

**PRELIMINARY LAND DEVELOPMENT SUBMISSION
FOR
LANCASTER AVENUE HOUSING**



Villanova University

**SITUATED IN
RADNOR TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA**

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Lancaster Avenue Housing
Lancaster and Ithan Avenues
Villanova PA 19085

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RAMSA**

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OWNER / APPLICANT

VILLANOVA UNIVERSITY
800 E LANCASTER AVE
VILLANOVA, PA 19085
610-619-4500

Gregory C. Newell



**CERTIFICATE OF OWNERSHIP
AND ACKNOWLEDGEMENT OF PLAN**

ON THIS, THE _____ DAY OF _____, 20____, BEFORE ME, THE
UNDERSIGNED OFFICER, PERSONALLY APPEARED _____

(NAME OF OWNER)
WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT HE/SHE IS THE OWNER
AND/OR EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, AND THAT HE/SHE
ACKNOWLEDGES THE SAME TO BE HIS/HER ACT AND PLAN AND DESIRES THE SAME BE RECORDED
AS SUCH ACCORDING TO LAW.

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN.
MY COMMISSION EXPIRES: _____

(NOTARY PUBLIC OR OTHER OFFICER)

**PRELIM. LAND DEVELOPMENT
SUBMISSION**

Revision
Date December 5, 2014
Title Title Sheet

Scale As Noted
Drawn By MMB

C0.0

Sheet No. 1 of 30

Contractor to verify all dimensions in field and inform
Architect of any discrepancies before starting work.

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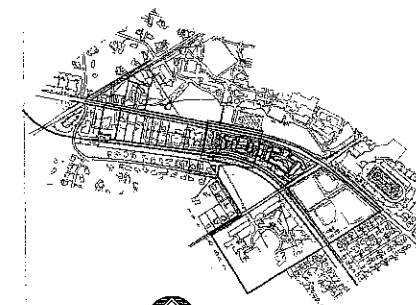
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KEY MAP
SCALE 1" = 1,000'

LEGEND

- ZONING LINE
- PROPERTY LINE
- BUILDING SETBACK LINE
- PARKING SETBACK LINE
- LEGAL RIGHT-OF-WAY LINE
- EXISTING EDGE OF PAVEMENT
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SIDE
- EXISTING TREE LINE
- EXISTING TREE
- EXISTING RAILROAD TRACKS
- EXISTING WETLANDS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING STORM INLET
- EXISTING STORM SEWER WITH MANHOLE
- EXISTING WATER SERVICE WITH MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING OVERHEAD WIRE
- EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE
- EXISTING TRANSFORMER
- EXISTING CABLE SERVICE WITH CABLE BOX
- EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE
- EXISTING TELEPHONE METER
- EXISTING TRAFFIC SIGNAL MAST ARM
- EXISTING BOUNDARY LINE
- EXISTING CURBS, RETAINING WALL OR FENCE TO BE REMOVED
- EXISTING BUILDING / STRUCTURE TO BE REMOVED
- EXISTING IMPERVIOUS AREA TO BE REMOVED
- EXISTING UTILITY TO BE REMOVED
- EXISTING TREE TO BE REMOVED
- AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION

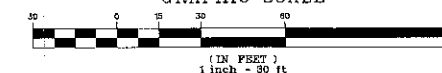
RADNOR TOWNSHIP UTILITY LIST:

AT & T LOCAL SERVICES	RADNOR TOWNSHIP
ADDRESS: 2315 SALEM RD F11 CONYERS, GA. 30013 CONTACT: NANCY SPENCE EMAIL: nspence@att.com	ADDRESS: 301 IVEN AVENUE WAYNE, PA. 19087 CONTACT: WILLIAM R. HAGEN EMAIL: whagen@radnor.org
AGUA PENNSYLVANIA ADDRESS: 742 LANCASTER AVENUE RYN MAWR, PA. 19010 CONTACT: STEVE PIZI	FEKO ENERGY ADDRESS: C/O SIS LLC 1004 W. 8TH AVE KING OF PRUSSIA, PA. 19406 CONTACT: WAYNE WICKERT EMAIL: wwickert@sis.net
COMCAST CABLE COMMUNICATIONS ADDRESS: 110 SPRINGBROOKE BLVD ASTON, PA. 19014 CONTACT: PAUL DABALDO EMAIL: paul_dabaldo@cable.comcast.com	LEVEL 3 COMMUNICATIONS ADDRESS: 1005 EL DORADO BLVD BLDG BROOMFIELD, CO 80021 CONTACT: CHRIS RICCIUCCI EMAIL: chris.ricciucci@level3.com
ABOVENET COMMUNICATIONS INC ADDRESS: 337 CIRCLE OF PROGRESS DR POTTSTOWN, PA. 19464 CONTACT: CHRIS RICCIUCCI EMAIL: chris.ricciucci@abovenet.com	SOUTHEAST PA TRANSPORTATION AUTHORITY ADDRESS: 123 MARKET ST, 12TH FLOOR PHILADELPHIA, PA. 19107 CONTACT: DAVID MONYVODAS EMAIL: dmonyvod@septa.org
VERIZON PENNSYLVANIA INC ADDRESS: 900 RACE STREET, 4TH FLOOR PHILADELPHIA, PA. 19107 CONTACT: SUZETTE WALKER EMAIL: suzette.walker@verizon.com	

SOILS DATA

SOILS INFORMATION OBTAINED FROM THE USDA-NRCS WEB SOIL SURVEY, VERSION 4, WITH A DATE OF SURVEY AREA DATA OF FEBRUARY 24, 2009. THE FOLLOWING SITE SPECIFIC SOIL CLASSIFICATIONS ARE NOT LISTED AS HYDRO SOILS:
M^o MADE LAND, SCHIST AND GNEISS MATERIALS
*WHOLE SITE LIES WITHIN THIS SOILS CLASSIFICATION

GRAPHIC SCALE



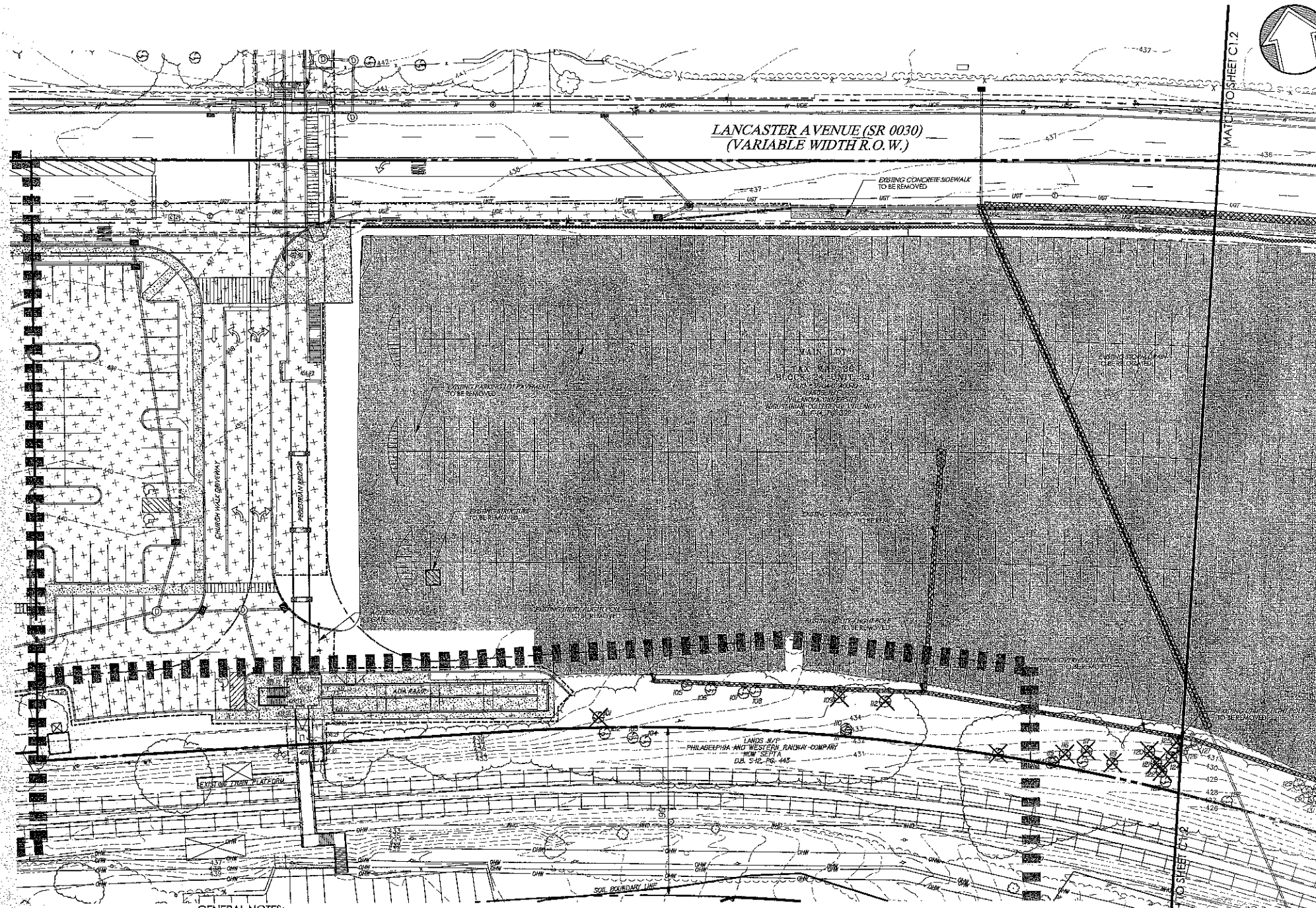
PRELIM. LAND DEVELOPMENT SUBMISSION

Revision
Date December 5, 2014
Title Existing Features / Demolition Plan
Scale 1" = 30'
Drawn By DWN

C1.1

Sheet No. 2 of 30

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



GENERAL NOTES:

1. THIS PLAN IS BASED ON A SURVEY CONDUCTED IN THE FIELD BY NAVE NEWELL, INC., COMPLETED ON AUGUST 8, 2011.
2. THIS SURVEY REPRESENTS CONDITIONS AS OF THE DATE OF THE SURVEY EXCEPT SUCH IMPROVEMENTS OR CHANGES, IF ANY, THAT MAY BE LOCATED BELOW THE SURFACE OF THE LANDS, ON THE SURFACE OF THE LANDS OR ABOVE THE SURFACE OF THE LANDS AND NOT VISIBLE.
3. THIS PLAN HAS BEEN PREPARED WITHOUT BENEFIT OF A TITLE REPORT. TITLE TO THE SUBJECT PROPERTY IS FILED IN THE DELAWARE COUNTY COURT HOUSE IN DEED BOOK 14 PAGE 399.
4. BEARING BASIS FOR THE SURVEY AS SHOWN ARE PER DEED. BEARINGS NOTED NAD 83 REFERENCE THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM. SOUTH ZONE AS DERIVED FROM GPS OBSERVATIONS. THE BEARINGS MADE BE ROTATED 0°48'58" COUNTERCLOCKWISE FROM THE DEED BEARING. VERTICAL DATUM IS NAVD 83.
5. PROPERTY AS SHOWN IS IN NON-FLOOD PRONE COMMUNITY AS DEPICTED ON THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM FLOOD INSURANCE RATE MAP COMMUNITY PANEL 400400000A. MAP REVISED NOVEMBER 16, 2009.
6. LOCATIONS OF EXISTING UTILITIES AS SHOWN HEREIN HAVE BEEN DEVELOPED FROM A SOFTDIS SURFACE UTILITY MARKOUT COMPLETED ON JULY 14, 2011. PROJECT NO. 11600. EXISTING UTILITY RECORDS, PLANS BY OTHERS AND/OR ABOVE GROUND EXAMINATION OF THE SITE, THE COMPLETENESS OR ACCURACY OF THE LOCATIONS ARE NOT GUARANTEED. SHOULD ANY NEW CONSTRUCTION BE PROPOSED, THE CONTRACTOR MUST VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES BEFORE START OF WORK.
7. PURSUANT TO ACT 187 (PENNSYLVANIA ONE CALL INC.) WAS PLACED ON JULY 26, 2011 AND ASSIGNED SERIAL NUMBERS 20112071855, 20112071869, 20112071907, 20112071937 AND 20112071972. INFORMATION THEREBY OBTAINED WAS USED TO ILLUSTRATE EXISTING UTILITIES.
8. NO REVIEW OF THE PROPERTY REGARDING THE PRESENCE OF WETLANDS WAS ACCOMPLISHED AS A PART OF THIS SURVEY.
9. BENT AND BLOCK NUMBERS REFER TO THE OFFICIAL TAX MAPS OF THE TOWNSHIP OF RADNOR, DELAWARE COUNTY, PENNSYLVANIA.
11. BASE PLANNING AND TOPOGRAPHY COMPILED PHOTOGRAMMETRICALLY BY AND GEOSPATIAL, LLC DATE OF FLIGHT: JUNE 19, 2011. THE TOPOGRAPHY AS SHOWN HAS BEEN PRODUCED TO MEET INDUSTRY ACCEPTED STANDARDS FOR NATIONAL MAP ACCURACY (NMAA). AT 30 SCALE MAPPING, ACCURACY OF CONTOURS IN AREAS WHERE THE GROUND IS OBSCURED AND IS NOT GUARANTEED AND MUST BE HELD VERIFIED PRIOR TO BEING USED FOR DESIGN OR ENGINEERING PURPOSES.
12. PLAN AND SURVEY HAS BEEN PREPARED IN ACCORDANCE WITH THE ACT OF MAY 23, 1945 (P.L. 713, NO. 367) KNOWN AS THE PROFESSIONAL ENGINEERS REGISTRATION LAW.
13. ALL SOILS ON SITE ARE MADE LAND, SCHIST AND GNEISS MATERIALS, H9G8.
14. SITE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE DISCONNECTION, ABANDONMENT, RELOCATION AND/OR REMOVAL OF ALL APPLICABLE EXISTING UTILITIES IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS AS WELL AS ANY REQUIREMENTS FROM THE RELEVANT UTILITY COMPANY.
15. ALL DEMOLITION SHALL BE PERFORMED BY A QUALIFIED, LICENSED CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.
16. THIS PLAN IS NOT INTENDED TO DETECT ALL FACETS AND ITEMS TO BE ADDRESSED DURING THE COURSE OF DEMOLITION ACTIVITIES. THE PLAN IS INTENDED TO REPRESENT ON THE READY RECALL, EXISTING IMPROVEMENTS, CONDUITS, CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE CONDITIONS PRIOR TO FINALIZING HIS BID AND PROVIDE ALL NECESSARY DEMOLITION SERVICES REQUIRED TO COMPLETE THE SCOPE OF WORK OUTLINED ON THESE DRAWINGS. UPON INITIATION OF DEMOLITION, CONTRACTOR SHALL ADVISE THE ENGINEER OF RECORD IMMEDIATELY SHOULD CONFLICTS ARISE IN THE FIELD.
17. ANY UTILITIES TO REMAIN, DAMAGED DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED IN KIND BY THE CONTRACTOR AT HIS OWN FORTRESS.
18. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISCONNECTION OF ALL UTILITIES ON SITE THAT ARE TO BE REMOVED.
19. LOCATION OF ALL UTILITIES ARE APPROXIMATE AND BASED ON INFORMATION PROVIDED BY THE RESPECTIVE UTILITY COMPANIES AND PROPERTY OWNER.
20. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE AND VERIFY EXISTING SITE CONDITIONS TO HIS SATISFACTION.
21. CONTRACTOR TO MEET WITH THE OWNER(S) ON JOB SITE TO IDENTIFY EQUIPMENT, SIGNS, AND ITEMS TO BE REMOVED OR REBUILT PRIOR TO THE START OF DEMOLITION.
22. ALL UTILITIES AND STRUCTURES WITHIN PUBLIC RIGHTS-OF-WAY SHALL REMAIN UNLESS OTHERWISE NOTED.
23. ANY UTILITIES DAMAGED DURING DEMOLITION AND CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED IN KIND BY THE CONTRACTOR AT HIS OWN EXPENSE. UTILITY REMOVAL, ABANDONMENT, AND/OR RELOCATION SHALL BE IN ACCORDANCE WITH REQUIREMENTS FROM THE RELEVANT UTILITY COMPANY.
24. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY "ONE-CALL" NUMBER 72 HOURS PRIOR TO ANY EXCAVATION/DEMOLITION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

25. ALL SLOPES IN EXCESS OF 14% WITHIN THE PROJECT LIMITS WERE CREATED BY MAN-MADE ACTIVITIES IN ACCORDANCE WITH SECTION 175-11A AND 3 OF THE CODE OF THE TOWNSHIP OF RADNOR. THE PROPOSED ACTIVITIES ARE NOT SUBJECT TO THE SLOPE CONTROLS, SECTION 280-112, OF THE CODE OF THE TOWNSHIP OF RADNOR PURSUANT TO SECTION 280-113.

