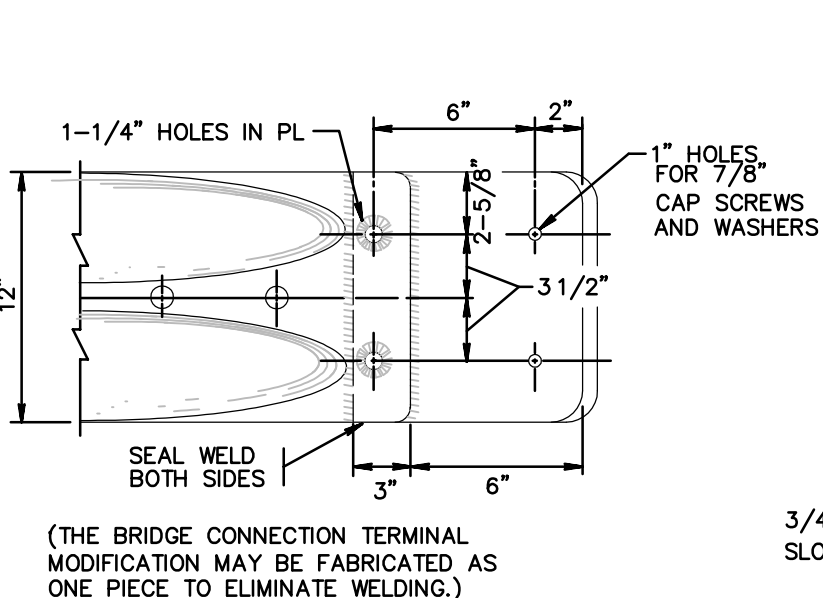
PLAN VIEW
SEE NOTE 2.



ELEVATION VIEW
SEE NOTE 2.



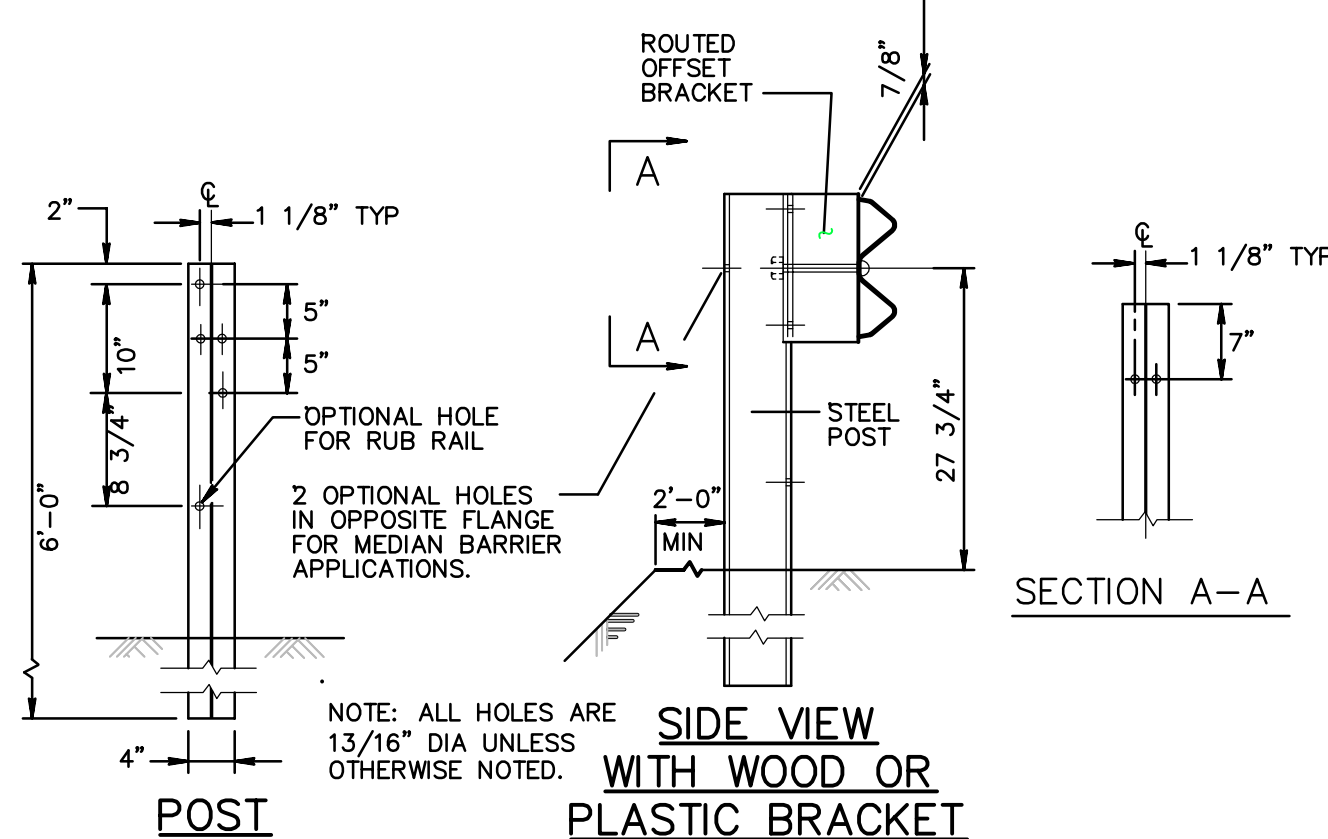
TYPE 2 STRONG POST END TREATMENT
SEE NOTE 3.



DETAIL A

- ** PROVIDE SPICE BOLTS WITH A LOCK NUT OR DOUBLE NUT AND TIGHTEN ONLY TO A POINT THAT ALLOWS GUIDE RAIL TO BE FREE TO MOVE. CENTER SPICE BOLTS IN THE SLOTTED HOLES.
- NOTE:
- PROVIDE BRIDGE CONNECTION AT CULVERT.
 - INSTALL IN ACCORDANCE WITH CURRENT PENNDOT RC STANDARDS.

TERMINAL SECTION BRIDGE CONNECTION



SIDE VIEW
WITH WOOD OR
PLASTIC BRACKET

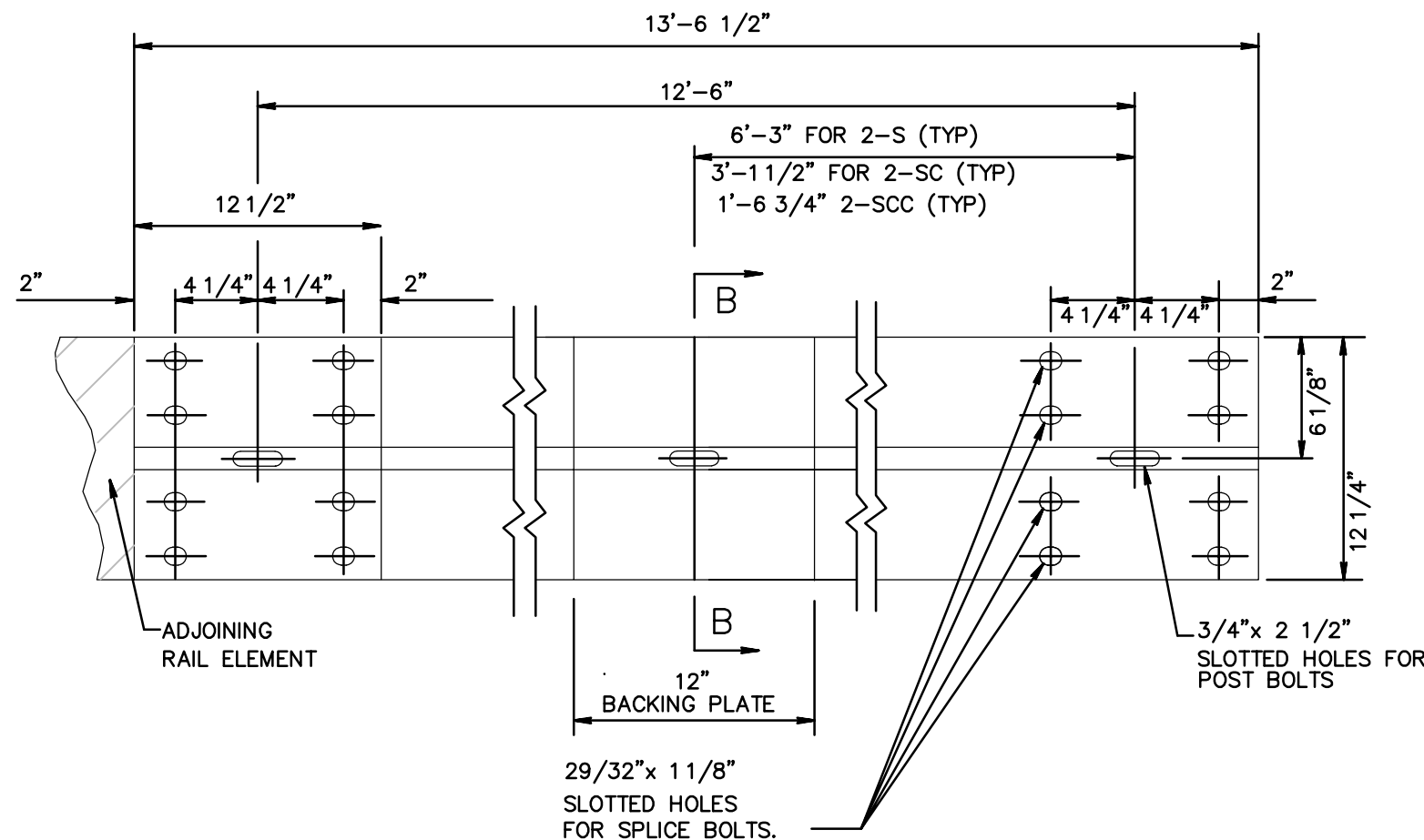
W6 x 8.5 or 9.0 POST DETAILS

NOTE:
INSTALL IN ACCORDANCE WITH
CURRENT PENNDOT RC STANDARDS.

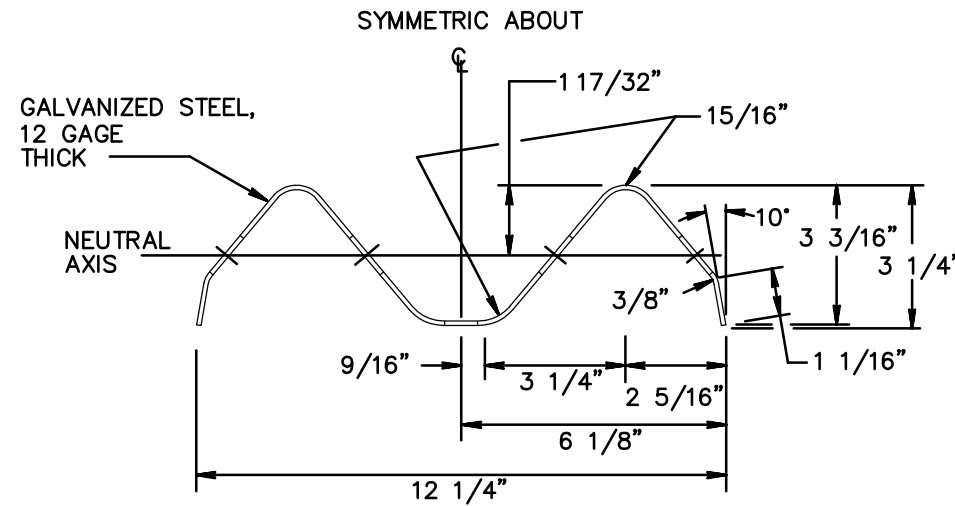


TYPE 2 STRONG POST GUIDE RAIL
NOT TO SCALE

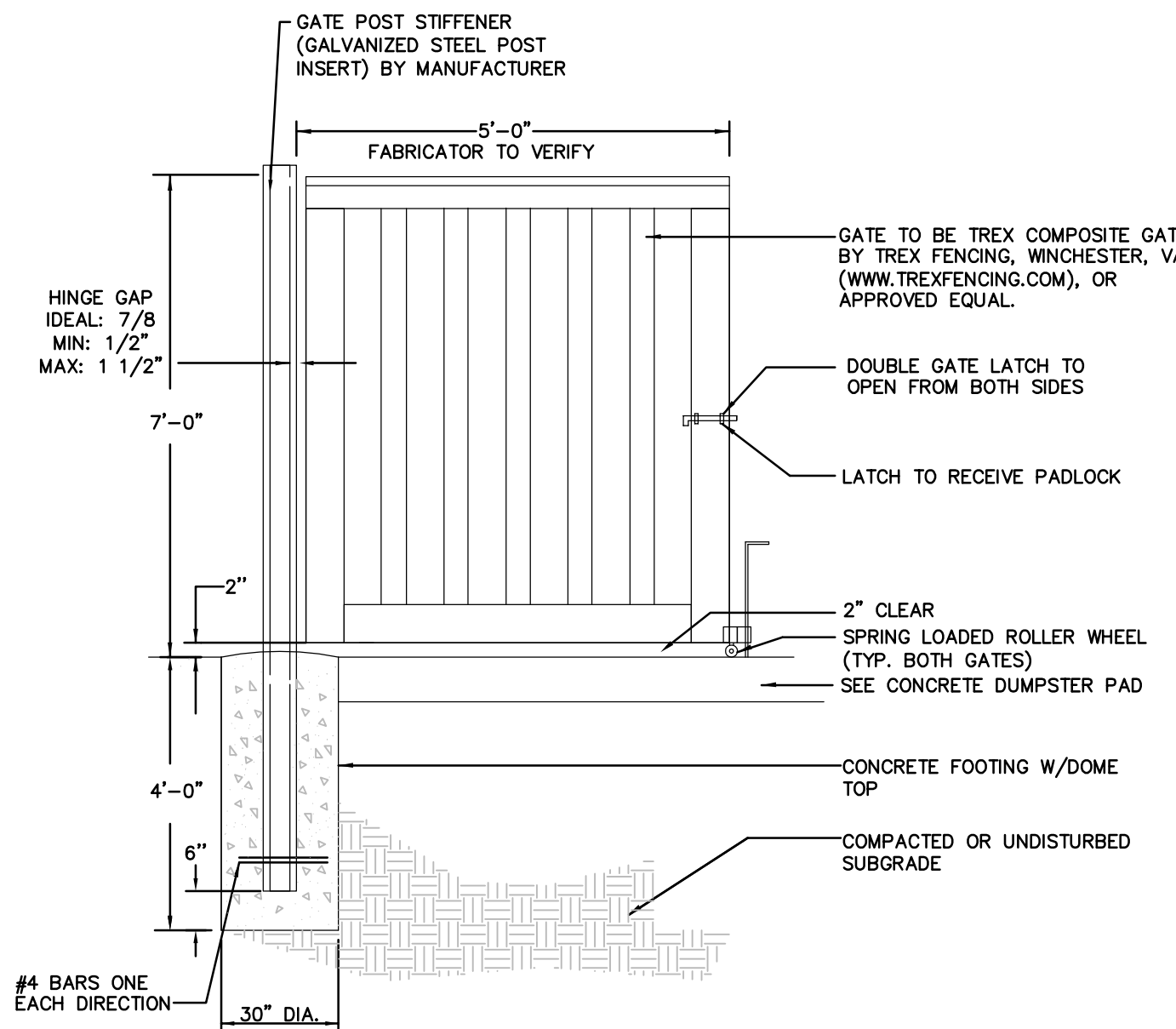
- NOTES:
- PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 620.
 - PROVIDE STEEL I-BEAM W150x13.5 (W6 x 8.5) POSTS WITH ROUTED WOOD, PLASTIC OR COMPOSITE OFFSET BRACKETS LISTED IN BULLETIN 15.
 - ATTACH W-BEAM RAIL ELEMENTS TO EACH POST. SPICE RAIL ELEMENTS ONLY AT POSTS AND LAP IN THE DIRECTION OF TRAFFIC.
 - INSTALL GUIDE RAIL DELINEATORS IN ACCORDANCE WITH TC-7604.
 - BURNING OF POSTS OR RAIL ELEMENT FOR HOLES IS NOT PERMITTED.
 - USE SPICE BOLTS TO DEVELOP THE DESIGN STRENGTH OF THE RAIL ELEMENT.
 - PROVIDE TERMINAL SECTION BRIDGE CONNECTION, WITH WELDED PLATE FOR SAFETY, AS AN INCIDENTAL ITEM.
 - USE SLOTTED ROUND-HEADED BOLTS TO PROVIDE FOR WRENCH OR SCREWDRIVER.



W-BEAM RAIL ELEMENT



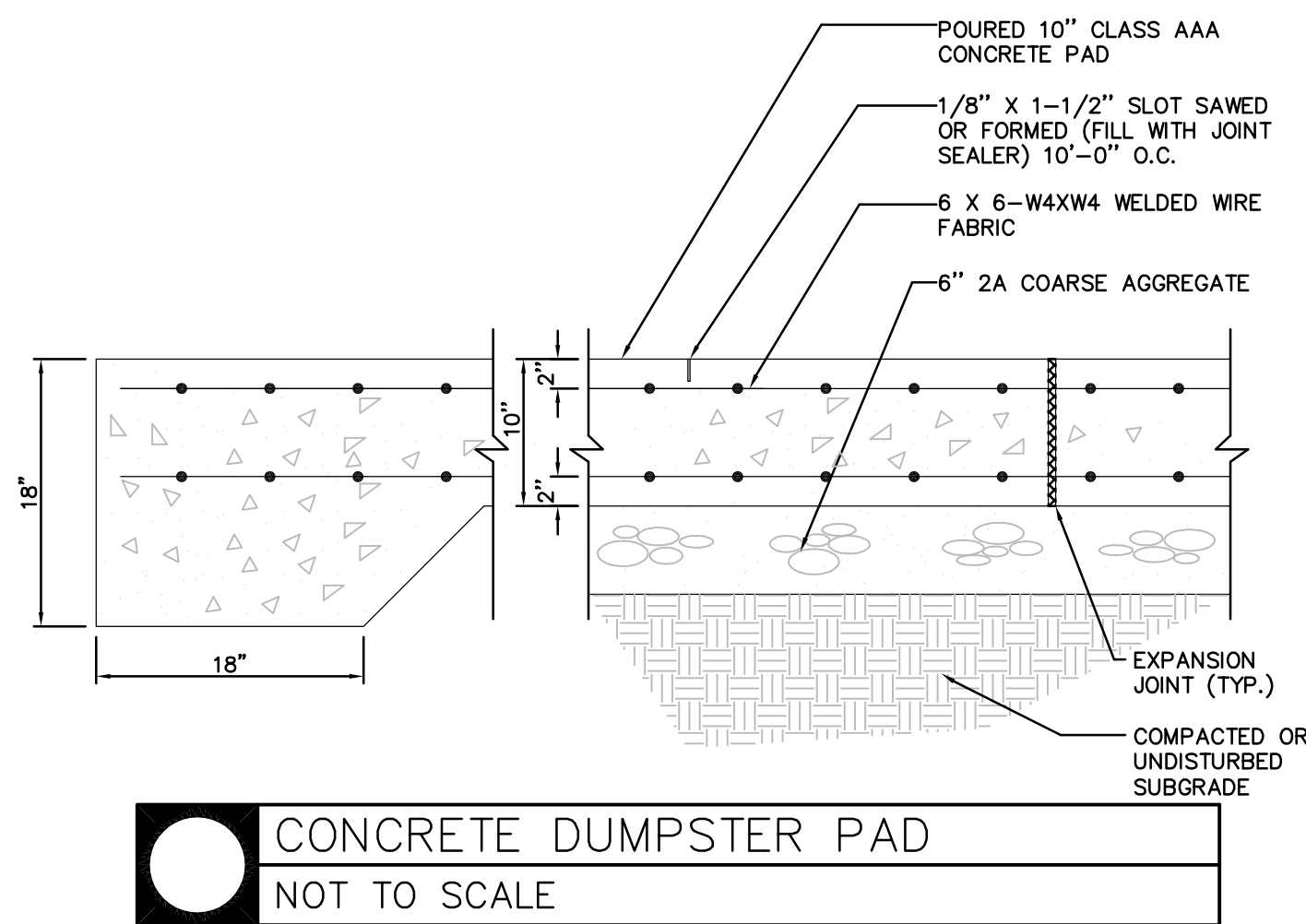
RAIL ELEMENT
SECTION B-B



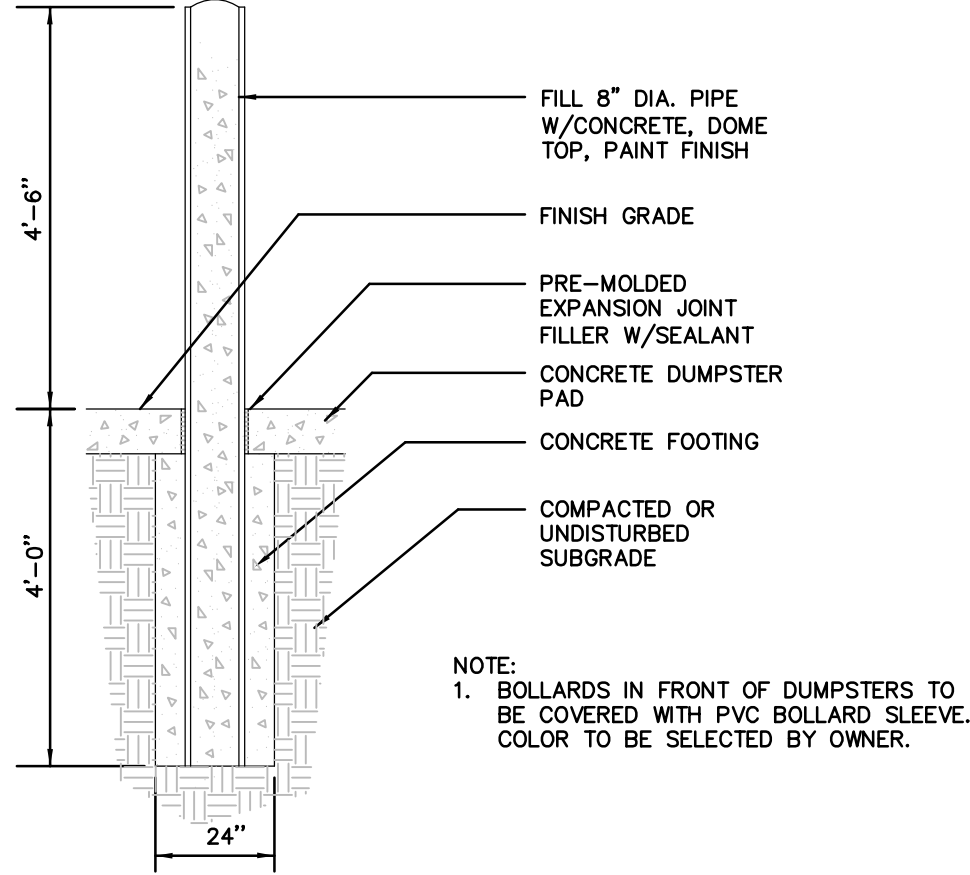
- NOTES:
- GATE TO BE TREX COMPOSITE GATE BY TREX FENCING, WINCHESTER, VA (WWW.TREXFENCING.COM) TO MATCH TREX SECLUSIONS FENCE, WITH GALVANIZED STEEL FRAME WHICH IS NOT VISIBLE FROM EITHER SIDE, OR APPROVED EQUAL.
 - TREX GATE HARDWARE OF STAINLESS STEEL, POWDER-COATED BLACK, WITH SELF-DRILLING SCREWS, OR APPROVED EQUAL.
 - MANUFACTURER TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS.
 - GATE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - COLOR, TEXTURE & STYLE TO BE SELECTED BY OWNER.
 - NOTCHES IN CONCRETE TO HOLD DOORS IN PLACE IN BOTH OPEN & CLOSED POSITIONS. NOTCHES ARE TO BE LOCATED IN THE FIELD UPON INSTALLATION OF DOOR ASSEMBLY FOR DIRECT ALIGNMENT AND PROPER FIT.



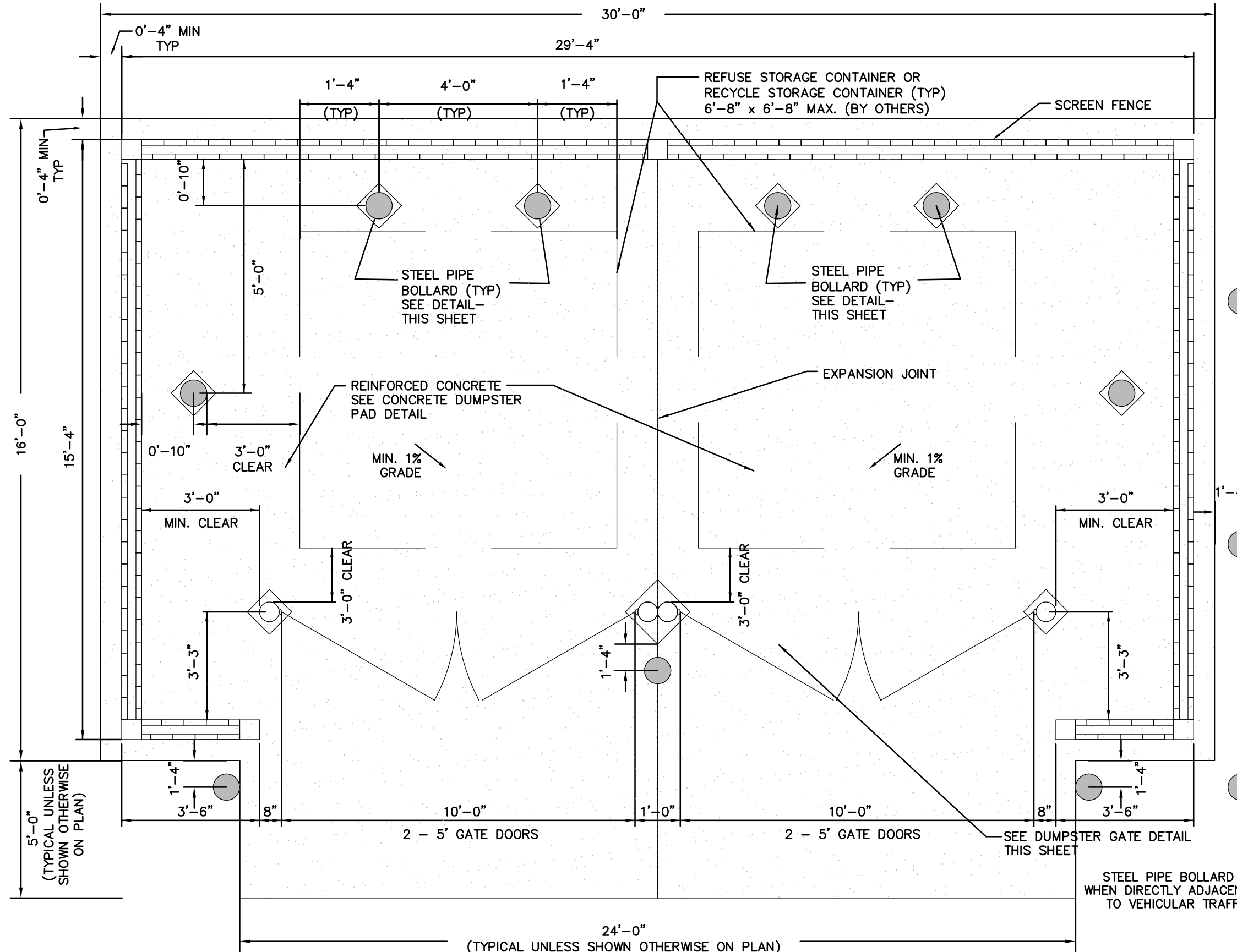
5'-0" GATE DOOR AT DUMPSTER
NOT TO SCALE



CONCRETE DUMPSTER PAD
NOT TO SCALE



STEEL PIPE BOLLARD IN DUMPSTER PAD
SCALE: NOT TO SCALE



- NOTES:
- SCREEN FENCE TO BE COMPOSITE TREX SECLUSIONS FENCE BY TREX FENCING, WINCHESTER, VA (WWW.TREXFENCING.COM), OR APPROVED EQUAL.
 - TREX HARDWARE OF STAINLESS STEEL, POWDER-COATED BLACK, WITH SELF-DRILLING SCREWS, OR APPROVED EQUAL.
 - MANUFACTURER TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS.
 - FENCE TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
 - COLOR, TEXTURE & STYLE OF FENCING TO BE SELECTED BY OWNER.



DUMPSTER PAD W/ SCREENING FENCE
NOT TO SCALE

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FOR SIGNATURES	EIS	06-08-18	
PER PENNDOT COMMENTS	EIS	05-04-18	
PER PENNDOT COMMENTS	EIS	03-28-18	
PER SUEZ WATER DESIGN	EIS	12-27-17	
PER 105 COMMENTS	EIS	11-13-17	
PER SUEZ WATER DESIGN	EIS		
REV	DESCRIPTION	BY	DATE

COMPREHENSIVE LAND AND SITE PLANNING
LANDSCAPE ARCHITECTURE
ENGINEERING

H. EDWARD BLACK AND ASSOCIATES, LTD.

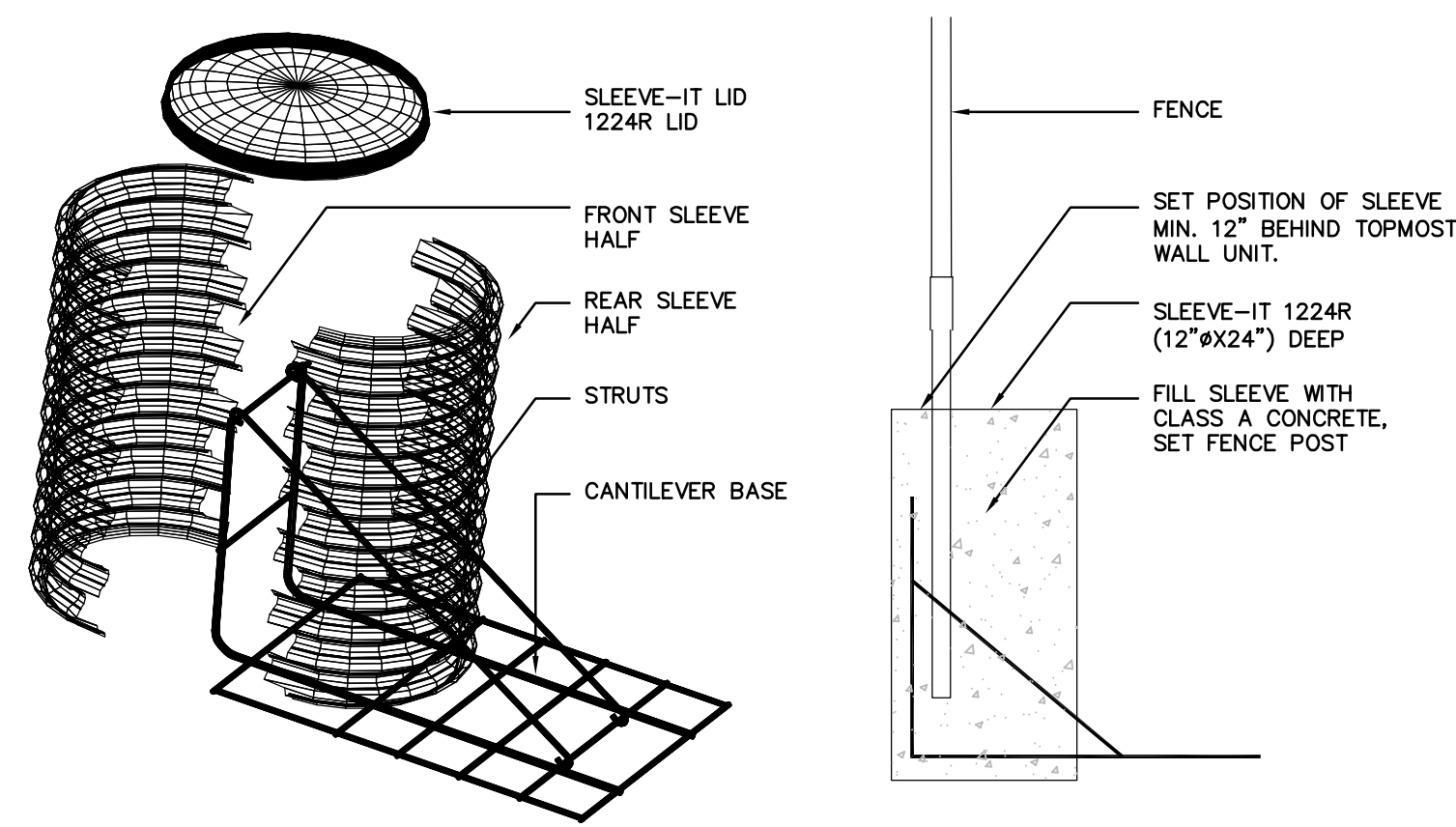
2403 North Front Street - Harrisburg, Pennsylvania 17110 - Telephone 717/233-0236 - FAX 717/233-2192

PRELIMINARY SUBD. AND LAND DEV. PLAN
OAKWOOD HILLS

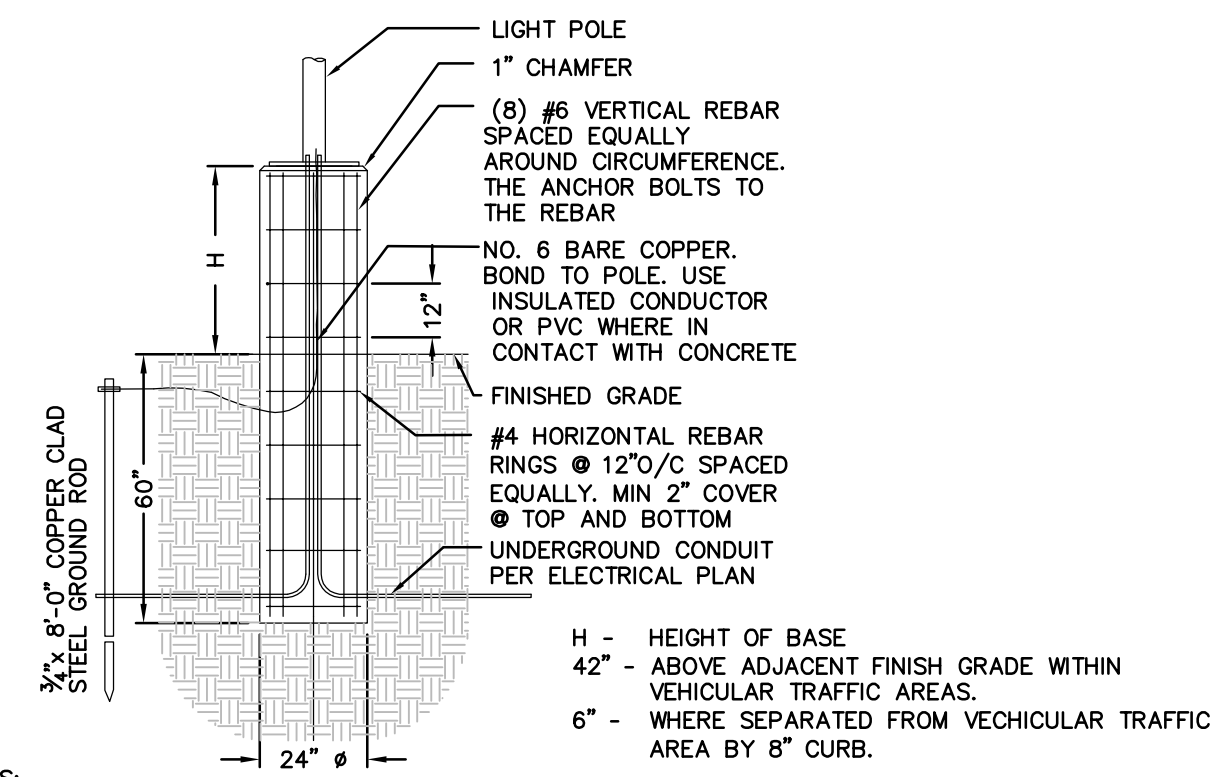
LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

SITE DETAILS

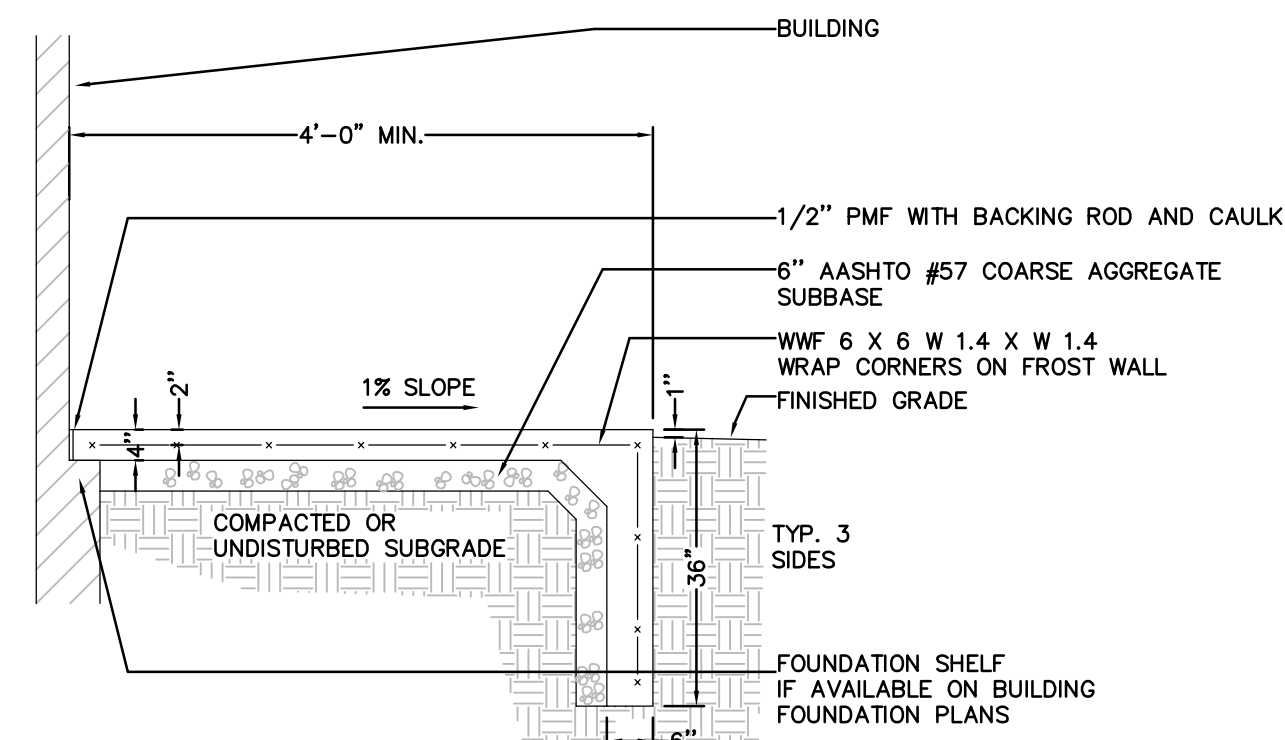
NOT FOR CONSTRUCTION
DRAWN BY: EIS
CHECKED BY: CHH
DATE: 05-01-17
SCALE: NOT TO SCALE
JOB NUMBER: 13021.020



 SLEEVE-IT
NOT TO SCALE



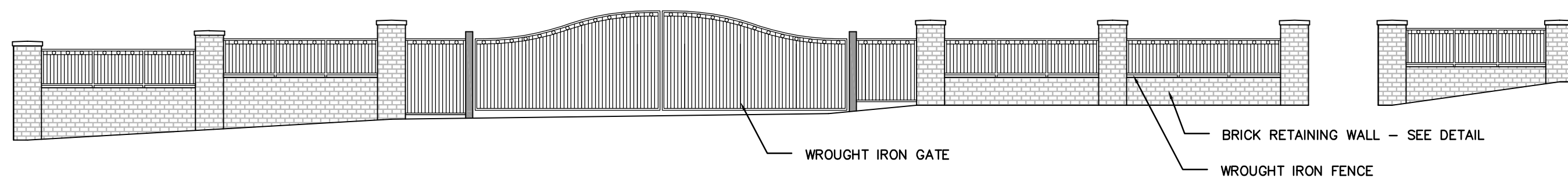
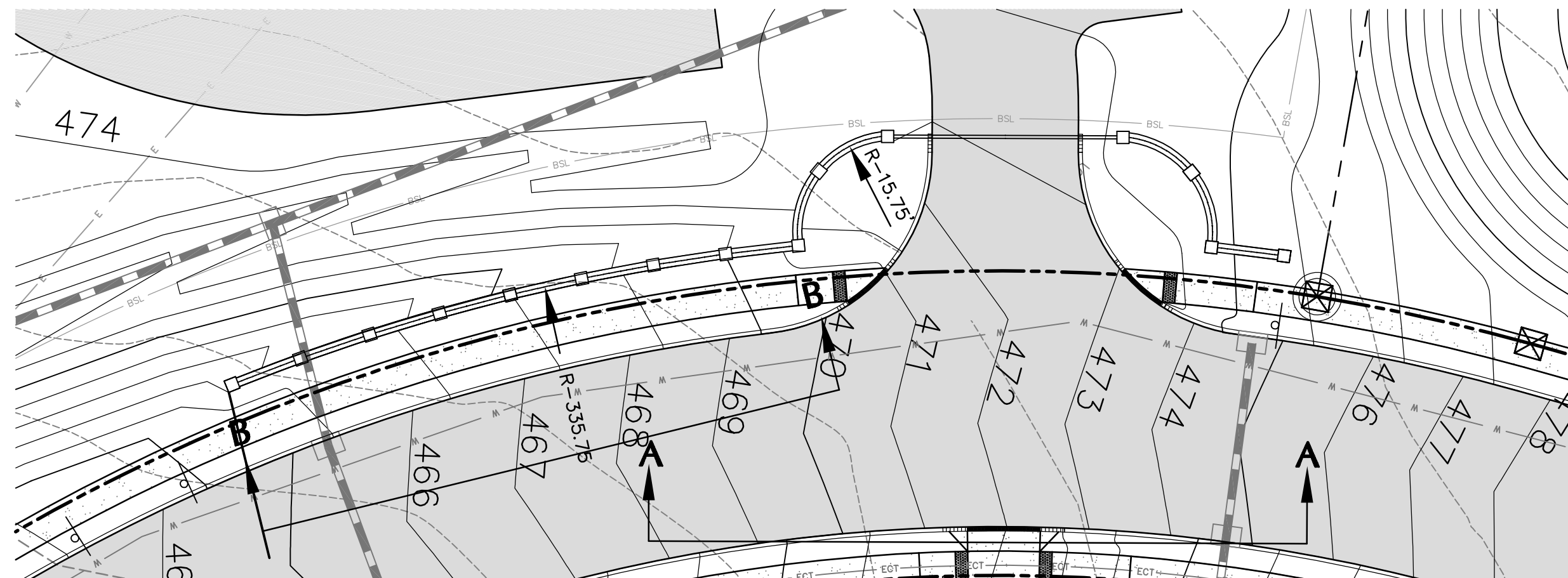
TYPICAL LIGHT POLE BASE
SCALE: NOT TO SCALE



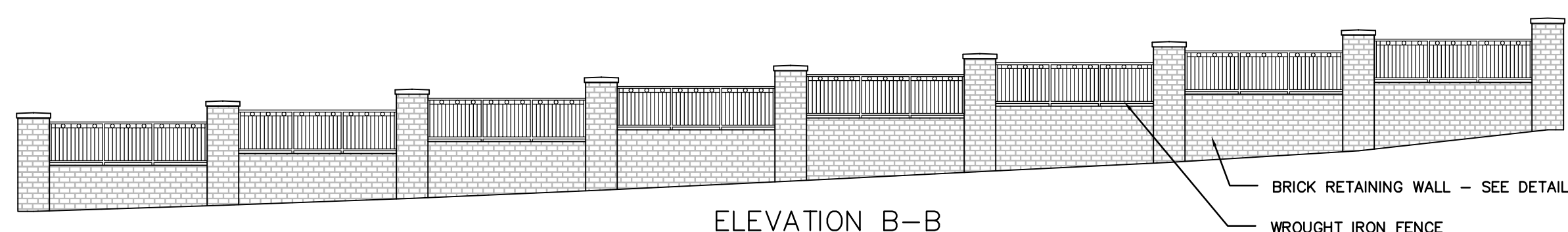
NOTE:

1. WIDTH TO MATCH SIDEWALK WIDTH.
2. INSTALL AT ALL ENTRANCES TO APARTMENT BUILDINGS.

CONCRETE DOOR SLAB WITH FROST WALL
SCALE: NOT TO SCALE



ELEVATION A-A

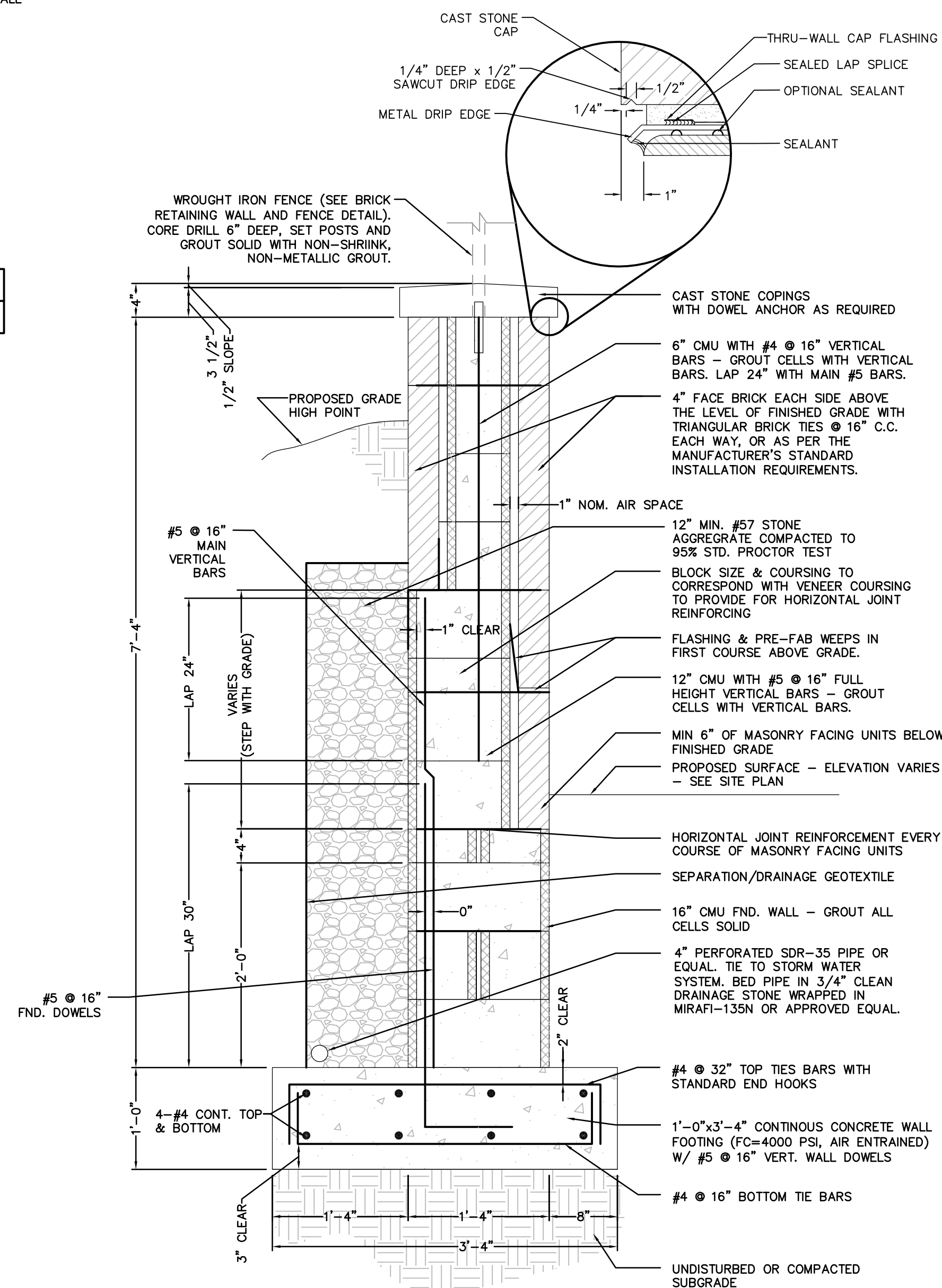


ELEVATION B-B

NOTES:

1. WROUGHT IRON FENCE AND GATE WITH REMOTE AUTOMATIC CONTROL BY COMPASS IRONWORKS, 1406 W. KINGS HIGHWAY, GAP, PA 17527 (WWW.IRONWORKCLASSICS.COM), STYLE: MAIN LINE, OR APPROVED EQUAL.
2. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL

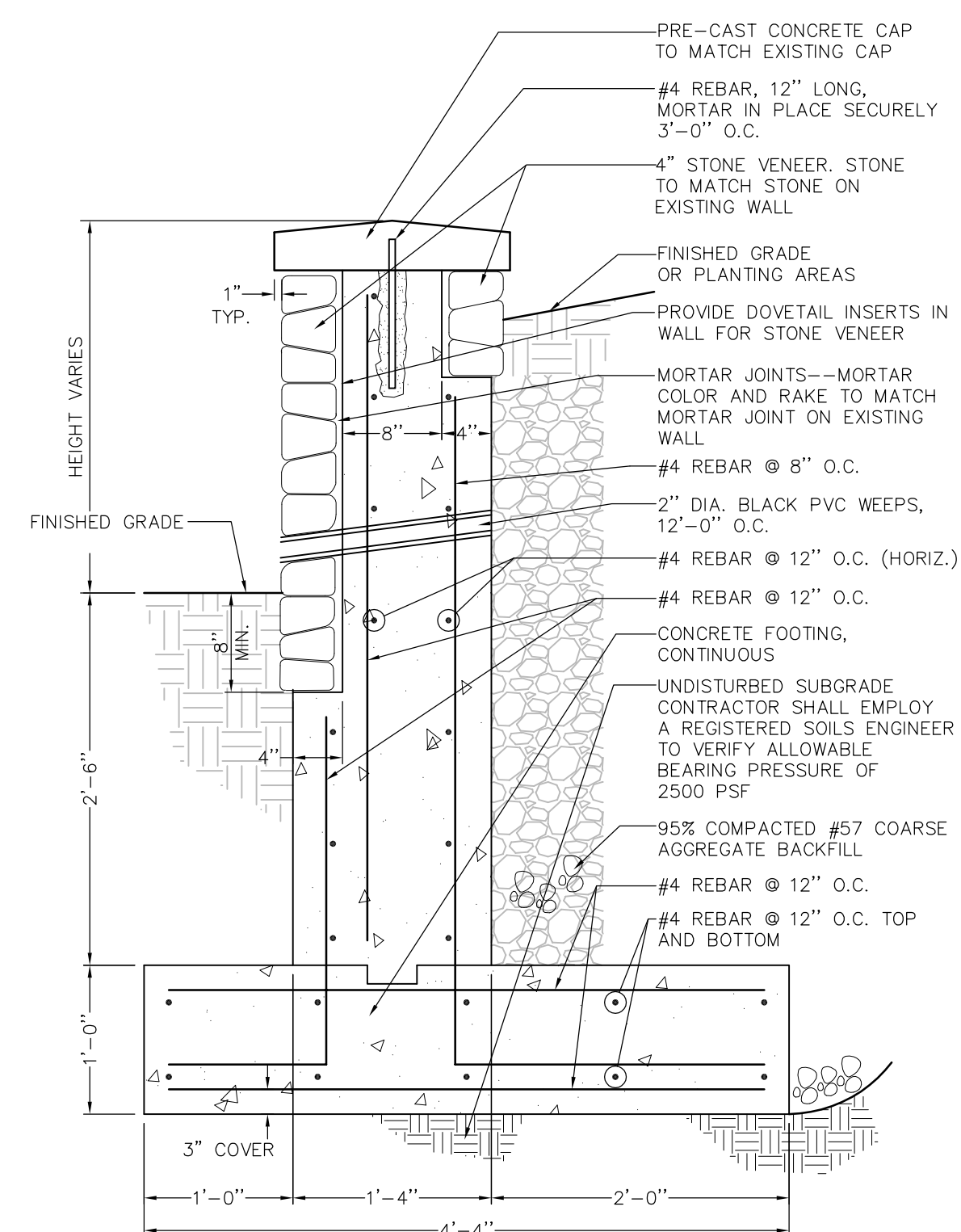
BRICK RETAINING WALL ELEVATION & PLAN NOT TO SCALE



NOTES:

1. FACE BRICK TO MATCH FACE BRICK ON ORCHARD HILL BUILDING. SUBMIT SAMPLES.
2. FLASH & WEEP MASONRY ABOVE GRADE ON EACH SIDE OF WALL.
3. PROVIDE VERTICAL MASONRY CONTROL JOINTS WITHIN 4 FEET OF EACH CORNER AND AT 12 F MAX. CENTERS IN-BETWEEN.
4. PRELIMINARY DESIGN - STRUCTURAL DESIGN TO BE PROVIDED WITH CONSTRUCTION DRAWINGS.

BRICK RETAINING WALL
NOT TO SCALE



NOTES:

1. PRELIMINARY DESIGN - STRUCTURAL DESIGN TO BE PROVIDED WITH CONSTRUCTION DRAWINGS.
2. FACING STONE TO MATCH COMMUNITY BUILDING.

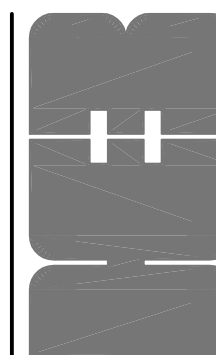
ORNAMENTAL RETAINING WALL
NOT TO SCALE

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✓	FOR CORRECTIONS	EIS	07-31-18
✓	FOR SIGNATURES	EIS	06-27-18
✓	PER PENNOT COMMENTS	EIS	06-08-18
✓	PER PENNOT COMMENTS	EIS	05-04-18
✓	PER SUEZ WATER DESIGN	EIS	03-28-18
✓	PER 105 COMMENTS	EIS	12-27-17
✓	PER SUEZ WATER DESIGN	EIS	11-13-17
✓	DESCRIPTION	RY	DATE

☐ ☐ COMPREHENSIVE LAND AND SITE PLANNING

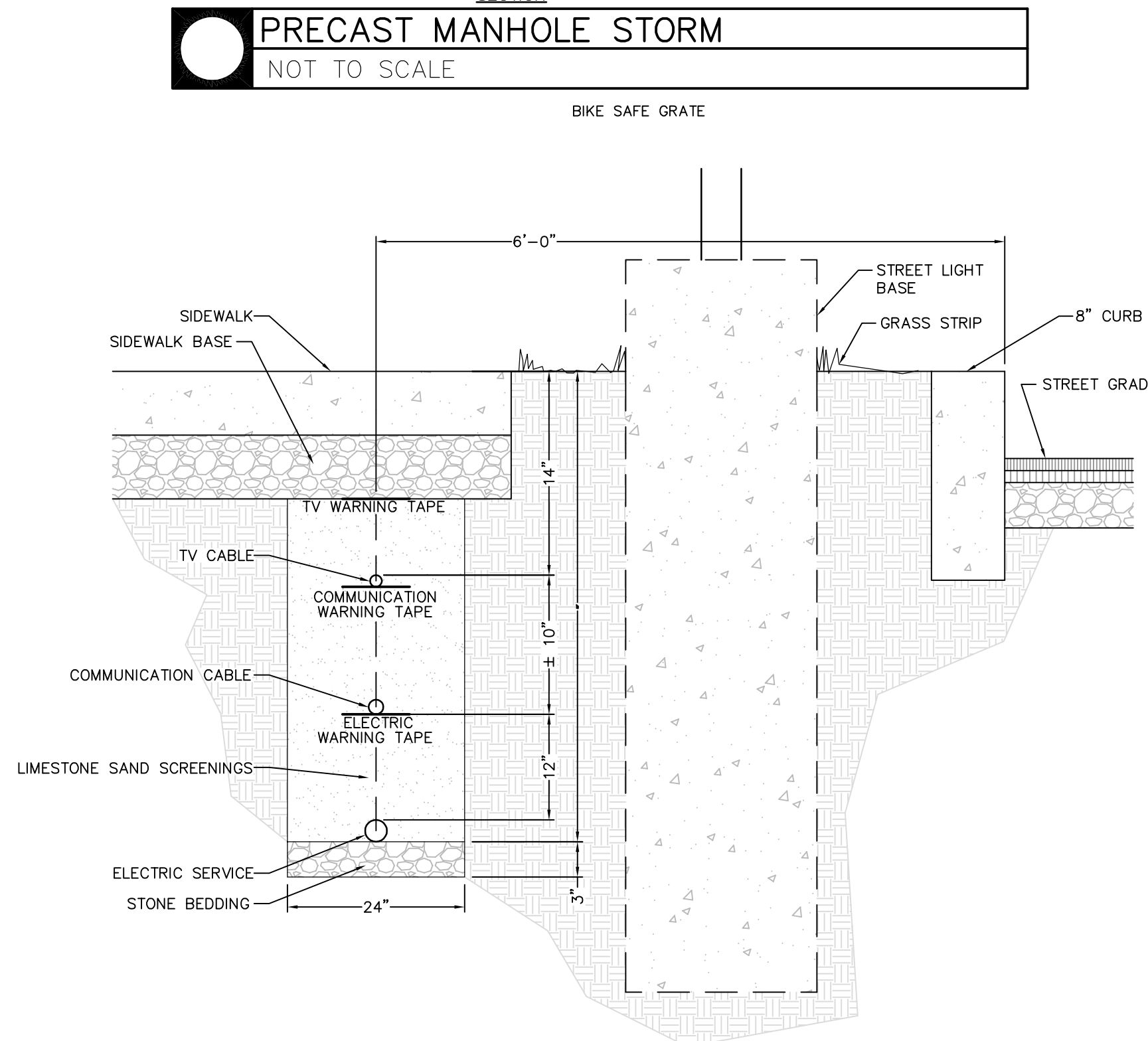
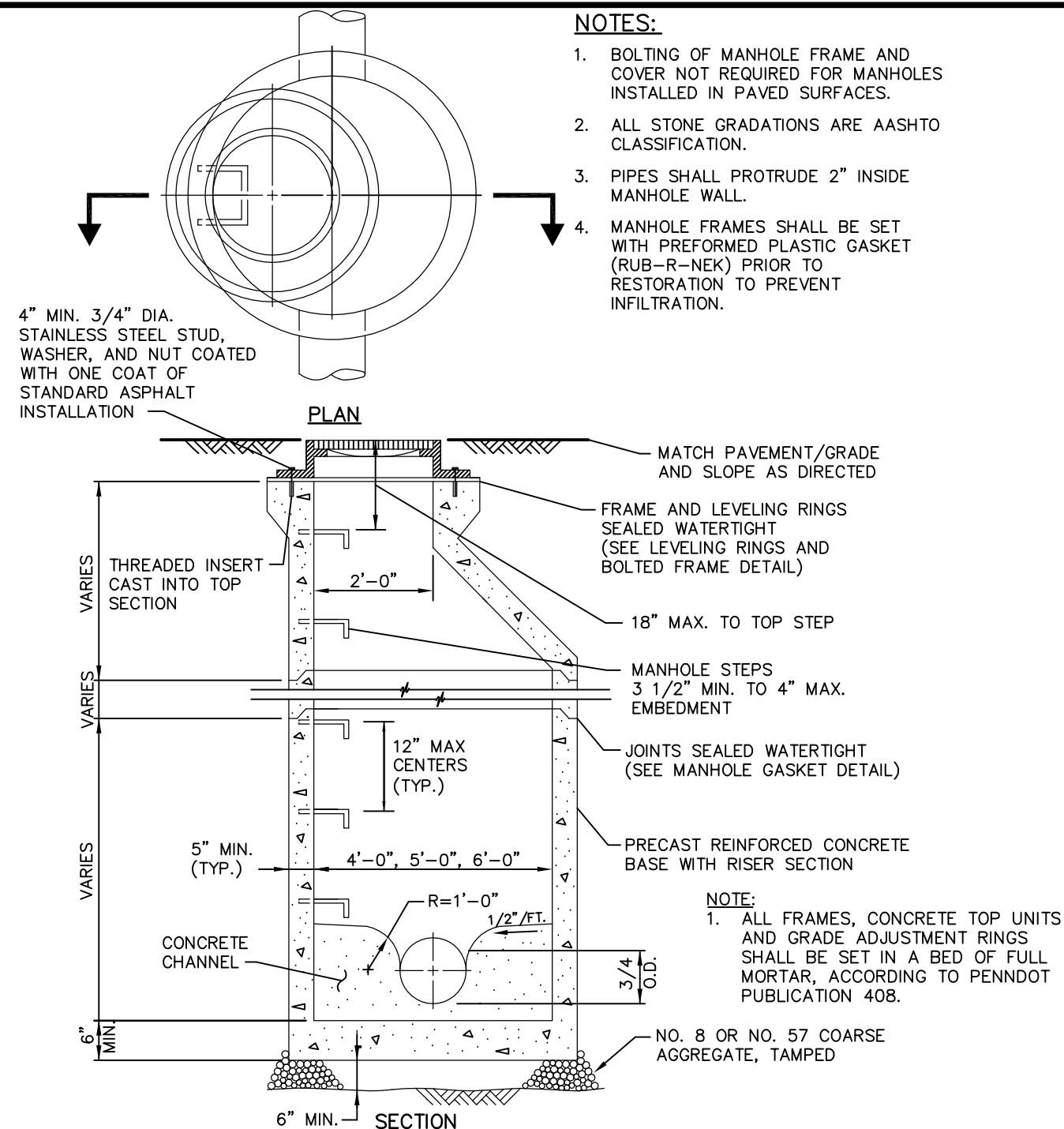
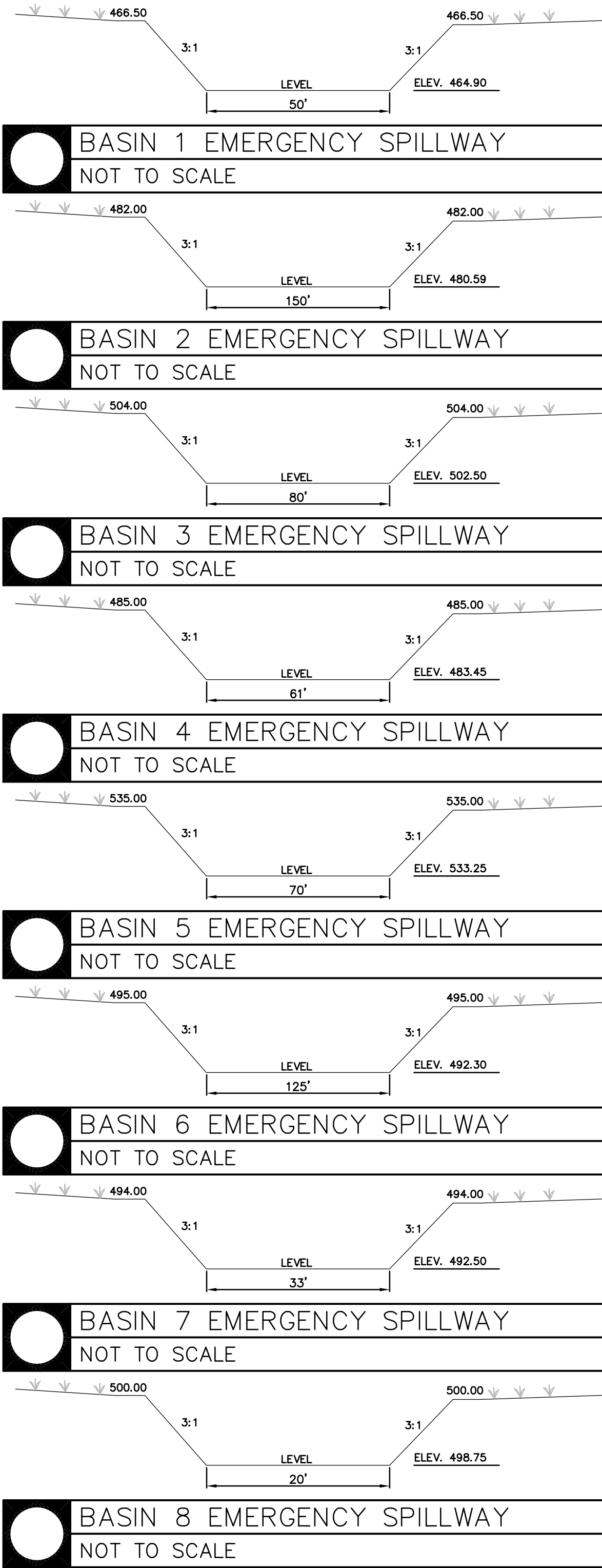
☐ ☐ LANDSCAPE ARCHITECTURE ☐ ENGINEERING



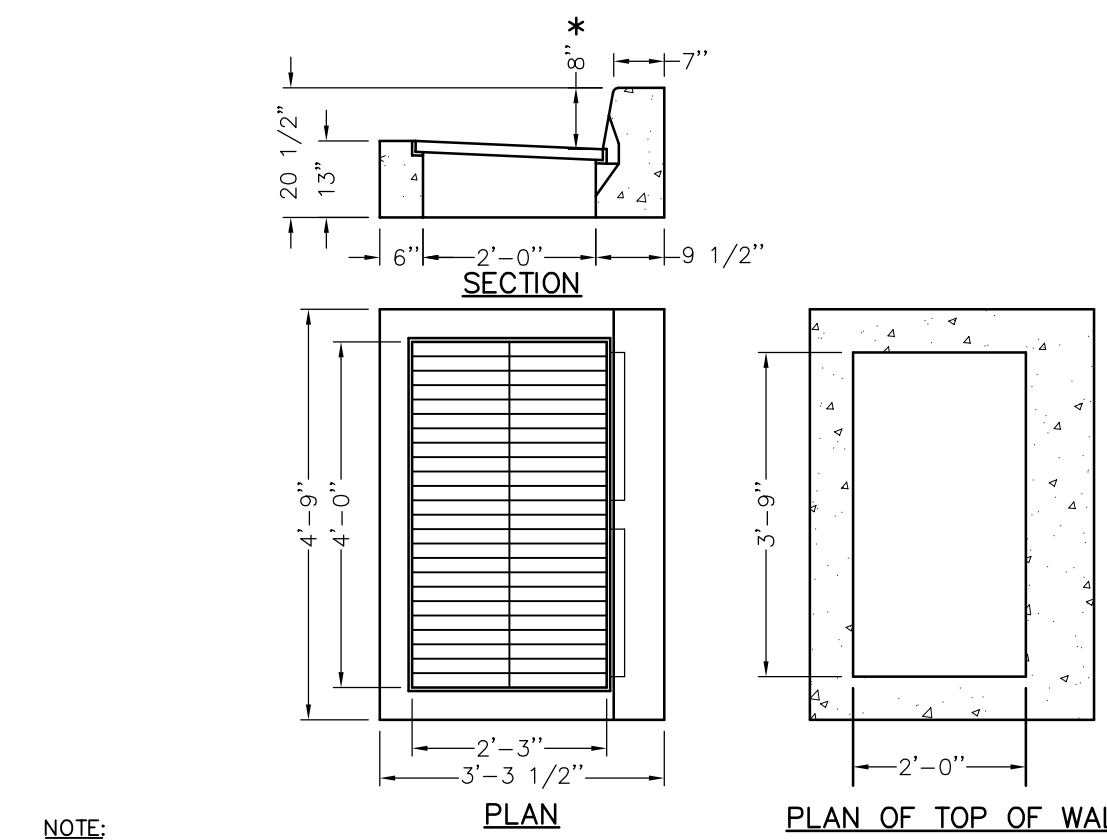
**H. EDWARD BLACK
and ASSOCIATES, Ltd.**

2403 North Front Street □ Harrisburg, Pennsylvania 17110 □ Telephone (717)233-1026 □ FAX (717)233-2192

SHEET		53 OF 68	
NOT FOR CONSTRUCTION		PRELIMINARY SUBD. AND LAND DEV. PLAN	
DRAWN BY:	EIS	OAKWOOD HILLS	
CHECKED BY:	CHH	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA	
DATE:	05-01-17		
SCALE:	NOT TO SCALE	SITE DETAILS	
JOB NUMBER:	13021.020		



ELECTRICAL, COMMUNICATION & TV CABLE
NOT TO SCALE

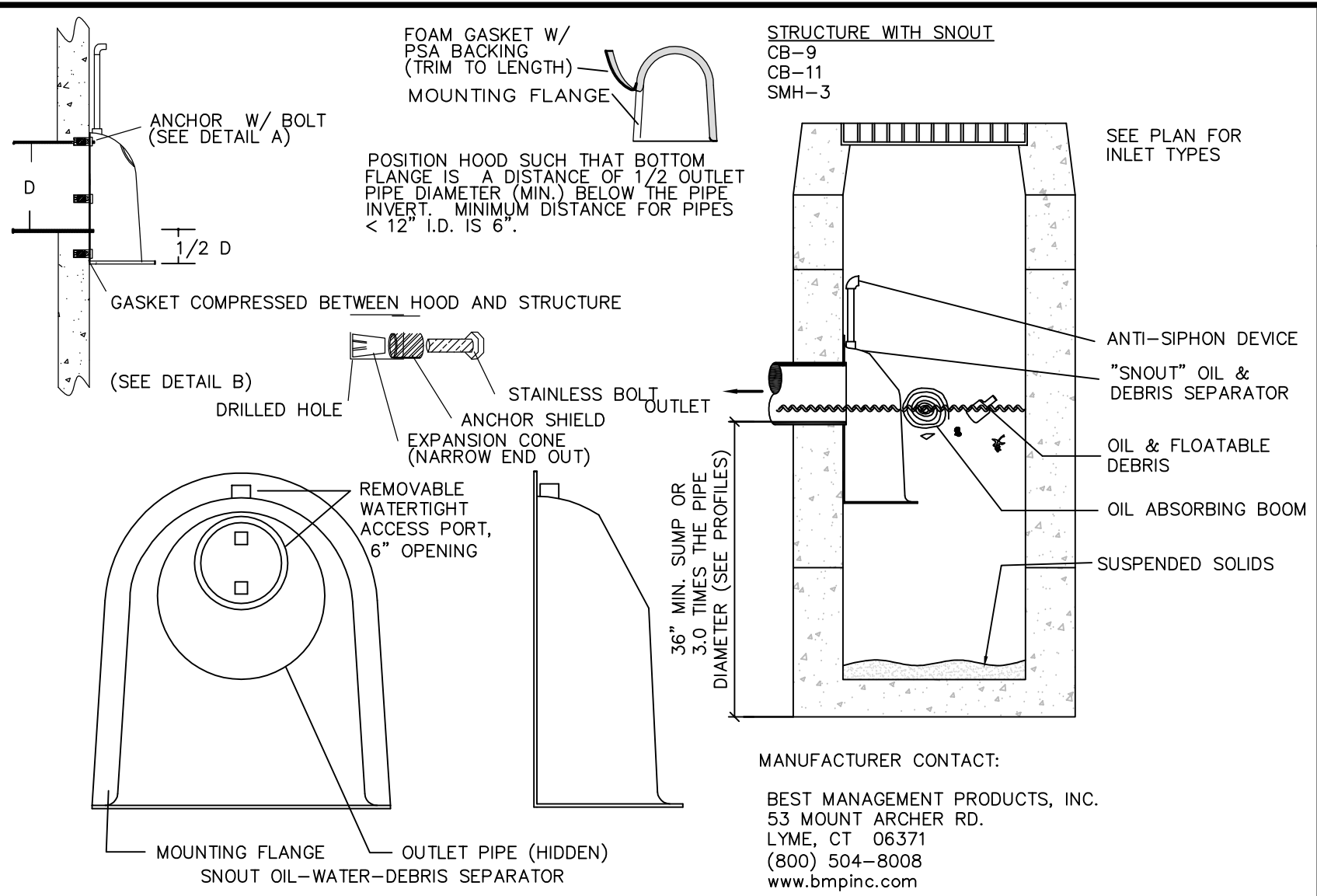


PRECAST R.C. CATCH BASIN (TYPE C)
NOT TO SCALE

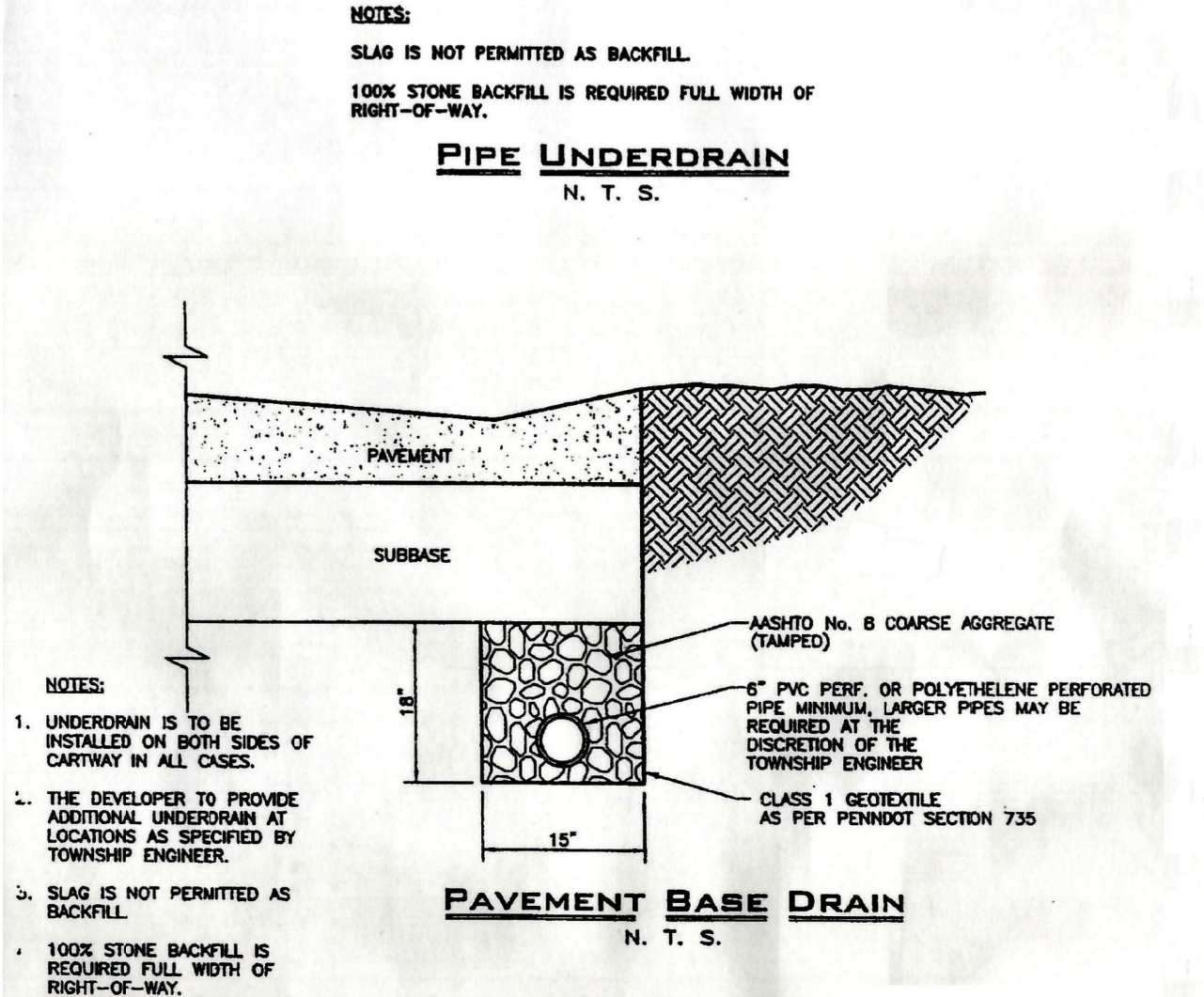
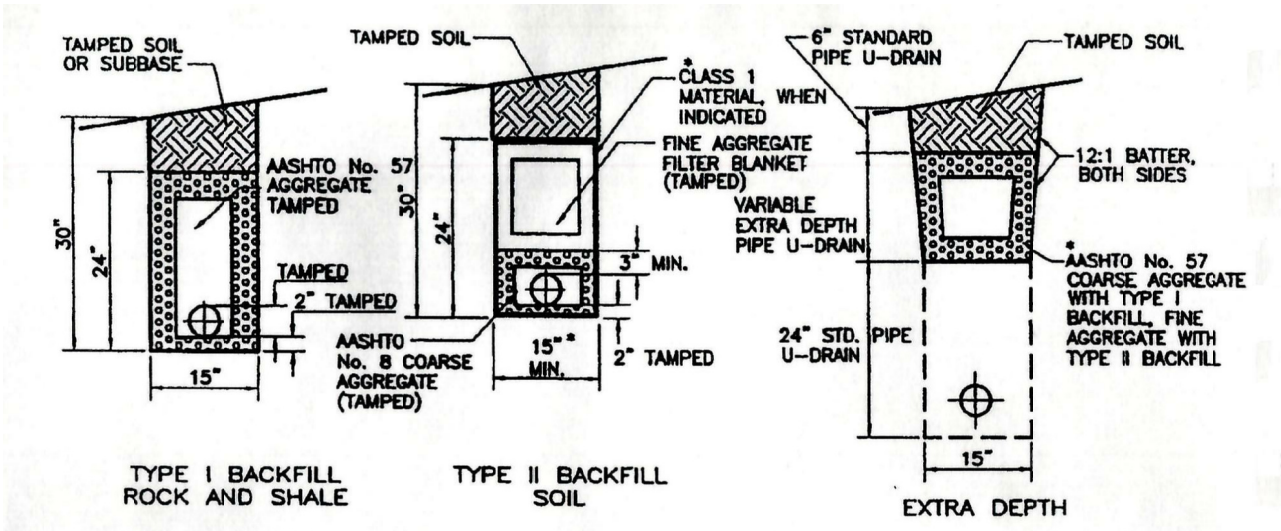
BMP SNOOT
DESIGN CHART