EXISTING TREE REMOVAL CHART

NUMBER	TYPE	SIZE (IN)	REMOVAL	NUMBER	TYPE	SIZE (IN)	REMOVAL	NUMBER	TYPE	SIZE (IN)	REMOVAL
101	WAL	10	X	131	SYC	15	X	161	SH	18	X
102	WAL	10	X	132	SYC	15	X	162	SH	20	X
103	WAL	10	X	133	SYC	15	X	163	SH	14	X
104	WAL	6	X	134	CHR	10	X	164	SH	14	X
105	CHR	24	X	135	MAP	10	X	165	SH	14	X
106	CHR	18	X	136	TRF	18	X	166	SH	18	X
107	MAP	24	X	137	TRF	18	X	167	SH	14	X
108	CHR	36	X	138	WAL	12	X				
109	SYC	12	X	139	CHR	10	X				
110	CHR	6	X	140	WAL	12	X				
111	MAP	6	X	141	WAL	12	X				
112	WAL	18	X	142	WAL	12	X				
113	CHR	18	X	143	CHR	14	X				
114	SYC	24	X	144	CHR	10	X				
115	MAP	6	X	145	CHR	14	X				
116	SYC	24	X	146	CHR	18	X				
117	SH	14	X	147	CHR	18	X				
118	CHR	6	X	148	CHR	10	X				
119	SYC	18	X	149	MAP	8	X				
120	SYC	18	X	150	CHR	10	X				
121	SYC	15	X	151	CHR	15	X				
122	MAP	8	X	152	LDC	8	X				
123	MAP	6	X	153	CHR	10	X				
124	SYC	15	X	154	CHR	15	X				
125	SYC	20	X	155	CHR	15	X				
126	MAP	10	X	156	CHR	15	X				
127	SYC	18	X	157	CHR	15	X				
128	TRF	8	X	158	SH	14	X				
129	SYC	15	X	159	SH	14	X				
130	SYC	15	X	160	SH	14	X				

20112071855
20112071869
20112071907
20112071937
20112071972
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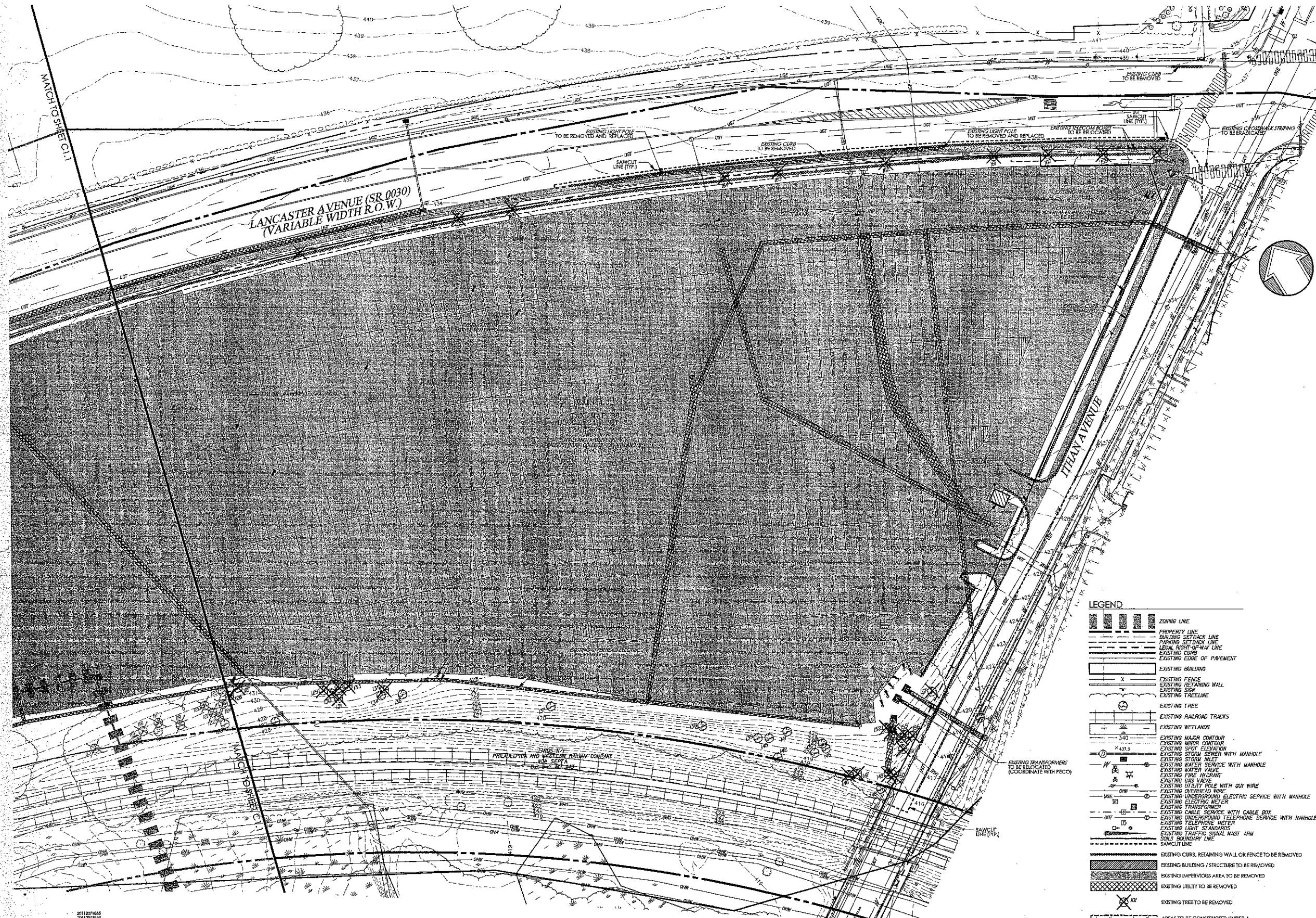
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Gregory C. Newell
PROFESSIONAL
GREGORY C. NEWELL
EXPIRES 03/31/2016
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PRELIM. LAND DEVELOPMENT
SUBMISSION
Revision
Date December 5, 2014
Title Existing Features /
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Scale 1" = 30'
Drawn By DWN

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Sheet No. 3 of 30
Contractor to verify all dimensions in field and inform
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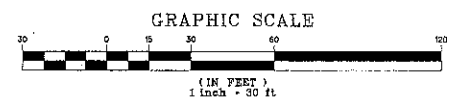
LEGEND

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	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
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	EXISTING LIGHT STANDARDS
	EXISTING TRAFFIC SIGNAL MAST ARM
	SOILS BOUNDARY LINE
	SAWCUT LINE
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	EXISTING IMPERVIOUS AREA TO BE REMOVED
	EXISTING UTILITY TO BE REMOVED
	EXISTING TREE TO BE REMOVED
	AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION

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Me* MADE LAND, SCHIST AND GNEISS MATERIALS
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NOTE:
1. REFER TO SHEET C1.2 FOR TREE REMOVAL CHART

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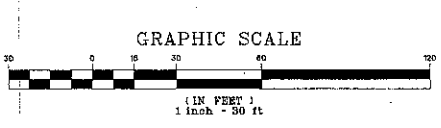
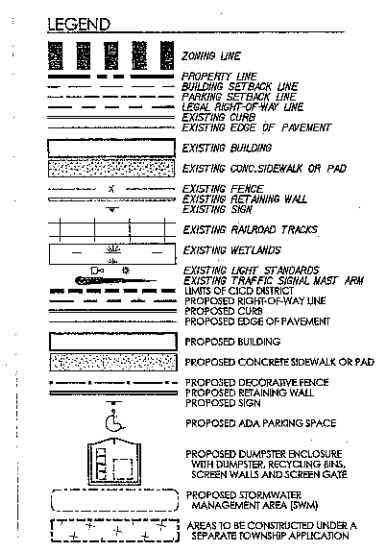
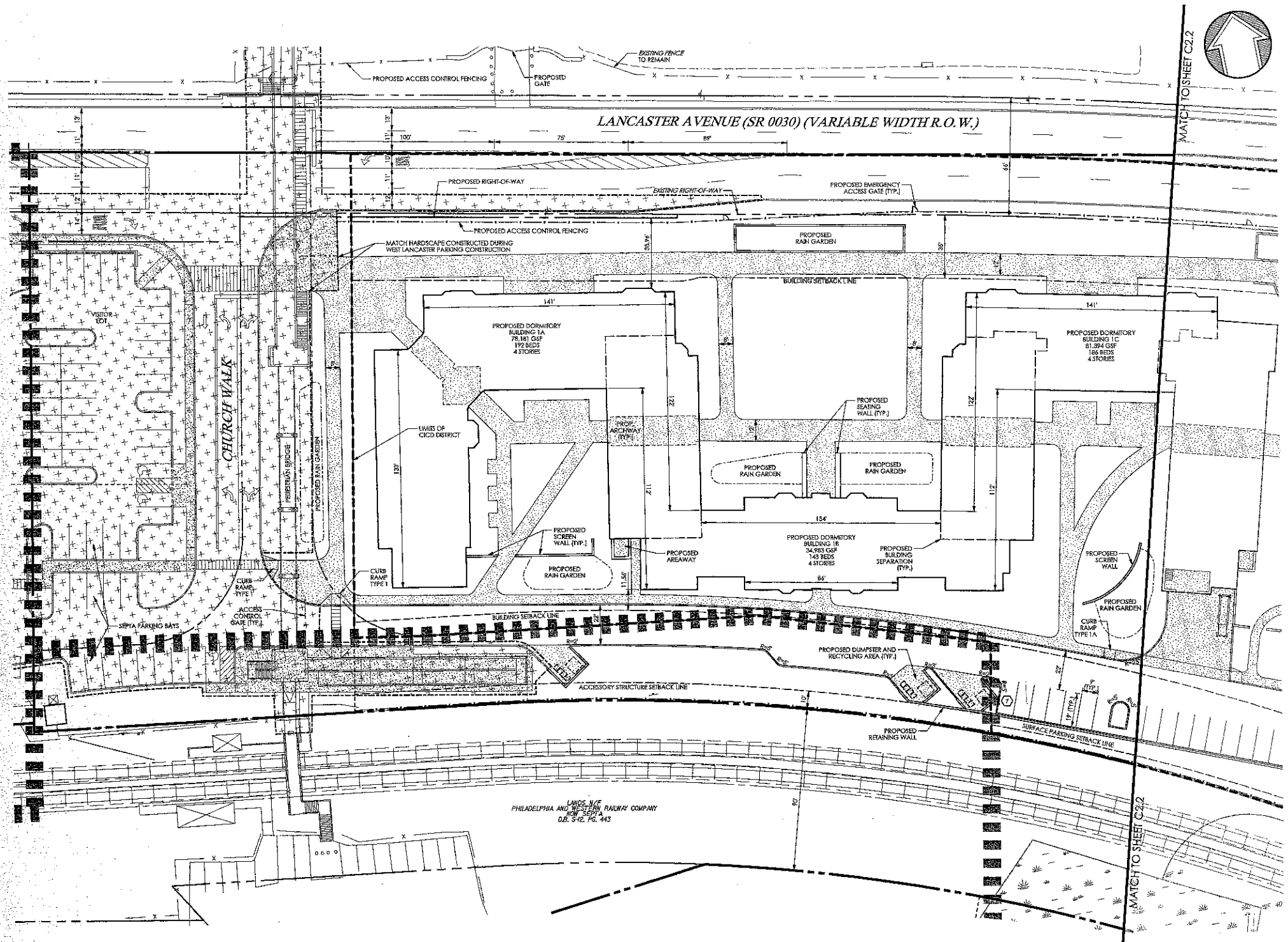
Revision
Date December 5, 2014
Title Site Plan

Scale 1" = 30'
Drawn By MMB

C2.1

Sheet No. 5 of 30

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



REFER TO SHEET C2.0 FOR NOTES.