OAKWOOD HILLS STORMWATER STRUCTURES

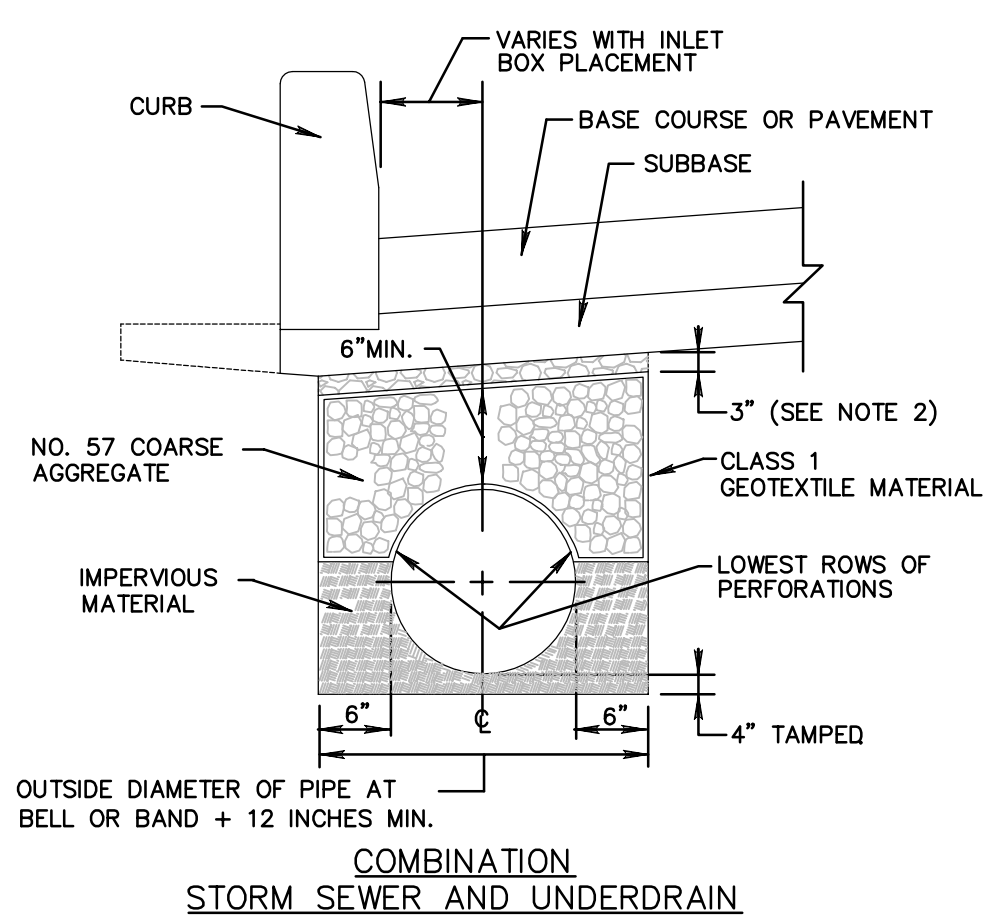
STORM STRUCTURE	PIPE SIZE	OUTSIDE PIPE DIA.	SNOOT PART #	SUMP DEPTH
MH1	15"	17.57"	24R	50"
MH2	24"	27.80"	30R	67.5"
MH6	18"	21.20"	24R	50"
CB11A	15"	17.57"	18F	37.5"
CB12A	15"	17.57"	18F	37.5"
MH7	30"	36.07"	52RTB72	105"
CB13	15"	17.57"	18F	37.5"
MH9	30"	36.07"	52RTB72	105"
CB20A	36"	42.46"	48FTB	90"
MH11	15"	17.57"	18R	37.5"
MH12	15"	17.57"	18R	37.5"



PENNDOT STANDARD CATCH BASIN W/ WATER QUALITY SNOOT
NOT TO SCALE



PAVEMENT BASE DRAIN
NOT TO SCALE



COMBINATION STORM SEWER UNDERDRAIN
NOT TO SCALE

PRECAST CONCRETE BOTTOM BOX
NOT TO SCALE

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EIS	07-31-18	FOR CORRECTIONS	REV	DESCRIPTION
EIS	08-27-18	FOR SIGNATURES		
EIS	08-08-18	PER PENNDOT COMMENTS		
EIS	05-04-18	PER PENNDOT COMMENTS		
EIS	03-28-18	PER SUEZ WATER DESIGN		
EIS	12-27-17	PER 105 COMMENTS		
EIS	11-13-17	PER SUEZ WATER DESIGN		
BY	DATE			

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

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PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

SITE/UTILITY DETAILS

NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: NOT TO SCALE

JOB NUMBER: 13021.020

54 OF 68

ACAD 14

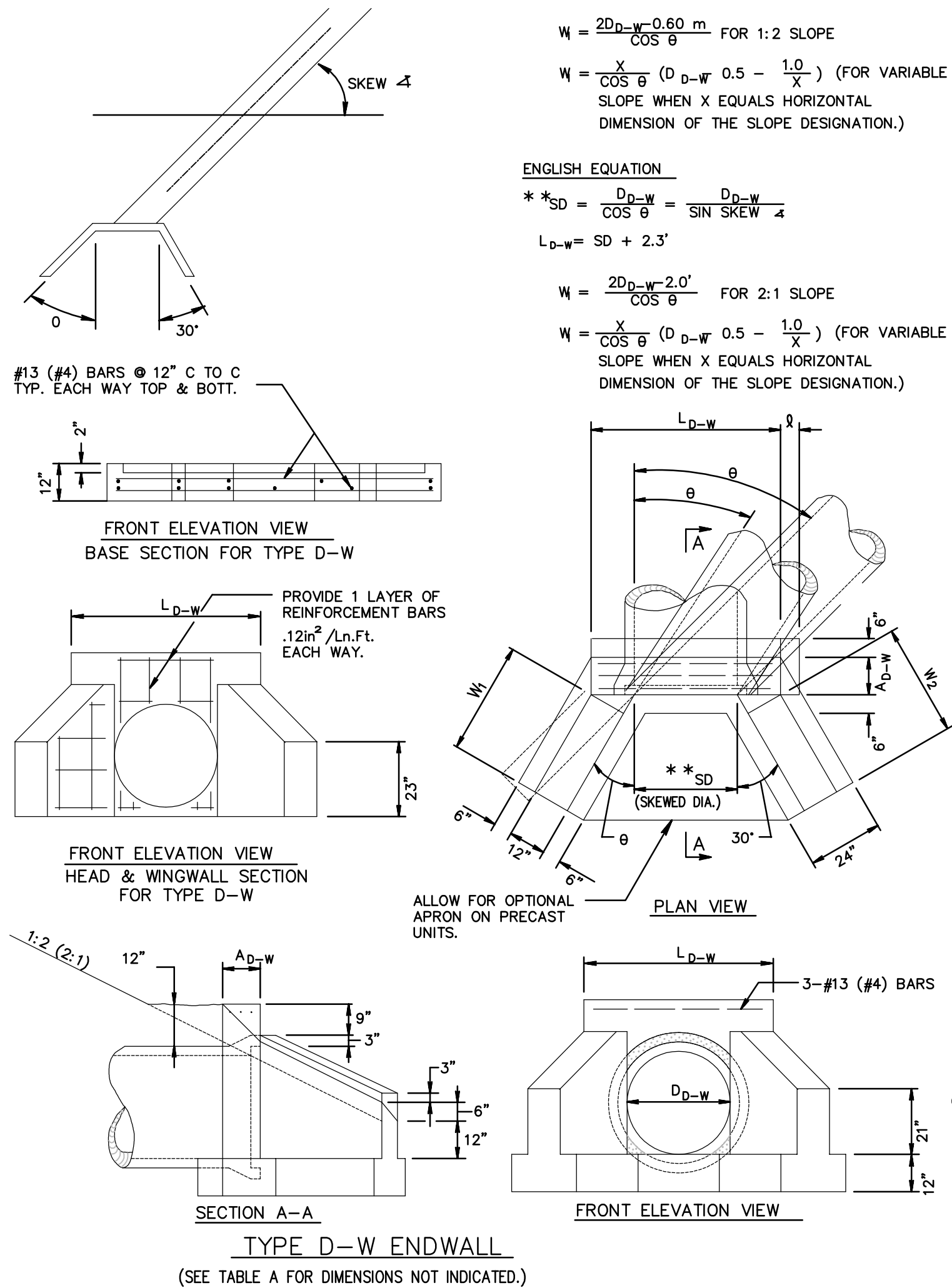
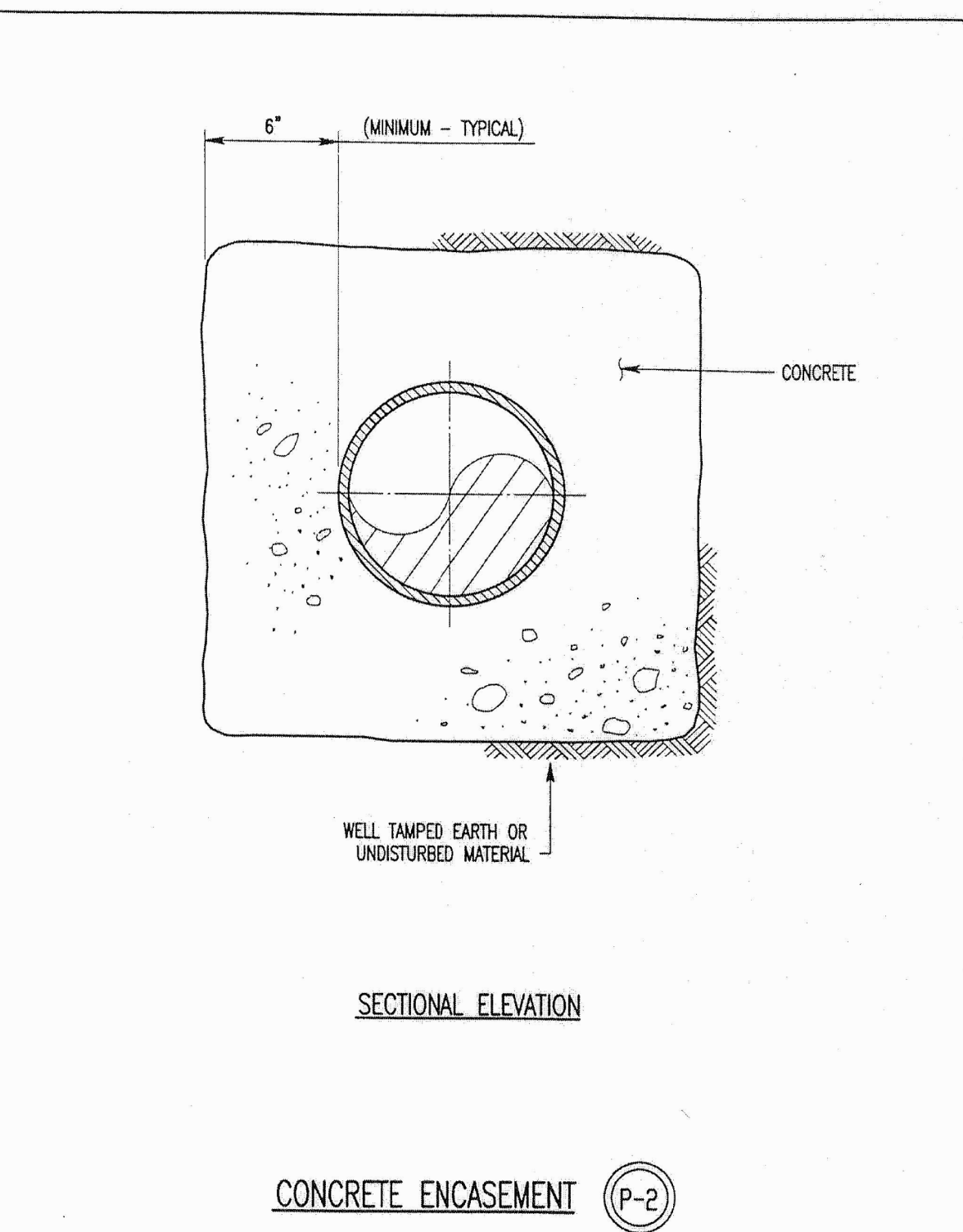
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CAP PROTECTION
NOT TO SCALE

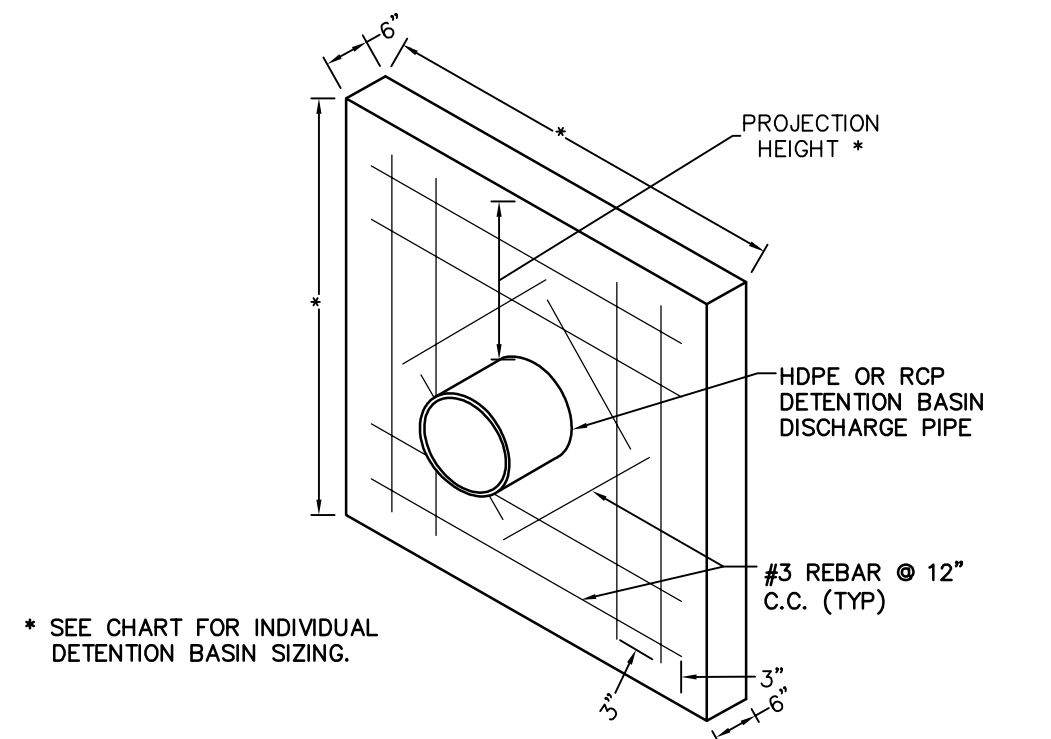
ACAD 14

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CONCRETE ENCASEMENT
NOT TO SCALE



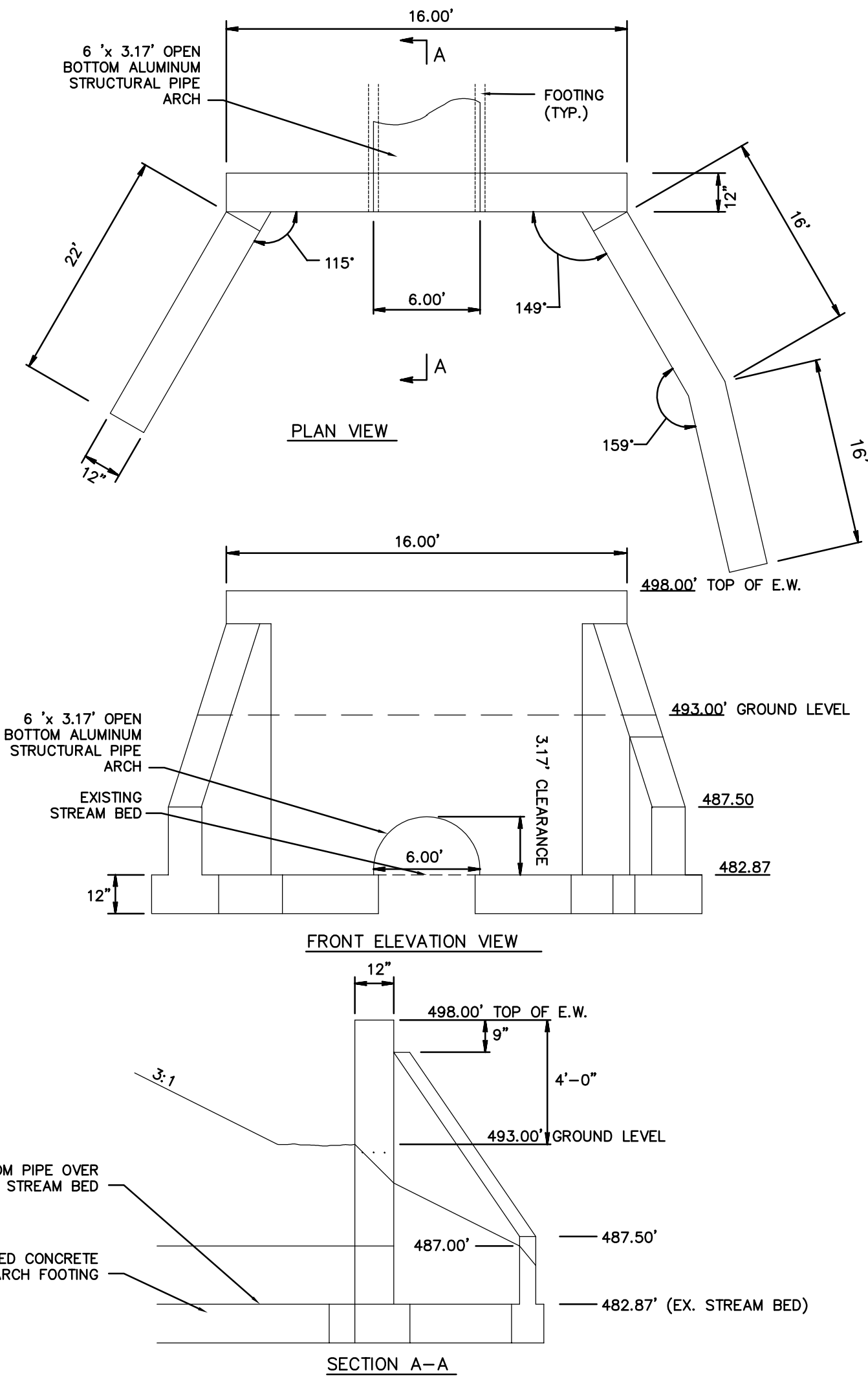
ENDWALLS TYPE D-W
NOT TO SCALE



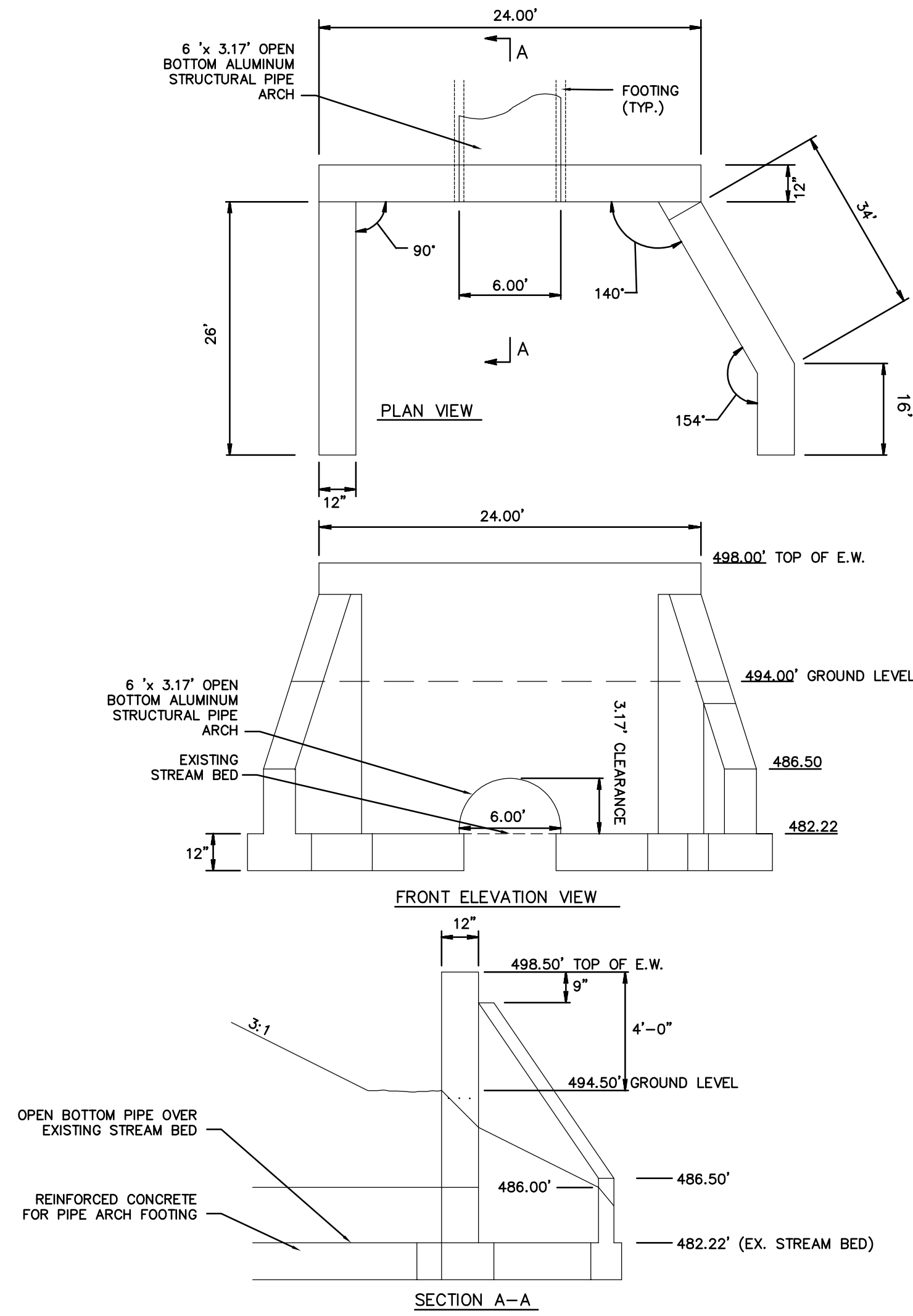
INSTALLATION INSTRUCTIONS
INSTALL THE HDPE OR RCP DETENTION BASIN OUTLET PIPE. CAST IN PLACE THE CONCRETE ANTI-SEEP COLLAR AROUND THE INSTALLED OUTLET PIPE. REINFORCED WITH #3 REBAR #12 C.C. AROUND OUTLET PIPE. THE #3 REBAR MUST BE PLACED IN THE CENTER ON THE CAST IN PLACE ANTI-SEEP COLLAR. BACKFILL AND HAND TAMP.

DETENTION BASIN ANTI-SEEP COLLAR SIZING				
BASIN NUMBER	WIDTH	HEIGHT	# OF COLLARS	PROJECTION HEIGHT (FT.)
1	49"	49"	2	1.43'
2	164"	164"	2	6.09'
3	54"	54"	1	1.62'
4	92"	92"	1	2.82'
5	58"	58"	2	1.78'
6	56"	56"	2	1.71'
7	67"	67"	1	2.16'
8	72"	72"	1	2.36'

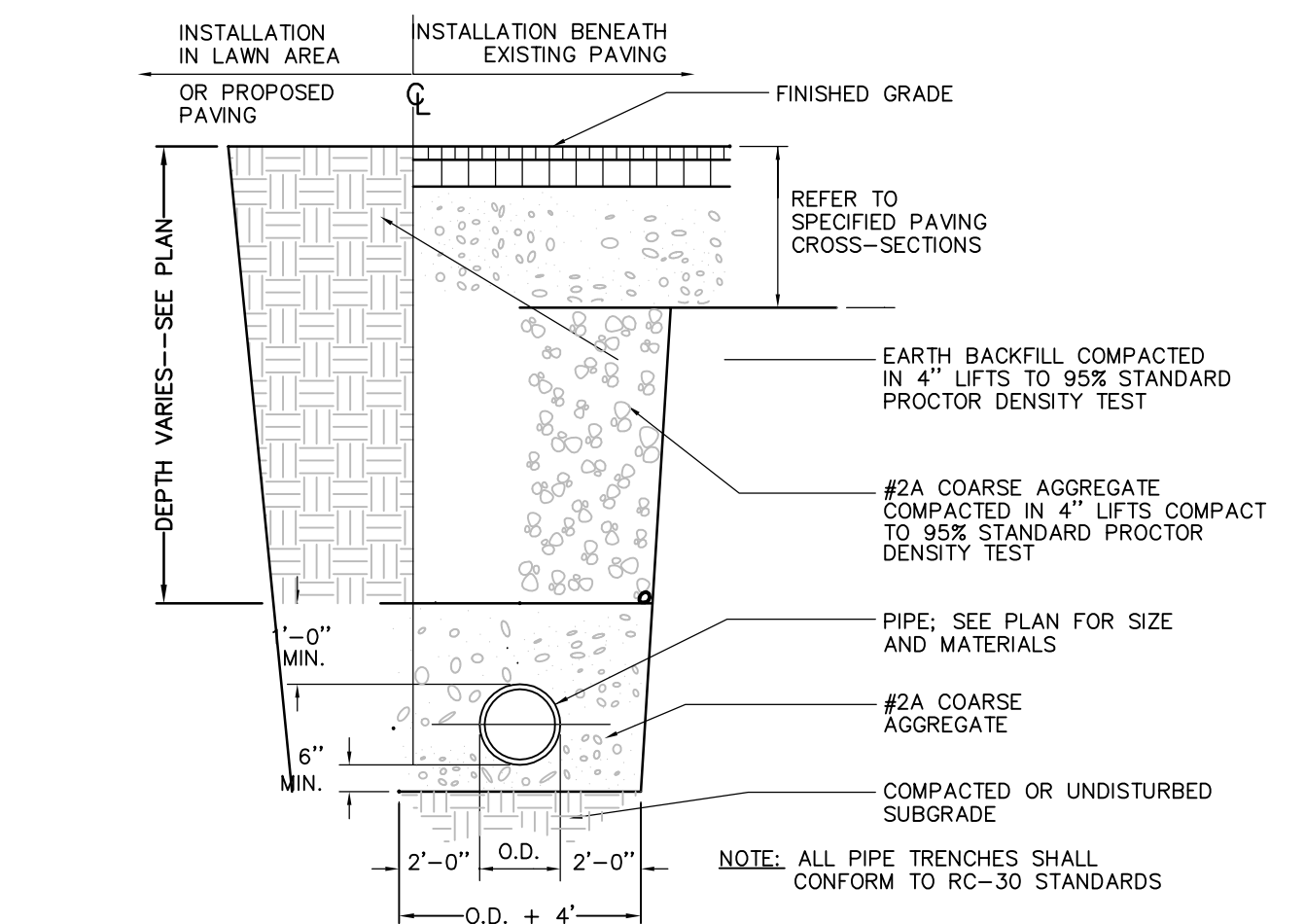
CAST-IN-PLACE CONCRETE ANTI-SEEP COLLAR
SCALE: NOT TO SCALE



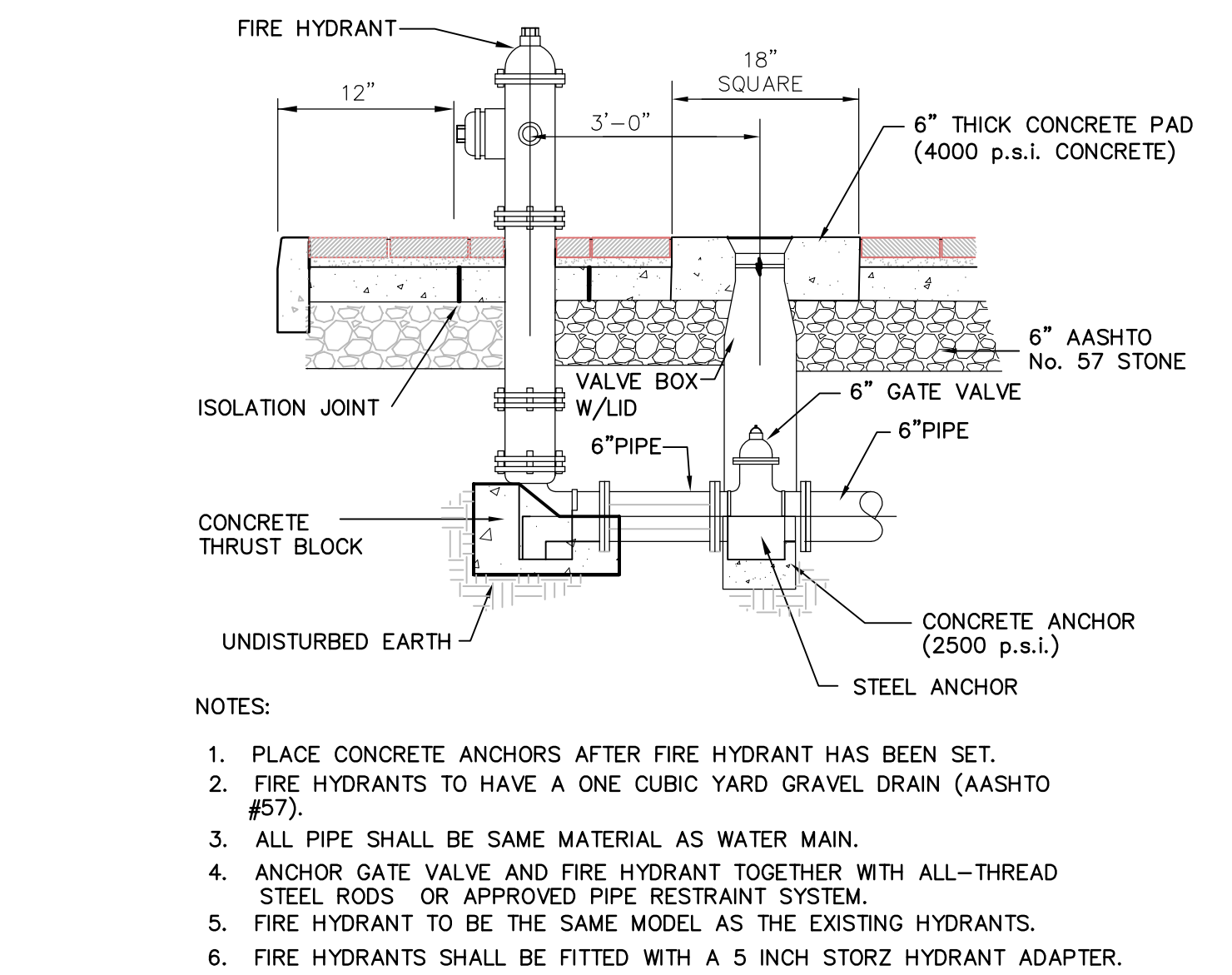
STREAM CROSSING #1 HEADWALL
NOT TO SCALE



STREAM CROSSING #1 ENDWALL
NOT TO SCALE



PIPE TRENCH
NOT TO SCALE



FIRE HYDRANT DETAIL
VIEWS AS NOTED SCALE: NOT TO SCALE

NOT FOR CONSTRUCTION

PRELIMINARY SUBD. AND LAND DEV. PLAN
OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

UTILITY DETAILS

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: NOT TO SCALE

JOB NUMBER: 13021.020

SHEET

55 OF 68

REV	DESCRIPTION	BY	DATE
A	FOR CORRECTIONS	EIS	07-31-18
A	FOR SIGNATURES	EIS	06-27-18
A	PER PENNDOT COMMENTS	EIS	06-08-18
A	PER PENNDOT COMMENTS	EIS	05-04-18
A	PER SUEZ WATER DESIGN	EIS	03-28-18
A	PER 105 COMMENTS	EIS	12-27-17
A	PER SUEZ WATER DESIGN	EIS	11-13-17

☐ COMPREHENSIVE LAND AND SITE PLANNING

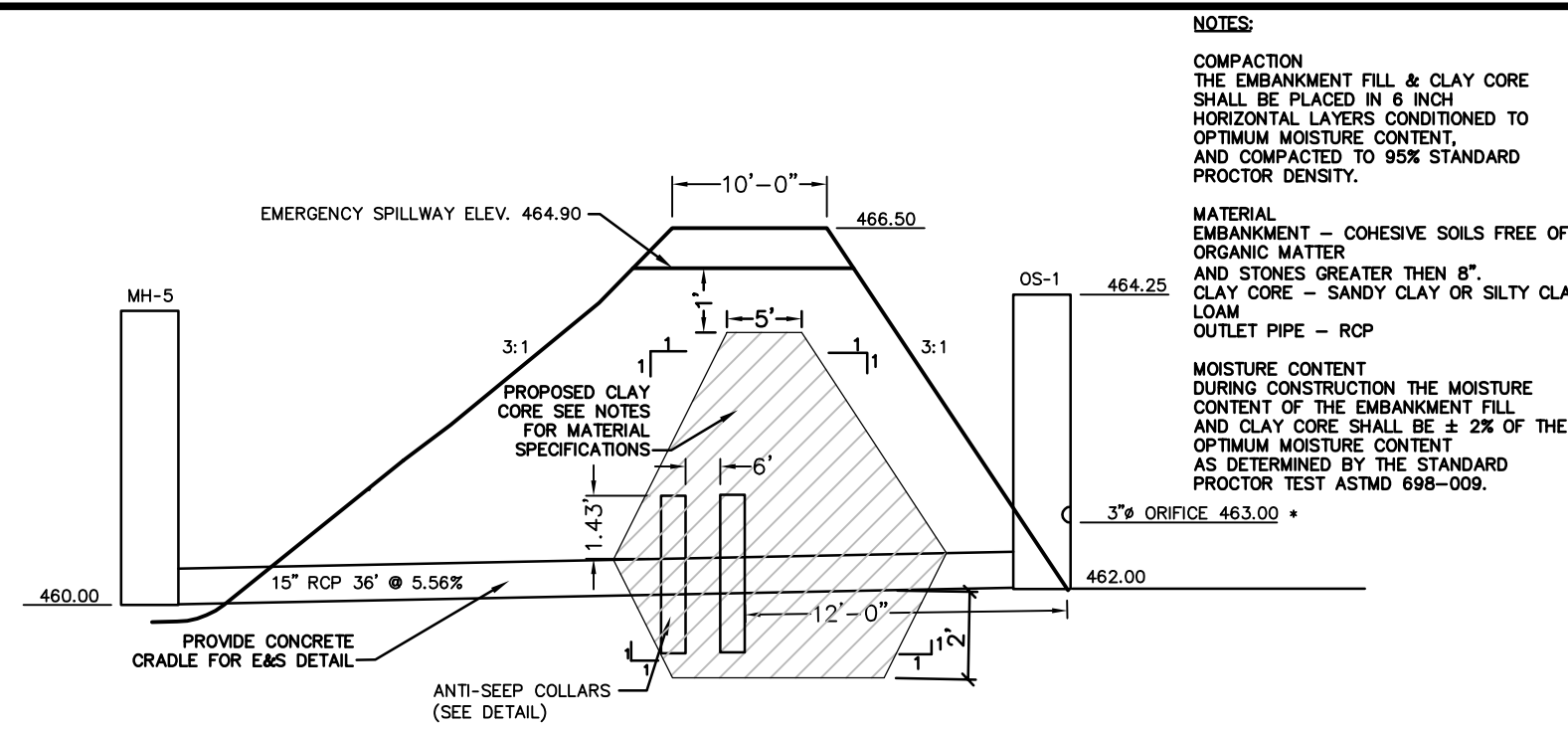
☐ LANDSCAPE ARCHITECTURE

☐ ENGINEERING

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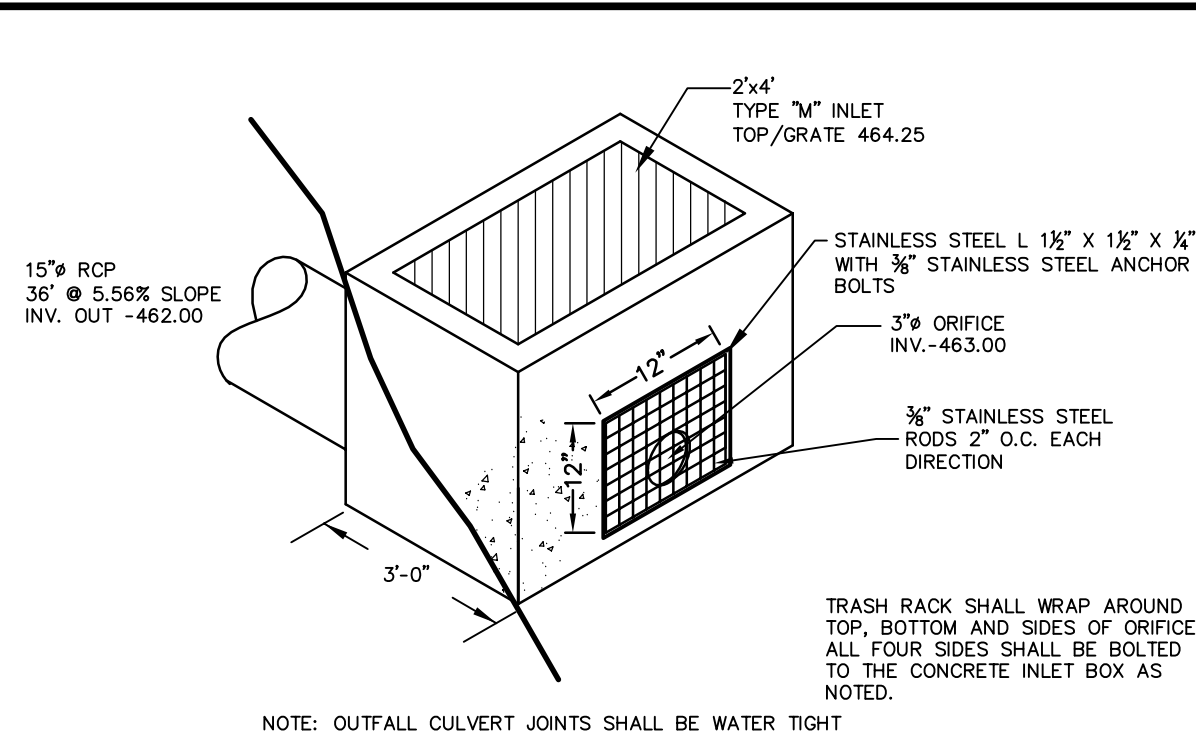
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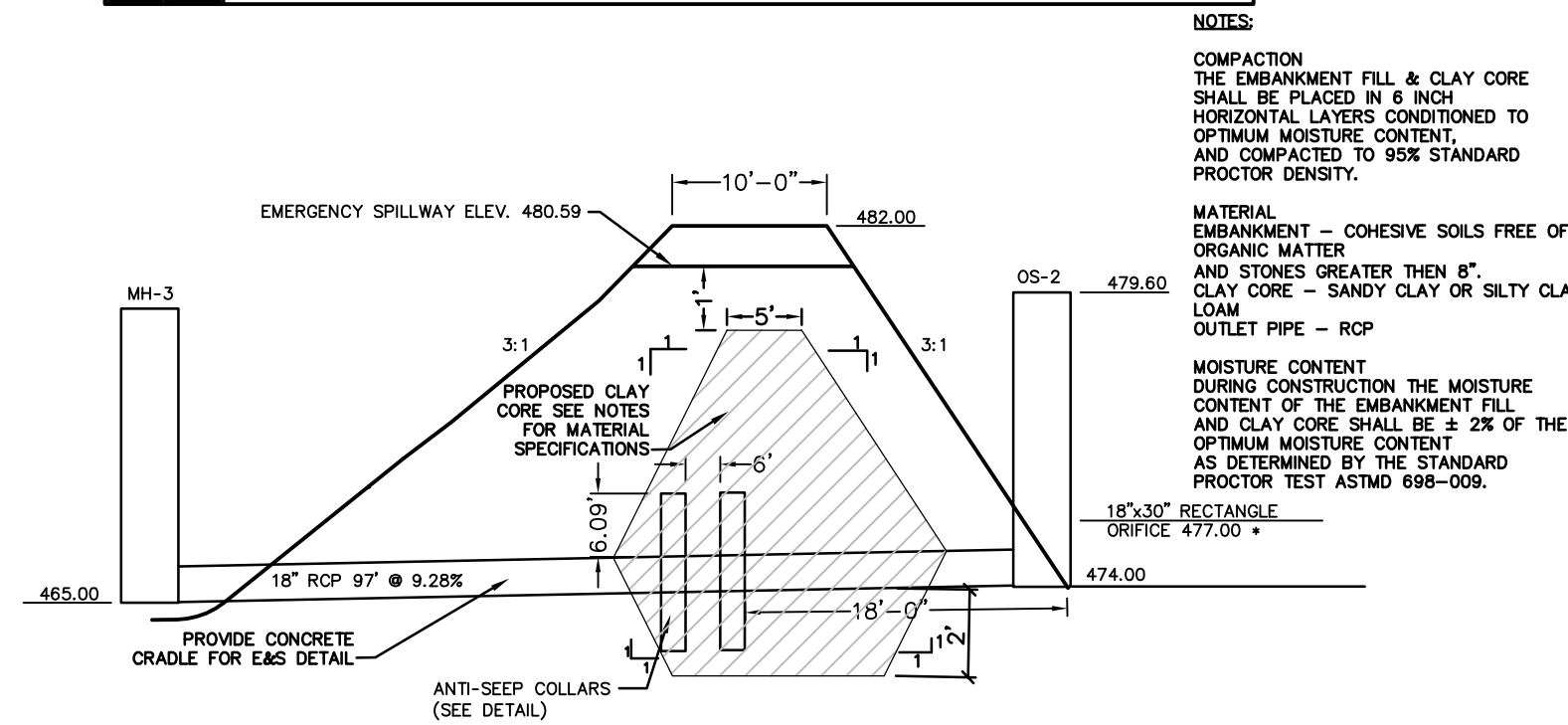


DETENTION BASIN #1

VIEWS AS NOTED SCALE: NOT TO SCALE

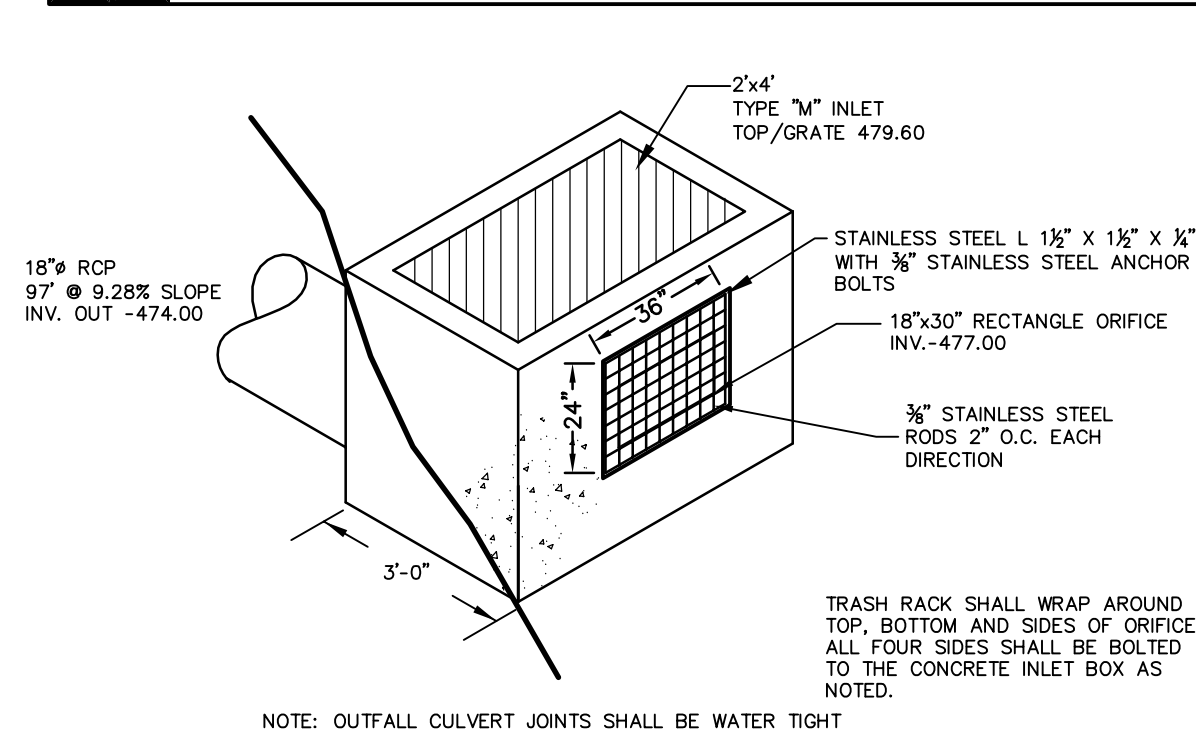


CONTROL BOX 1

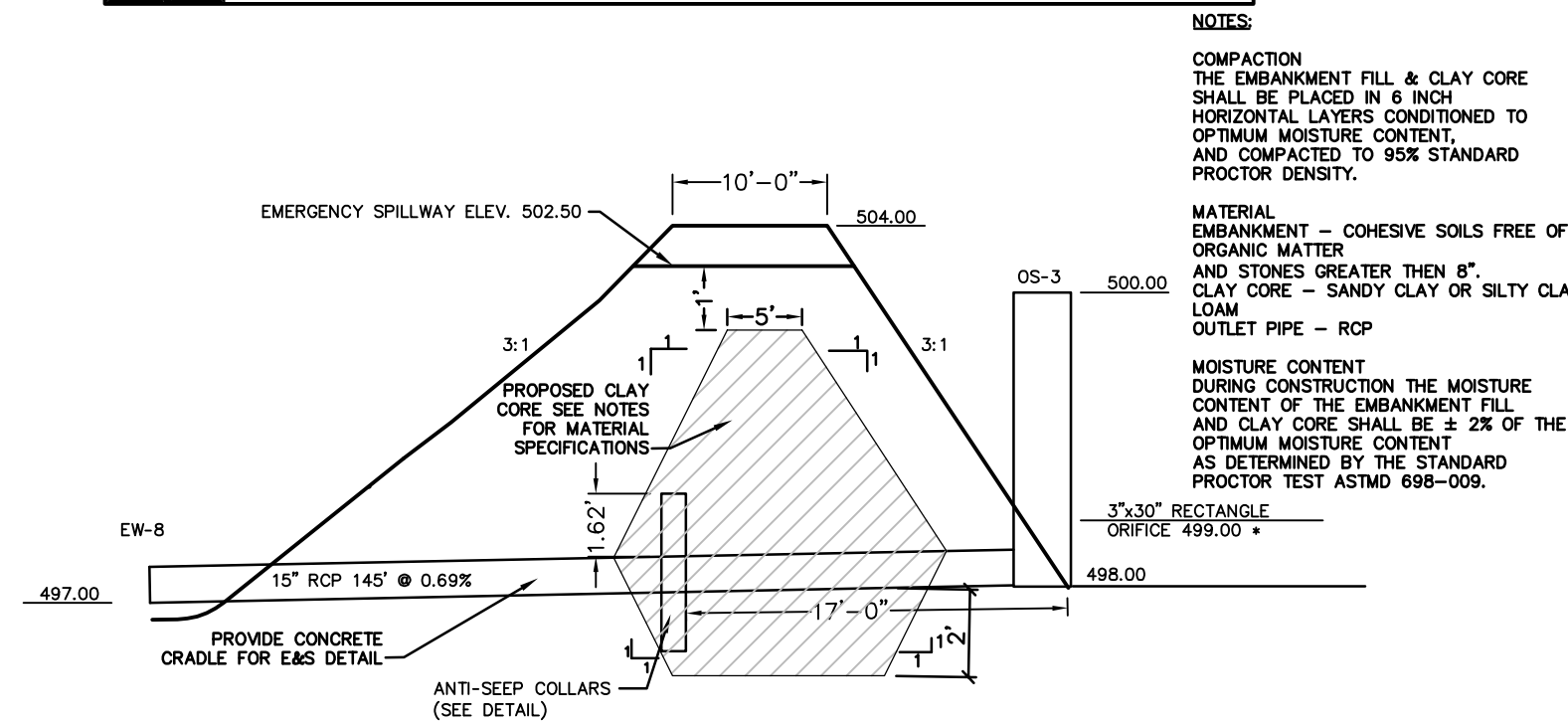


DETENTION BASIN #2

VEWS AS NOTED SCALE: NOT TO SCALE

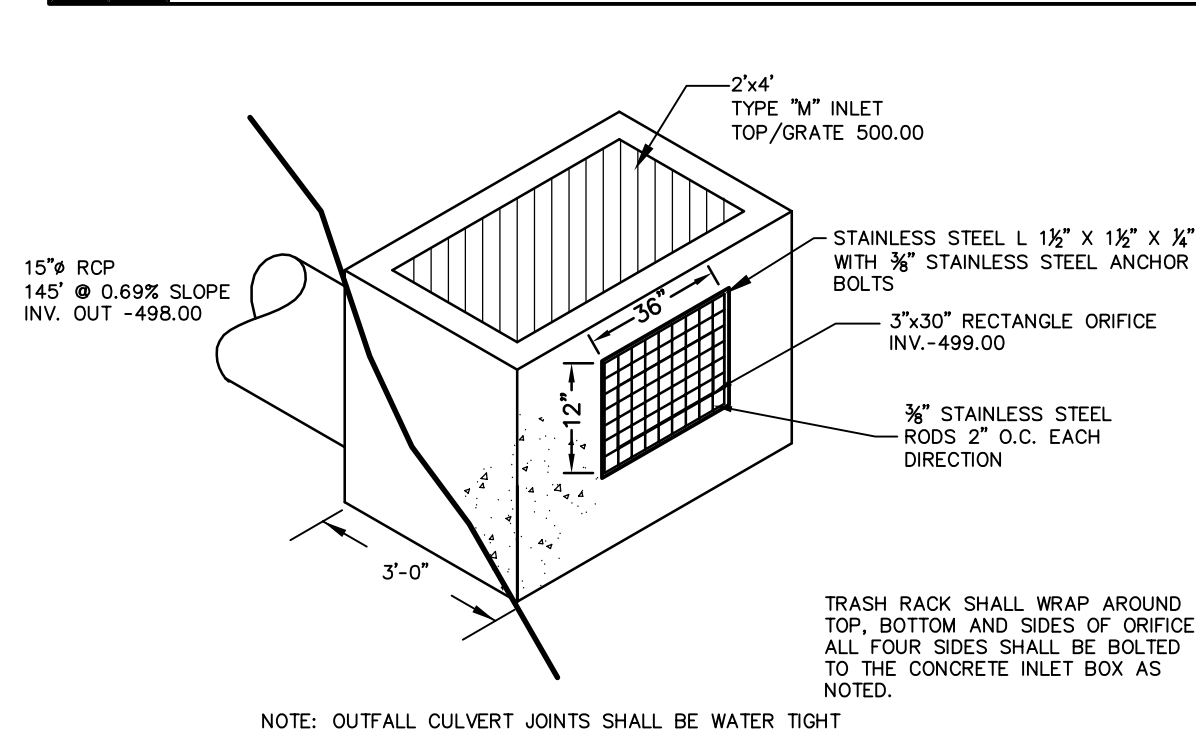


CONTROL BOX 2

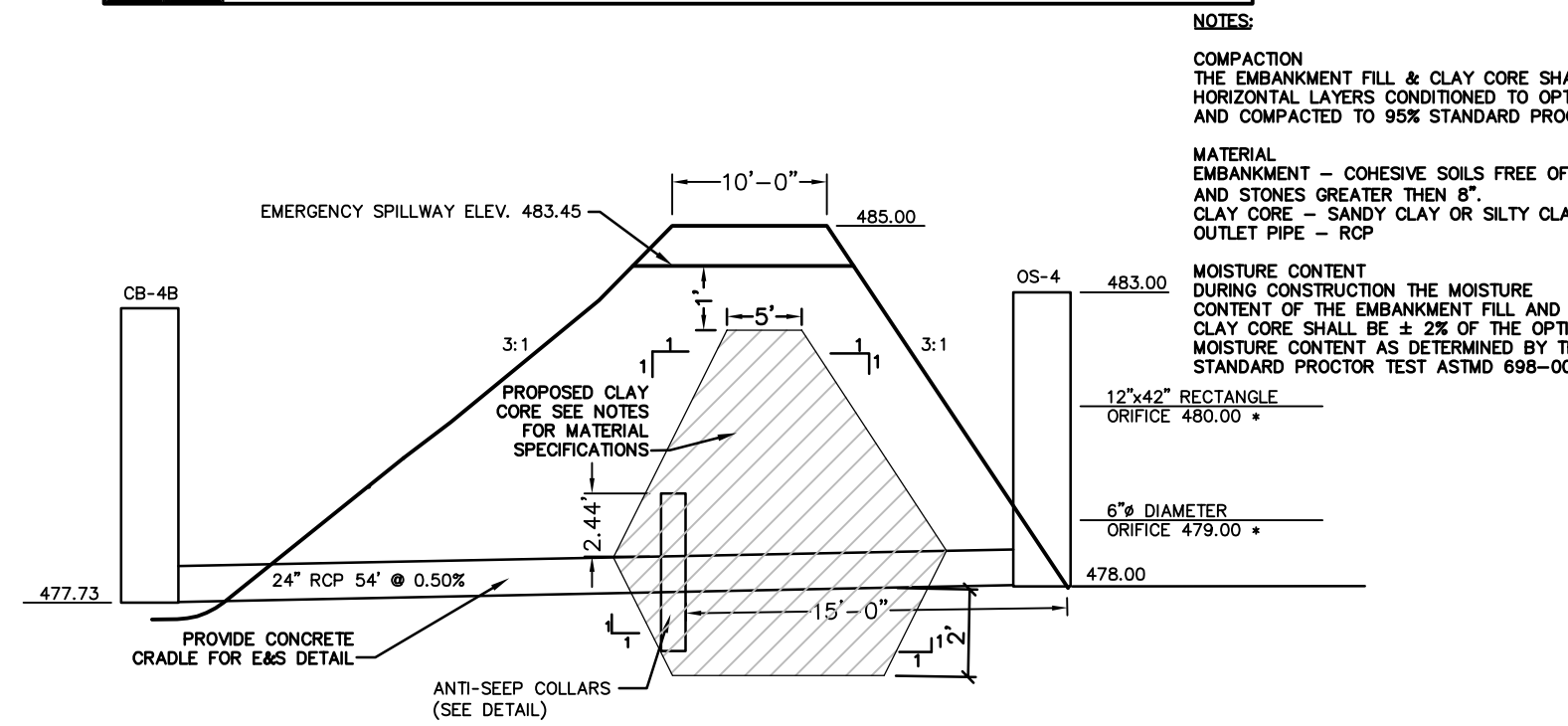


DETENTION BASIN #3

VEWS AS NOTED SCALE: NOT TO SCALE

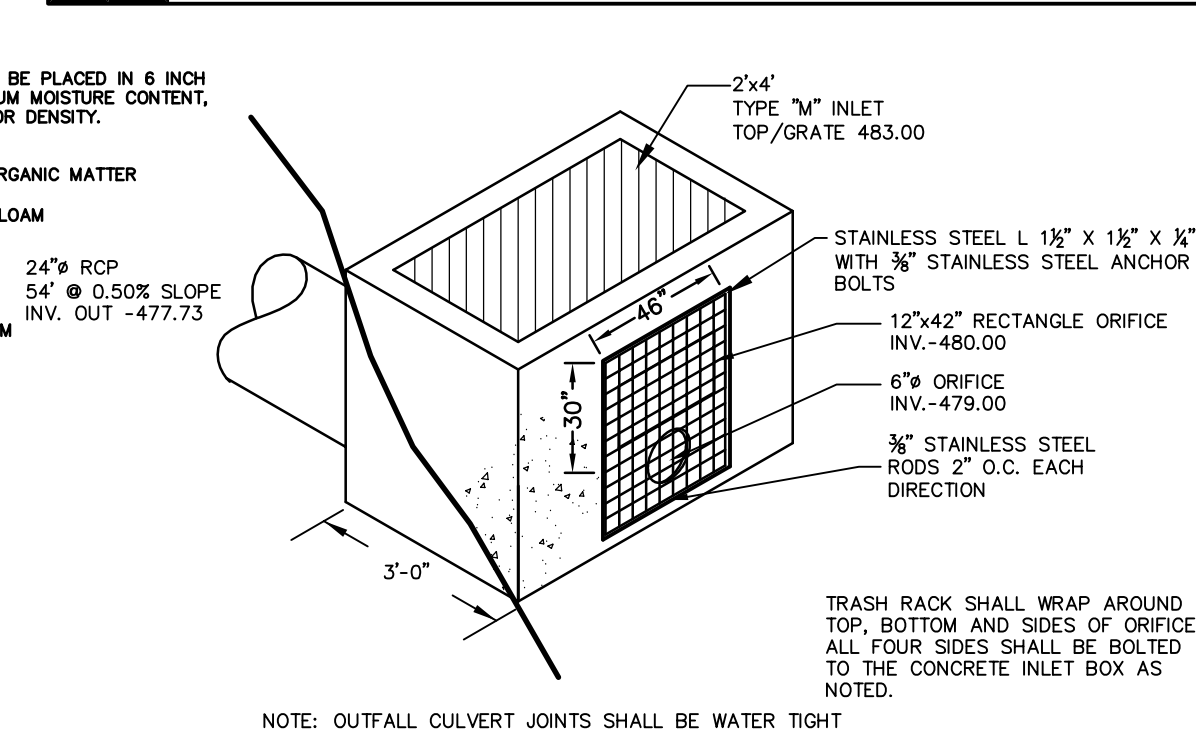


CONTROL BOX 3

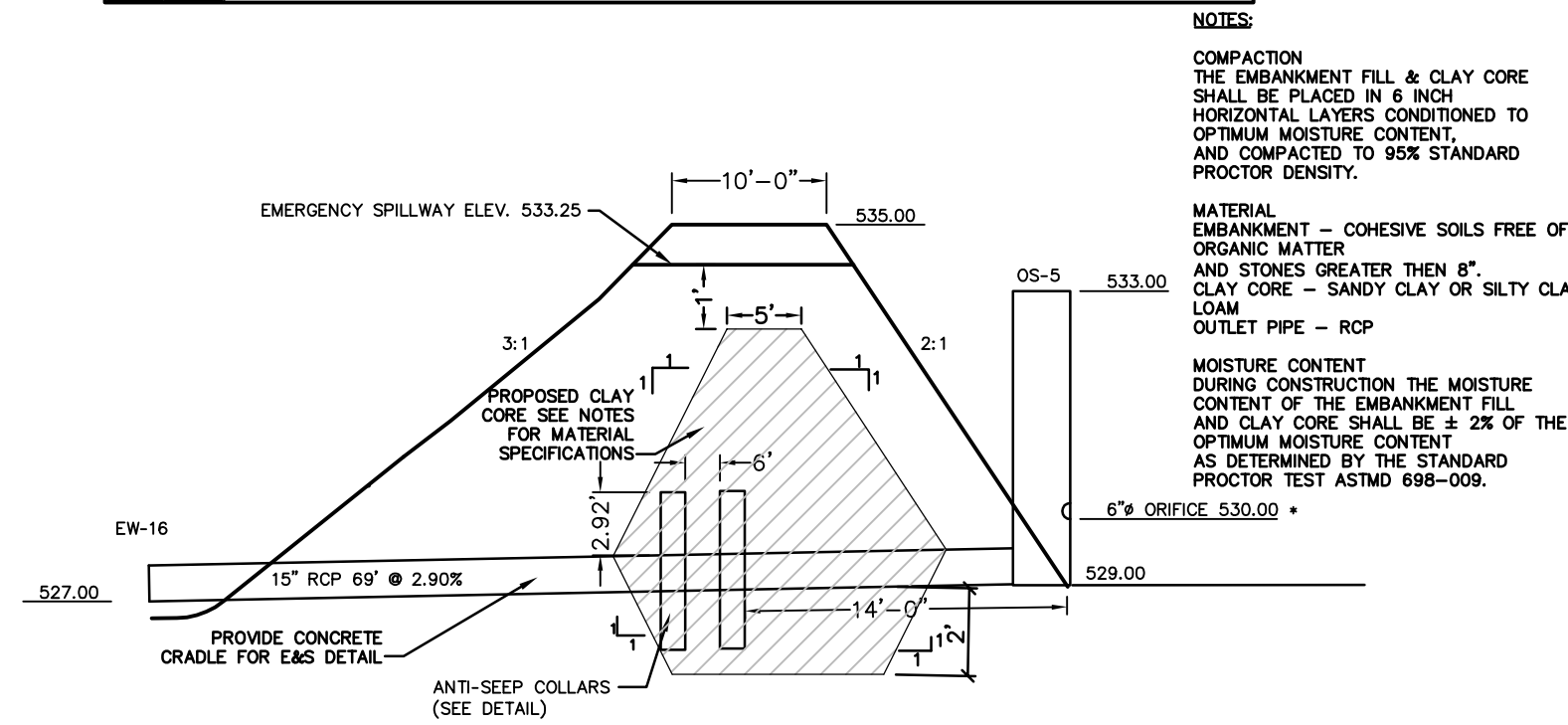


DETENTION BASIN #4

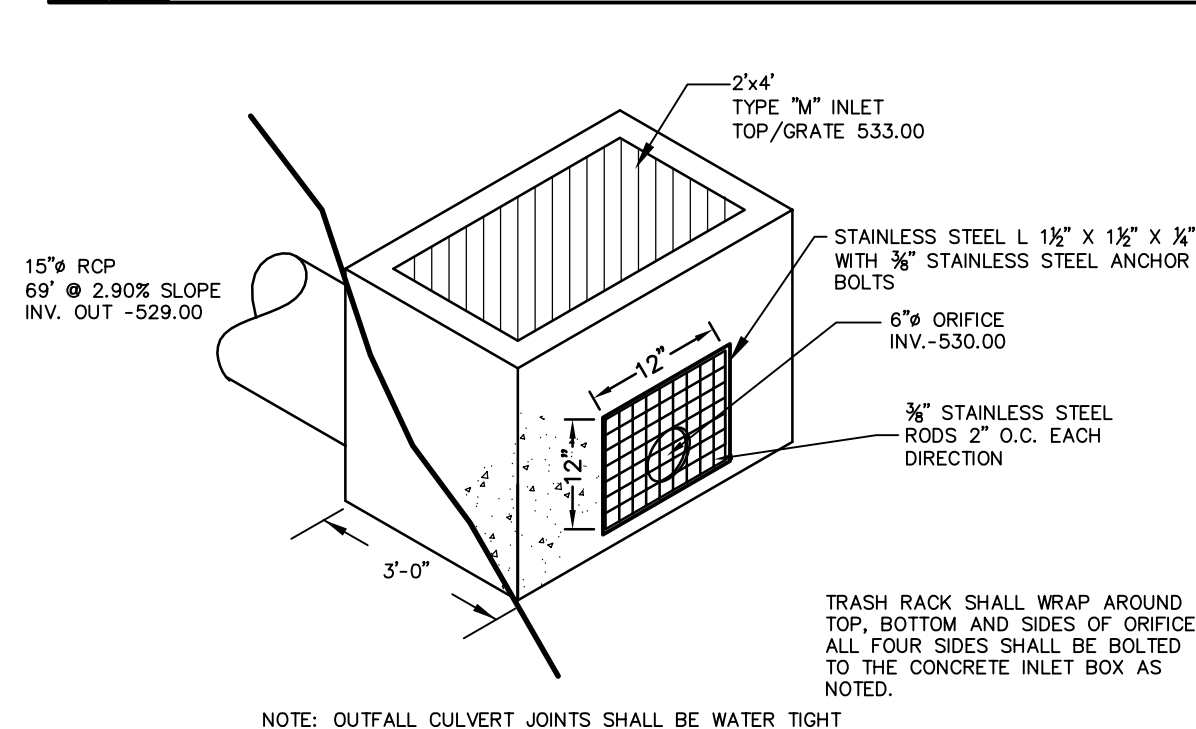
VEWS AS NOTED SCALE: NOT TO SCALE



CONTROL BOX 4

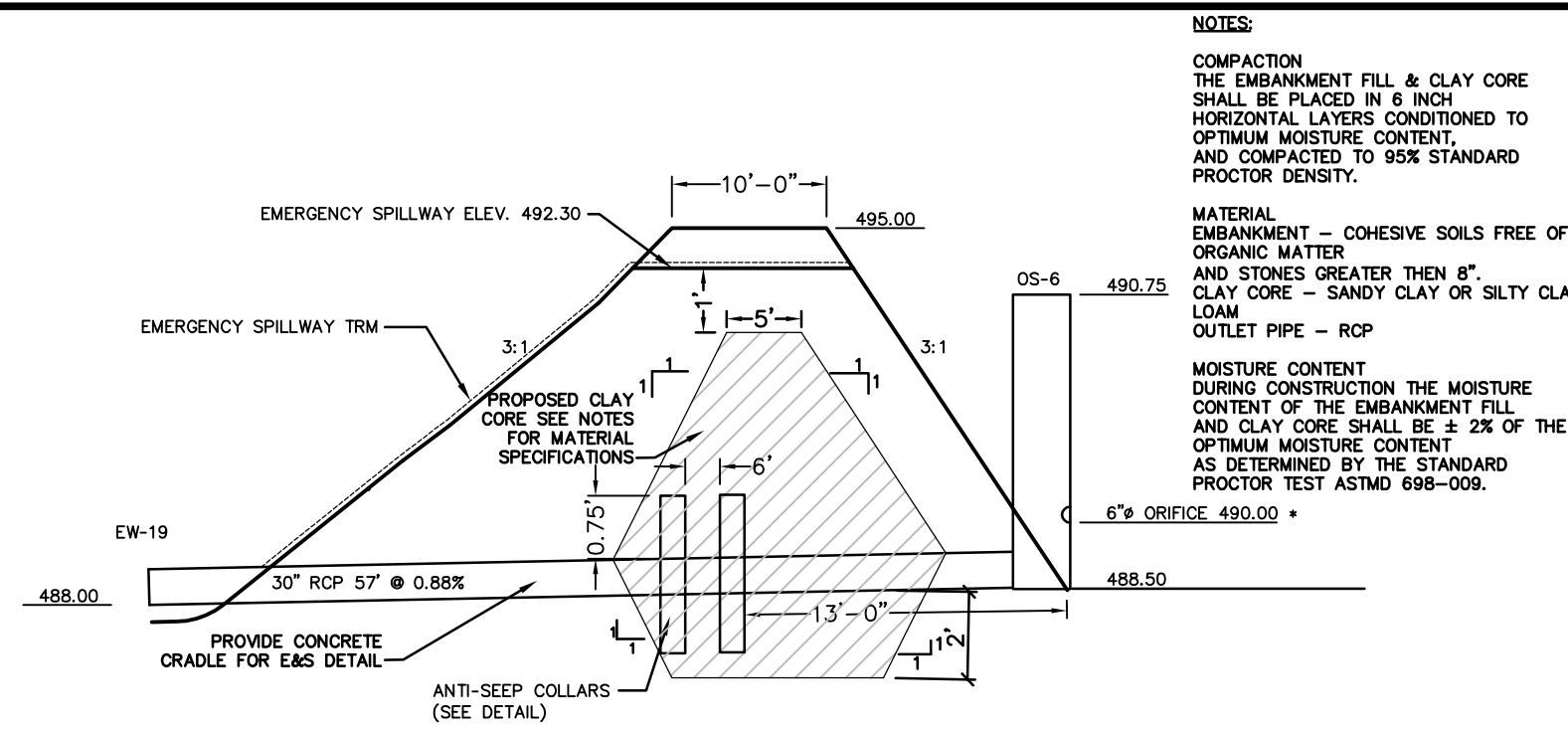


DETENTION BASIN #5 VIEWS AS NOTED SCALE: NOT TO SCALE



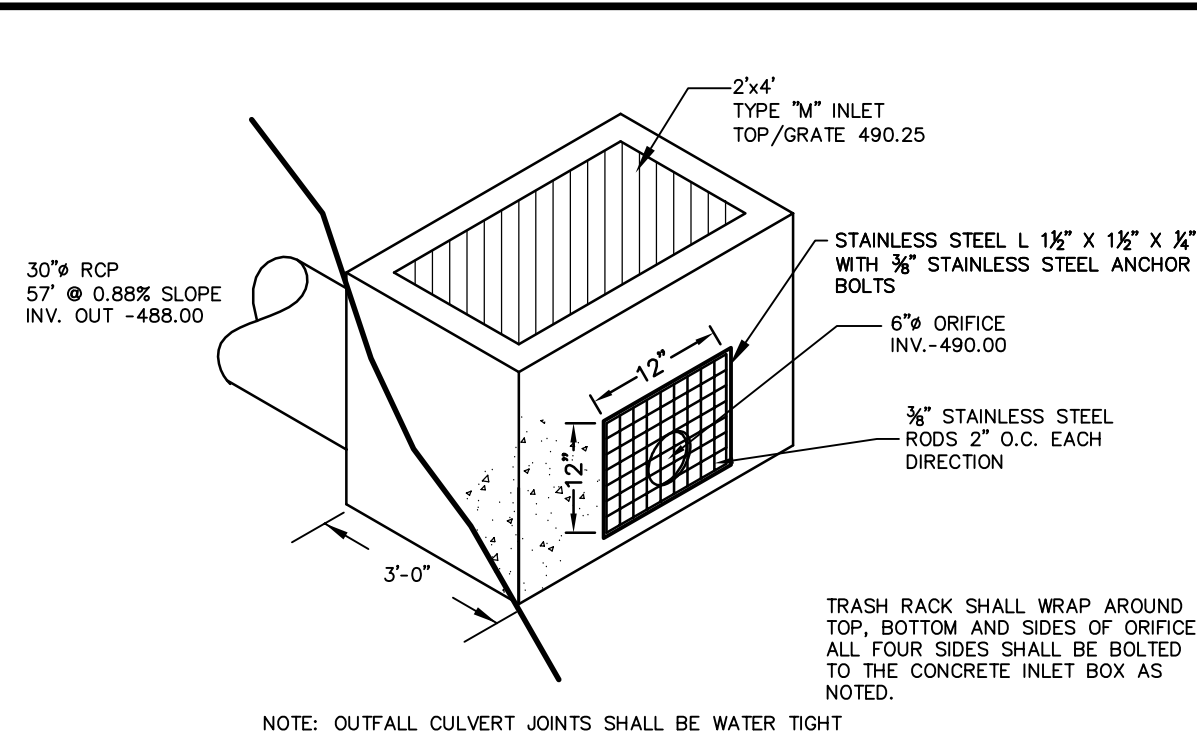
CONTROL BOX 5

VEWS AS NOTED SCALE: NOT TO SCALE

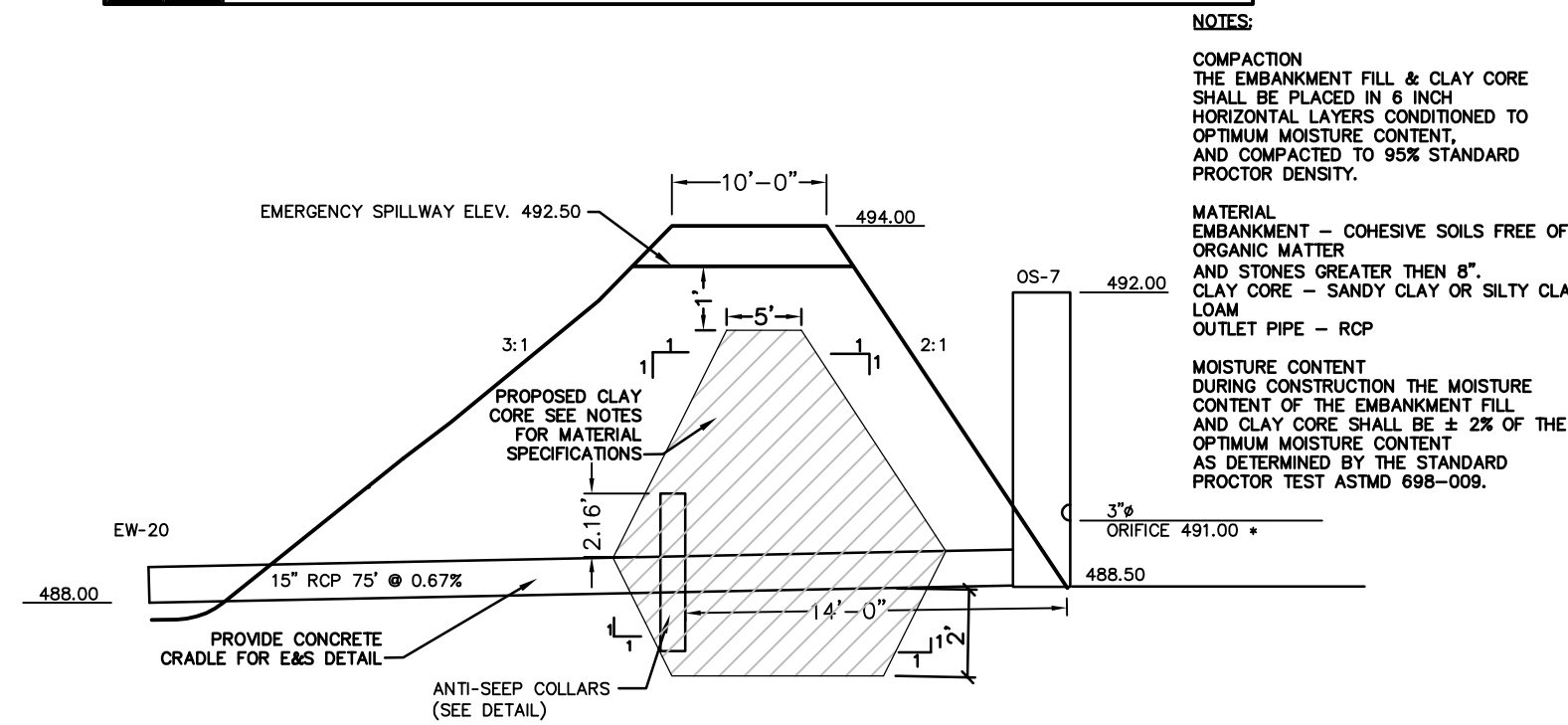


DETENTION BASIN #6

VIEWS AS NOTED SCALE: NOT TO SCALE

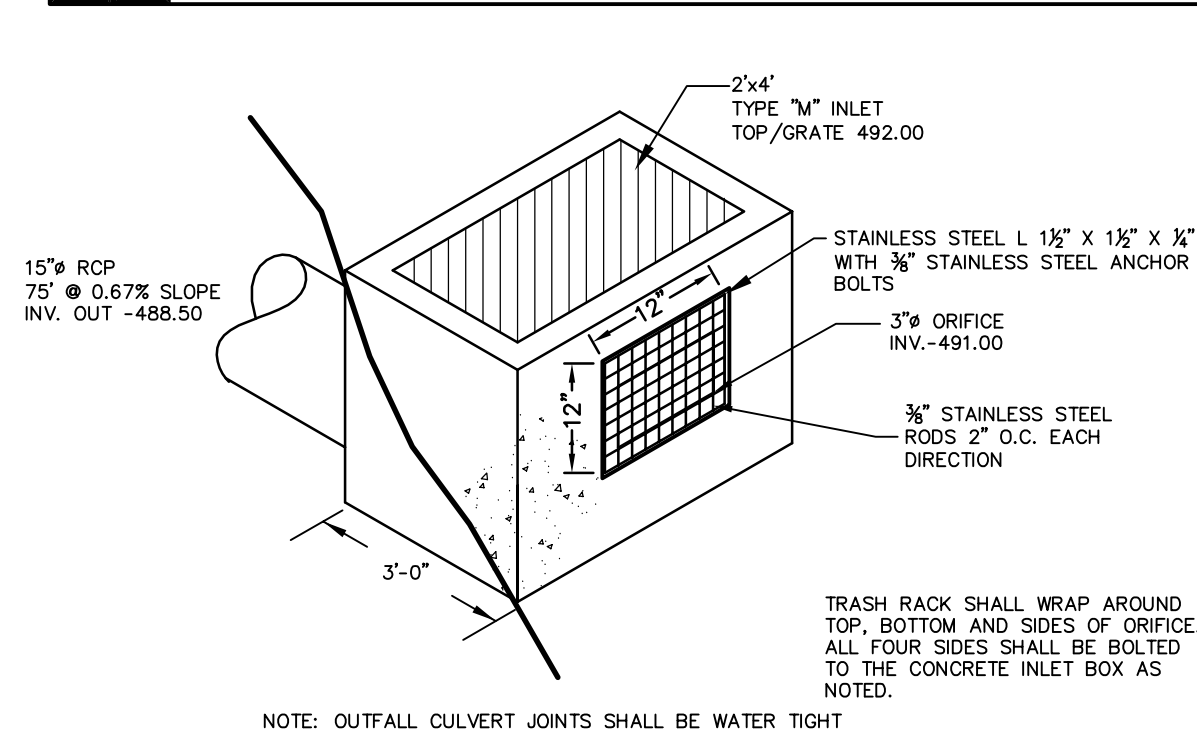


CONTROL BOX 6

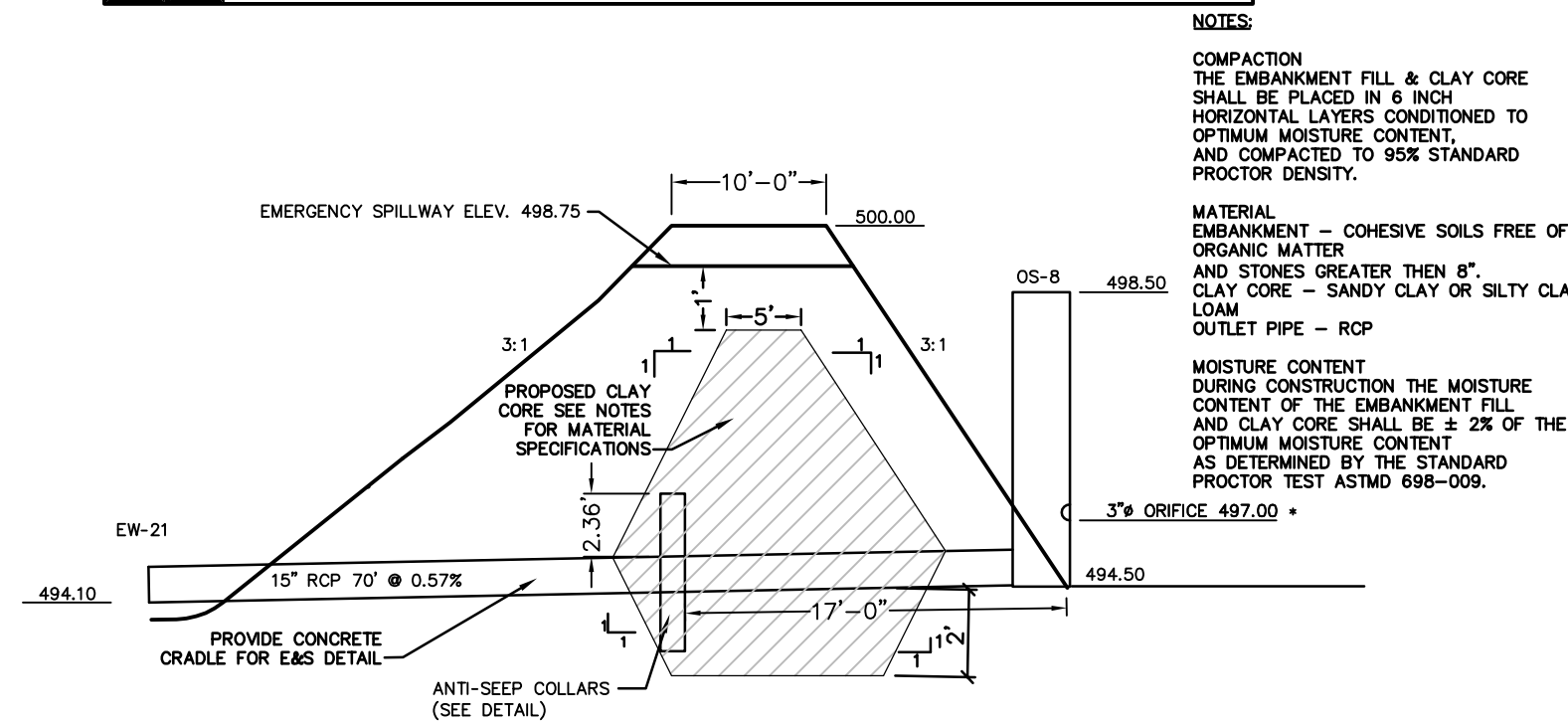


DETENTION BASIN #7

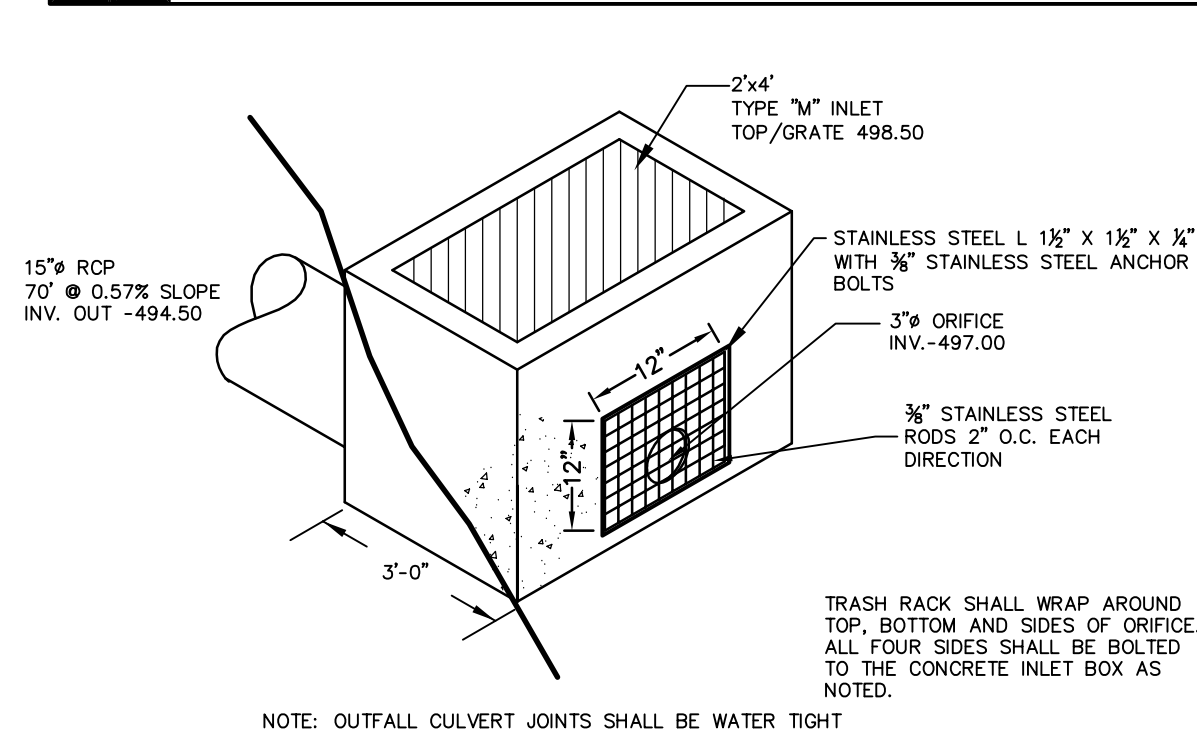
VEWS AS NOTED SCALE: NOT TO SCALE



CONTROL BOX 7