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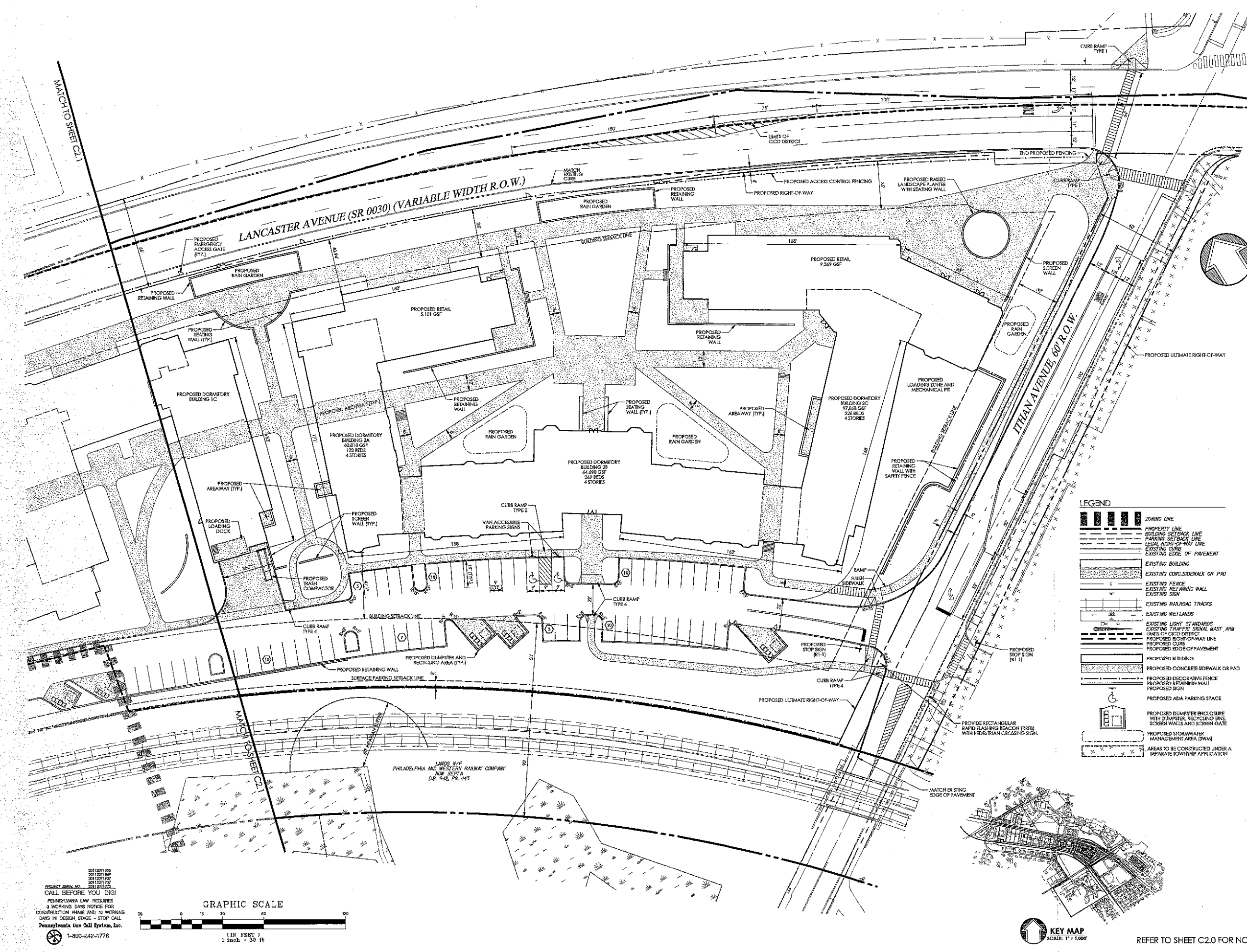
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Revision
Date December 5, 2014
Title Site Plan
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Sheet No. 6 of 30

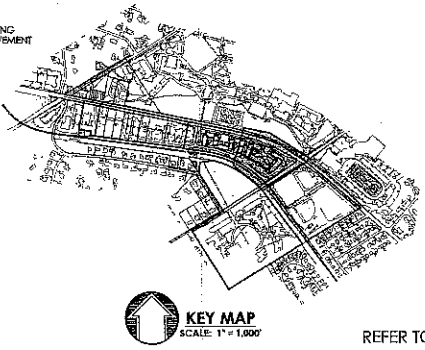
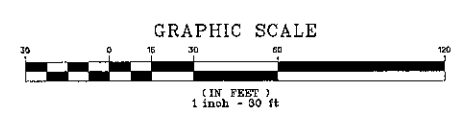
Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



LEGEND

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	PROPOSED BUILDING
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	PROPOSED DECORATIVE FENCE
	PROPOSED RETAINING WALL
	PROPOSED SIGN
	PROPOSED ADA PARKING SPACE
	PROPOSED DUMPSTER ENCLOSURE WITH DUMPSTER, RECYCLING BINS, SCREEN WALLS AND SCREEN GATE
	PROPOSED STORMWATER MANAGEMENT AREA (SWMA)
	AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION

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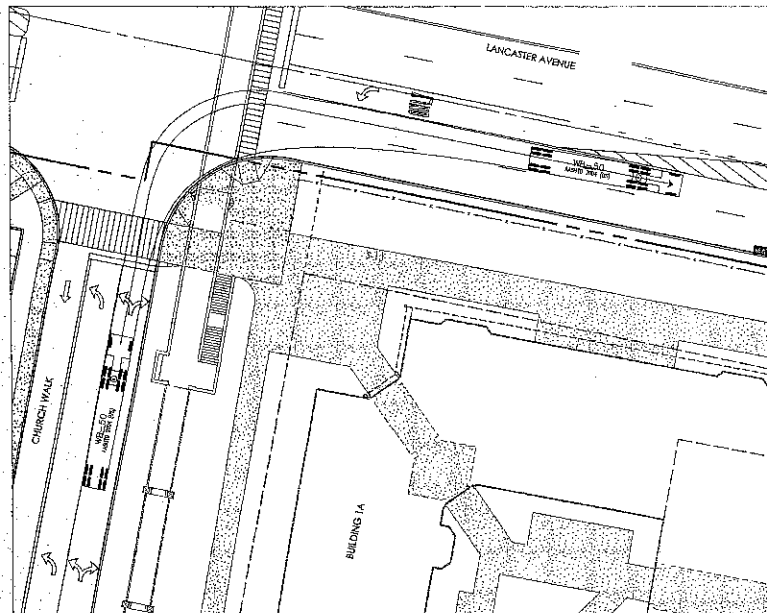


EXHIBIT 1: CHURCH WALK TO LANCASTER AVENUE - RIGHT TURN (WB-50)

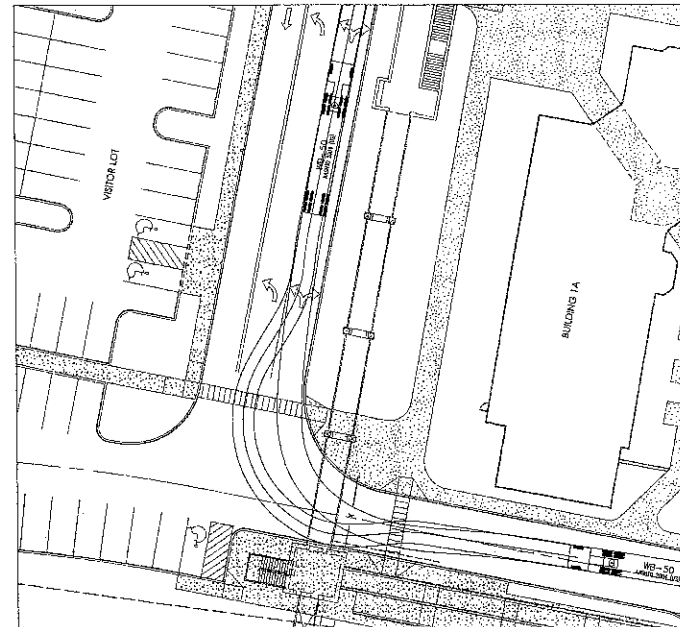


EXHIBIT 3: SITE TO CHURCH WALK: RIGHT TURN (WB-50)

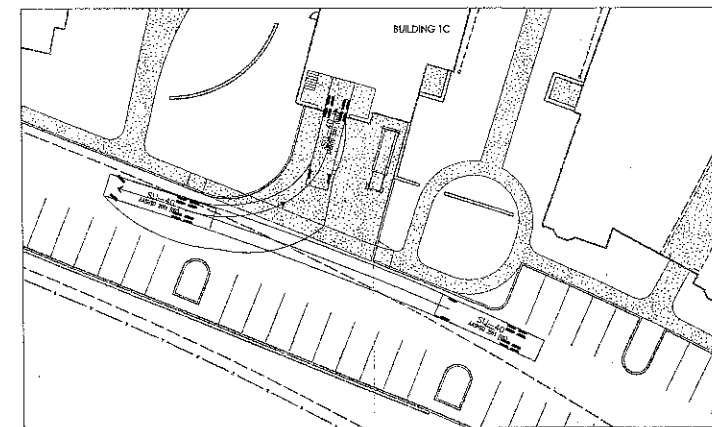


EXHIBIT 5: BUILDING 1C LOADING DOCK (BOX TRUCK)

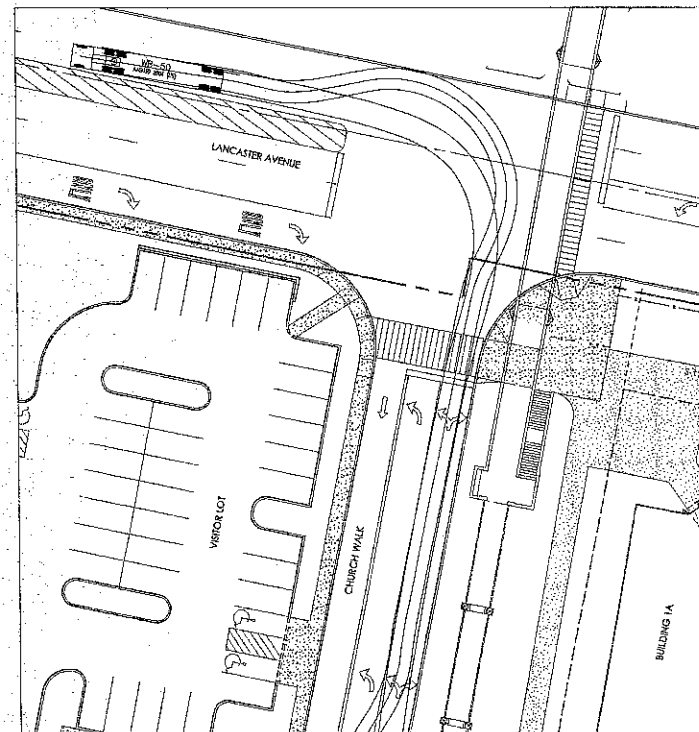


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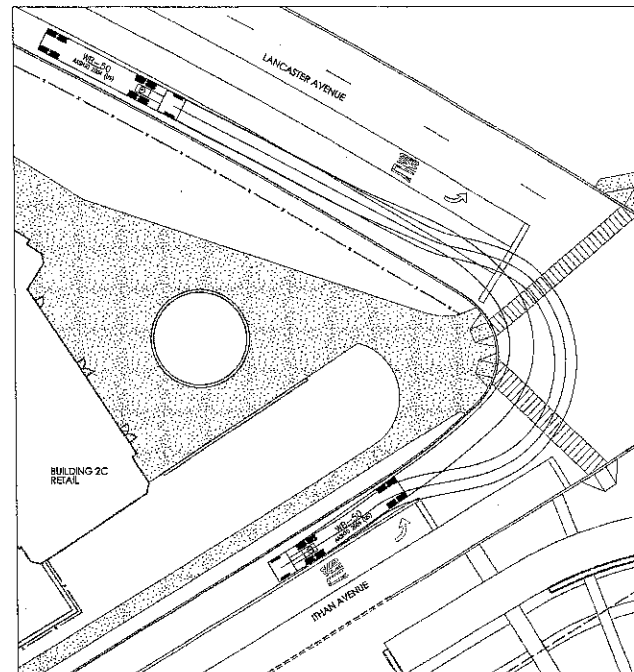


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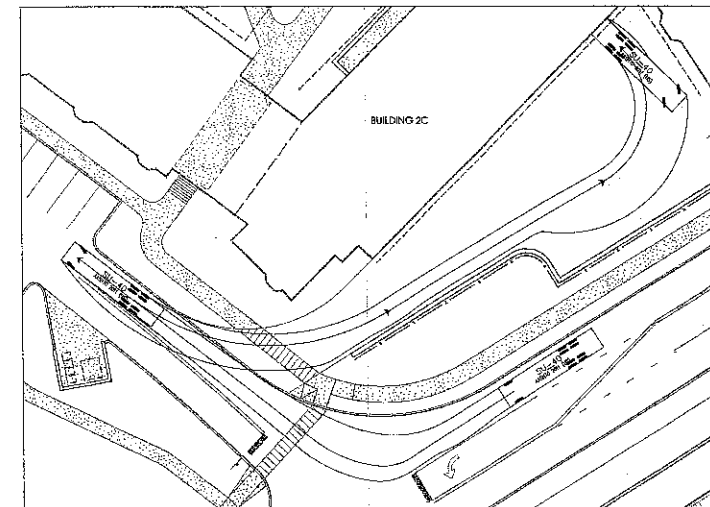


EXHIBIT 6: BUILDING 2C CENTRAL UTILITY PLANT ACCESS (BOX TRUCK)

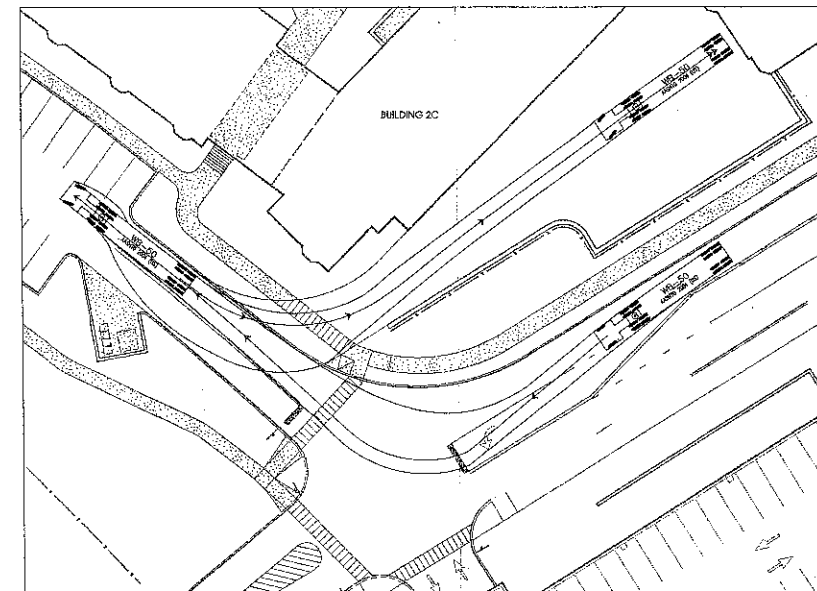


EXHIBIT 7: BUILDING 2C LOADING DOCK ACCESS (WB-50)

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fax: 610-667-0216

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PRELIM. LAND DEVELOPMENT
SUBMISSION

Revision
Date December 5, 2014
Title Truck Turning Plan

Scale 1" = 30'
Drawn By OGY

C2.3

Sheet No. 7 of 30

Contractor to verify all dimensions in field and inform
Architect of any discrepancies before starting work.

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fax: 610-667-0218

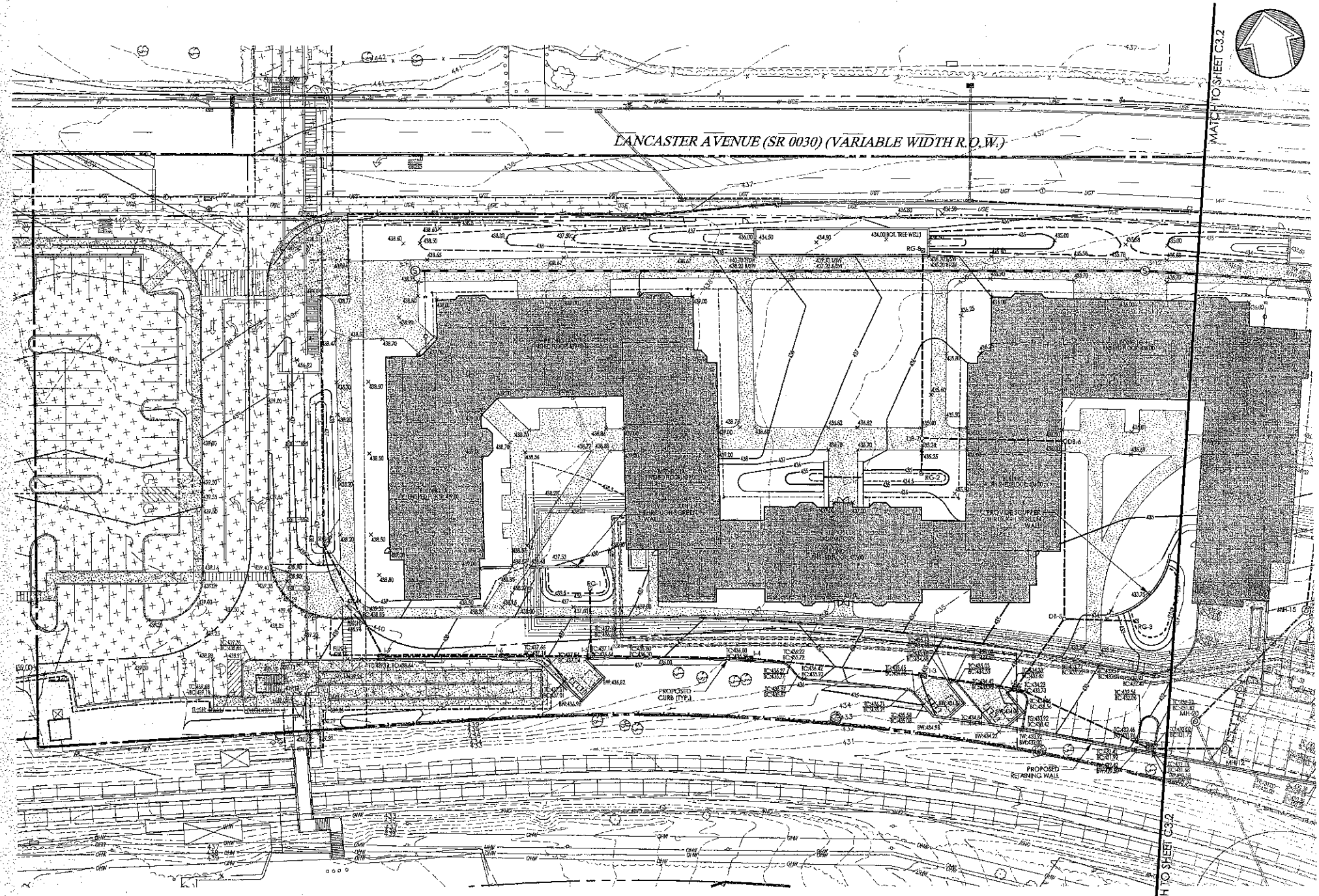
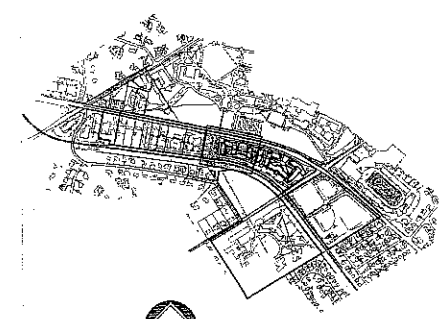
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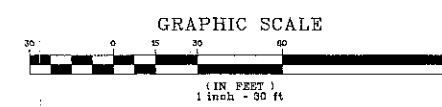
PRELIM. LAND DEVELOPMENT
SUBMISSION
Revision
Date December 5, 2014
Title Grading Plan
Scale 1" = 30'
Drawn By DCH

C3.1

Sheet No. 8 of 30
Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



LEGEND	
	PROPERTY LINE
	LEGAL RIGHT-OF-WAY LINE
	EXISTING CURB
	EXISTING EDGE OF PAVEMENT
	EXISTING BUILDING
	EXISTING FENCE
	EXISTING RETAINING WALL
	EXISTING TREE LINE
	EXISTING TREE
	EXISTING RAILROAD TRACKS
	EXISTING WETLANDS
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	EXISTING STORM SEWER WITH MANHOLE
	EXISTING WATER SERVICE WITH MANHOLE
	EXISTING FIRE HYDRANT
	EXISTING GAS VALVE
	EXISTING UTILITY POLE WITH GUY WIRE
	EXISTING OVERHEAD WIRE
	EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE
	EXISTING ELECTRIC METER
	EXISTING TRANSFORMER
	EXISTING CABLE SERVICE WITH CABLE BOX
	EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE
	EXISTING TELEPHONE METER
	EXISTING LIGHT POLE
	EXISTING TRAFFIC SIGNAL MAST ARM
	EXISTING BOUNDARY LINE
	PROPOSED RIGHT-OF-WAY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED BUILDING
	PROPOSED CONCRETE SIDEWALK OR PAD
	PROPOSED DECORATIVE FENCE
	PROPOSED RETAINING WALL
	PROPOSED SIGN
	PROPOSED ADA PARKING SPACE
	PROPOSED DUMPSTER ENCLOSURE WITH DUMPSTER, RECYCLING BINS, SCREEN WALLS AND SCREEN GATE
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	PROPOSED TOP OF WALL
	PROPOSED BOTTOM OF WALL
	PROPOSED TOP OF CURB
	PROPOSED BOTTOM OF CURB
	PROPOSED FLUSHED CURB
	PROPOSED SANITARY MAIN
	PROPOSED SANITARY LATERAL
	PROPOSED STORM PIPE
	PROPOSED INLET / ROAD DRAIN
	PROPOSED UNDERDRAIN / ROOF DRAIN
	PROPOSED FIRE SERVICE
	PROPOSED WATER SERVICE
	PROPOSED UNDERGROUND ELECTRIC
	PROPOSED UNDERGROUND TELECOM
	PROPOSED GAS LINE
	AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION



- GRADING NOTES:**
1. REFER TO SITE PLAN FOR ADDITIONAL NOTES.
 2. IN CASE OF DISCREPANCIES BETWEEN PLANS, THE SITE PLAN WILL SUPERSEDE IN ALL CASES. NOTIFY ENGINEER OF RECORD OF ANY CONFLICT.
 3. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. MOISTURE CONTENT AT THE TIME OF PLACEMENT SHALL BE NO MORE THAN 2% ABOVE OR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT, PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITH THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS.
 4. SUBGRADE MATERIAL FOR SIDEWALKS, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DESIGNED UNSUITABLE, SUBBASES TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL AND COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD).
 5. CONTRACTOR TO UTILIZE APPROPRIATE CONSTRUCTION TECHNIQUES TO PROTECT THE PROPOSED INFILTRATION PRACTICE OF THE STORMWATER BASIN. UNDER NO CIRCUMSTANCES IS THE INFILTRATION AREA TO BE COMPACTED, ROLLED, OR HAVE HEAVY EQUIPMENT OPERATING WITHIN THE EXCAVATED PERIMETER.
 6. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION AND/OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
 7. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL UNDERGROUND TANKS, PIPES, VALVES, ETC.
 8. ALL EXCAVATED UNSUITABLE MATERIAL MUST BE TRANSPORTED TO AN APPROVED DISPOSAL LOCATION.
 9. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES. AS FIELD CONDITIONS DICTATE.
 10. CONTRACTOR SHALL ADHERE TO ALL SAFETY REGULATIONS AS REQUIRED BY "OSHA", THE PROPERTY OWNER, OR ANY LOCAL STATE & FEDERAL AUTHORITY.
 11. CONTRACTOR TO ENSURE COMPLIANCE WITH A.D.A. REGULATIONS.

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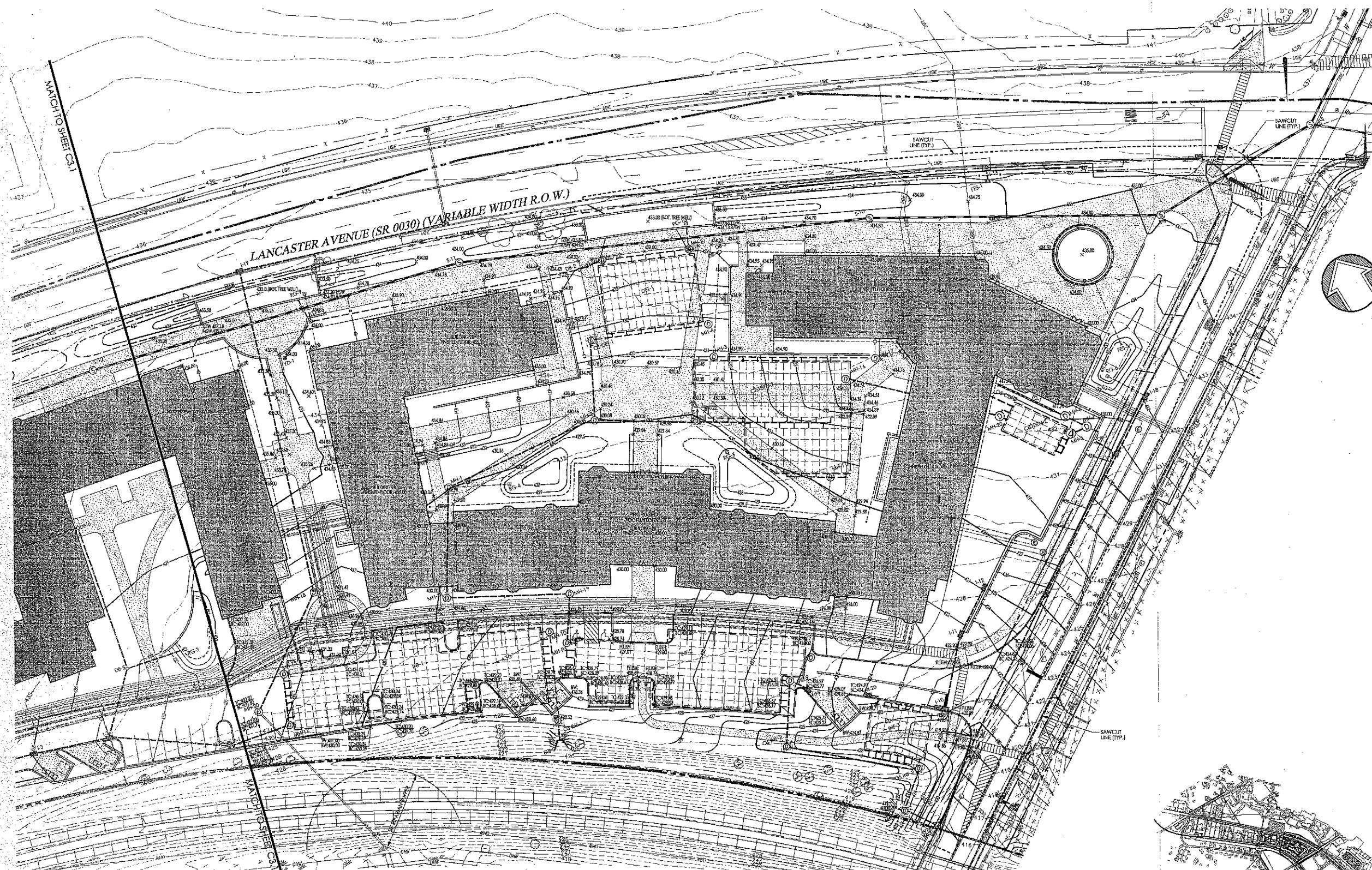


PRELIM. LAND DEVELOPMENT
SUBMISSION

Revision
Date December 5, 2014
Title Grading Plan
Scale 1" = 30'
Drawn By DCH

C3.2
Sheet No. 9 of 30

Contractor to verify all dimensions in field and inform architect of any discrepancies before starting work.

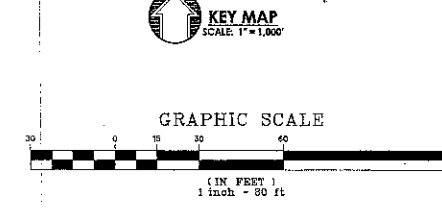
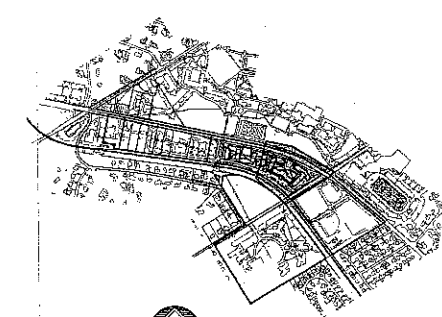