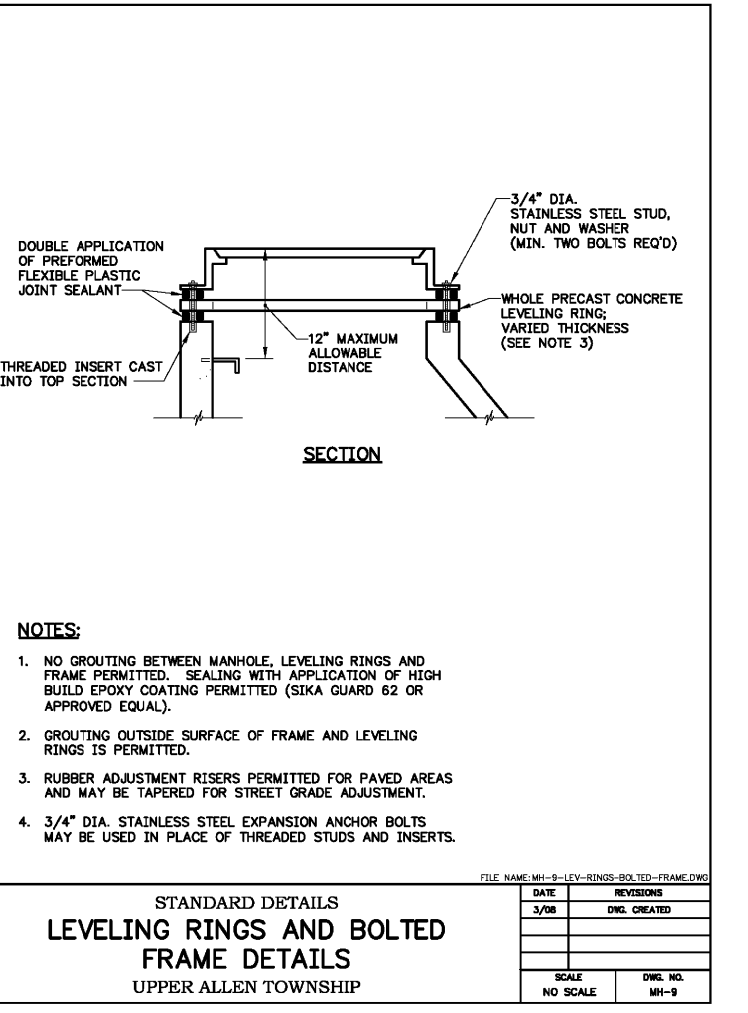
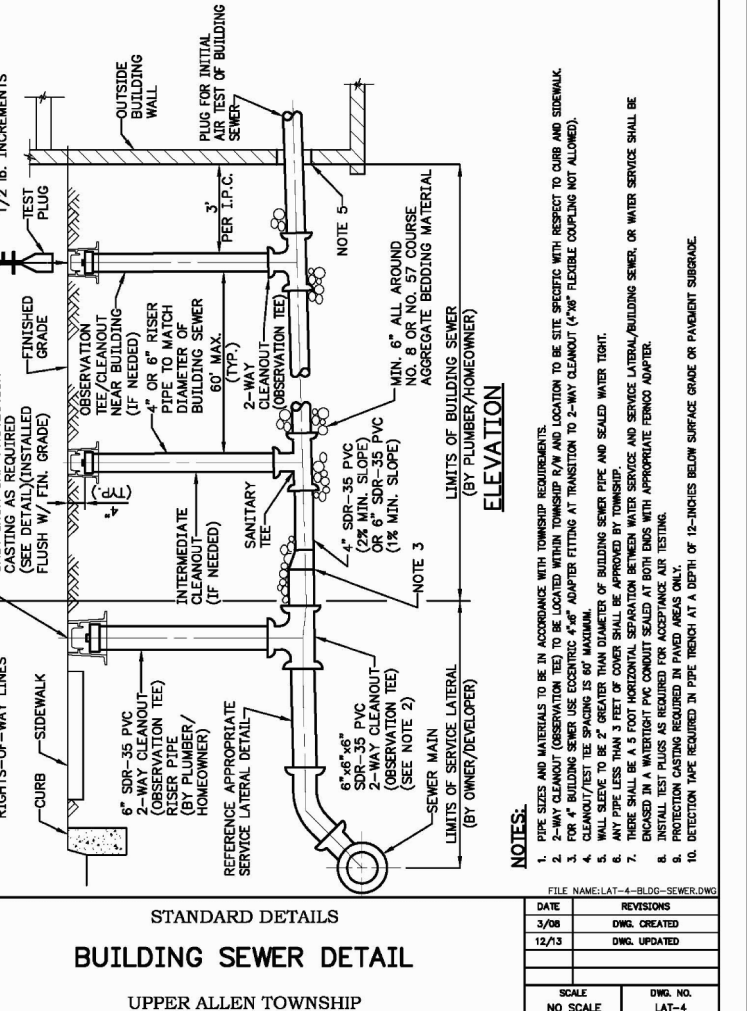
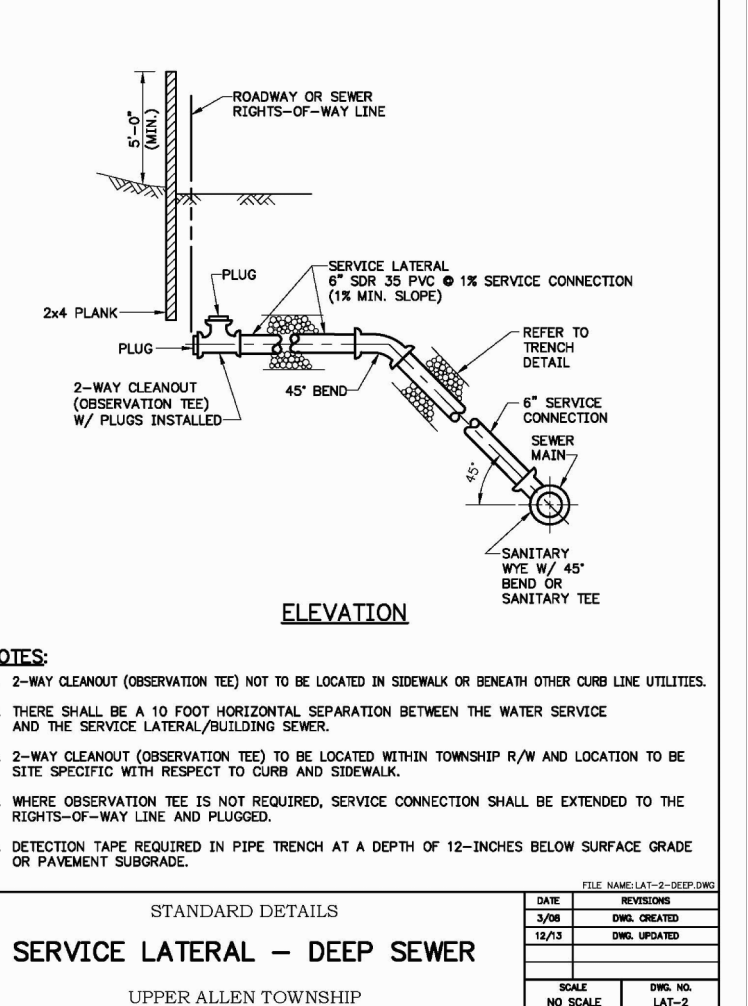
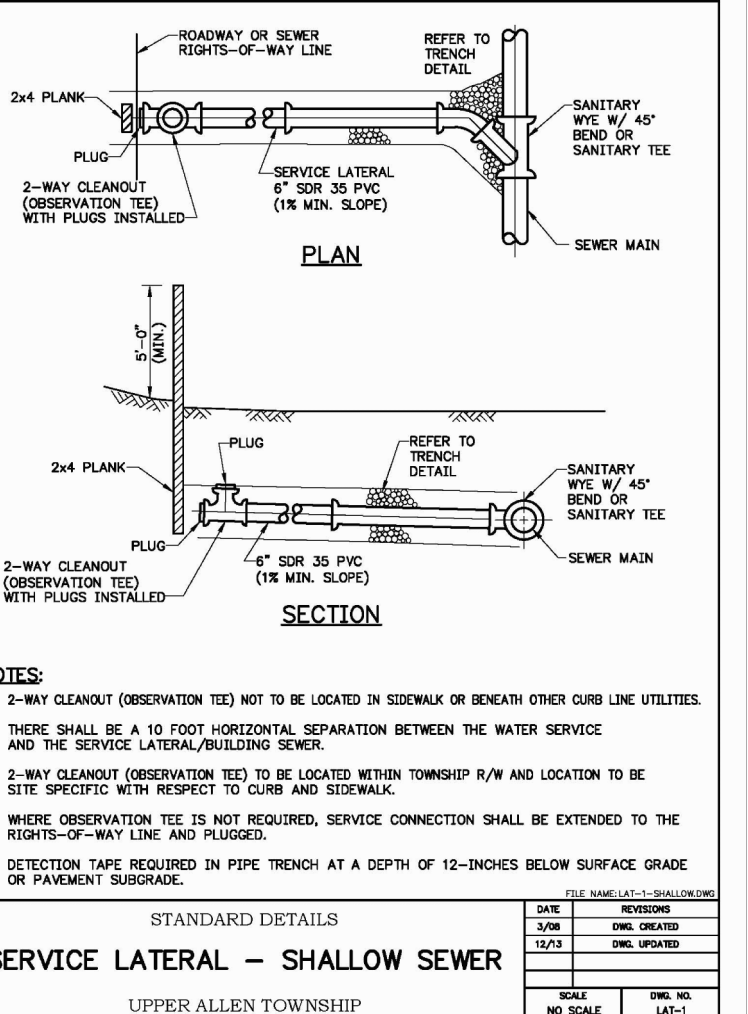
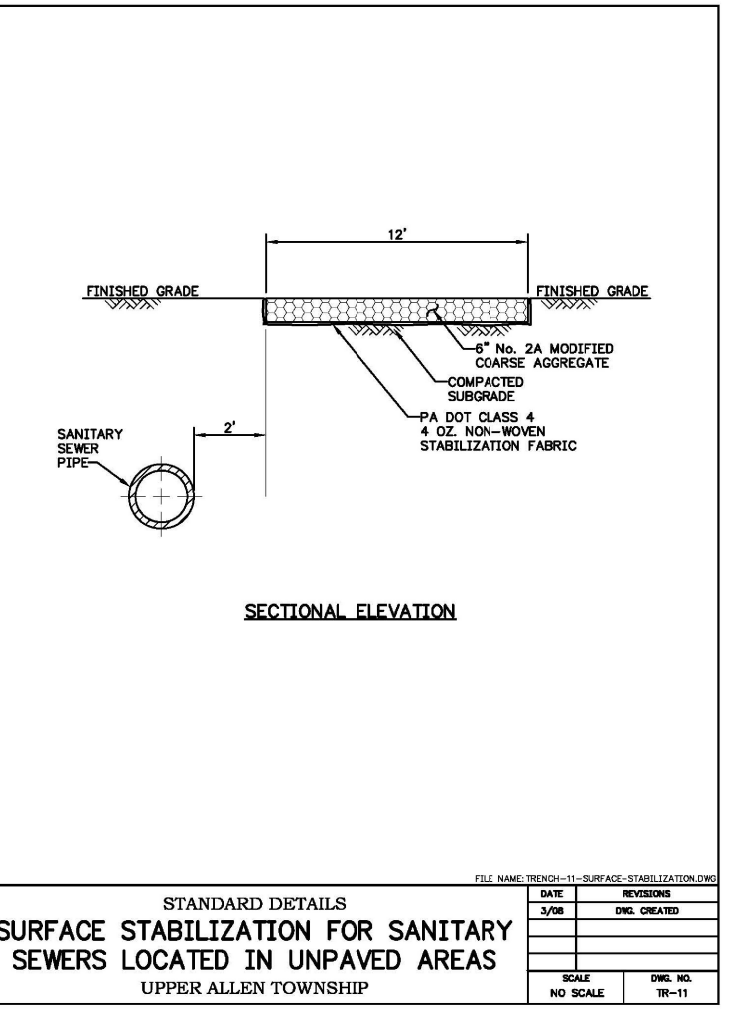
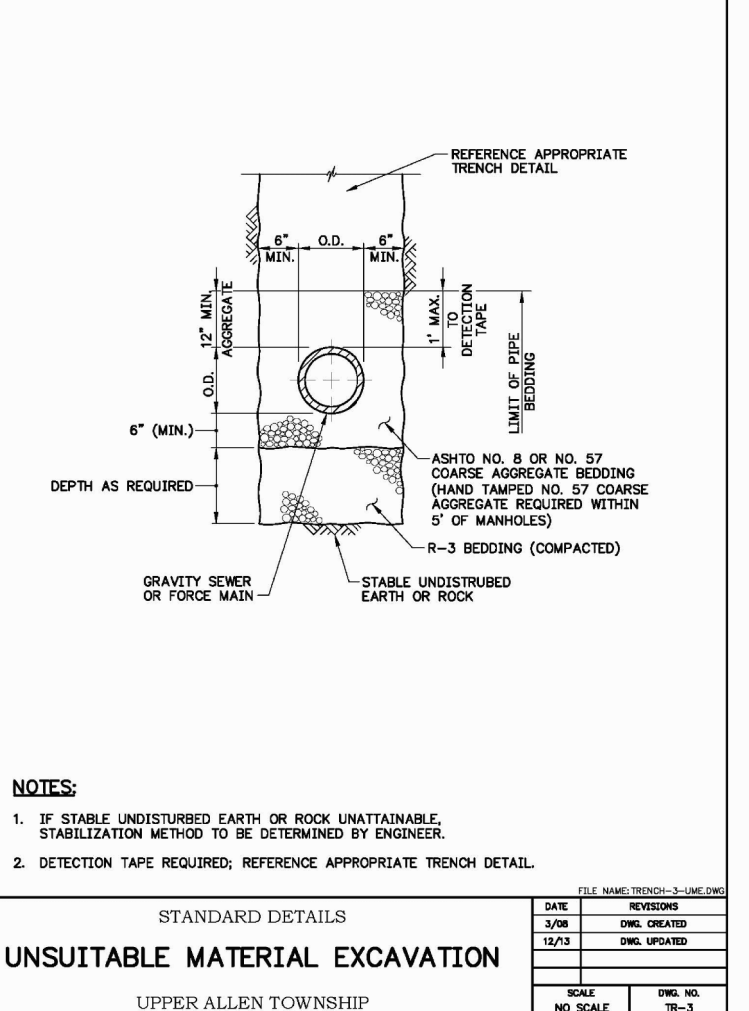
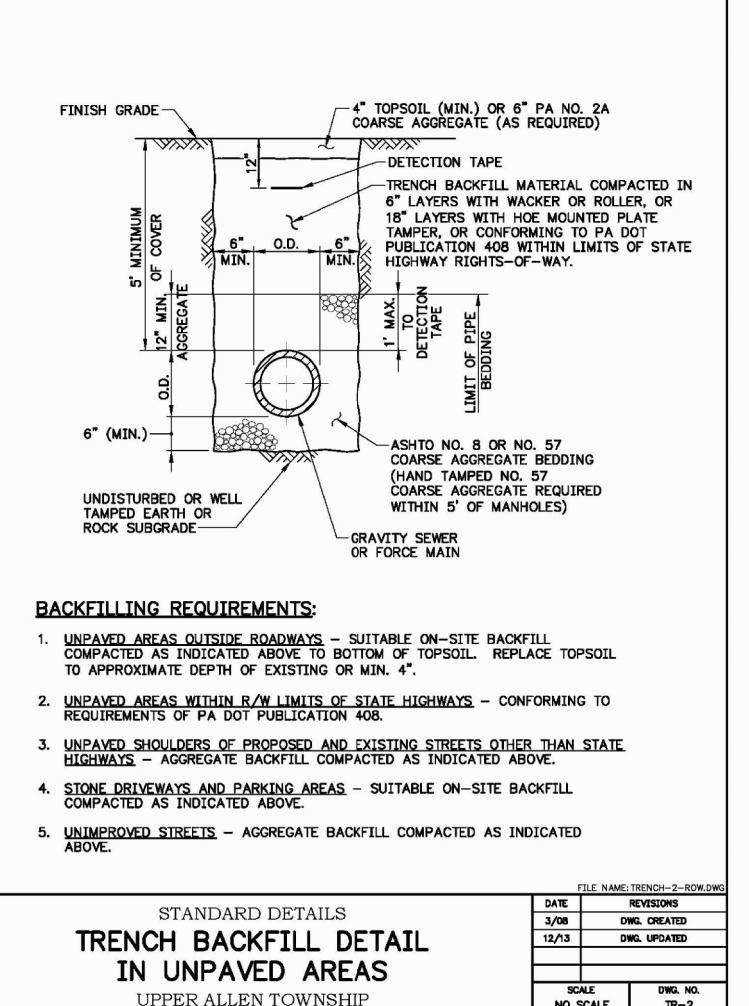
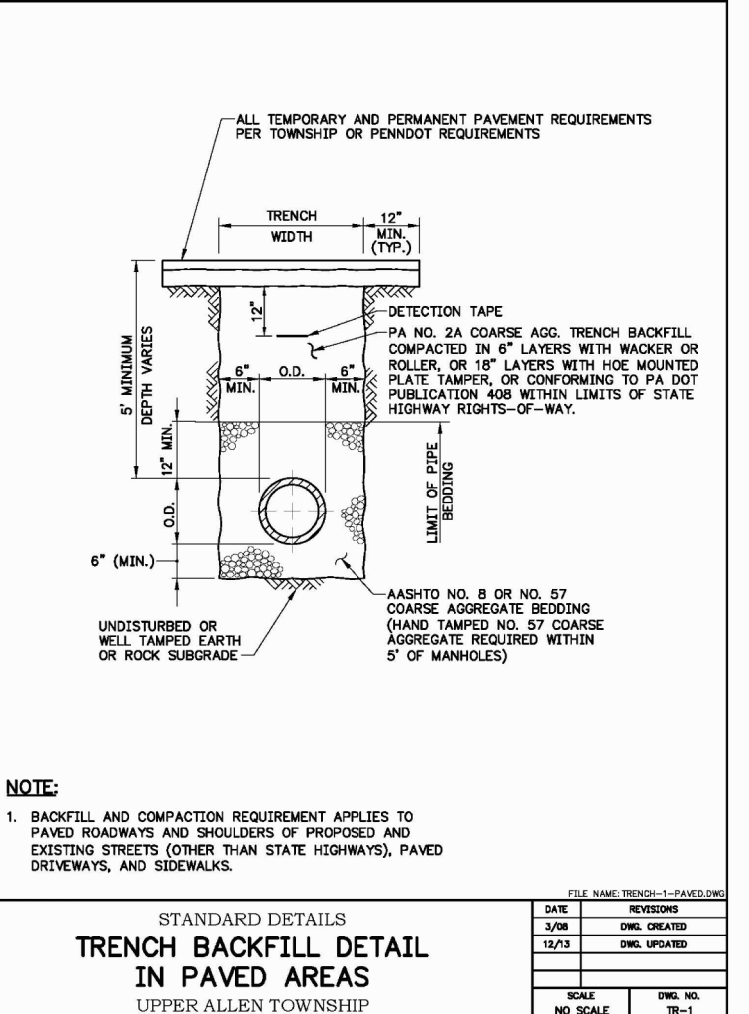
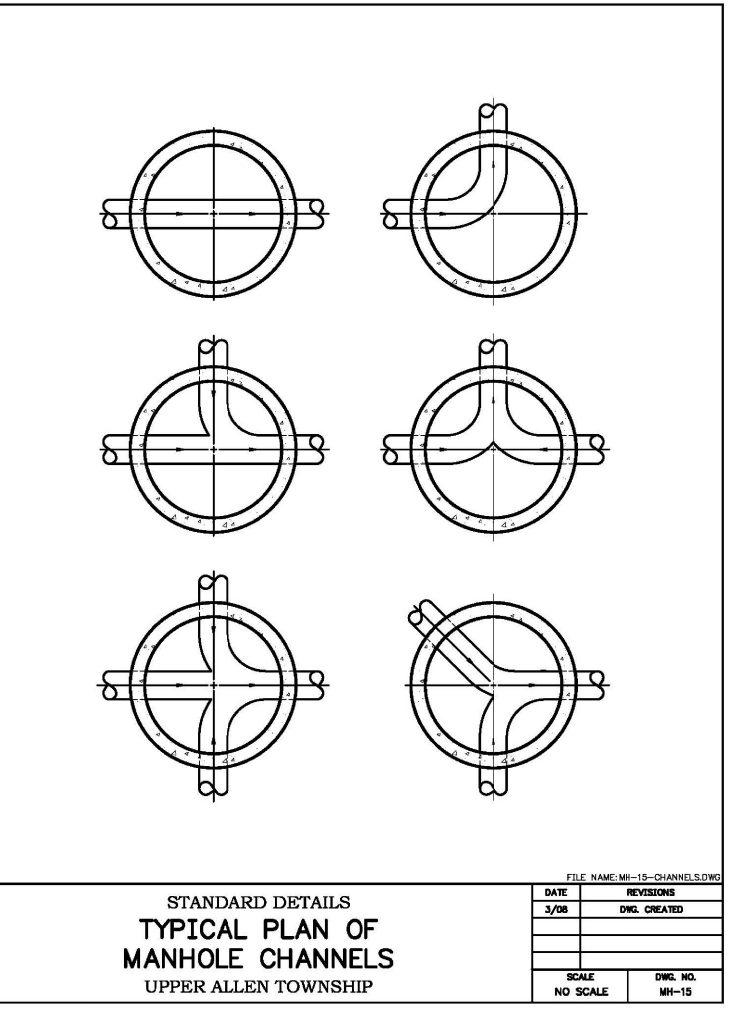
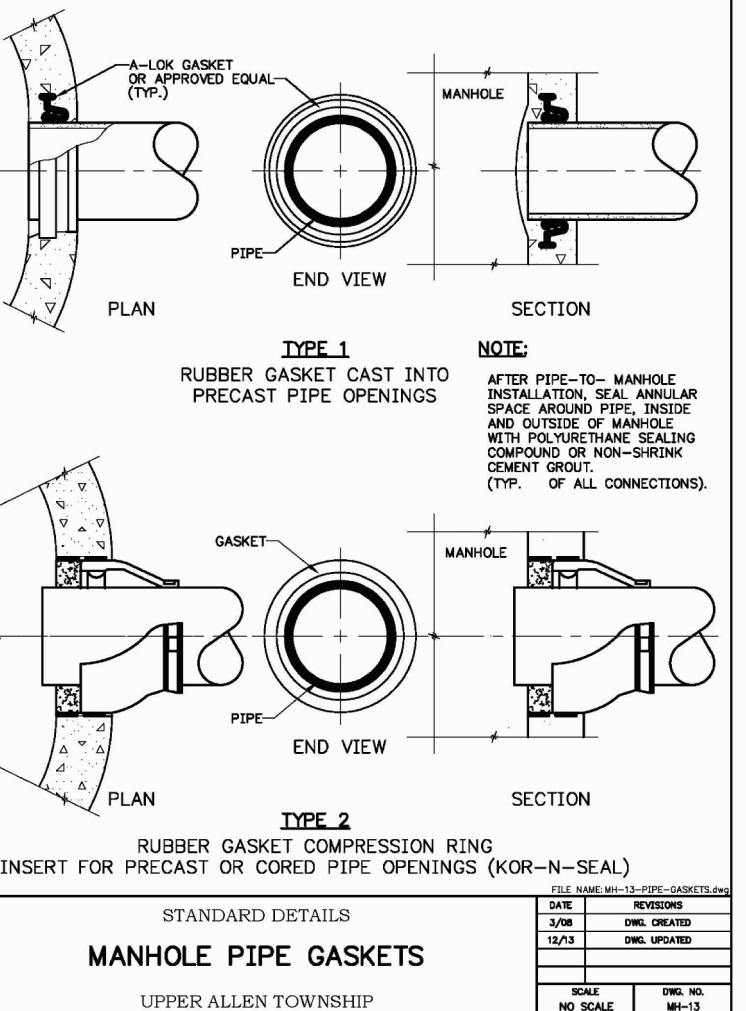
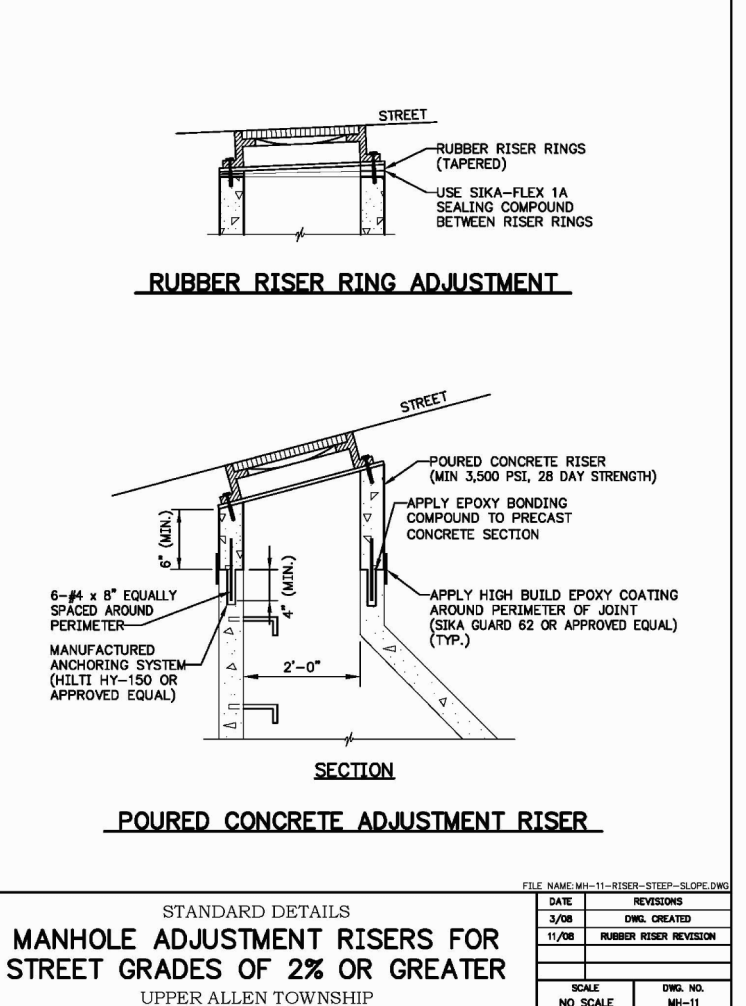
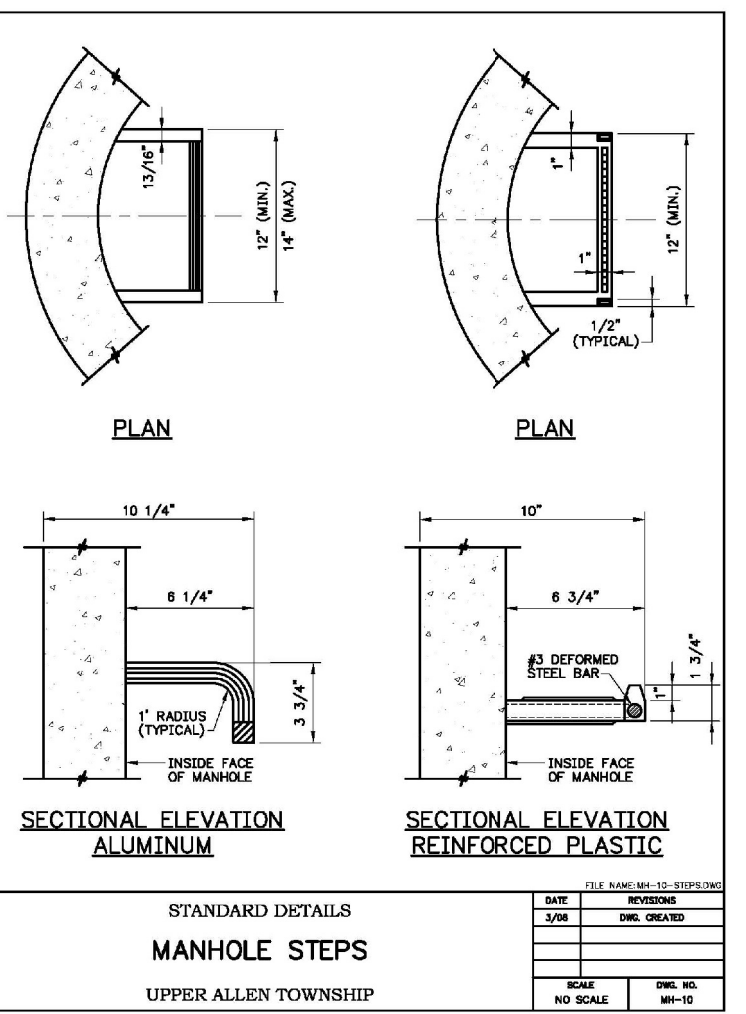
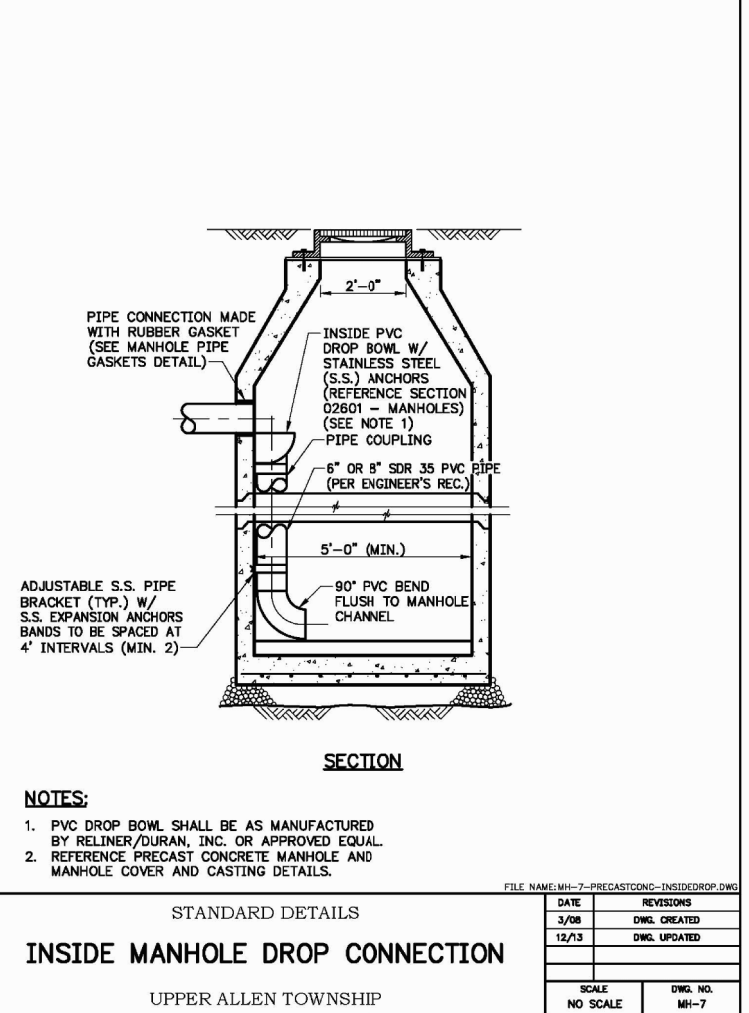
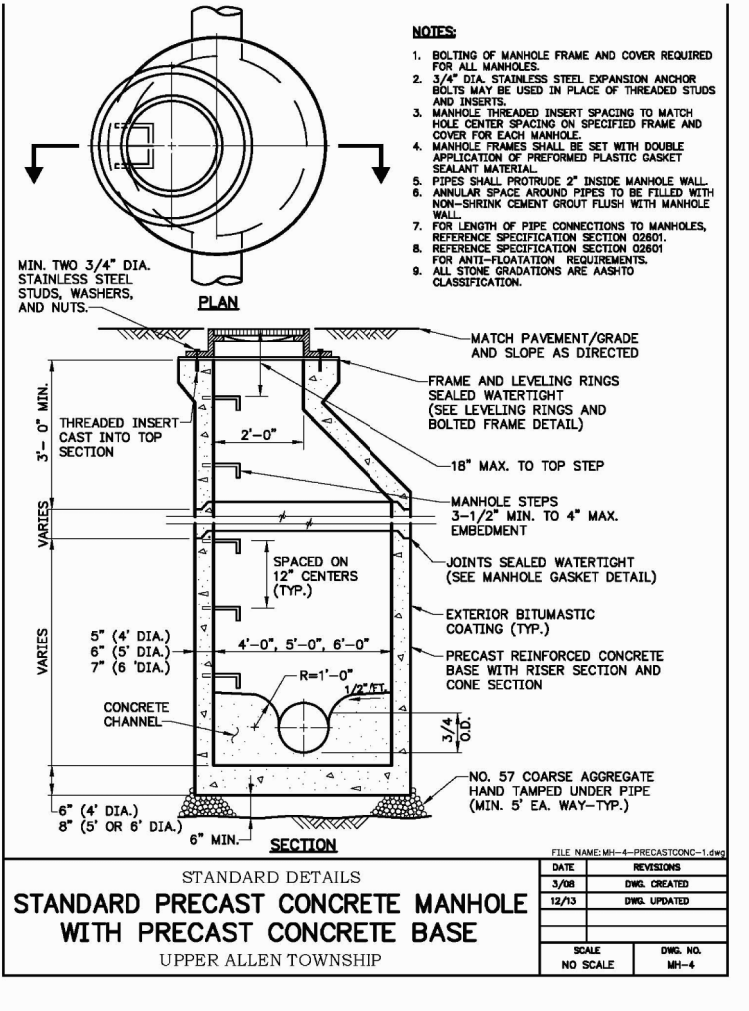
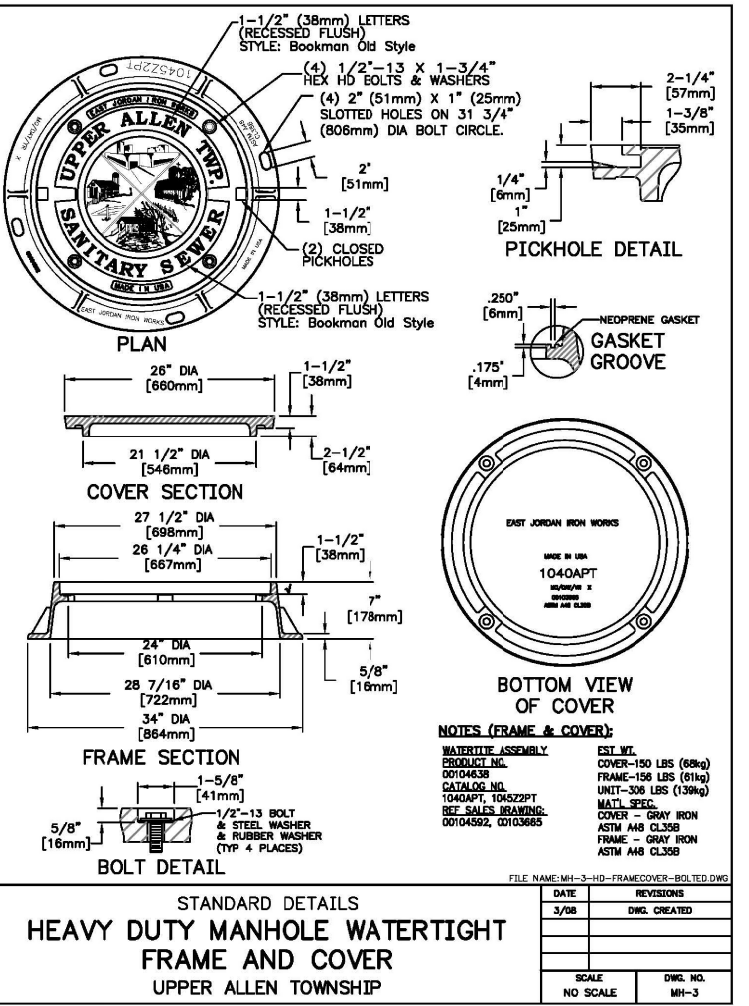
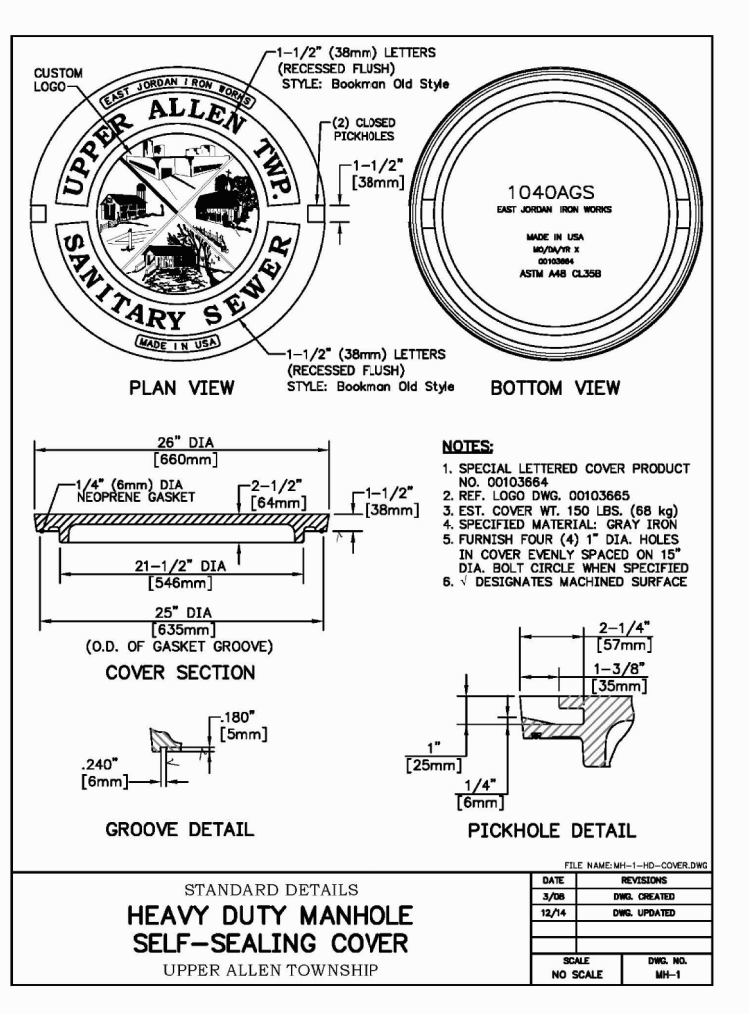
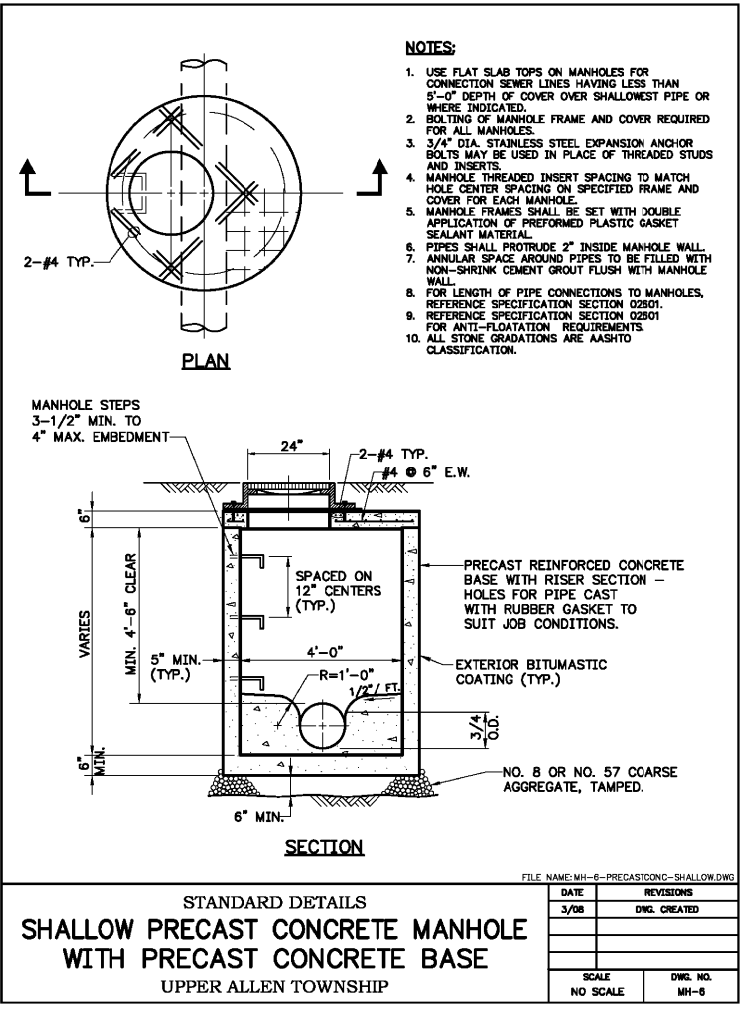
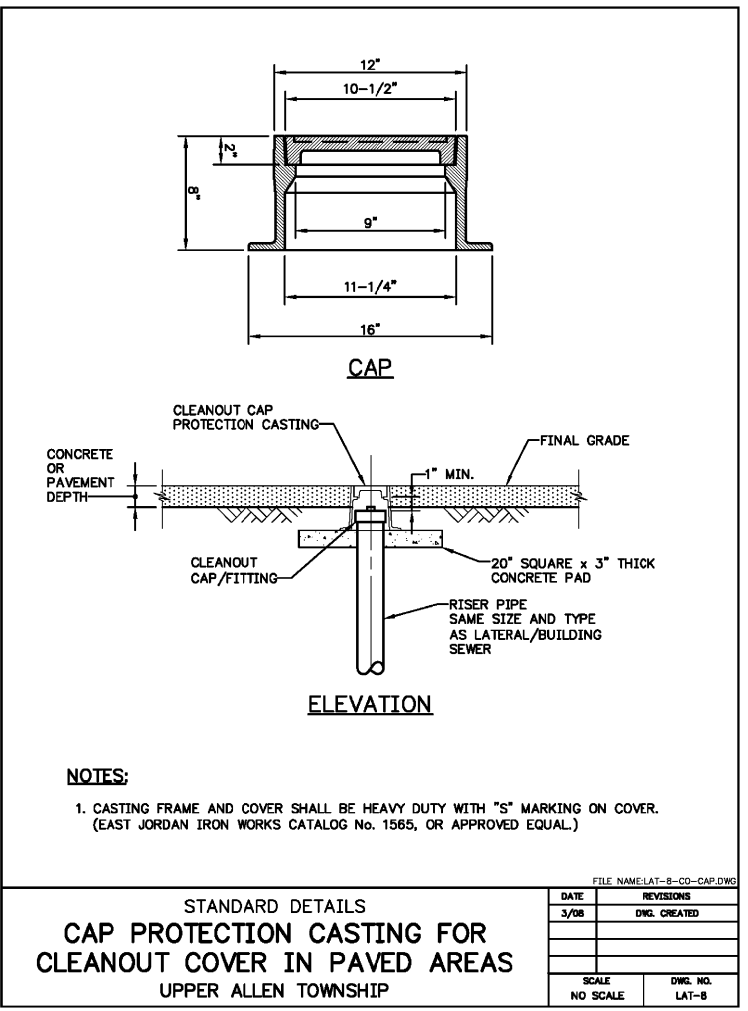
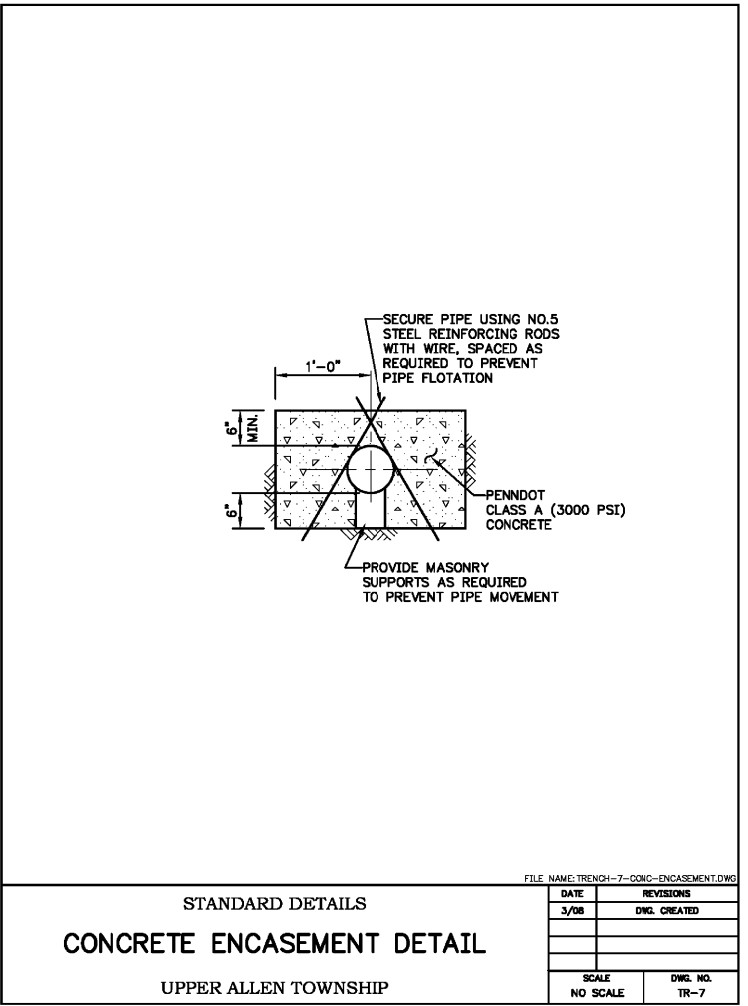
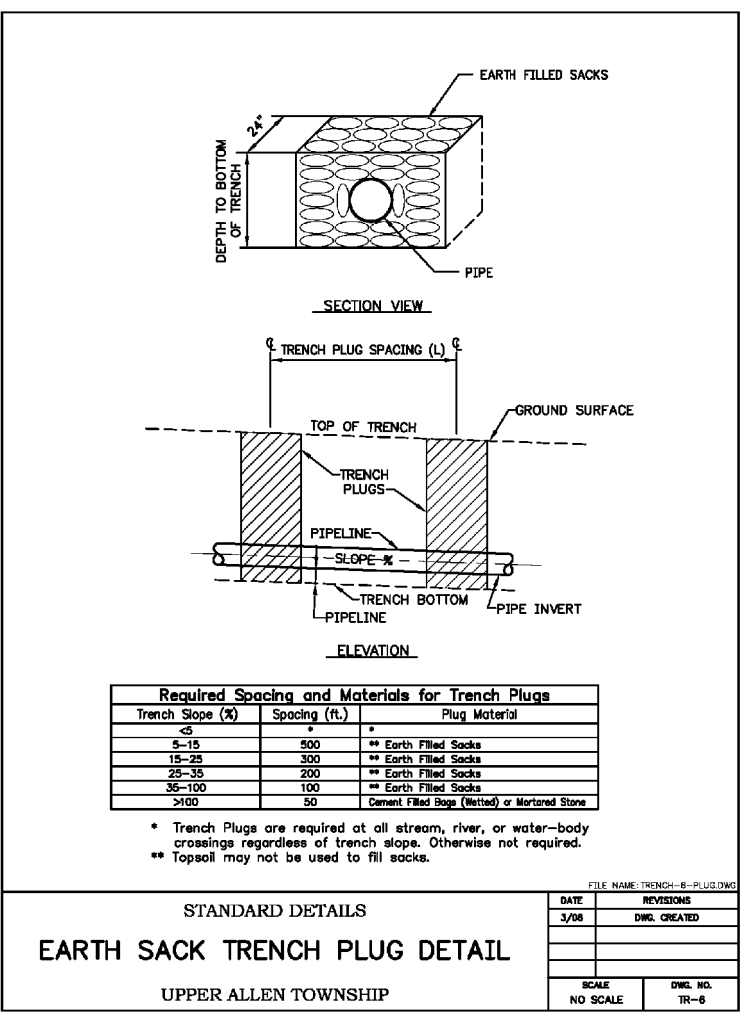
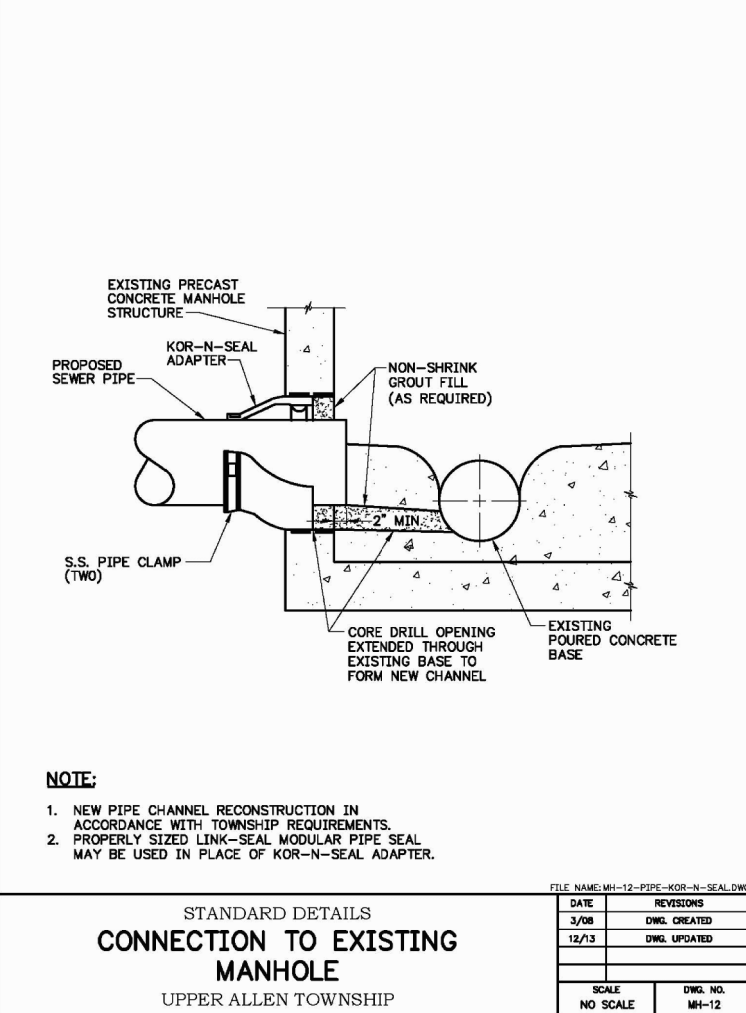
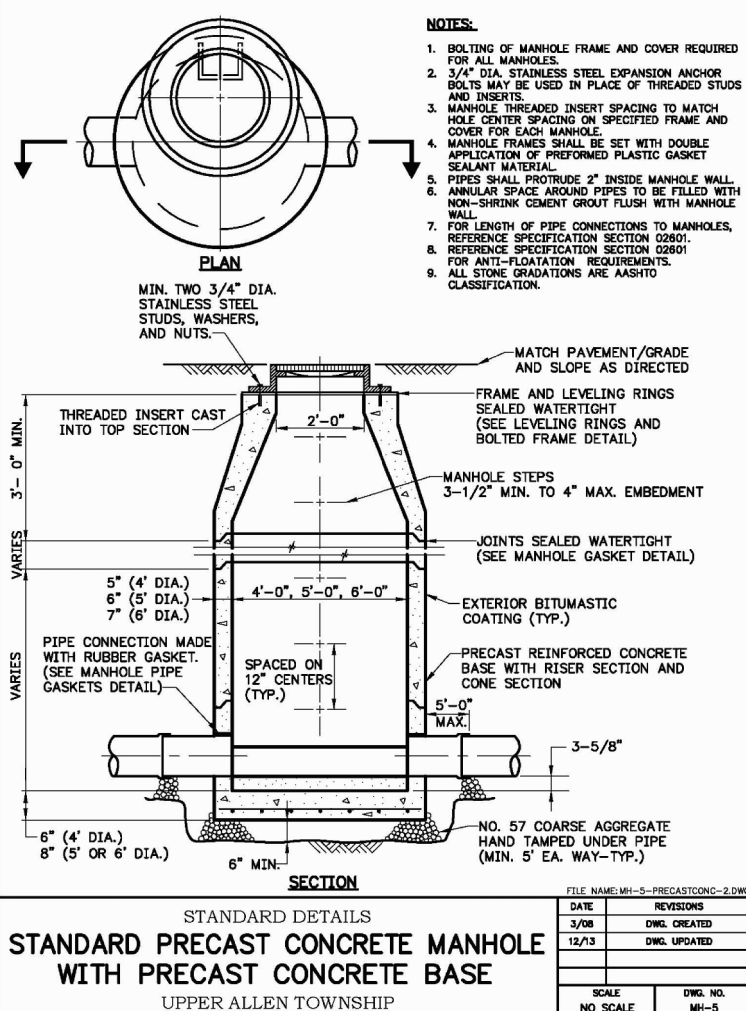
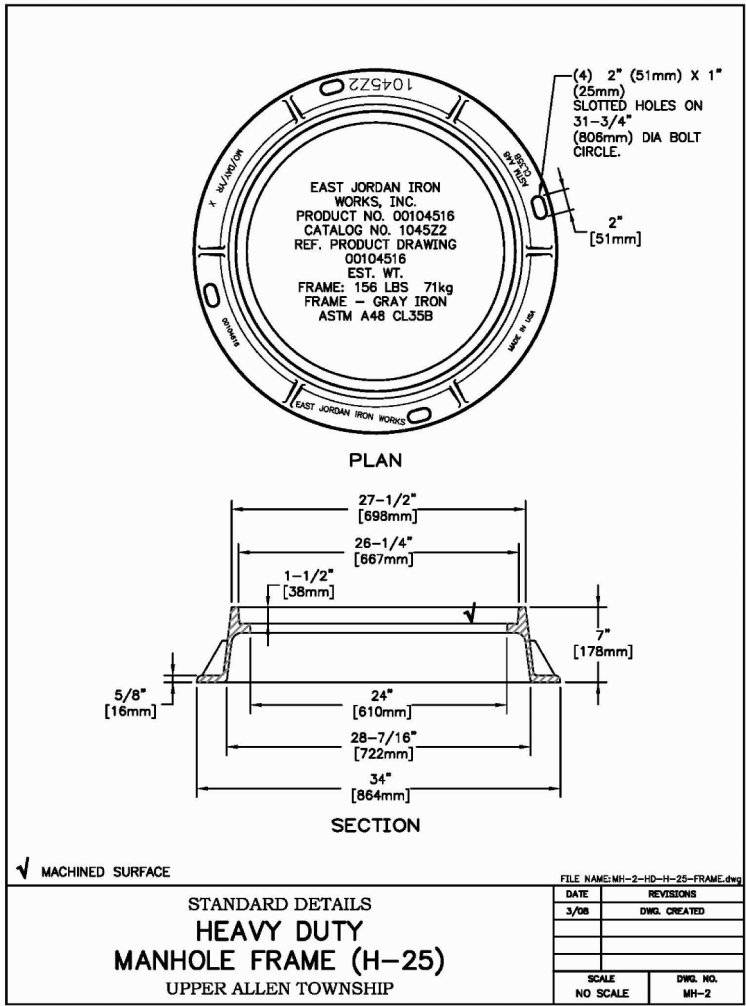
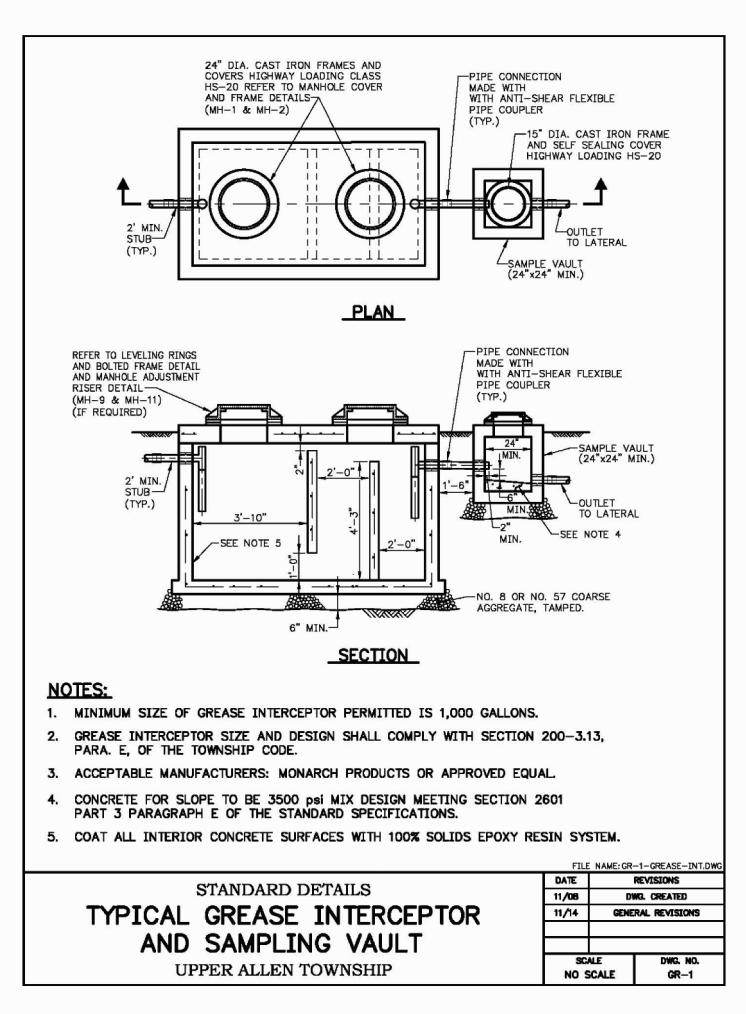
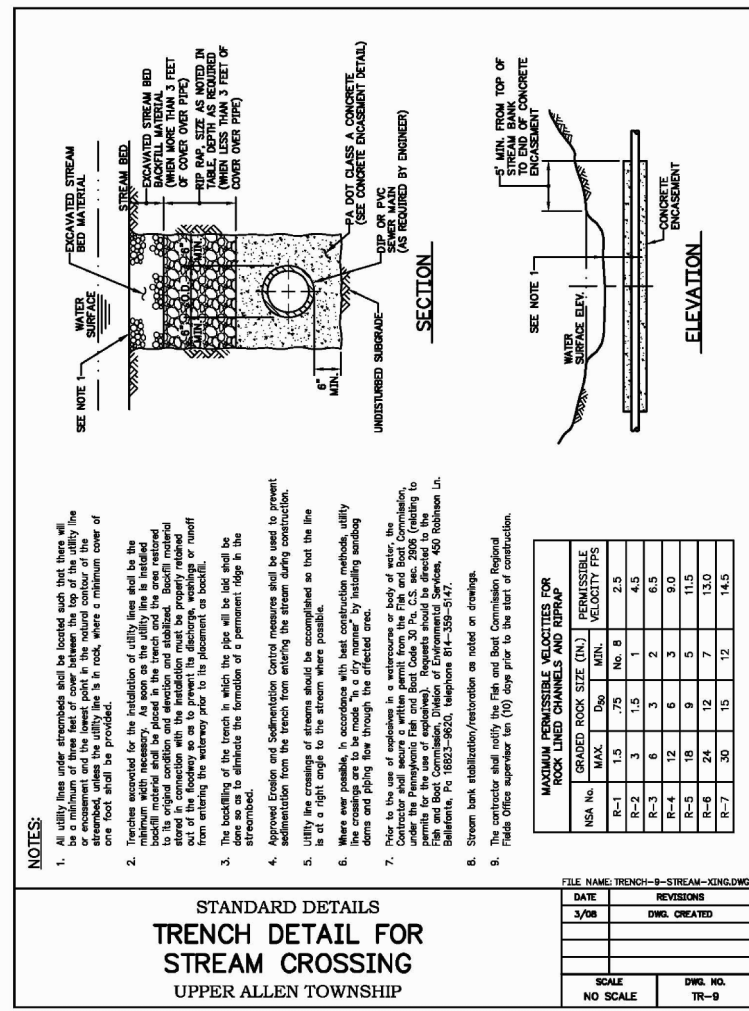
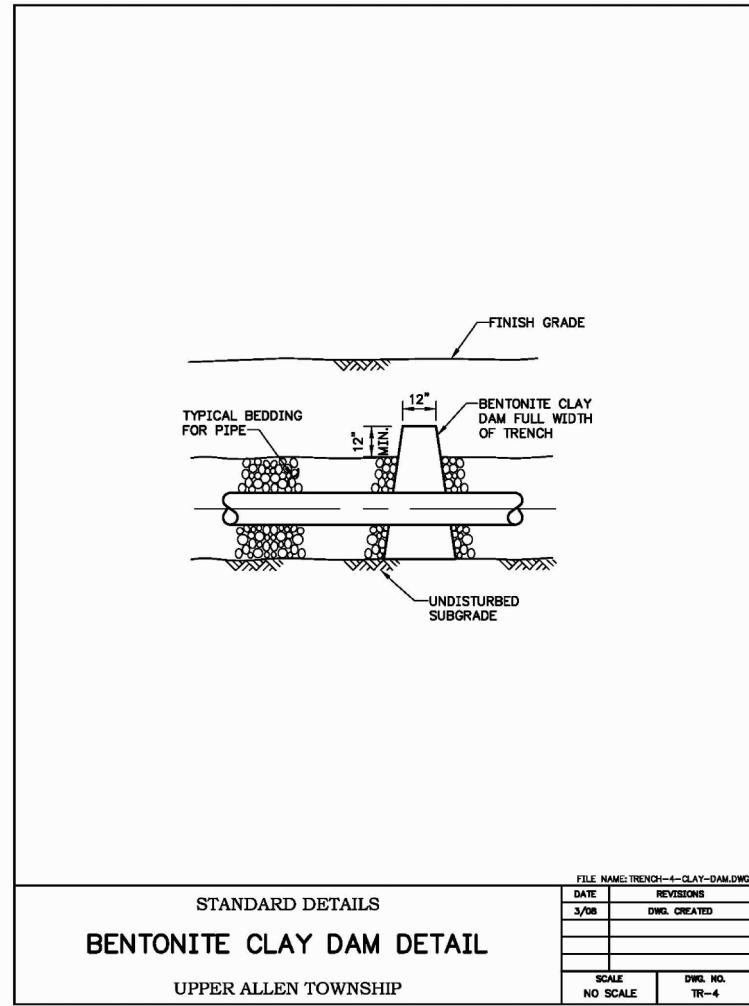
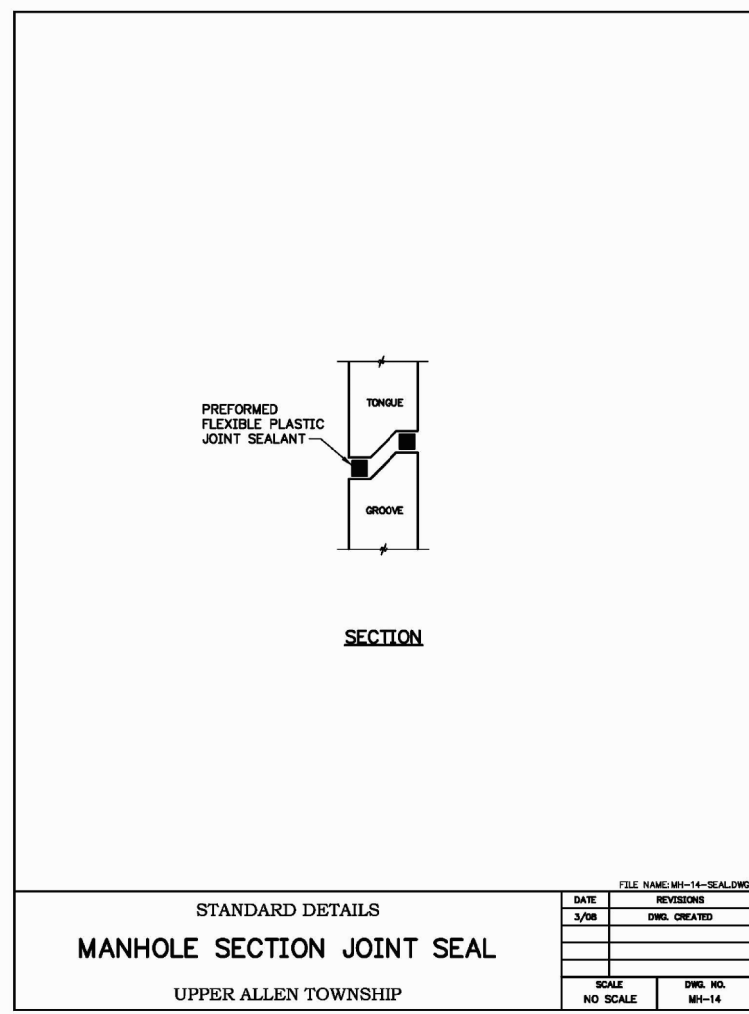
DETENTION BASIN #8