LEGEND

<p>PROPERTY LINE</p> <p>LEAK RIGHT-OF-WAY LINE</p> <p>EXISTING CURB</p> <p>EXISTING EDGE OF PAVEMENT</p> <p>EXISTING BUILDING</p> <p>EXISTING RETAINING WALL</p> <p>EXISTING SIGN</p> <p>EXISTING TREELINE</p> <p>EXISTING TREE</p> <p>EXISTING RAILROAD TRACKS</p> <p>EXISTING WETLANDS</p> <p>EXISTING MAJOR CONTOUR</p> <p>EXISTING MINOR CONTOUR</p> <p>EXISTING STORM SEWER WITH MANHOLE</p> <p>EXISTING STORM INLET</p> <p>EXISTING WATER SERVICE WITH MANHOLE</p>	<p>EXISTING WATER VALVE</p> <p>EXISTING FIRE HYDRANT</p> <p>EXISTING GAS VALVE</p> <p>EXISTING UTILITY POLE WITH GUY WIRE</p> <p>EXISTING OVERHEAD WIRE</p> <p>EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE</p> <p>EXISTING ELECTRIC METER</p> <p>EXISTING TELEPHONE METER</p> <p>EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE</p> <p>EXISTING TELEPHONE METER</p> <p>EXISTING LIGHT STAKE/ARM</p> <p>EXISTING TRAFFIC SIGNAL MAST ARM</p> <p>SOILS BOUNDARY LINE</p> <p>PROPOSED RIGHT-OF-WAY LINE</p> <p>PROPOSED CURB</p> <p>PROPOSED EDGE OF PAVEMENT</p> <p>PROPOSED BUILDING</p> <p>PROPOSED CONCRETE SIDEWALK OR PAD</p> <p>PROPOSED DECORATIVE FENCE</p> <p>PROPOSED RETAINING WALL</p>	<p>PROPOSED SIGN</p> <p>PROPOSED ADA PARKING SPACE</p> <p>PROPOSED DUMPSTER ENCLOSURE WITH DUMPSTER, RECYCLING BINS, SCREEN WALLS AND SCREEN GATE</p> <p>PROPOSED MAJOR CONTOUR</p> <p>PROPOSED MINOR CONTOUR</p> <p>PROPOSED TOP OF WALL</p> <p>PROPOSED BOTTOM OF WALL</p> <p>PROPOSED TOP OF CURB</p> <p>PROPOSED BOTTOM OF CURB</p> <p>PROPOSED FLUSHED CURB</p> <p>PROPOSED SANITARY MAIN</p> <p>PROPOSED SANITARY LATERAL</p> <p>PROPOSED STORM PIPE</p> <p>PROPOSED WALKER/YARD DRAIN</p> <p>PROPOSED UNDERDRAIN/ROOF DRAIN</p> <p>PROPOSED FIRE SERVICE</p> <p>PROPOSED WATER SERVICE</p> <p>PROPOSED UNDERGROUND ELECTRIC</p> <p>PROPOSED UNDERGROUND TELECOM</p> <p>PROPOSED GAS LINE</p>	<p>SAWCUT LINE</p> <p>AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION</p>
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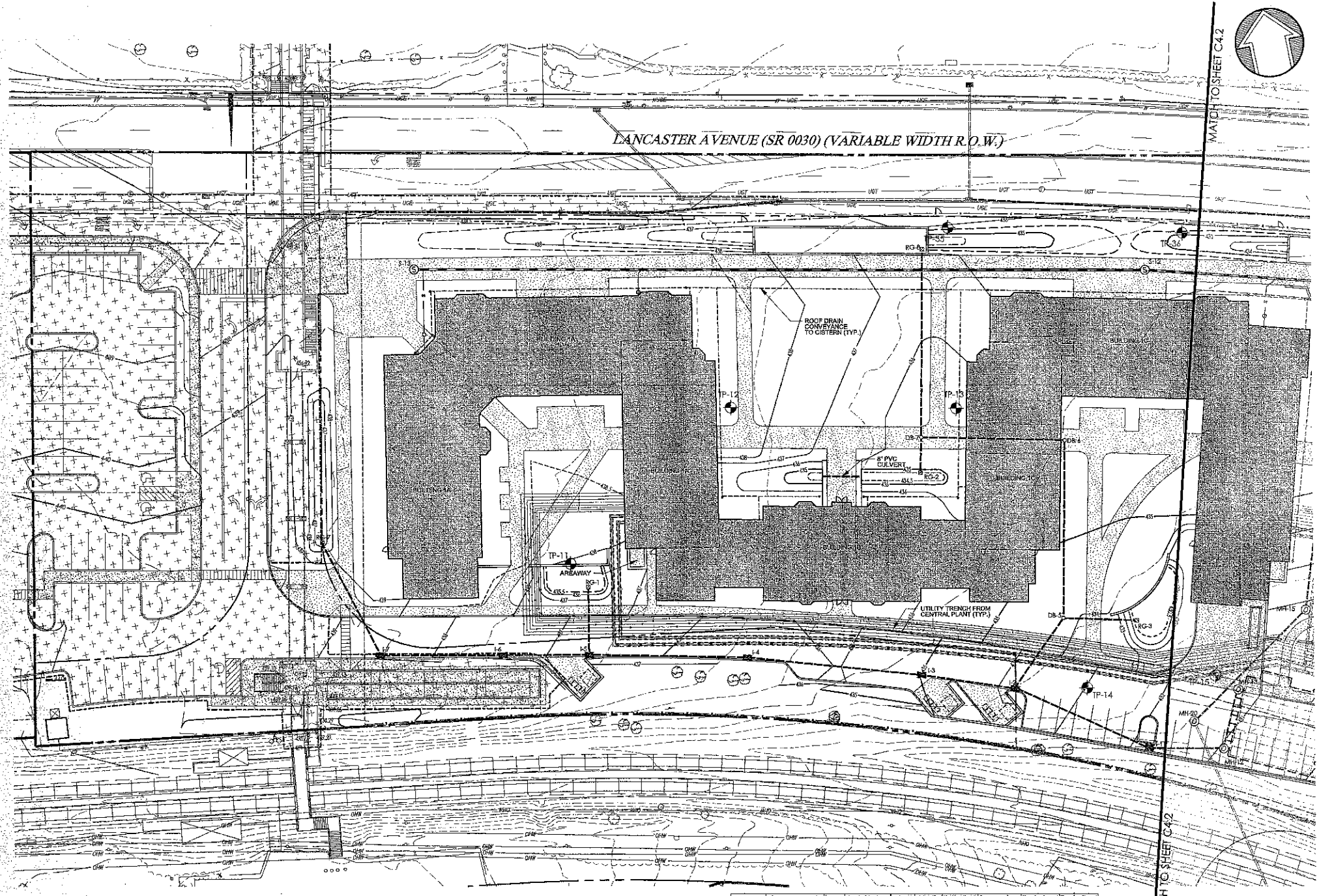
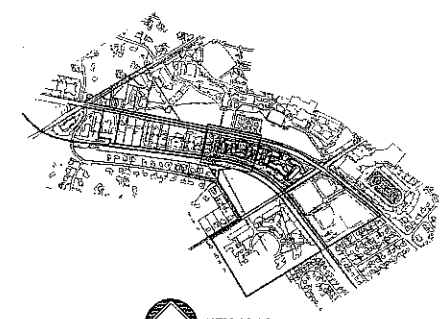


PRELIM. LAND DEVELOPMENT SUBMISSION

Revision
Date December 5, 2014
Title Utility Plan
Scale 1" = 30'
Drawn By DCH

C4.1

Sheet No. 10 of 30
Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.

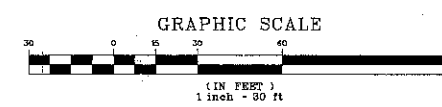


LEGEND

- PROPERTY LINE
- - - LEGAL RIGHT-OF-WAY LINE
- - - EXISTING CURB
- - - EXISTING EDGE OF PAVEMENT
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SIDEWALK
- EXISTING TREE LINE
- EXISTING TREE
- EXISTING RAILROAD TRACKS
- EXISTING WETLANDS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING STORM SEWER WITH MANHOLE
- EXISTING WATER SERVICE WITH MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING OVERHEAD WIRE
- EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE
- EXISTING TRANSFORMER
- EXISTING CABLE SERVICE WITH CABLE BOX
- EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE
- EXISTING TELEPHONE METER
- EXISTING LEAF STAIRWAYS
- EXISTING TRAFFIC SIGNAL MAST ARM
- SOILS BOUNDARY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE SIDEWALK OR PAD
- PROPOSED DECORATIVE FENCE
- PROPOSED RETAINING WALL
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- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED SANITARY MAIN
- PROPOSED INLET / YARD DRAIN
- PROPOSED UNDERDRAIN / ROOF DRAIN
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND TELECOM
- PROPOSED GAS LINE
- AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION

LOCATION	TEST ELEV.	FIELD TEST INFILTRATION RATE	DESIGN RATE
TP-11	428.70	0.18	0.09
TP-12	429.30	0.08	0.04
TP-13	429.50	0.97	0.14
TP-14	429.50	0.90	0.46
TP-15	427.50	11.70	5.85
TP-16	429.00	0.24	0.02
TP-17	429.00	0.24	0.02
TP-18	424.25	12.26	6.52
TP-19	425.00	12.86	6.74
TP-20	423.25	12.26	6.52
TP-21	425.25	8.44	4.22
TP-22	425.25	0.30	0.15
TP-23	425.00	0.30	0.15
TP-24	425.00	1.86	0.93
TP-25	425.00	1.29	0.65
TP-26	425.00	0.65	0.32
TP-27	422.00	0.22	0.11
TP-28	422.00	0.22	0.11

NOTE: REFER TO STORMWATER MANAGEMENT REPORT FOR STORM STRUCTURE PROFILES AND ELEVATION DETAILS.



Manhole No.	Structure No.	Material	Construction	Location	Top of Structure	Bottom of Structure	Bottom of Manhole	Bottom of Inlet	Bottom of Outlet
MS-1	MS-1	CONCRETE	18.00	428.70	428.70	428.70	428.70	428.70	428.70
MS-2	MS-2	CONCRETE	18.00	429.30	429.30	429.30	429.30	429.30	429.30
MS-3	MS-3	CONCRETE	18.00	429.50	429.50	429.50	429.50	429.50	429.50
MS-4	MS-4	CONCRETE	18.00	429.50	429.50	429.50	429.50	429.50	429.50
MS-5	MS-5	CONCRETE	18.00	427.50	427.50	427.50	427.50	427.50	427.50
MS-6	MS-6	CONCRETE	18.00	429.00	429.00	429.00	429.00	429.00	429.00
MS-7	MS-7	CONCRETE	18.00	429.00	429.00	429.00	429.00	429.00	429.00
MS-8	MS-8	CONCRETE	18.00	424.25	424.25	424.25	424.25	424.25	424.25
MS-9	MS-9	CONCRETE	18.00	425.00	425.00	425.00	425.00	425.00	425.00
MS-10	MS-10	CONCRETE	18.00	423.25	423.25	423.25	423.25	423.25	423.25
MS-11	MS-11	CONCRETE	18.00	425.25	425.25	425.25	425.25	425.25	425.25
MS-12	MS-12	CONCRETE	18.00	425.25	425.25	425.25	425.25	425.25	425.25
MS-13	MS-13	CONCRETE	18.00	425.00	425.00	425.00	425.00	425.00	425.00
MS-14	MS-14	CONCRETE	18.00	425.00	425.00	425.00	425.00	425.00	425.00
MS-15	MS-15	CONCRETE	18.00	425.00	425.00	425.00	425.00	425.00	425.00
MS-16	MS-16	CONCRETE	18.00	422.00	422.00	422.00	422.00	422.00	422.00
MS-17	MS-17	CONCRETE	18.00	422.00	422.00	422.00	422.00	422.00	422.00

UTILITY NOTES:

- WATER SERVICE MATERIALS SHALL BE AS NOTED BY MEP ENGINEER. SERVICE SIZE SHALL BE DETERMINED BY THE ARCHITECT AND SHALL BE INSTALLED WITH 48" MINIMUM COVER OR BELOW THE FRONT LINE, WHICHEVER IS GREATER. CONTRACTOR'S PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHY INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION. ANY DISCREPANCIES THAT MAY AFFECT PUBLIC SAFETY AND/OR PROJECT COST MUST BE IDENTIFIED IMMEDIATELY TO THE ENGINEER OF RECORD IN WRITING. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.
- CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND INSTALLATIONS SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. SERVICE SIZE TO BE DETERMINED BY ARCHITECT.
- CONTRACTOR TO CONFIRM THE HORIZONTAL LOCATION AND VERTICAL ELEVATION OF UTILITIES BEING CROSSED OR CONNECTED TO, PRIOR TO CONSTRUCTION. THE ENGINEER SHALL BE INFORMED IN WRITING OF ANY DISCREPANCIES OR CLEARANCE ISSUES PRIOR TO PROCEEDING WITH CONSTRUCTION.
- ALL ON-SITE STORM WATER PIPING SHALL BE HDPE. ALL LANCASTER AVENUE STORM WATER PIPING SHALL BE REINFORCED CONCRETE PIPE (RCP).
- CLEAN OUTS AND CURB BOXES WITHIN THE PAVED AREAS MUST HAVE TRAFFIC LOADING FRAMES AND COVERS.
- ALL INLET GRATES SHALL BE BICYCLE SAFE GRATES.
- CONTRACTOR TO UTILIZE APPROPRIATE CONSTRUCTION TECHNIQUES TO PROTECT THE PROPOSED INFILTRATION PRACTICE OF THE STORMWATER BASIN. UNDER NO CIRCUMSTANCES IS THE INFILTRATION AREA TO BE COMPACTED, ROLLED, OR HAVE HEAVY EQUIPMENT OPERATING WITHIN THE DESIGNATED PERIMETER.
- ALL BUILDINGS AND ASSOCIATED UTILITY CONNECTIONS, AS SHOWN, HAVE BEEN BASED UPON SCHEMATIC ARCHITECTURAL PLANS. CONTRACTOR SHALL REFER TO ARCHITECT'S FINAL PLANS FOR EXACT BUILDING DIMENSIONS AND UTILITY CONNECTION POINTS FOR SIZING.
- ALL STORM DRAINAGE AND STORMWATER MANAGEMENT FACILITIES ON-SITE ARE TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNER. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION AND/OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
- LOCATIONS OF EXISTING UTILITIES DISPICTED HEREON HAVE BEEN DEVELOPED FROM EXISTING UTILITY RECORDS, PLANS BY OTHERS, AND/OR GROUND EXAMINATION OF SITE. COMPLETENESS OR ACCURACY OF THE LOCATIONS OF SAID UTILITIES IS NOT GUARANTEED.
- ALL UTILITIES AND STRUCTURES WITHIN PUBLIC RIGHTS-OF-WAY OR BASEMENTS SHALL REMAIN UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL ADHERE TO ALL SAFETY REGULATIONS AS REQUIRED BY "OSHA", THE PROPERTY OWNER, OR ANY LOCAL, STATE & FEDERAL AUTHORITY.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE SITE AND VERIFY EXISTING SITE CONDITIONS TO HIS SATISFACTION.
- PRIOR TO STARTING CONSTRUCTION, ALL UTILITY SERVICES IN THE AREA ARE TO BE LOCATED, THE USER NOTIFIED AND MEASURES TAKEN TO PROTECT THE USER IN ACCORDANCE WITH PA ACT 987, AS AMENDED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONTACT PA "ONE-CALL" AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION OR DEMOLITION ON-SITE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY "ONE-CALL" NUMBERS 72 HOURS PRIOR TO ANY EXCAVATION/DEMOLITION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.

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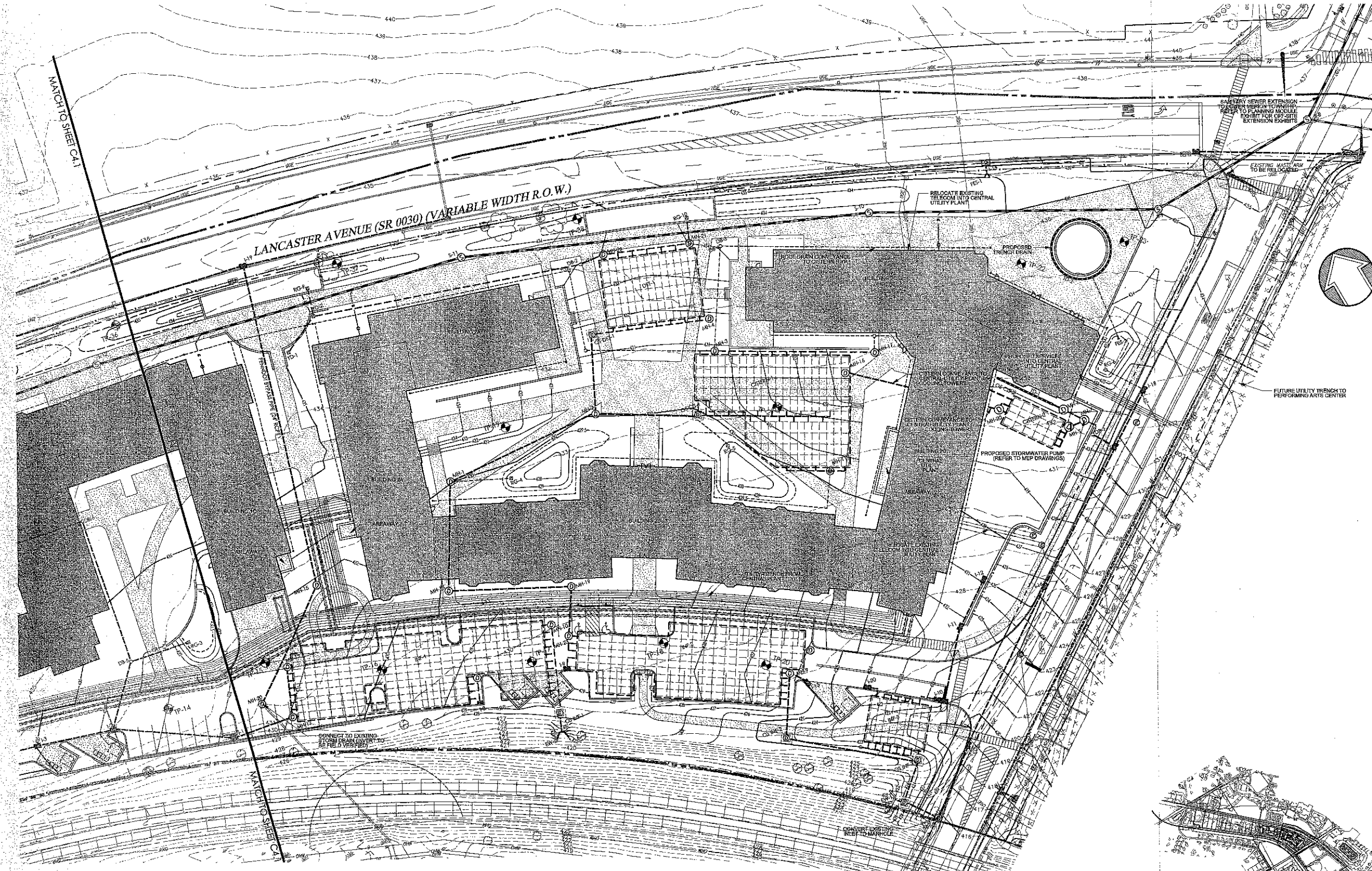


PRELIM. LAND DEVELOPMENT
 SUBMISSION

Revision
 Date December 5, 2014
 Title Utility Plan
 Scale 1" = 30'
 Drawn By DCH

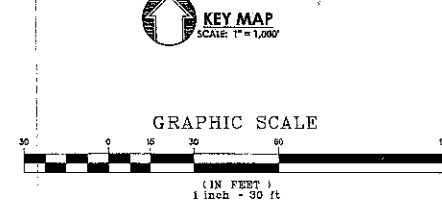
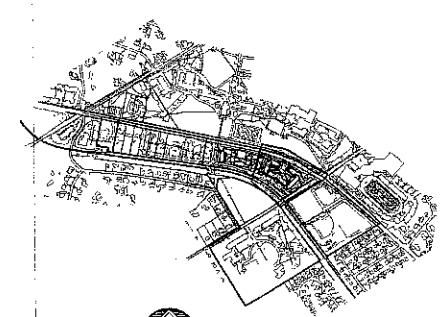
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 Sheet No. 11 of 30

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



LEGEND

<p>PROPERTY LINE LEGAL RIGHT-OF-WAY LINE EXISTING CURB EXISTING EDGE OF PAVEMENT</p> <p>EXISTING BUILDING EXISTING FENCE EXISTING RETAINING WALL EXISTING SIGN EXISTING TREE LINE EXISTING TREE</p> <p>EXISTING RAILROAD TRACKS EXISTING WETLANDS EXISTING MAJOR CONTOUR EXISTING MINOR CONTOUR EXISTING STORM SEWER WITH MANHOLE EXISTING STORM INLET</p>	<p>EXISTING WATER SERVICE WITH MANHOLE EXISTING WATER VALVE EXISTING FIRE HYDRANT EXISTING GAS VALVE EXISTING UTILITY POLE WITH GUY WIRE EXISTING OVERHEAD WIRE EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE EXISTING ELECTRIC METER EXISTING TRANSFORMER EXISTING CABLE SERVICE WITH CABLE BOY EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE EXISTING TELEPHONE METER EXISTING LIGHT STANCHIONS EXISTING TRAFFIC SIGNAL MAST ARM SOILS BOUNDARY LINE PROPOSED RIGHT-OF-WAY LINE PROPOSED CURB PROPOSED EDGE OF PAVEMENT PROPOSED BUILDING PROPOSED CONCRETE SIDEWALK OR PAD PROPOSED DECORATIVE FENCE PROPOSED RETAINING WALL</p>	<p>PROPOSED SIGN PROPOSED ADA PARKING SPACE</p> <p>PROPOSED DUMPSTER ENCLOSURE WITH DIMENSIONAL CYCLING BINS, SCREEN WALLS AND SCREEN GATE</p> <p>PROPOSED MAJOR CONTOUR PROPOSED MINOR CONTOUR PROPOSED SANITARY MAIN PROPOSED SANITARY LATERAL PROPOSED STORM PIPE PROPOSED INLET / YARD DRAIN PROPOSED UNDERDRAIN / ROOF DRAIN PROPOSED TRICH DRAIN PROPOSED WATER SERVICE PROPOSED UNDERGROUND ELECTRIC PROPOSED UNDERGROUND TELECOM PROPOSED GAS LINE</p> <p>AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION</p>
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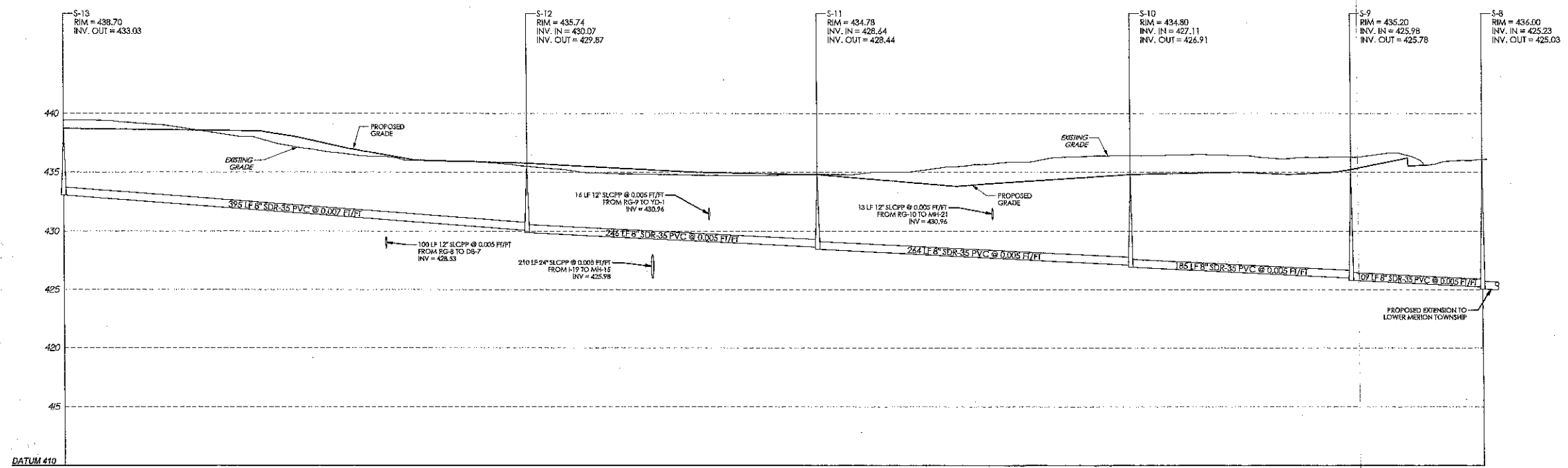
Revision
 Date December 5, 2014
 Title Utility Profiles

Scale As Noted
 Drawn By MMB

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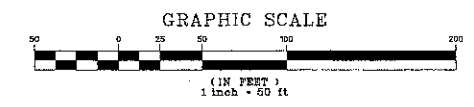
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Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



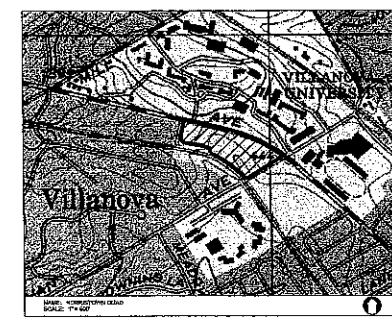
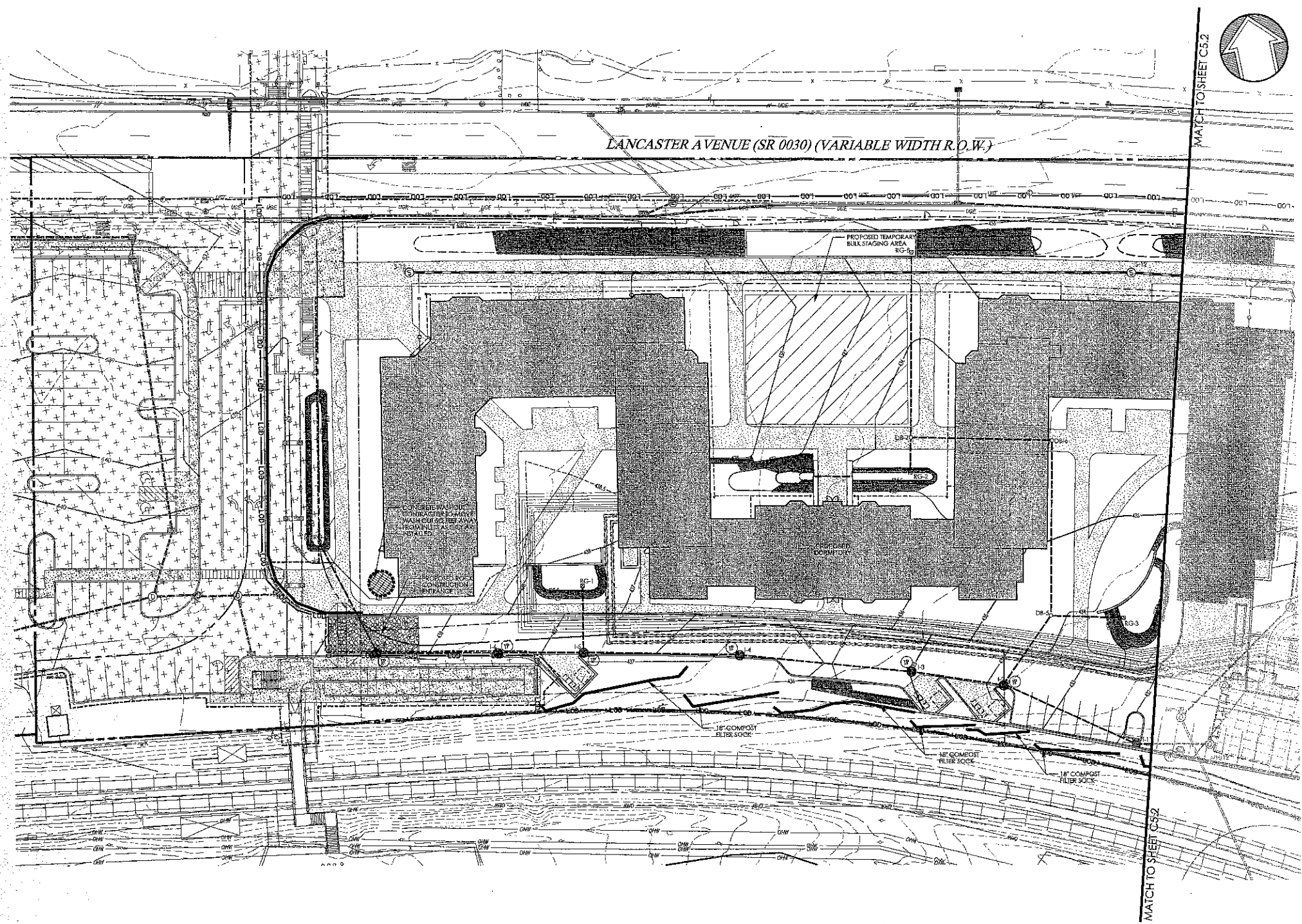
**SANITARY PROFILE -
 S-13 TO S-8**

SCALE: HORIZONTAL 1" = 50'
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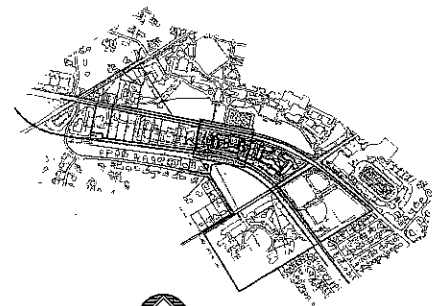
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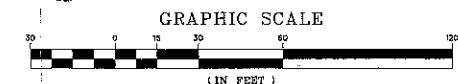
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KEY MAP
SCALE: 1" = 1,000'

LEGEND

- PROPERTY LINE
- LEGAL RIGHT-OF-WAY LINE
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SIGN
- EXISTING TREELINE
- EXISTING TREE
- EXISTING RAILROAD TRACKS
- EXISTING WETLANDS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING STORM SEWER WITH MANHOLE
- EXISTING STORM INLET
- EXISTING WATER SERVICE WITH MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- EXISTING GAS VALVE
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING OVERHEAD WIRE
- EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE
- EXISTING ELECTRIC METER
- EXISTING TRANSFORMER
- EXISTING CABLE SERVICE WITH CABLE BOX
- EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE
- EXISTING TELEPHONE METER
- EXISTING LIGHT STANDARDS
- EXISTING TRAFFIC SIGNAL MAST ARM
- SOILS BOUNDARY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE SIDEWALK OR PAD
- PROPOSED DECORATIVE FENCE
- PROPOSED RETAINING WALL
- PROPOSED SIGN
- PROPOSED ADA PARKING SPACE
- PROPOSED DUMPSTER ENCLOSURE WITH DUMPSTER, RECYCLING BINS, SCREEN WALLS AND SCREEN GATE
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- PROPOSED SANITARY MAIN
- PROPOSED SANITARY LATERAL
- PROPOSED STORM PIPE
- PROPOSED INLET / YARD DRAIN
- PROPOSED FIRE SERVICE
- PROPOSED WATER SERVICE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND TELECOM
- PROPOSED GAS LINE
- PROPOSED LIMIT OF DISTURBANCE
- PROPOSED COMPOST FILTER SOCK
- PROPOSED ROCK CONSTRUCTION ENTRANCE
- PROPOSED INLET PROTECTION
- PROPOSED TEMPORARY BULK STAGING AREA
- EROSION CONTROL BLANKET, NAG 575
- AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION
- CONCRETE WASH OUT



AREA OF DISTURBANCE = 9.38 ACRES
THIS PLAN FOR EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY.

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SOILS DATA
SOILS INFORMATION OBTAINED FROM THE USDA-NRCS WEB SOIL SURVEY, VERSION 4, WITH A DATE OF SURVEY AREA DATA OF FEBRUARY 24, 2009. THE FOLLOWING SITE-SPECIFIC SOIL CLASSIFICATIONS ARE NOT LISTED AS HYDRIC SOILS.
M6* MADE LAND, SCHIST AND GNEISS MATERIALS
*WHOLE SITE LIES WITHIN THIS SOILS CLASSIFICATION

Gregory C. Newell

PRELIM. LAND DEVELOPMENT
SUBMISSION
Revision
Date December 5, 2014
Title Erosion & Sedimentation Control Plan
Scale 1" = 30'
Drawn By DCH

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Sheet No. 15 of 30
Contractor to verify all dimensions in field and before Architect of any discrepancies before starting work.

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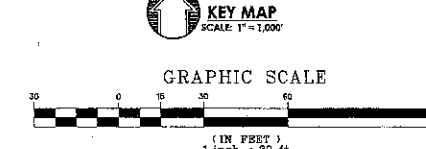
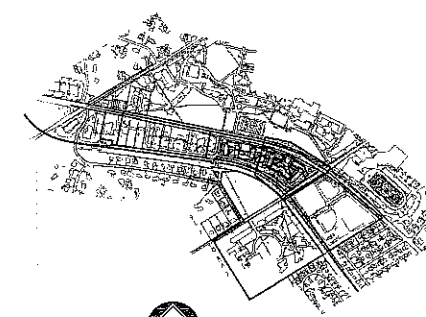
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SOILS DATA
SOILS INFORMATION OBTAINED FROM THE MDA-NRCS WEB SOIL SURVEY, VERSION 6, WITH A DATE OF SURVEY AREA DATA OF FEBRUARY 24, 2009. THE FOLLOWING SITE SPECIFIC SOIL CLASSIFICATIONS ARE NOT LISTED AS HYDRO SOILS.
Mo* MADE LAND, SCHIST AND GNESS MATERIALS
*WHOLE SITE LIES WITHIN THIS SOILS CLASSIFICATION



AREA OF DISTURBANCE = 9.38 ACRES
THIS PLAN FOR EROSION AND SEDIMENTATION CONTROL PURPOSES ONLY.