CONTROL BOX 8

* NOTES: MIDDLE ORIFICE SHALL BE PLUGGED DURING SEDIMENT STAGE.

NOT FOR CONSTRUCTION		PRELIMINARY SUBD. AND LAND DEV. PLAN		<div></div> <div>H. EDWARD BLACK and ASSOCIATES, Ltd.</div> <div><input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING</div> <div>2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone (717) 233-1026 • FAX (717) 233-1192</div> <div>THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.</div>					
DRAWN BY:	EIS	OAKWOOD HILLS				FOR CORRECTIONS	EIS	07-31-18	
CHECKED BY:	CHH	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA				FOR SIGNATURES	EIS	06-27-18	
DATE:	05-01-17					PER PENNDOT COMMENTS	EIS	06-08-18	
SCALE:	NOT TO SCALE					PER SUZ WATER DESIGN	EIS	05-04-18	
JOB NUMBER: 13021.020		UTILITY DETAILS		PER 105 COMMENTS	EIS	03-28-18			
				PER SUZ WATER DESIGN	EIS	12-27-17			
				PER SUZ WATER DESIGN	EIS	11-13-17			
				REV. DESCRIPTION	BY	DATE			



NOT FOR CONSTRUCTION

DRAWN BY: EIS

CHECKED BY: CHH

DATE: 05-01-17

SCALE: NOT TO SCALE

JOB NUMBER: 13021.020

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

WEST LISBURN ROAD

UPPER ALLEN TOWNSHIP

CUMBERLAND COUNTY

PENNSYLVANIA

SANITARY SEWER DETAILS

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUZ WATER DESIGN

PER 105 COMMENTS

PER SUZ WATER DESIGN

DATE

07-31-18

08-27-18

08-08-18

05-04-18

03-28-18

12-27-17

11-13-17

BY

EIS

EIS

EIS

EIS

EIS

EIS

DESCRIPTION

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK AND ASSOCIATES, Ltd.

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/233-1026 • FAX 717/233-2192

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PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017



10

SHEET
50 OF 68

SHE	DRAWN BY:	EIS
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ET	CHECKED BY:	CHH
59		

9 OF 68


JOB NUMBER: 13021.020

H. EDWARD DEACK
and ASSOCIATES, Ltd.

AND F

2192

DATE
11-13-17
12-27-17
03-28-18
05-04-18
06-08-18
06-27-18

SHEET 60 OF 68		DRAWN BY: EIS CHECKED BY: CHH DATE: 05-01-17 SCALE: 1" = 50' JOB NUMBER: 13021.020		PRELIMINARY SUBD. AND LAND DEV. PLAN OAKWOOD HILLS LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA		 H. EDWARD BLACK and ASSOCIATES, Ltd.		<div> <input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING <input type="checkbox"/> LANDSCAPE ARCHITECTURE <input type="checkbox"/> ENGINEERING </div> <div> 2403 North Front Street □ Harrisburg, Pennsylvania 17110 □ Telephone (717) 233-1192 </div>		<div> <input checked="" type="checkbox"/> FOR CORRECTIONS <input type="checkbox"/> FOR SIGNATURES <input type="checkbox"/> PER PENNDOT COMMENTS <input type="checkbox"/> PER PENNDOT COMMENTS <input type="checkbox"/> PER SUZ. WATER DESIGN <input type="checkbox"/> PER 105 COMMENTS <input type="checkbox"/> PER SUZ. WATER DESIGN REV. DESCRIPTION </div>		THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, LTD. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, LTD.																									
						EIS		07-31-18		EIS		06-27-18		EIS		06-08-18		EIS		05-04-18		EIS		03-28-18		EIS		12-27-17		EIS		11-13-17		BY		DATE	

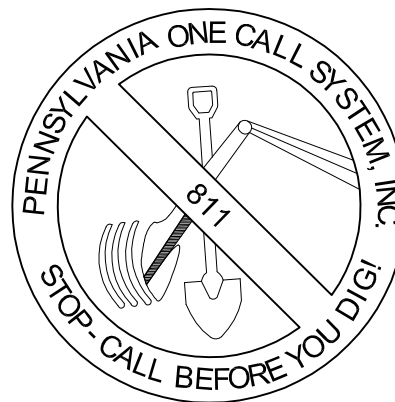
60 OF 68

[illegible]



TOPSOIL
STOCKPILE

**RESERVED FOR
FUTURE
DEVELOPMENT
LOT 5**

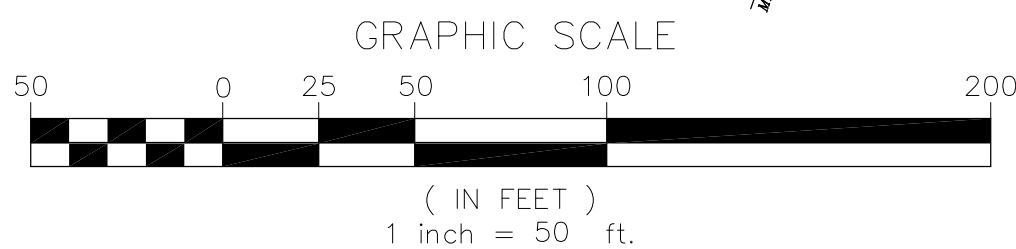



LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE BASED UPON SURFACE EVIDENCE AND EXISTING DRAWINGS AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTORS SHALL BE RESPONSIBLE AND ASSIGNED TO CONTACT A ONE CALL SYSTEMS, INC. (1-800-242-1776) TO ESTABLISH EXISTING UTILITY LOCATIONS AT LEAST THREE (3) WORKING DAYS PRIOR TO THE START OF ANY EARTH MOVING ACTIVITIES.

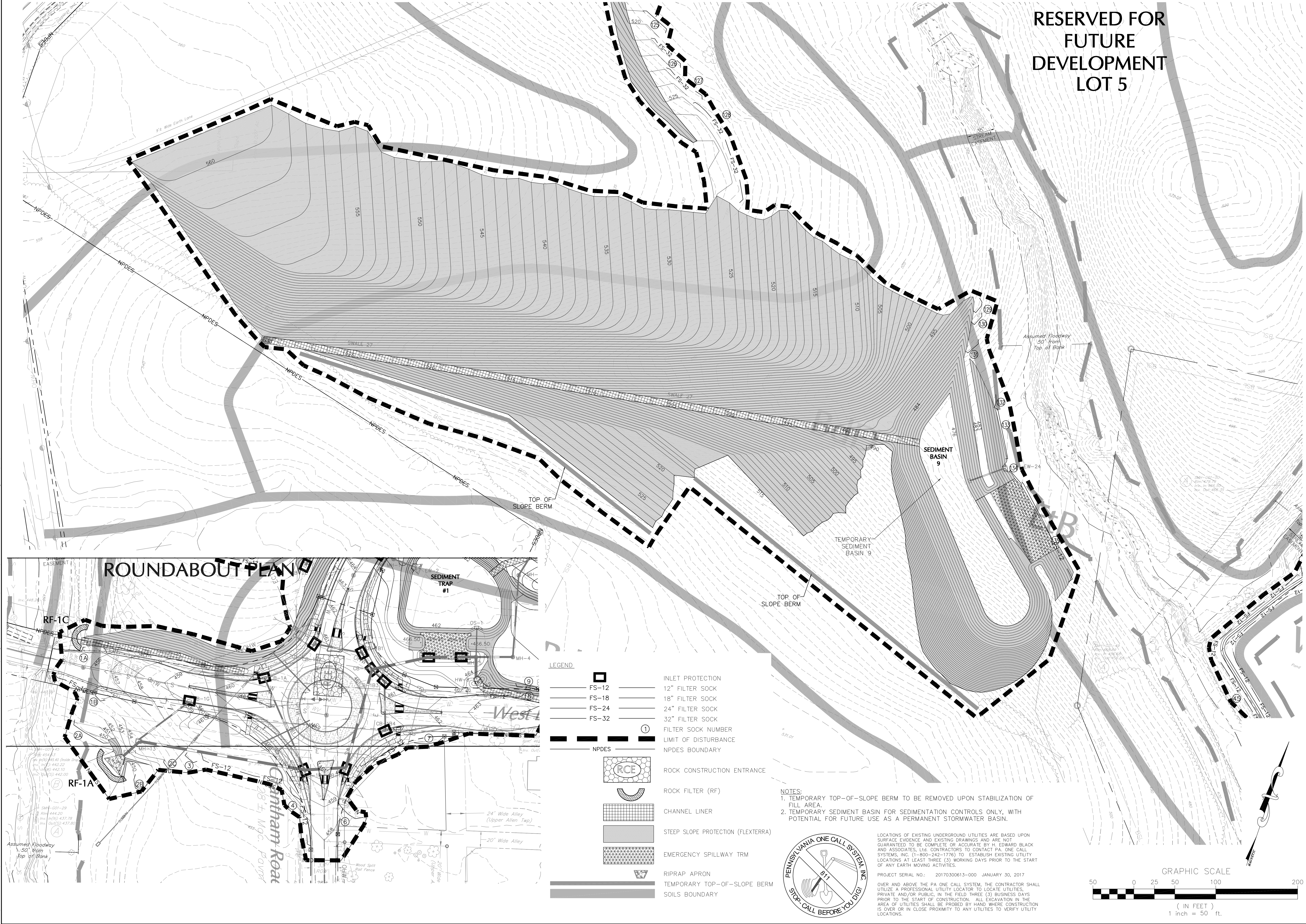
PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017



OVER AND ABOVE THE PAID FOR THIS PROJECT, THE CONTRACTOR SHALL UTILIZE A PROFESSIONAL UTILITY LOCATOR TO LOCATE UTILITIES, MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. ALL EXCAVATION IN THE AREA OF UTILITIES SHALL BE PROBED BY HAND WHERE CONSTRUCTION IS IN CLOSE PROXIMITY TO ANY UTILITIES TO VERIFY UTILITY LOCATIONS.