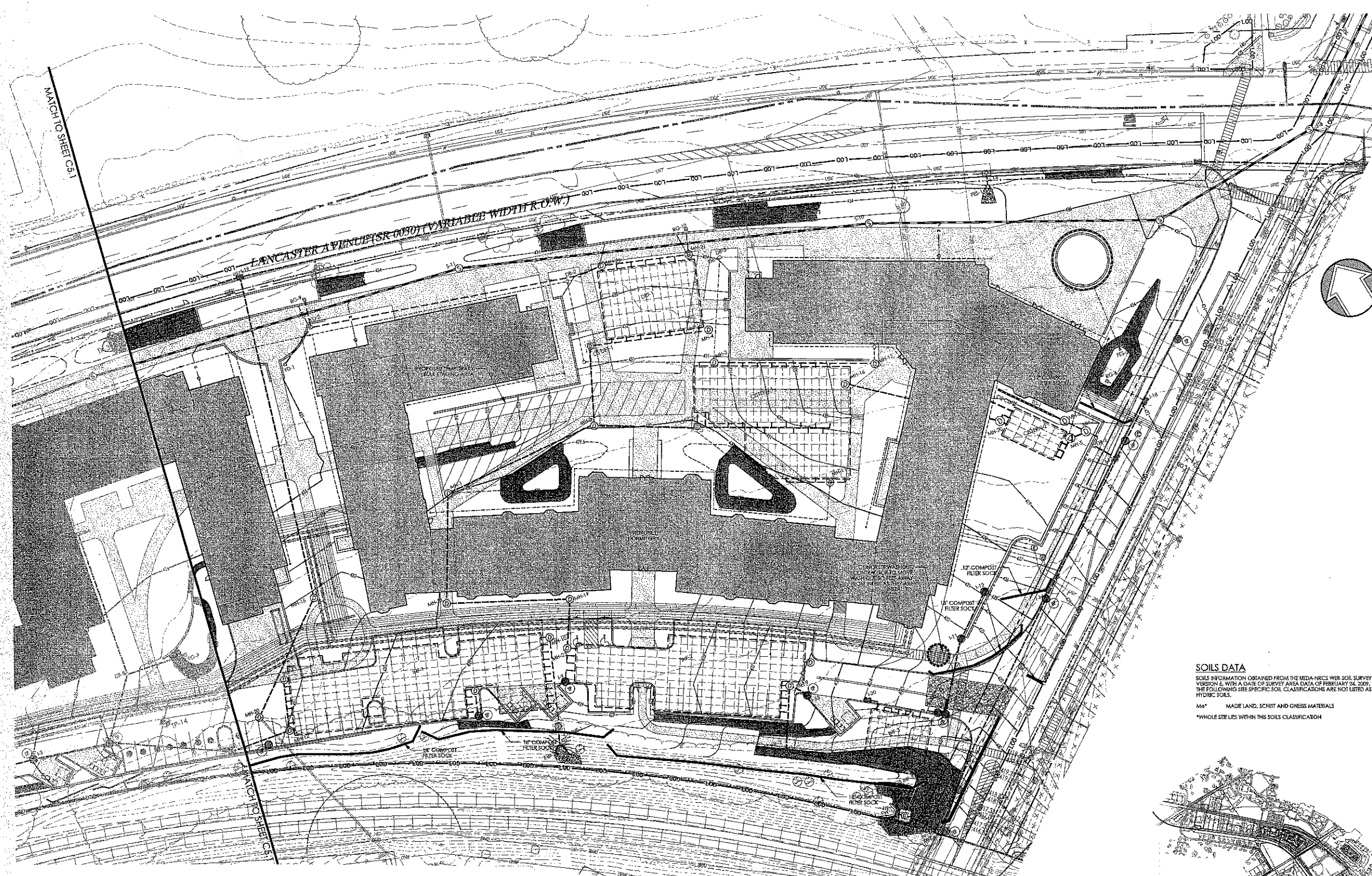
Gregory C. Newell
PROFESSIONAL ENGINEER
GREGORY C. NEWELL
EXPIRES 12/31/2014
39760-E

PRELIM. LAND DEVELOPMENT
SUBMISSION

Revision
Date December 5, 2014
Title Erosion & Sedimentation Control Plan
Scale 1" = 30'
Drawn By DCH

C5.2
Sheet No. 16 of 30

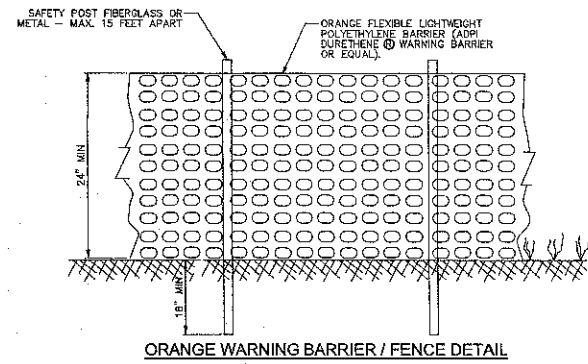
Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



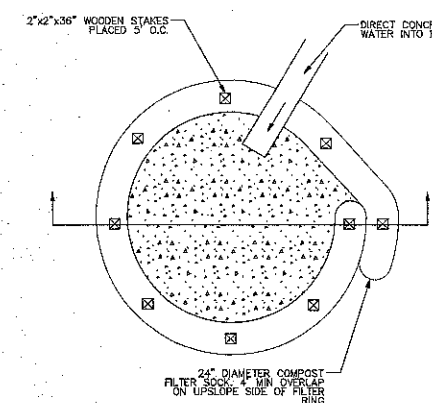
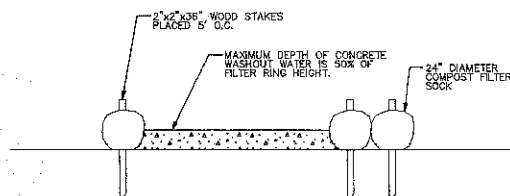
PROJ. NO. 13111001888
DATE 01/13/2015
CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES 8 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 30 WORKING DAYS IN DESIGN STAGE - STOP CALL DAYS IN DESIGN STAGE - STOP CALL
Pennsylvania One Call System, Inc.
1-800-242-1776

LEGEND

- PROPERTY LINE
- LEGAL RIGHT-OF-WAY LINE
- EXISTING CURB
- EXISTING EDGE OF PAVEMENT
- EXISTING BUILDING
- EXISTING FENCE
- EXISTING RETAINING WALL
- EXISTING SIGN
- EXISTING TREE
- EXISTING RAILROAD TRACKS
- EXISTING WETLANDS
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING STORM SEWER WITH MANHOLE
- EXISTING STORM INLET
- EXISTING WATER SERVICE WITH MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING GAS METER
- EXISTING UTILITY POLE WITH GUY WIRE
- EXISTING OVERHEAD WIRE
- EXISTING UNDERGROUND ELECTRIC SERVICE WITH MANHOLE
- EXISTING ELECTRIC METER
- EXISTING TRANSFORMER
- EXISTING CABLE SERVICE WITH CABLE BOX
- EXISTING UNDERGROUND TELEPHONE SERVICE WITH MANHOLE
- EXISTING TELEPHONE METER
- EXISTING LIGHT STANDARDS
- EXISTING TRAFFIC SIGNAL MAST ARM
- SOILS BOUNDARY LINE
- PROPOSED RIGHT-OF-WAY LINE
- PROPOSED CURB
- PROPOSED EDGE OF PAVEMENT
- PROPOSED BUILDING
- PROPOSED CONCRETE SIDEWALK OR PAD
- PROPOSED DECORATIVE FENCE
- PROPOSED RETAINING WALL
- PROPOSED SIGN
- PROPOSED ADA PARKING SPACE
- PROPOSED DUMPSTER ENCLOSURE WITH DUMPSTER, RECYCLING BIN, SCREEN WALLS AND SCREEN GATE
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY LATERAL
- PROPOSED STORM PIPE
- PROPOSED INLET / YARD DRAIN
- PROPOSED FIRE SERVICE
- PROPOSED WATER SERVICE
- PROPOSED UNDERGROUND ELECTRIC
- PROPOSED UNDERGROUND TELECOM
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- PROPOSED INLET PROTECTION
- PROPOSED TEMPORARY BULK STAGING AREA
- EROSION CONTROL BLANKET HAG 575
- AREAS TO BE CONSTRUCTED UNDER A SEPARATE TOWNSHIP APPLICATION
- CONCRETE WASHOUT

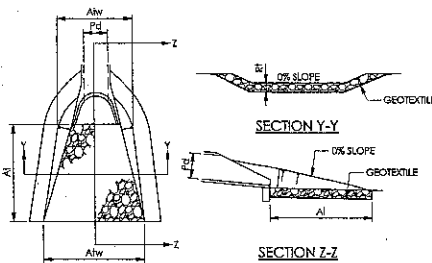


ORANGE WARNING BARRIER / FENCE DETAIL
NOT TO SCALE



CONTROLLED NON-DISCHARGE CONCRETE WASHOUT
NOT TO SCALE

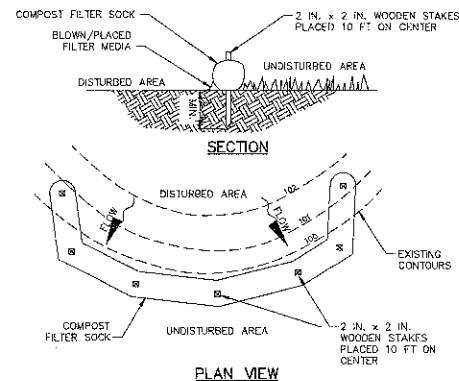
- NOTES:**
- A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS.
 - INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE.
 - 18" DIAMETER FILTER SOCKS MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT.
 - ALL CONCRETE WASHOUT FACILITIES SHOULD BE INSPECTED DAILY. DAMAGED OR LEAKING WASHOUTS SHOULD BE DEACTIVATED AND REPAIRED OR REPLACED IMMEDIATELY.



CURB NO.	PIPE DIA (IN)	RIPRAP		APRON	
		SIZE (IN)	TRUCK R (IN)	LENGTH (FT)	TERMINAL WIDTH (FT)
H-4	18	3	9	8	4.5
OS-EN-1	30	4	16	16	7.5
					23.5

- NOTES:**
- ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
- ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

STANDARD CONSTRUCTION DETAIL #9-1
RIPRAP APRON AT PIPE OUTLET WITH FLARED END SECTION OR ENDWALL
NOT TO SCALE



PLAN VIEW

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 THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MESH SPREAD AS A SOIL SUPPLEMENT.

WHERE SOCKS ARE PLACED ON PAVED SURFACES, CONCRETE BLOCKS SHOULD BE USED IMMEDIATELY DOWNSLOPE OF THE SOCKS (AT THE SAME INTERVALS RECOMMENDED FOR THE STAKES) TO HELP HOLD THE SOCK IN PLACE.

TABLE 4.2 FROM PA ERS MANUAL, MARCH 2012
COMPOST STANDARDS

ORGANIC MATTER CONTENT	25%-100% (DRY WEIGHT BASIS)
ORGANIC PORTION	FIBROUS AND ELONGATED
MOISTURE CONTENT	30%-50%
PARTICLE SIZE	30% 50% PASS THROUGH 3/8" SIEVE
SOLUBLE SALT CONCENTRATION	3.0 mg/l (100mg/cm) MAXIMUM

TABLE 4.1 FROM PA ERS MANUAL, MARCH 2012
COMPOST SOCK FABRIC MINIMUM SPECIFICATIONS

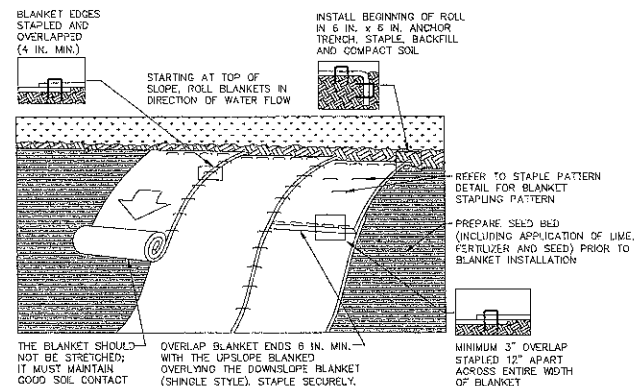
MATERIAL TYPE	3 MIL HOPE	5 MIL HOPE	5 MIL HOPE	MULTI-FILAMENT POLYPROPYLENE (MEPP)	HEAVY DUTY MULTI-FILAMENT POLYPROPYLENE (HDMPP)
MATERIAL CHARACTERISTICS	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE	PHOTO-DEGRADABLE
SOCK DIAMETERS	12"	18"	18"	18"	18"
MESH OPENING	3/8"	3/8"	3/8"	3/8"	1/8"
TENSILE STRENGTH	26 PSI	26 PSI	44 PSI	202 PSI	202 PSI
ULTRAVIOLET STABILITY % ORIGINAL STRENGTH (ASTM G-155)	23% AT 1000 HR	23% AT 1000 HR	100% AT 1000 HR	100% AT 1000 HR	100% AT 1000 HR
MINIMUM FUNCTIONAL LONGEVITY	6 MONTHS	9 MONTHS	6 MONTHS	1 YEAR	2 YEARS

TWO-PLY SYSTEMS

INNER CONTAINMENT NETTING	HOPE BIAXIAL NET CONTINUOUSLY WOUND FUSION-WELDED JUNCTIONS
OUTER FILTRATION MESH	3/4" X 3/4" MAX. APERTURE SIZE COMPOSITE POLYPROPYLENE FABRIC (WOVEN LAYER AND NON-WOVEN FLEECE MECHANICALLY FUSED VIA NEEDLE PUNCH)

SOCK FABRICS COMPOSED OF GURLAP MAY BE USED ON PROJECTS LASTING 6 MONTHS OR LESS.
FILTREX & JMO

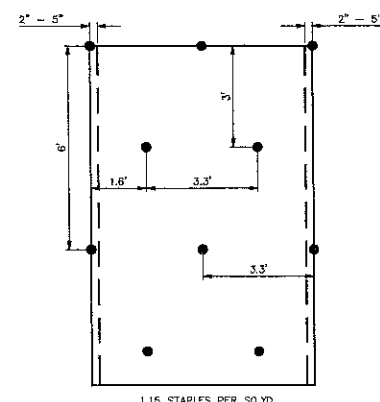
STANDARD CONSTRUCTION DETAIL #4-1
COMPOST FILTER SOCK
NOT TO SCALE



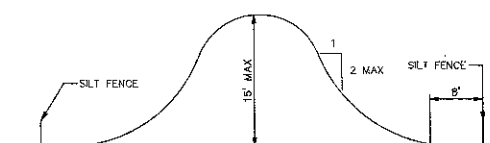
NOTES:

- SEED AND SOIL AMENDMENTS SHALL BE APPLIED ACCORDING TO THE RATES IN THE PLAN DRAWINGS PRIOR TO INSTALLING THE BLANKET.
- PROVIDE ANCHOR TRENCH AT TOE OF SLOPE IN SIMILAR FASHION AS AT TOP OF SLOPE.
- SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS, AND GRASS.
- BLANKET SHALL HAVE GOOD CONTINUOUS CONTACT WITH UNDERLYING SOIL THROUGHOUT ENTIRE LENGTH. LAY BLANKET LOOSELY AND STAPLE TO MAINTAIN DIRECT CONTACT WITH SOIL. DO NOT STRETCH BLANKET.
- THE BLANKET SHALL BE STAPLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- BLANKETED AREAS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT UNTIL PERENNIAL VEGETATION IS ESTABLISHED TO A MINIMUM UNIFORM 100% COVERAGE THROUGHOUT THE BLANKETED AREA. DAMAGED OR DISPLACED BLANKETS SHALL BE RESTORED OR REPLACED WITHIN 4 CALENDAR DAYS.