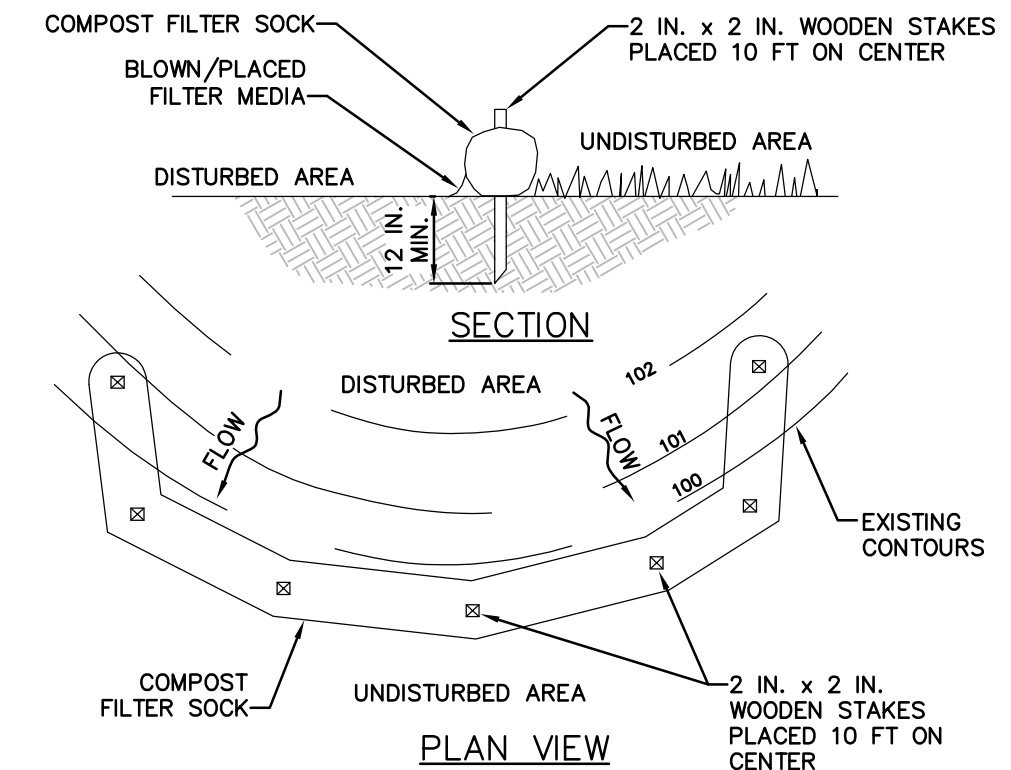
PROJECT SERIAL NO.: 20170300613-000 JANUARY 30, 2017



E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PCSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT			THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE OR PROJECT EXTENSIONS, ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.		
PRELIMINARY SUBD. AND LAND DEV. PLAN			□ COMPREHENSIVE LAND AND SITE PLANNING □ LANDSCAPE ARCHITECTURE □ ENGINEERING		
			2403 North Front Street □ Haridburg, Pennsylvania 17110 □ Telephone (717)233-1036 □ FAX (717)233-2192		
PRELIMINARY SUBD. AND LAND DEV. PLAN			H. EDWARD BLACK and ASSOCIATES, Ltd.		
OAKWOOD HILLS					
LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA					
SCALE: 1" = 50'					
JOB NUMBER: 13021.020					
SHEET			REV. DESCRIPTION		
DRAWN BY: EIS			FOR CORRECTIONS		
CHECKED BY: CHH			FOR SIGNATURES		
DATE: 05-01-17			EIS		
			06-27-18		
			EIS		
			06-08-18		
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			05-04-18		
			EIS		
			03-28-18		
			EIS		
			12-27-17		
			EIS		
			11-13-17		
			EIS		
			BY DATE		
62 OF 68					



E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PCSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT SHEET		DRAWN BY: EIS		PRELIMINARY SUBD. AND LAND DEV. PLAN		 H. EDWARD BLACK and ASSOCIATES, Ltd.		<div> <div> <input type="checkbox"/> COMPREHENSIVE LAND AND SITE PLANNING </div> <div> <input type="checkbox"/> LANDSCAPE ARCHITECTURE </div> <div> <input type="checkbox"/> ENGINEERING </div> </div>		<div> <div> <input type="checkbox"/> FOR CORRECTIONS </div> <div> <input type="checkbox"/> FOR SIGNATURES </div> <div> <input type="checkbox"/> PER PENNDOT COMMENTS </div> <div> <input type="checkbox"/> PER PENNDOT COMMENTS </div> <div> <input type="checkbox"/> PER SUZ WATER DESIGN </div> <div> <input type="checkbox"/> PER 105 COMMENTS </div> <div> <input type="checkbox"/> PER SUZ WATER DESIGN </div> </div>		<div> <div> <input type="checkbox"/> REV </div> <div> <input type="checkbox"/> DESCRIPTION </div> </div>		<div> <div> <input type="checkbox"/> EIS </div> <div> <input type="checkbox"/> EIS </div> <div> <input type="checkbox"/> EIS </div> <div> <input type="checkbox"/> EIS </div> <div> <input type="checkbox"/> EIS </div> <div> <input type="checkbox"/> EIS </div> <div> <input type="checkbox"/> EIS </div> </div>		<div> <div> <input type="checkbox"/> 07-31-18 </div> <div> <input type="checkbox"/> 06-27-18 </div> <div> <input type="checkbox"/> 08-08-18 </div> <div> <input type="checkbox"/> 05-04-18 </div> <div> <input type="checkbox"/> 03-28-18 </div> <div> <input type="checkbox"/> 12-27-17 </div> <div> <input type="checkbox"/> 11-13-17 </div> </div>		<div> <div> <input type="checkbox"/> BY </div> <div> <input type="checkbox"/> DATE </div> </div>	
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SOCK NO.	DIA (IN)	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER
1	12"		7.92%	265'
1A	12"		4.44%	45'
2A	12"		12.50%	40'
2B	12"		13.33%	75'
2C	12"		12.50%	65'
3	12"		7.69%	65'
4	12"		6.55%	61'
5	12"		3.25%	123'
6	12"		2.50%	80'
7	12"		1.87%	80'
8	12"		7.00%	150'
9	12"		5.15%	126'
10	12"		12.85%	35'
11	12"		6.52%	23'
12	12"		13.63%	11'
13	12"		8.33%	12'
14	12"		9.52%	21'
15	12"		10.71%	42'
16	12"		15.00%	30'
17	12"		23.33%	15'
18	12"		10.00%	15'
19	12"		2.53%	19'
20	12"		9.09%	11'
21	12"		8.33%	12'
22	12"		9.61%	26'
23	18"		6.00%	100'
24	18"		6.00%	100'
25	12"		16.67%	27'
26	12"		18.18%	44'
27	12"		17.27%	55'
28	12"		27.58%	29'
29	12"		27.58%	29'
30	12"		6.49%	77'
31	12"		11.18%	76'
32	18"		15.00%	30'
33	12"		2.41%	124'
34	12"		11.38%	101'
35	12"		7.57%	66'
36	12"		5.31%	47'
37	12"		10.52%	19'
38	12"		15.62%	16'
39	12"		16.66%	31'
40	12"		25.00%	6'
41	32"		22.92%	199'
42	12"		18.75%	16'
43	12"		12.50%	20'
44	12"		3.57%	7'
45	12"		4.16%	12'
46	12"		18.28%	22'
47	12"		14.28%	7'
48	18"		15.62%	160'
49	12"		5.10%	46'
50	12"		21.73%	23'
51	12"		22.22%	27'
52	12"		7.14%	35'
53	12"		6.97%	43'
54	12"		13.33%	15'
55	12"		10.00%	20'
56	12"		13.63%	22'
57	12"		18.18%	22'
58	12"		20.00%	20'
59	12"		15.00%	20'
60	12"		16.00%	25'
61	18"		20.00%	20'
62	18"		16.67%	12'
63	12"		19.04%	42'
64	18"		20.51%	78'
65	18"		32.50%	40'
66	18"		31.70%	41'
67	18"		31.57%	38'
68	18"		32.35%	34'
69	18"		31.81%	33'
70	18"		26.82%	41'
71	18"		25.00%	42'
72	18"		26.19%	42'
73	18"		26.13%	44'
74	18"		26.30%	33'
75	18"		30.30%	33'
76	18"		30.30%	33'
77	18"		33.33%	30'
78	12"		32.00%	25'
79	12"		6.13%	163'
80	12"		11.68%	107'
81	12"		13.04%	92'
82	12"		17.14%	35'
83	12"		6.75%	37'
84	12"		5.81%	172'
85	12"		5.11%	127'

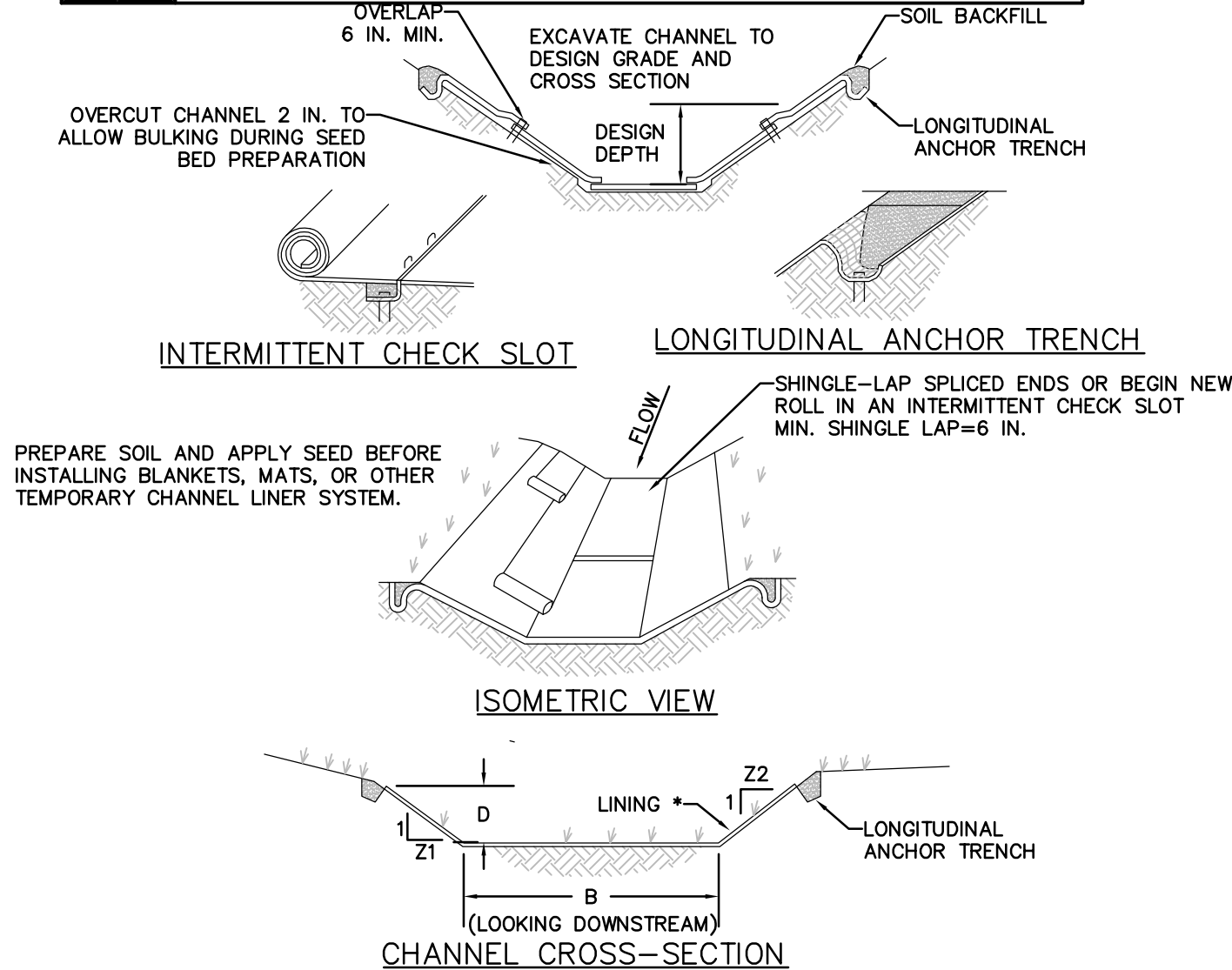
NOTES:
SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.
TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.
ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR.
POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
UPON STABILIZATION OF AREA TRIBUTARY TO THE SOCK, THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

STANDARD CONSTRUCTION DETAIL #4-1

COMPOST SILT SOCK
NOT TO SCALE

SOCK NO.	STATIONS	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER
86	12"		5.00%	100'
87	18"		20.83%	48'
88	12"		9.45%	37'
89	12"		20.00%	15'
90	12"		15.00%	20'
91	12"		10.00%	55'
92	12"		7.27%	55'
93	12"		12.50%	48'
94	12"		14.03%	57'
95	12"		19.56%	46'
96	12"		17.85%	56'
97	12"		18.64%	59'
98	12"		6.94%	72'
99	12"		10.52%	38'
100	12"		13.33%	30'
101	12"		32.35%	17'
102	12"		33.33%	18'
103	12"		6.25%	64'
104	12"		6.12%	49'
105	12"		7.01%	57'
106	18"		10.00%	160'
107	12"		7.01%	57'
108	12"		5.00%	140'
109	12"		12.50%	40'
110	12"		3.70%	27'

COMPOST SILT SOCK
NOT TO SCALE



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1	Z2	LINING *
SWALE 1.1	ALL	0.92	1.08	7.86	3	3	ROCK RIPRAP/R8 ROCK
SWALE 1.2	ALL	2.00	1.36	10.16	3	3	NAG DS75/VEGETATION
SWALE 2.1	ALL	2.00	1.19	9.86	3	3	ROCK RIPRAP/R7 ROCK
SWALE 2.2	ALL	3.00	1.37	11.22	3	3	NAG S75BN/VEGETATION
SWALE 2.3	ALL	3.00	1.54	12.24	3	3	NAG S75BN/VEGETATION
SWALE 2.4	ALL	0.00	1.88	7.52	2	2	NAG S75BN/VEGETATION
SWALE 3.1	ALL	0.00	1.74	6.96	2	2	NAG S75BN/VEGETATION
SWALE 3.2	ALL	2.00	1.41	10.46	3	3	NAG S75BN/VEGETATION
SWALE 4	ALL	2.00	1.60	11.60	3	3	NAG S75BN/VEGETATION
SWALE 5.1	ALL	2.00	1.37	10.22	3	3	NAG SC250/VEGETATION
SWALE 5.2	ALL	2.00	1.45	10.70	3	3	NAG S75BN/VEGETATION
SWALE 6.1	ALL	3.00	1.25	8.28	2	2	ROCK RIPRAP/R8 ROCK
SWALE 6.2	ALL	3.00	1.45	8.80	2	2	NAG SC250/VEGETATION
SWALE 6.3	ALL	3.00	1.50	12.00	3	3	NAG SC150BN/VEGETATION
SWALE 7.1	ALL	2.00	1.39	10.34	3	3	NAG SC150BN/VEGETATION
SWALE 7.2	ALL	2.00	1.46	10.76	3	3	NAG SC150BN/VEGETATION
SWALE 8.1	ALL	2.00	1.34	10.04	3	3	NAG SC250/VEGETATION
SWALE 8.2	ALL	2.00	1.36	10.16	3	3	NAG SC250/VEGETATION
SWALE 9	ALL	2.00	1.56	11.36	3	3	NAG S75BN/VEGETATION
SWALE 10	ALL	2.00	1.34	10.04	3	3	NAG SC250/VEGETATION
SWALE 11.1	ALL	2.00	1.57	11.42	3	3	NAG S75BN/VEGETATION
SWALE 11.2	ALL	2.00	1.37	7.48	2	2	NAG S75BN/VEGETATION
SWALE 12.1	ALL	2.00	1.60	11.60	3	3	NAG S75BN/VEGETATION
SWALE 12.2	ALL	2.00	1.42	7.68	2	2	NAG S75BN/VEGETATION
SWALE 13.1	ALL	2.00	1.69	11.98	3	3	NAG SC250/VEGETATION
SWALE 13.2	ALL	2.00	1.80	12.80	3	3	NAG S75BN/VEGETATION
SWALE 13.3	ALL	2.00	1.50	11.00	3	3	NAG S75BN/VEGETATION
SWALE 14.1	ALL	2.00	1.21	8.05	2	3	NAG S75BN/VEGETATION
SWALE 14.2	ALL	2.00	1.25	9.50	3	3	NAG S75BN/VEGETATION
SWALE 15	ALL	0.50	1.89	11.84	3	3	NAG S75BN/VEGETATION
SWALE 16.1	ALL	3.50	1.19	8.83	3	3	ROCK RIPRAP/R8 ROCK
SWALE 16.2	ALL	0.50	1.63	10.28	3	3	NAG S75BN/VEGETATION
SWALE 16.3	ALL	0.50	1.41	8.98	3	3	NAG S75BN/VEGETATION
SWALE 17	ALL	0.50	1.25	8.00	3	3	NAG S75BN/VEGETATION
SWALE 18	ALL	2.00	1.76	12.56	3	3	NAG S75BN/VEGETATION
SWALE 19	ALL	0.50	1.98	12.38	3	3	NAG S75BN/VEGETATION
SWALE 20	ALL	0.50	1.49	9.44	3	3	NAG S75BN/VEGETATION
SWALE 21.1	ALL	4.00	1.69	12.45	2	2	NAG S75BN/VEGETATION
SWALE 21.2	ALL	1.50	11.50	3	2	2	NAG S75BN/VEGETATION
SWALE 22	ALL	4.00	1.53	11.65	2	3	NAG SC150BN/VEGETATION
SWALE 23.1	ALL	0.50	1.35	8.60	3	3	NAG P550/VEGETATION
SWALE 23.2	ALL	0.50	1.65	10.40	3	3	NAG S75BN/VEGETATION
SWALE 24	ALL	4.00	2.02	12.08	2	2	NAG S75BN/VEGETATION
SWALE 25	ALL	2.00	1.67	12.02	3	3	NAG S75BN/VEGETATION
SWALE 26	ALL	3.00	1.54	12.24	3	3	NAG S75BN/VEGETATION
SWALE 27	ALL	3.00	1.56	12.36	3	3	NAG SC250/VEGETATION
SWALE 28	ALL	2.00	1.53	11.18	3	3	NAG S75BN/VEGETATION

NOTES:
ANCHOR TRENCHES SHALL BE INSTALLED AT BEGINNING AND END OF CHANNEL IN THE SAME MANNER AS LONGITUDINAL ANCHOR TRENCHES.

CHANNEL DIMENSIONS SHALL BE CONSTANTLY MAINTAINED. CHANNEL SHALL BE CLEANED WHENEVER TOTAL CHANNEL DEPTH IS REDUCED BY 25% AT ANY LOCATION. SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS OF DISCOVERY OR AS SOON AS SOIL CONDITIONS PERMIT ACCESS TO CHANNEL WITHOUT FURTHER DAMAGE. DAMAGED LINING SHALL BE REPAIRED OR REPLACED WITHIN 48 HOURS OF DISCOVERY.

NO MORE THAN ONE THIRD OF THE SHOOT (GRASS LEAF) SHALL BE REMOVED IN ANY MOWING. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED. EXCESS VEGETATION SHALL BE REMOVED FROM PERMANENT CHANNELS TO ENSURE SUFFICIENT CHANNEL CAPACITY.

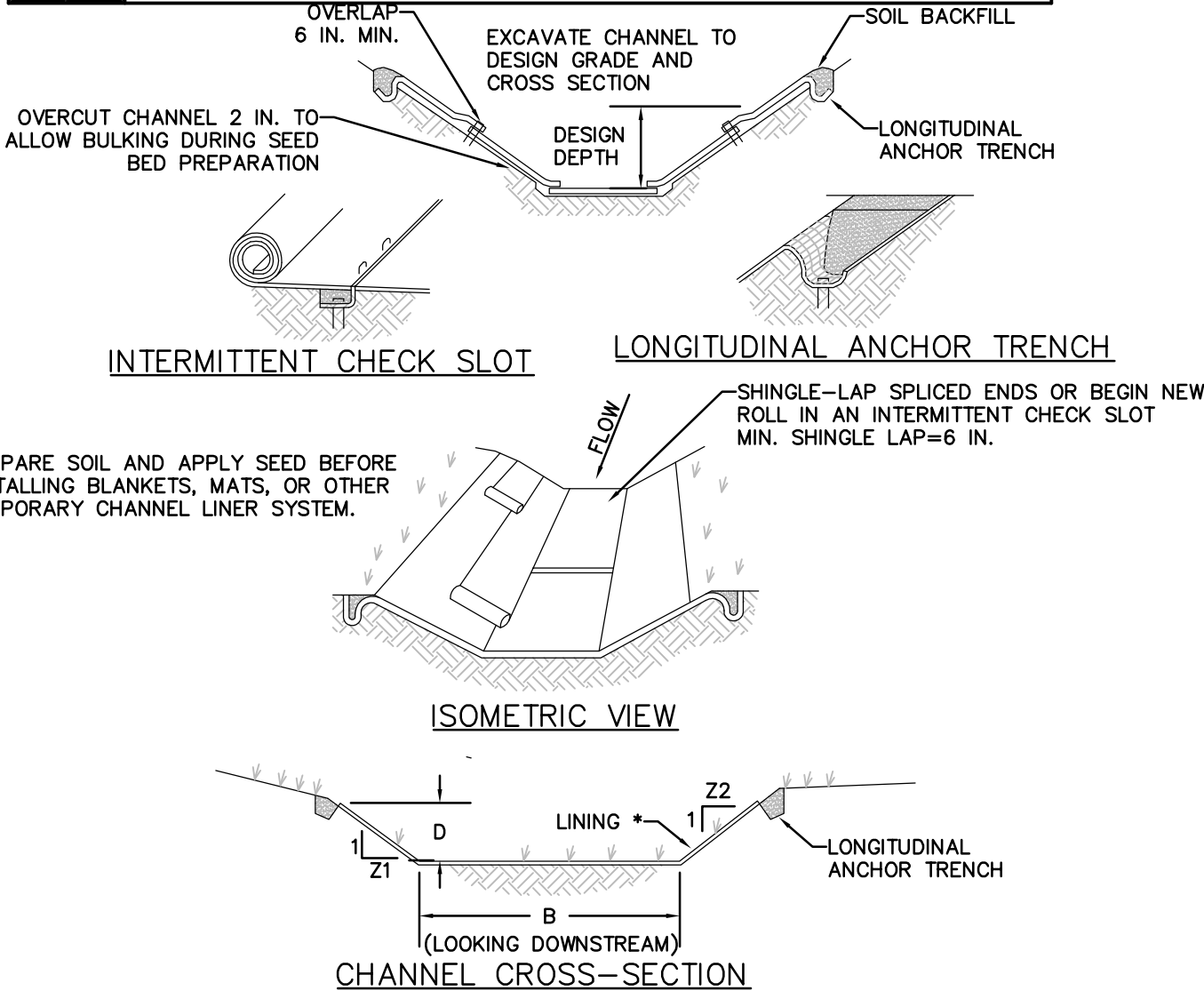
*INCLUDES FREEBOARD

STANDARD CONSTRUCTION DETAIL #6-1

VEGETATED CHANNEL
NOT TO SCALE

SOCK NO.	STATIONS	LOCATION	SLOPE PERCENT	SLOPE LENGTH ABOVE BARRIER
111	12"		5.71%	35'
112	12"		5.88%	34'
113	12"		5.00%	40'
114	12"		4.25%	47'
115	12"		4.00%	25'
116	12"		6.45%	31'
117	12"		5.71%	105'
118	12"		7.79%	154'
119	12"		9.17%	109'
120	12"		8.33%	72'
121	24"		4.47%	380'
122	12"		8.24%	97'
123	12"		7.31%	41'
124	12"		7.50%	40'
125	32"		8.02%	411'
126	32"		8.39%	393'
127	32"		6.98%	415'
128	32"		5.96%	569'
129	12"		9.25%	54'
130	12"		25.00%	22'
131	12"		25.00%	26'
132	12"		25.86%	29'
133	12"		26.56%	32'
134	12"		26.47%	37'
135	12"		27.02%	37'
136	12"		17.65%	17'

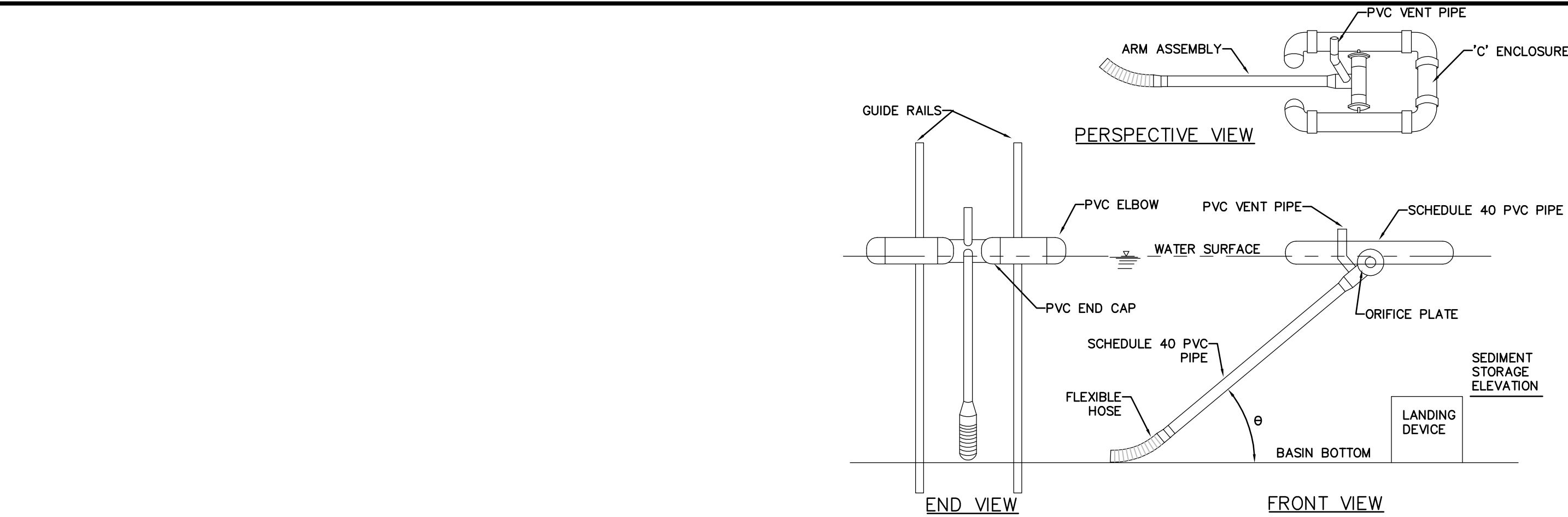
COMPOST SILT SOCK
NOT TO SCALE



* SEE MANUFACTURER'S LINING INSTALLATION DETAIL FOR STAPLE PATTERNS, VEGETATIVE STABILIZATION FOR SOIL AMENDMENTS, SEED MIXTURES AND MULCHING INFORMATION

CHANNEL NO.	STATIONS	BOTTOM WIDTH B (FT)	DEPTH D (FT)	TOP WIDTH W (FT)	Z1	Z2	LINING *
SWALE 1.1	ALL	0.92	1.08	7.86	3	3	ROCK RIPRAP/R8 ROCK
SWALE 1.2	ALL	2.00	1.36	10.16	3	3	NAG DS75/VEGETATION
SWALE 2.1	ALL	2.00	1.19	9.86	3	3	ROCK RIPRAP/R7 ROCK
SWALE 2.2	ALL	3.00	1.37	11.22	3	3	NAG S75BN/VEGETATION
SWALE 2.3	ALL	3.00	1.54	12.24	3	3	NAG S75BN/VEGETATION
SWALE 2.4	ALL	0.00	1.88	7.52	2	2	NAG S75BN/VEGETATION
SWALE 3.1	ALL	0.00	1.74	6.96	2	2	NAG S75BN/VEGETATION
SWALE 3.2	ALL	2.00	1.41	10.46	3	3	NAG S75BN/VEGETATION
SWALE 4	ALL	2.00	1.60	11.60	3	3	NAG S75BN/VEGETATION
SWALE 5.1	ALL	2.00	1.37	10.22	3	3	NAG SC250/VEGETATION
SWALE 5.2	ALL	2.00	1.45	10.70	3	3	NAG S75BN/VEGETATION
SWALE 6.1	ALL	3.00	1.25	8.28	2	2	ROCK RIPRAP/R8 ROCK
SWALE 6.2	ALL	3.00	1.45	8.80	2	2	NAG SC250/VEGETATION
SWALE 6.3	ALL	3.00	1.50	12.00	3	3	NAG SC150BN/VEGETATION
SWALE 7.1	ALL	2.00	1.39	10.34	3	3	NAG SC150BN/VEGETATION
SWALE 7.2	ALL	2.00	1.46	10.76	3	3	NAG SC150BN/VEGETATION
SWALE 8.1	ALL	2.00	1.34	10.04	3	3	NAG SC250/VEGETATION
SWALE 8.2	ALL	2.00	1.36	10.16	3	3	NAG SC250/VEGETATION
SWALE 9	ALL	2.00	1.56	11.36	3	3	NAG S75BN/VEGETATION
SWALE 10	ALL	2.00	1.34	10.04	3	3	NAG SC25

W:\PROJECTS\13021.020 Oakwood Hills Rev Apt Land Dev Plans\dwg\Land Development\13021.020-Details E&S.dwg 8/1/2018 4:23:30 PM EDT



BASIN NO.	WATER SURFACE ELEV. (FT)	ARM LENGTH (FT)	ARM DIA. (IN)	ORIFICE DIA. (IN)	TOP OF LANDING DEVICE ELEVATION (FT)	FLEXIBLE HOSE LENGTH (IN)	FLEXIBLE HOSE ATTACHMENT ELEVATION (FT)
1	464.25	4	2.5	2.1	463.00	12	462.00
2	479.60	8	5.0	4.5	475.00	12	474.00
3	500.00	4	2.5	2.0	499.00	12	498.00
4	482.95	6	4.0	3.3	479.50	12	478.00
5	533.00	6	5.0	4.4	530.00	12	529.00
6	493.00	6	4.0	3.4	489.50	12	488.50
7	492.00	6	2.5	2.5	489.50	12	488.00
8	498.50	6	2.0	1.8	495.50	12	494.50
9	480.25	6	4.0	3.9	477.25	12	476.00

NOTES:

ORIFICE DIAMETER MUST BE EQUAL TO OR LESS THAN ARM DIAMETER

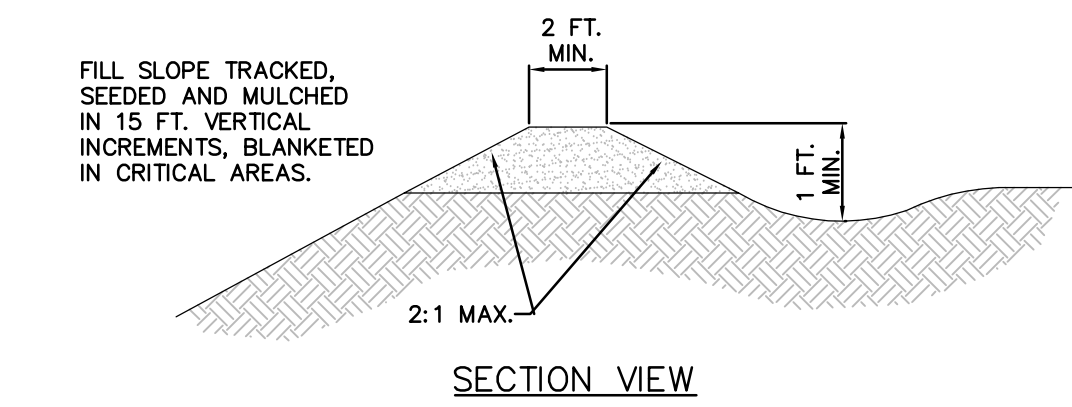
A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE LANDING DEVICE.

A SEMI-CIRCULAR LANDING ZONE MAY BE SUBSTITUTED FOR THE GUIDE RAILS (STANDARD CONSTRUCTION DETAIL # 7-3).

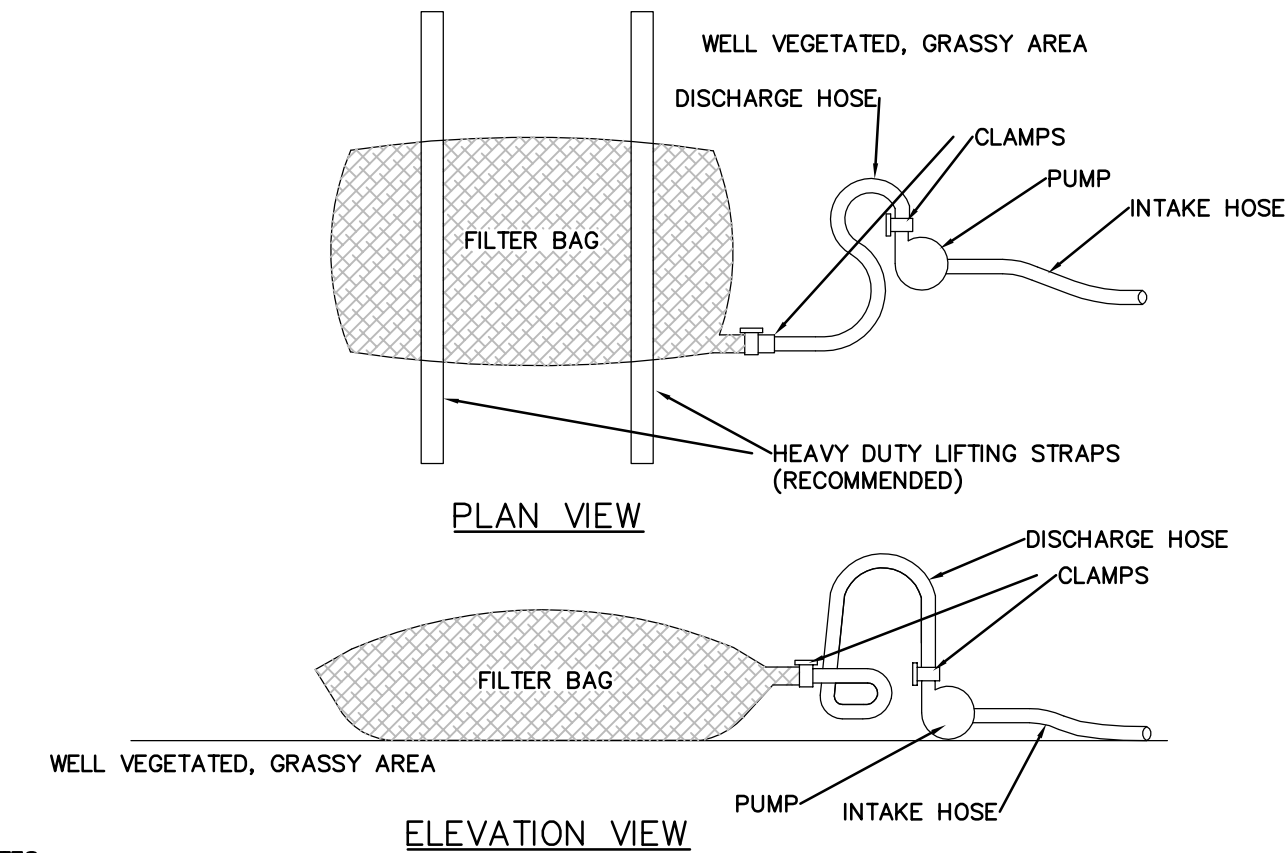


STANDARD CONSTRUCTION DETAIL #6-4

X

TOP-OF-SLOPE BERM

NOT TO SCALE



NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5% FOR SLOPES EXCEEDING 5% CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HO OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

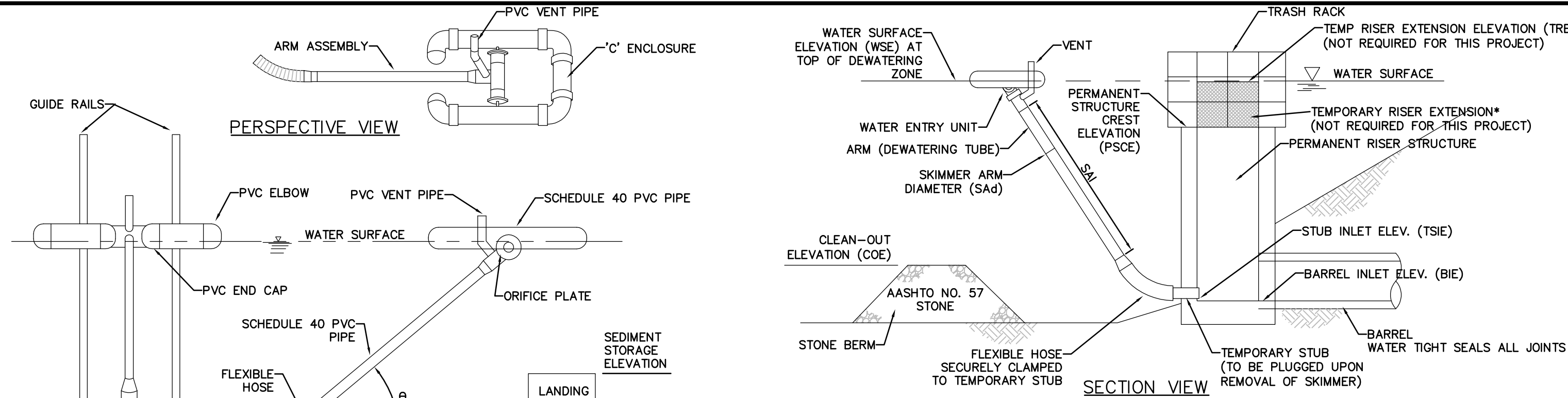
FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

STANDARD CONSTRUCTION DETAIL #3-16

X

PUMPED WATER FILTER BAG

NOT TO SCALE



BASIN NO.	WATER SURFACE ELEV. WISE (FT)	SKIMMER								
		ORIFICE		ARM			FLEXIBLE HOSE			
		DIA. (IN.)	HEAD (FT)	DIA. SAG (IN.)	LENGTH (FT)	MAT'L	DIA. (IN.)	LENGTH (IN)	MAT'L	
1	464.25	2.1	0.167	2.5	4	PVC	5.0	12	TR*	
2	479.60	4.5	0.33	5.0	8	PVC	5.0	12	TR*	
3	500.00	2.0	0.167	2.5	4	PVC	2.5	12	TR*	
4	482.95	3.3	0.25	4.0	6	PVC	4.0	12	TR*	
5	533.00	4.4	0.33	5.0	6	PVC	5.0	12	TR*	
6	493.00	3.4	0.25	4.0	6	PVC	4.0	12	TR*	
7	492.00	2.5	0.167	2.5	6	PVC	4.0	12	TR*	
8	498.50	1.8	0.167	2.0	6	PVC	4.0	12	TR*	
9	480.25	3.9	0.25	4.0	6	PVC	4.0	12	TR*	

BASIN NO.	TEMPORARY STUB			PERMANENT RISER			RISER EXTENSION			BARREL
	INSIDE DIA (IN)	INVERT ELEV (FT)	MAT'L	CREST ELEV PSCE (FT)	HORIZ LENGTH (IN)	OPENING WIDTH (IN)	CREST ELEV TRE (FT)	HORIZ LENGTH (IN)	OPENING WIDTH (IN)	
1	2.5	464.00	PVC	464.25	48	24	N/A	N/A	N/A	464.00
2	5.0	474.00	PVC	479.60	48	24	N/A	N/A	N/A	474.00
3	2.5	498.00	PVC	500.00	48	24	N/A	N/A	N/A	498.00
4	4.0	478.00	PVC	482.95	48	24	N/A	N/A	N/A	478.00
5	5.0	529.00	PVC	533.00	48	24	N/A	N/A	N/A	529.00
6	4.0	488.50	PVC	493.00	48	24	N/A	N/A	N/A	488.50
7	2.5	490.50	PVC	492.00	48	24	N/A	N/A	N/A	490.50
8	2.0	496.50	PVC	498.50	48	24	N/A	N/A	N/A	496.50
9	4.0	476.00	PVC	480.25	48	24	N/A	N/A	N/A	476.00

NOTES:

ALL ORIFICES ON PERMANENT RISER BELOW TEMPORARY RISER EXTENSION SHALL HAVE WATER-TIGHT TEMPORARY SEALS PROVIDED. TEMPORARY STUB INVERT ELEVATION SHALL BE SET AT OR BELOW SEDIMENT CLEAN-OUT ELEVATION.

A ROPE SHALL BE ATTACHED TO THE SKIMMER ARM TO FACILITATE ACCESS TO THE SKIMMER ONCE INSTALLED.

SKIMMER SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. ANY MALFUNCTIONING SKIMMER SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF INSPECTION.

ICE OR SEDIMENT BUILDUP AROUND THE PRINCIPAL SPILLWAY SHALL BE REMOVED SO AS TO ALLOW THE SKIMMER TO RESPOND TO FLUCTUATING WATER ELEVATIONS.

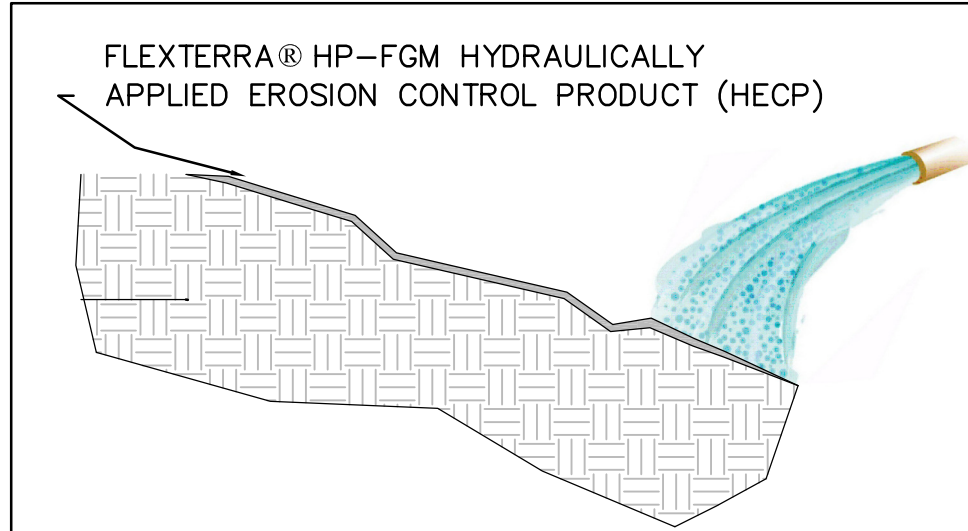
SEDIMENT SHALL BE REMOVED FROM THE BASIN WHEN IT REACHES THE LEVEL MARKED ON THE SEDIMENT CLEAN-OUT STAKE OR THE TOP OF THE STONE BERM. SEE STANDARD CONSTRUCTION DETAIL #7-3 FOR CONFIGURATION OF STONE BERM.

STANDARD CONSTRUCTION DETAIL 7-2

X

SKIMMER ATTACHED TO A PERMANENT RISER

NOT TO SCALE



INSTALLATION

Strictly comply with equipment manufacturer's installation instructions and recommendations. Use approved hydro-spraying machines with fan-type nozzle (50-degree tip). To achieve optimum soil surface coverage, apply HP-FGM from opposing directions to soil surface. Rough surfaces (rocky terrain, cat tracks and ripped soils) may require higher application rates to achieve 100% cover. Slope interruption devices or water diversion techniques are recommended when slope lengths exceed 100 feet (30 m). Maximum slope length is for product applications on a 3H:1V slope. For application on steeper slopes, slope interruption lengths may need to be decreased based on actual site conditions. Not recommended for channels or areas with concentrated water flow. No chemical additives with the exception of fertilizer, liming and biostimulant materials should be added to this product. To ensure proper application rates, measure and stake area. For maximum performance, apply HP-FGM in a two-step process as follows:

- Step One: Apply fertilizer with specified prescriptive agronomic formulations and 50% of seed with a small amount of HP-FGM for visual metering.
- Step Two: Mix balance of seed and apply HP-FGM at a rate of 50 lb per 125 gallons (23 kg/475 liters) of water over freshly seeded surfaces. Confirm loading rates with equipment manufacturer. Do not leave seeded surfaces unprotected, especially if precipitation is imminent.

APPLICATION RATES: These application rates are for standard conditions. Designers may wish to reduce rates to encourage faster vegetation establishment or may need to increase application rates on rough surfaces. Consult application and loading charts to determine number of bags to be added for desired area and application rate.

Slope Gradient / Condition	English	SI
≤ 4H to 1V	2500 lb/ac	2800 kg/ha
> 4H to 1V and ≤ 3H to 1V	3000 lb/ac	3400 kg/ha
≥ 3H to 1V and ≤ 2H to 1V	3500 lb/ac	3900 kg/ha
> 2H to 1V and ≤ 1H to 1V	4000 lb/ac	4500 kg/ha
> 1H to 1V	4500 lb/ac	5100 kg/ha
Below ECB or TRM	1500 lb/ac	1700 kg/ha
As infill for TRM	3500 lb/ac	3900 kg/ha

SEE COMPREHENSIVE CSI FORMATTED SPECIFICATION FOR FURTHER DETAILS

PLEASE NOTE THAT THE INFORMATION PRESENTED HEREIN IS GENERAL INFORMATION ONLY. IT IS FOR CONCEPTUAL USE ONLY AND NOT INTENDED TO BE USED FOR CONSTRUCTION. WHILE EVERY EFFORT HAS BEEN MADE TO ENSURE ITS ACCURACY, THIS INFORMATION SHOULD NOT BE USED FOR A SPECIFIC APPLICATION WITHOUT INDEPENDENT PROFESSIONAL EXAMINATION AND VERIFICATION OF ITS SUITABILITY, APPLICABILITY AND ACCURACY.

FLEXTERRA® HP-FGM CAD Details Slope

FILE NAME: CAD Details Slope - FLEXTERRA HP-FGM.dwg

CONTACT NUMBER: 800-508-8681

WEB SITE: www.profileproducts.com

DRAWN BY: MDR

DATE: 06/14/10

SCALE: NOT TO SCALE

SHEET 1 OF 1

X

STEEP SLOPE PROTECTION

NOT TO SCALE

PLAN VIEW

NOTES:

NO GUIDE RAILS SHALL BE REQUIRED FOR THIS INSTALLATION.

THIS DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD CONSTRUCTION DETAILS #7-2 AND #7-4.

STANDARD CONSTRUCTION DETAIL 7-3

X

SKIMMER WITH STONE LANDING BERM

NOT TO SCALE

SPECIFICATION: 31 25 14.13 - High Performance-Flexible Growth Medium

This section specifies a hydraulically-applied, 100% biodegradable, High Performance-Flexible Growth Medium (HP-FGM) that is manufactured in the United States and is composed of 100% recycled thermally refined (within a pressure vessel) wood fibers, crimped interlocking man-made biodegradable fibers, micro-pore granules, naturally derived crosslinked biopolymers and water absorbents. The HP-FGM is phytosanitized, free from plastic netting, requires no curing period and upon application forms an intimate bond with the soil surface to create a continuous, porous, absorbent and flexible erosion resistant blanket that allows for rapid germination and accelerated plant growth. All components of the FGM shall be pre-packaged by the Manufacturer to assure both material performance and compliance with the following values. No chemical additives with the exception of fertilizer, liming and biostimulant materials should be added to this product.

- Thermally Processed (within a pressure vessel) Wood Fiber - 80% ± 3%
 - Heated to a temperature greater than 380 degrees Fahrenheit (193 degrees Celsius) for 5 minutes at a pressure greater than 50 psi (345 kPa)
- Crosslinked Biopolymers and Water Absorbents - 10% ± 1%
 - Crimped, Man-made Biodegradable Interlocking Fibers - 5% ± 1%
 - Micro-Pore Granules - 5% ± 1%

E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PDSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT

EIS

FOR CORRECTIONS

07-31-18

EIS

FOR SIGNATURES

06-27-18

EIS

PER PENNDOT COMMENTS

06-08-18

EIS

PER PENNDOT COMMENTS

05-04-18

EIS

PER SUEZ WATER DESIGN

03-28-18

EIS

PER 105 COMMENTS

12-27-17

EIS

PER SUEZ WATER DESIGN

11-13-17

DATE

BY

REV

DESCRIPTION

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK AND ASSOCIATES, Ltd.

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone 717/233-1036 • FAX 717/233-2192

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA

E&S DETAILS

EIS

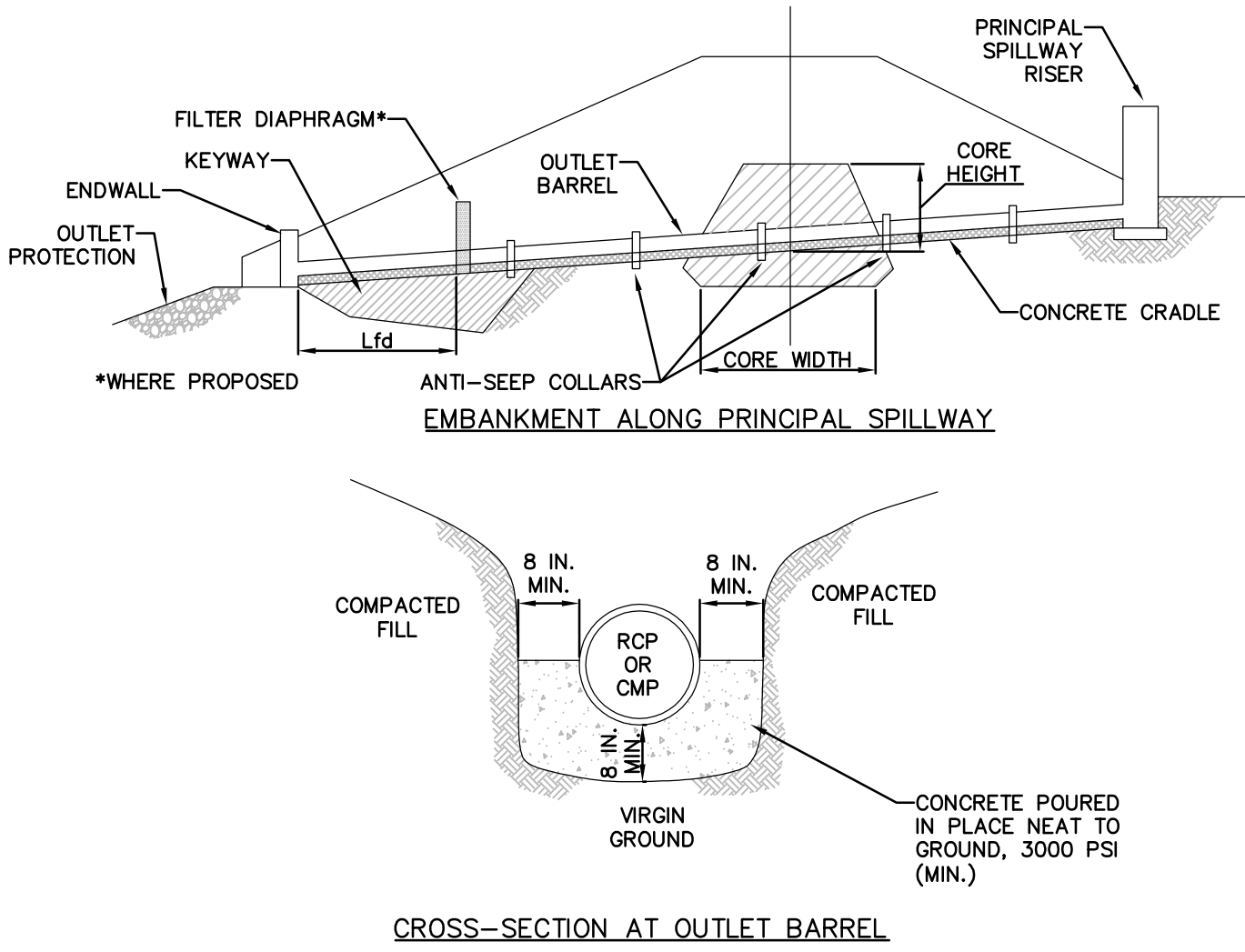
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DATE: 05-01-17

SCALE: NOT TO SCALE

JOB NUMBER: 13021.020

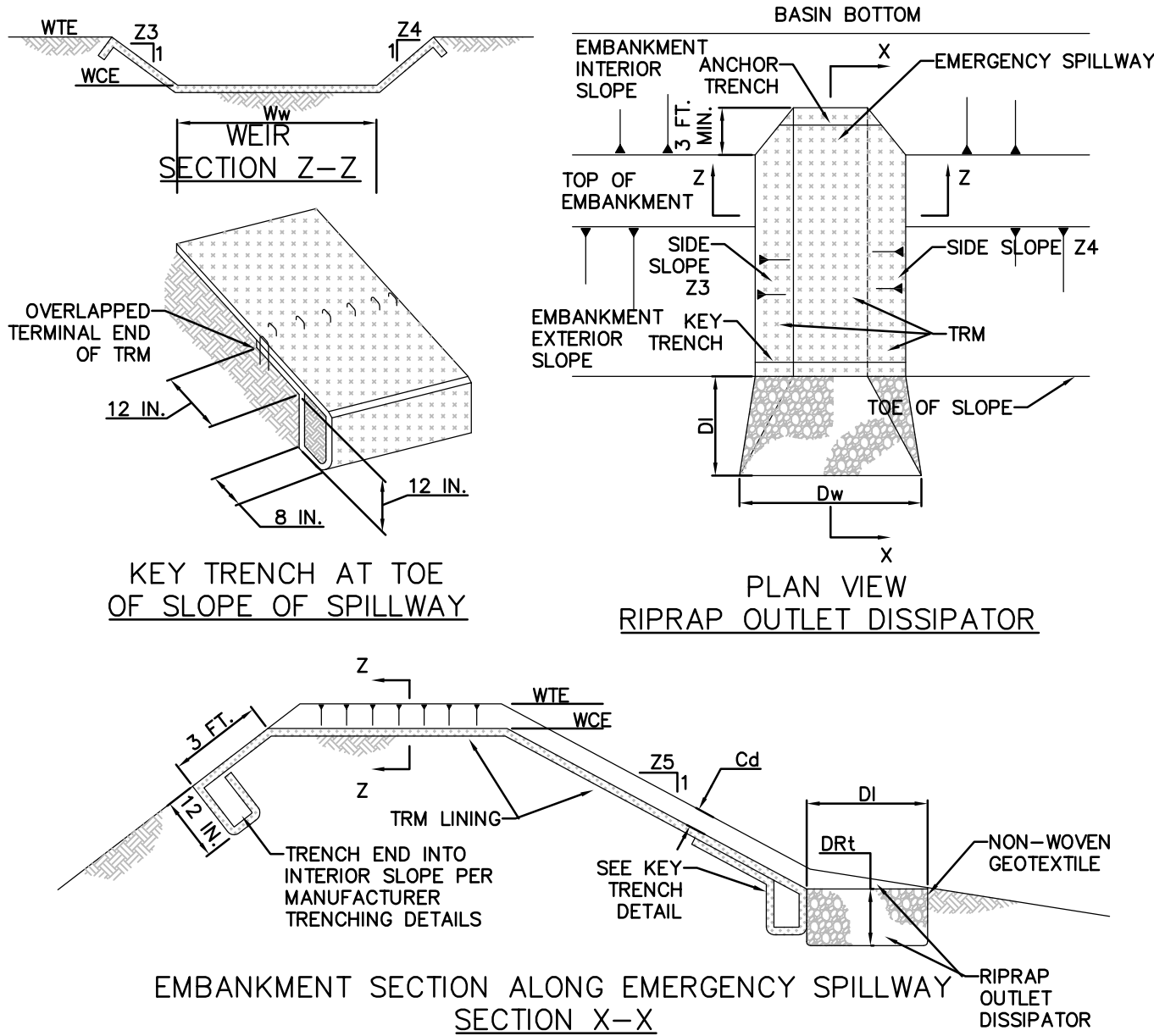
66 OF 68



NOTES:
A CONCRETE CRADLE MAY BE USED IN CONJUNCTION WITH ANTI-SEEP COLLARS AND/OR FILTER DIAPHRAGM.
ANTI-SEEP COLLAR NUMBER, SIZE AND SPACING SHALL BE AS SHOWN ELSEWHERE IN PLAN.
FILTER DIAPHRAGM LOCATION (Lfd) SHALL BE AS SHOWN IN FIGURE 7.8 OF THE PA DEP EROSION CONTROL MANUAL.

STANDARD CONSTRUCTION DETAIL 7-17

X CONCRETE CRADLE FOR BASIN OR TRAP OUTLET BARREL
NOT TO SCALE



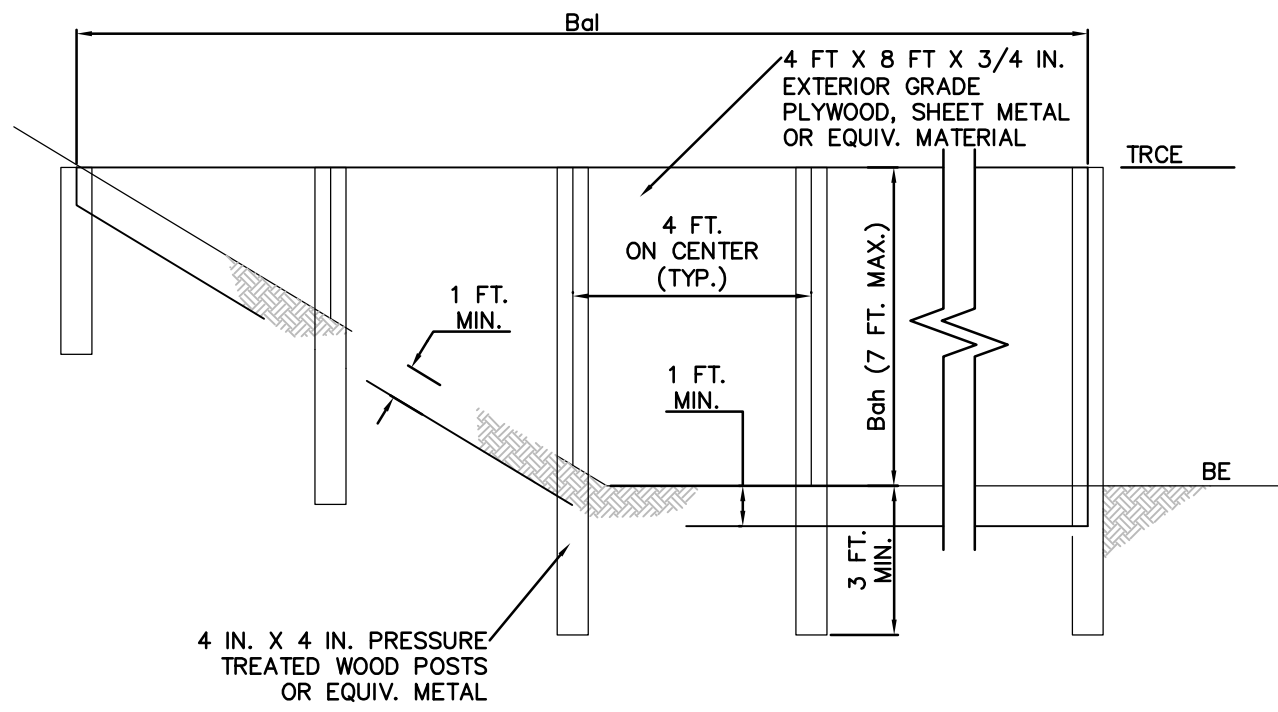
BASIN NO.	WEIR			CREST ELEV WTE (FT)	CREST ELEV WCE (FT)	WIDTH Ww (FT)	LINING		CHANNEL		DISSIPATOR			
	Z3 (FT)	Z4 (FT)	TOP ELEV WTE (FT)				TRM TYPE	STAPLE PATTERN	Z5 (FT)	DEPTH Cd (FT)	LENGTH Dl (FT)	WIDTH Dm (FT)	RIPRAP SIZE (R-...)	RIPRAP THICK. DRI (IN)
1	3	3	466.50	464.90	50	SC250	E	3	3	1	10	6	R-3	9.0
2	3	3	482.00	480.59	150	SC250	E	3	3	1	10	6	R-3	9.0
3	3	3	504.00	502.50	80	SC250	E	3	3	1	10	6	R-3	9.0
4	3	3	485.00	483.45	61	P550	E	3	3	1	10	6	R-3	9.0
5	3	3	535.00	533.25	70	P300	E	3	3	1	10	6	R-3	9.0
6	3	3	495.00	492.30	125	SC250	E	3	3	1	10	6	R-3	9.0
7	3	3	494.00	492.50	33	P300	E	3	3	1	10	6	R-3	9.0
8	3	3	500.00	498.75	20	S75BN	D		3	1	*	*	*	*
9	3	3	483.00	481.50	100	P300	E	3	3	1	10	6	R-3	9.0

* NO DISSIPATOR REQUIRED VELOCITY LESS THAN 2 FPS.

NOTES:
HEAVY EQUIPMENT SHALL NOT CROSS OVER SPILLWAY WITHOUT PRECAUTIONS TAKEN TO PROTECT TRM LINING.
DISPLACED LINER WITHIN THE SPILLWAY AND/OR OUTLET CHANNEL SHALL BE REPLACED IMMEDIATELY.
RIPRAP AT TOE OF EMBANKMENT SHALL BE EXTENDED A SUFFICIENT LENGTH IN BOTH DIRECTIONS TO PREVENT SCOUR.
THE USE OF BAFFLES THAT REQUIRE SUPPORT POSTS ARE RESTRICTED FROM USE IN BASINS REQUIRING IMPERVIOUS LINERS.

STANDARD CONSTRUCTION DETAIL 7-13

X SEDIMENT BASIN EMERGENCY SPILLWAY WITH TRM LINER
NOT TO SCALE

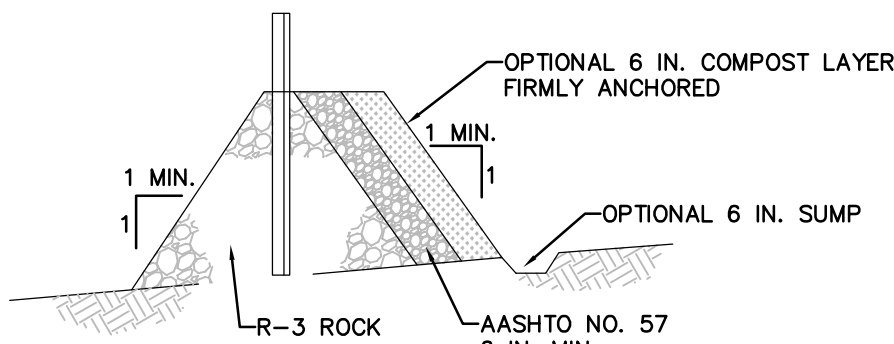


BASIN OR TRAP NO.	BAFFLE		TEMPORARY RISER		BOTTOM ELEV BE (FT)
	LENGTH Bel (FT)	HEIGHT Boh (FT)	CREST ELEV. TRCE (FT)		
6	110	4.50	493.00		488.50

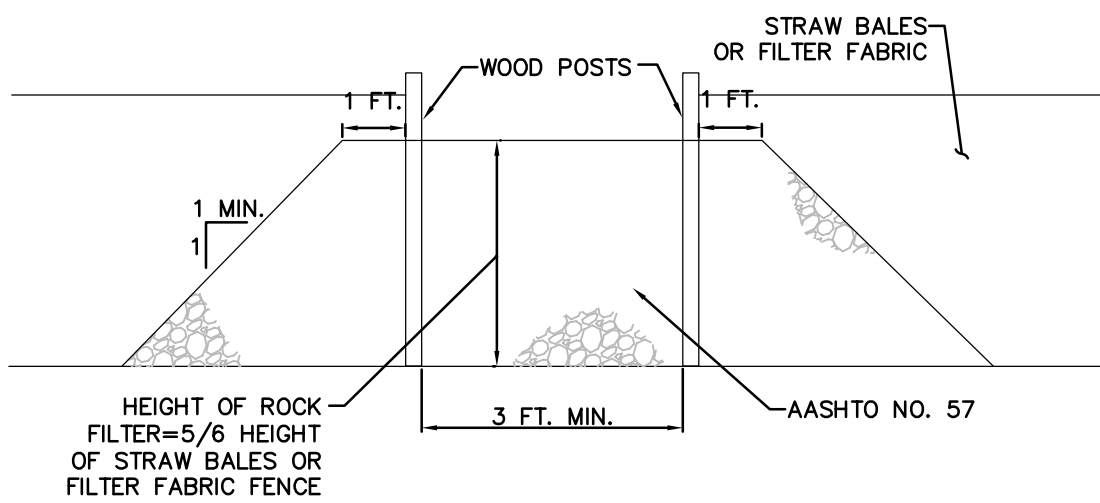
NOTES:
SEE APPROPRIATE BASIN DETAIL FOR PROPER LOCATION AND ORIENTATION.
AN ACCEPTABLE ALTERNATIVE IS TO INSTALL A SUPER SILT FENCE AT THE BAFFLE LOCATION
IN POOLS WITH DEPTHS EXCEEDING 7', THE TOP OF THE PLYWOOD BAFFLE DOES NOT NEED TO EXTEND TO THE TEMPORARY RISER CREST. SUPER SILT FENCE BAFFLES NEED NOT EXTEND TO TRCE ELEVATION.
BAFFLES SHALL BE TIED INTO ONE SIDE OF THE BASIN UNLESS OTHERWISE SHOWN ON THE PLAN DRAWINGS.
SUBSTITUTION OF MATERIALS NOT SPECIFIED IN THIS DETAIL SHALL BE APPROVED BY THE DEPARTMENT OR THE LOCAL CONSERVATION DISTRICT BEFORE INSTALLATION.
DAMAGED OR WARPED BAFFLES SHALL BE REPLACED WITHIN 7 DAYS OF INSPECTION.
BAFFLES REQUIRING SUPPORT POSTS SHALL NOT BE INSTALLED IN BASINS REQUIRING IMPERVIOUS LINERS.

STANDARD CONSTRUCTION DETAIL 7-14

X BAFFLE
NOT TO SCALE



OUTLET CROSS-SECTION



UP-SLOPE FACE

NOTES:
A ROCK FILTER OUTLET SHALL BE INSTALLED WHERE FAILURE OF A SILT FENCE OR STRAW BALE BARRIER HAS OCCURRED DUE TO CONCENTRATED FLOW. ANCHORED COMPOST LAYER SHALL BE USED ON UPSLOPE FACE IN HQ AND EV WATERSHEDS.
SEDIMENT SHALL BE REMOVED WHEN ACCUMULATIONS REACH 1/3 THE HEIGHT OF THE OUTLET.

STANDARD CONSTRUCTION DETAIL #4-6

X ROCK FILTER OUTLET
NOT TO SCALE

E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND POSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT

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EIS 07-31-18

EIS 06-27-18

EIS 06-08-18

EIS 05-04-18

EIS 03-28-18

EIS 12-27-17

EIS 11-13-17

FOR CORRECTIONS

FOR SIGNATURES

PER PENNDOT COMMENTS

PER PENNDOT COMMENTS

PER SUEZ WATER DESIGN

PER 105 COMMENTS

PER SUEZ WATER DESIGN

DATE

BY

REV

DESCRIPTION

COMPREHENSIVE LAND AND SITE PLANNING

LANDSCAPE ARCHITECTURE

ENGINEERING

H. EDWARD BLACK and ASSOCIATES, Ltd.

2403 North Front Street • Harrisburg, Pennsylvania 17110 • Telephone (717)233-1026 • FAX (717)233-2192

PRELIMINARY SUBD. AND LAND DEV. PLAN

OAKWOOD HILLS

LOCATION: WEST LISBURN ROAD
UPPER ALLEN TOWNSHIP
CUMBERLAND COUNTY
PENNSYLVANIA

E&S DETAILS

DRAWN BY: EIS

CHECKED BY: CHH

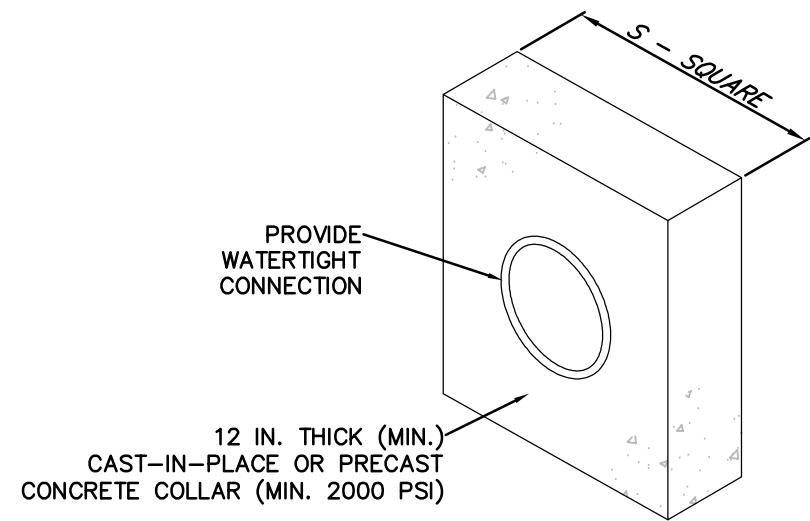
DATE: 05-01-17

SCALE: NOT TO SCALE

JOB NUMBER: 13021.020

SHEET

67 OF 68



BASIN OF TRAP NO.	PIPE SIZE (IN)	S (IN)	NO. OF COLLARS	RISER TO FIRST COLLAR (FT)	COLLAR SPACING (FT)
1	15	70	2	12	6
2	18	164	2	18	6
3	15	54	1	17	N/A
4	24	92	1	15	N/A
5	15	58	2	14	6
6	30	48	2	13	6
7	15	67	1	14	N/A
8	15	72	1	17	N/A
9	15	40	1	15	N/A

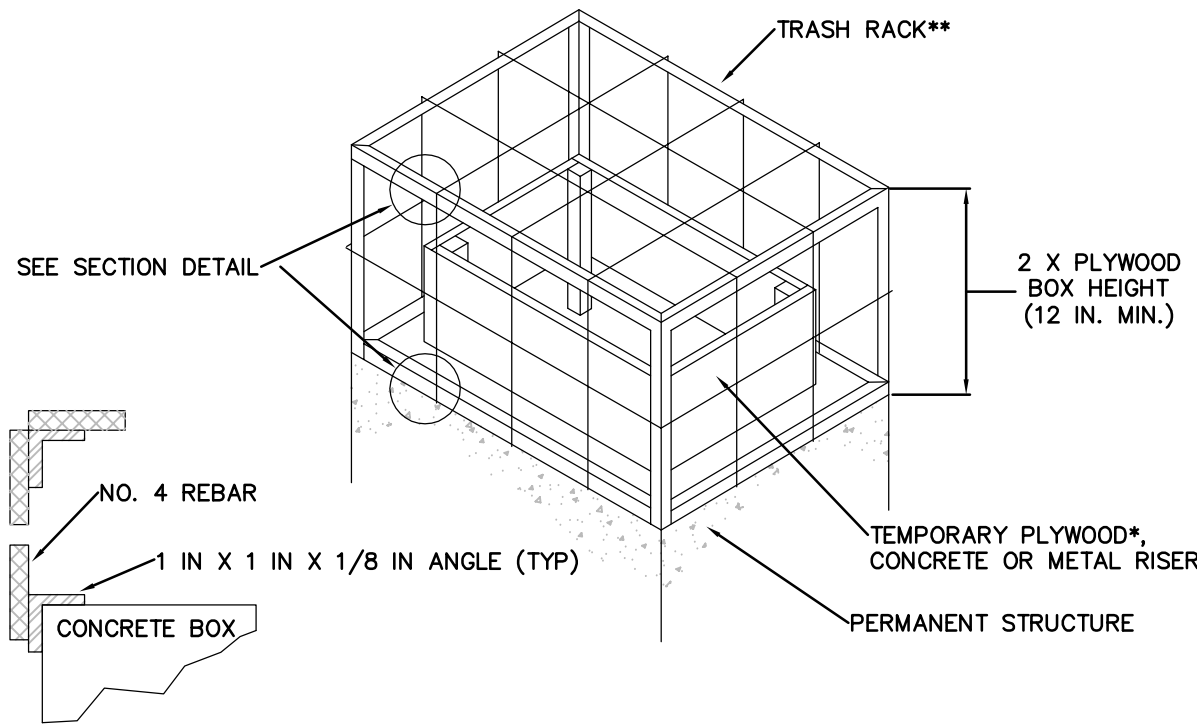
NOTES:

ALL COLLARS SHALL BE INSTALLED SO AS TO BE WATERTIGHT.

COLLAR SIZE AND SPACING SHALL BE AS INDICATED WITHIN TABLE.

STANDARD CONSTRUCTION DETAIL 7-16

CONCRETE ANTI-SEEP COLAR FOR PERMANENT BASINS OR TRAPS
NOT TO SCALE



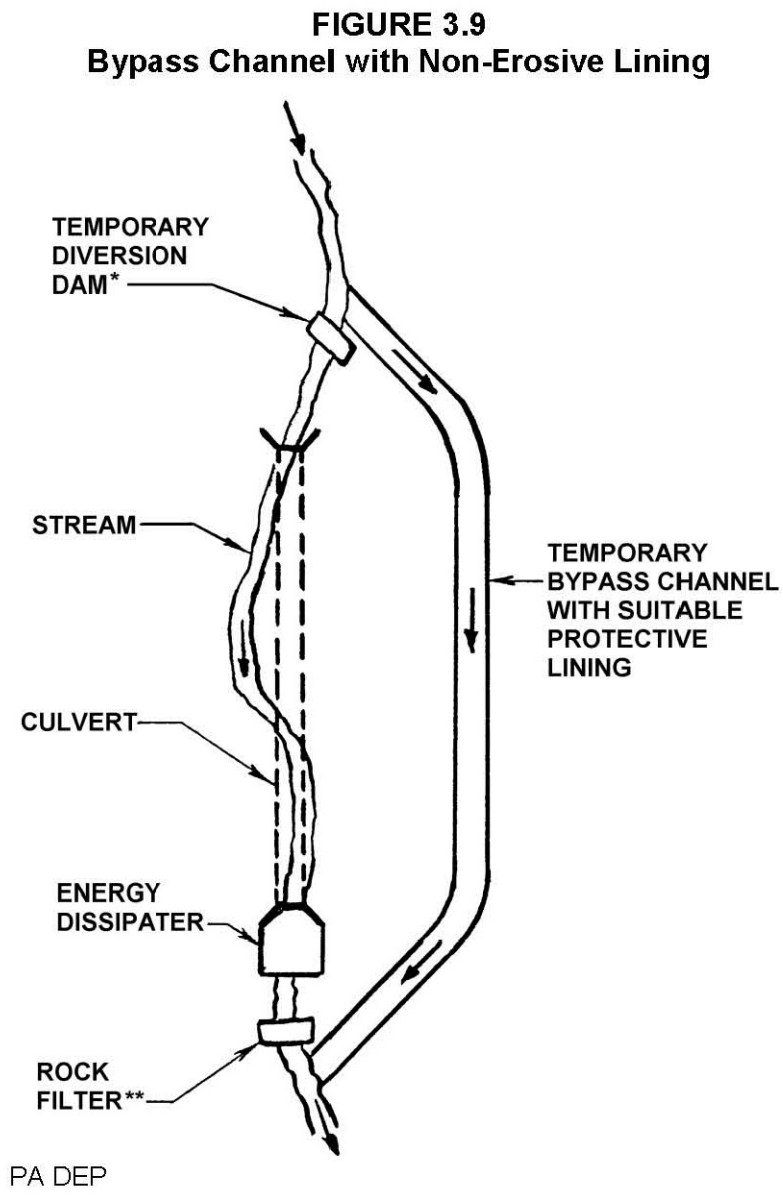
SECTION DETAIL

* 3/4 IN. PRESSURE TREATED PLYWOOD BOX WITH 2 IN. X 2 IN. PRESSURE TREATED CORNER SUPPORTS, SET INTO 1-1/2 IN. GRATE OFFSETS, CAULK ALL SEAMS TO FORM WATERTIGHT SEALS.

** TRASH RACK COMPOSED OF 1 IN. X 1 IN. X 1/8 IN. L (TYP.) AND #4 BARS (TYP.) WELDED TO THE ANGLES AND AT EACH INTERSECTION OF THE BARS; #4 BARS SPACED AT HALF THE DIAMETER OF THE BARREL MAX.

STANDARD CONSTRUCTION DETAIL 7-10

TEMPORARY EXTENSION RISER AND TRASH RACK FOR PERMANENT STRUCTURE
NOT TO SCALE



TYPICAL ROADWAY STREAM CROSSING
NOT TO SCALE

SHEET		68 OF 68		E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PCSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT		THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.	
DRAWN BY:	EIS	PRELIMINARY SUBD. AND LAND DEV. PLAN		E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PCSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT		THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.	
CHECKED BY:	CHH	OAKWOOD HILLS		E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PCSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT		THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.	
DATE:	05-01-17	LOCATION: WEST LISBURN ROAD UPPER ALLEN TOWNSHIP CUMBERLAND COUNTY PENNSYLVANIA		E&S PLANS SUBMITTED WITH LAND DEVELOPMENT PLANS ARE PRELIMINARY. OWNER AND SITE WORK CONTRACTOR SHALL REFER TO E&S PLANS AND PCSM PLANS APPROVED BY COUNTY CONSERVATION DISTRICT AS PART OF NPDES PERMIT		THIS DRAWING IS AND SHALL REMAIN THE PROPERTY OF H. EDWARD BLACK AND ASSOCIATES, Ltd. ANY REUSE ON PROJECT EXTENSIONS, ANY OTHER PROJECT, OR ALTERATIONS OR ADDITIONS TO THIS PROJECT SHALL BE AT USER'S SOLE RISK AND WITHOUT LIABILITY TO H. EDWARD BLACK AND ASSOCIATES, Ltd.	
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