STANDARD CONSTRUCTION DETAIL #11-1
EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE

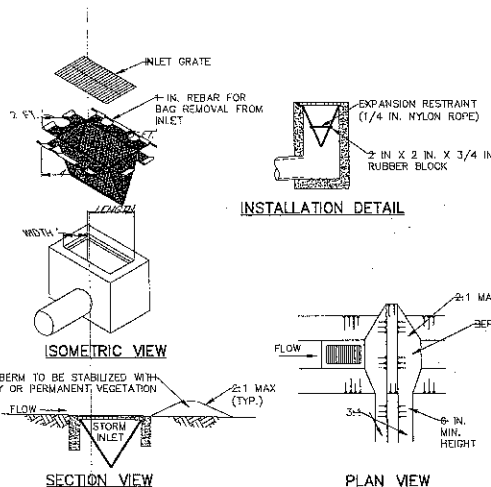


EROSION CONTROL BLANKET STAPLE PATTERN
NOT TO SCALE



TYPICAL SOIL STOCKPILE CROSS SECTION
NOT TO SCALE

- NOTES:**
- SILT FENCE MUST COMPLETELY ENIRCLE STOCKPILE
- TOPSOIL SHALL NOT BE REMOVED FROM THE DEVELOPMENT SITE OR USED AS FILL. TOPSOIL SHALL BE REMOVED FROM THE AREAS OF CONSTRUCTION AND STORED SEPARATELY. THE TOPSOIL SHALL BE STABILIZED TO MINIMIZE EROSION DURING STORAGE. UPON COMPLETION OF CONSTRUCTION, THE TOPSOIL SHALL BE UNIFORMLY REDISTRIBUTED ON THE SITE.



SECTION VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

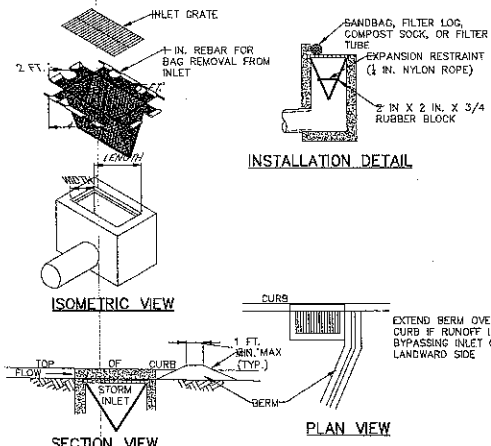
ROLLED EARTHEN BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM ON ROADWAY SHALL BE MAINTAINED UNTIL ROADWAY IS PAVED. EARTHEN BERM IN CHANNELS SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION IS COMPLETED OR REMAIN PERMANENTLY.

AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED. A SUPPLY SHALL BE MAINTAINED ON SITE FOR REPLACEMENT OF BAGS. ALL NEEDED REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED BAGS ACCORDING TO THE PLAN NOTES.

DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-16
FILTER BAG INLET PROTECTION - TYPE M INLET
NOT TO SCALE



SECTION VIEW

NOTES:

MAXIMUM DRAINAGE AREA = 1/2 ACRE.

INLET PROTECTION SHALL NOT BE REQUIRED FOR INLET TRIBUTARY TO SEDIMENT BASIN OR TRAP. BERMS SHALL BE REQUIRED FOR ALL INSTALLATIONS.

ROLLED EARTHEN BERM SHALL BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM SHALL BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.

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DO NOT USE ON MAJOR PAVED ROADWAYS WHERE PONDING MAY CAUSE TRAFFIC HAZARDS.

STANDARD CONSTRUCTION DETAIL #4-15
FILTER BAG INLET PROTECTION - TYPE C INLET
NOT TO SCALE

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Gregory C. Newell

PRELIM. LAND DEVELOPMENT
SUBMISSION

Revision

Date December 5, 2014

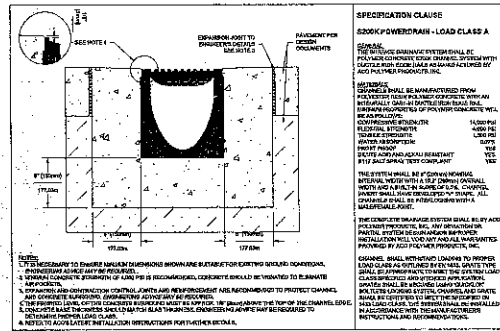
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Scale N.T.S.

Drawn By DCH

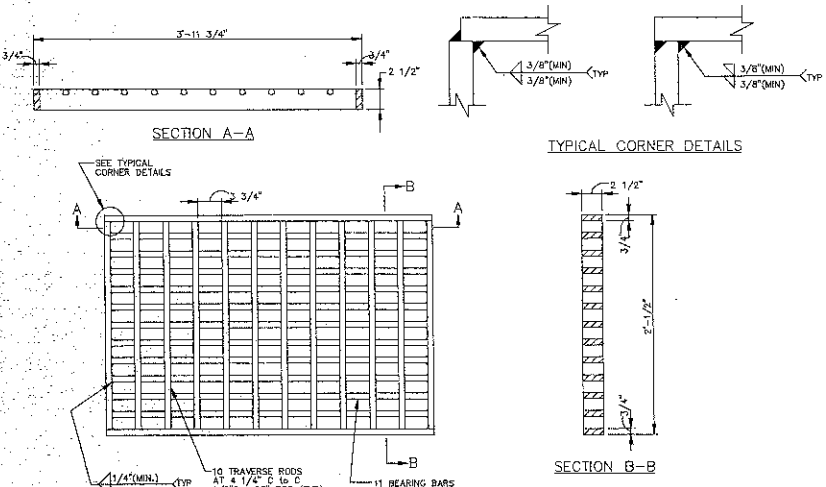
C5.4

Sheet No. 18 of 30



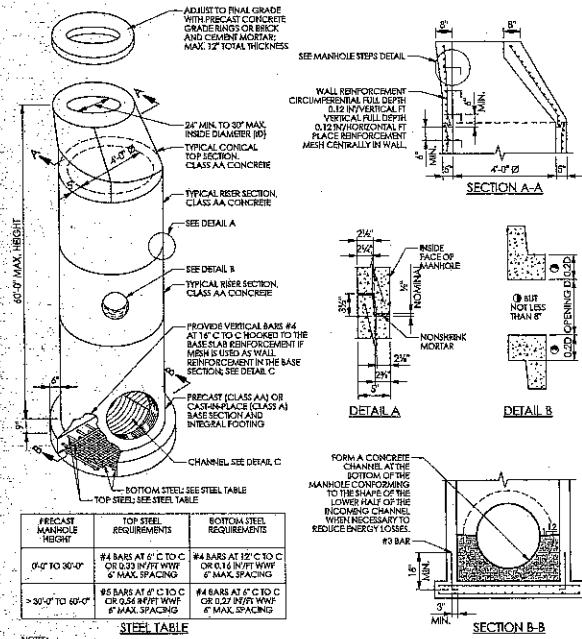
TRENCH DRAIN WITH GRATED COVER
 N.T.S.

NOTES:
 1. TRENCH DRAIN SHALL HAVE A TRASH BASKET AND CATCH BASIN INSTALLED BEFORE DISCHARGING INTO STORM PIPE NETWORK. TRASH BASKET AND CATCH BASIN SHALL MATCH TRENCH DRAIN MATERIALS.

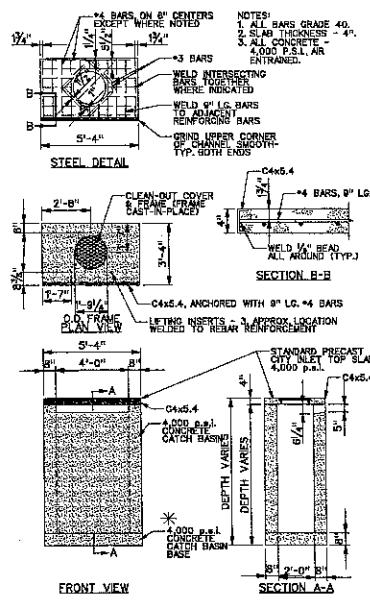
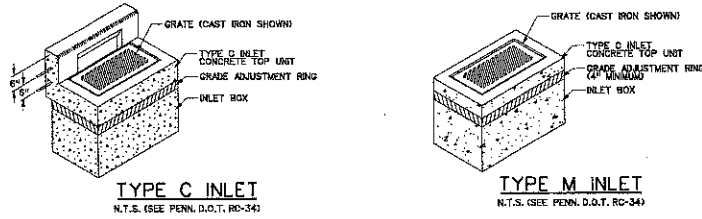


BICYCLE SAFE GRATE
 N.T.S.

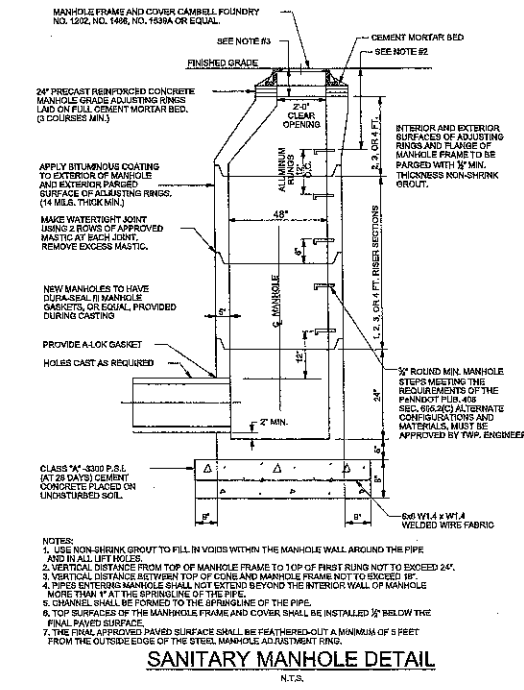
NOTE:
 STEEL GRATE TO BE USED IN ROADWAY JUMP AND YARD INLETS ONLY. ALL OTHER INLETS ARE TO HAVE CAST IRON VANE GRATES.



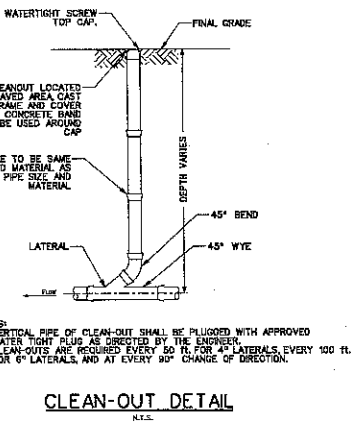
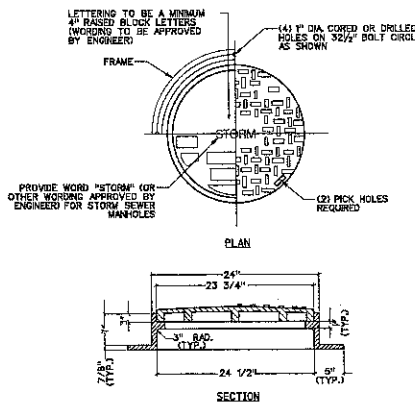
STANDARD PRECAST MANHOLE
 FOR PIPS 37 INSET DIAMETER AND LESS.
 N.T.S. (SEE FINISHER'S DRAWING)



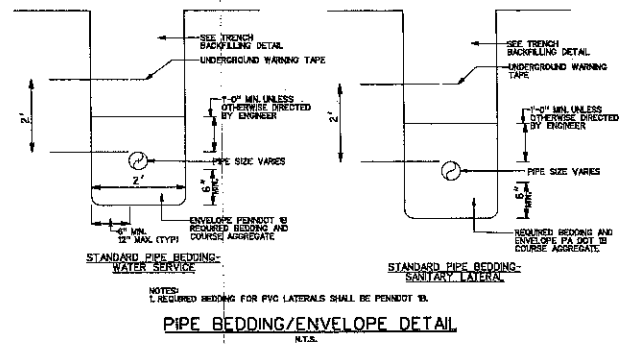
NOTE: STEEL REINFORCEMENT OF THE BASE AND RISER SECTIONS FOR THE CITY INLET SHALL BE BASED ON THE REQUIREMENTS OF FOR A PADDT STANDARD INLET BOX REINFORCEMENT BAR SCHEDULES AS SHOWN IN RC-49M OF PADDT PUBLICATION 72M AS LAST REVISED.
 *CONCRETE COMPRESSIVE STRENGTH TO CONFORM WITH MATERIAL NOTES AS SHOWN ON SHEET 1 OF RC-95M OF PADDT PUBLICATION 72M AS LAST REVISED.



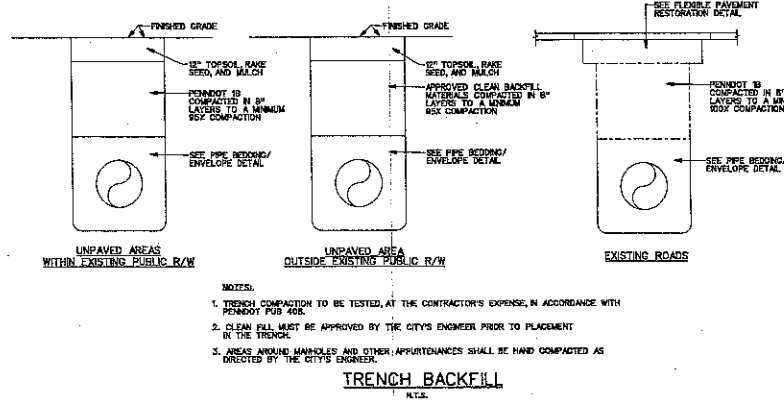
HEAVY DUTY CAST IRON MANHOLE FRAME AND SELF-SEALING COVER
 N.T.S.



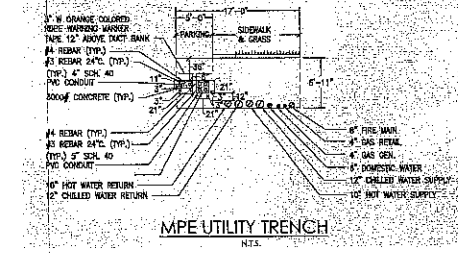
CLEAN-OUT DETAIL
 N.T.S.



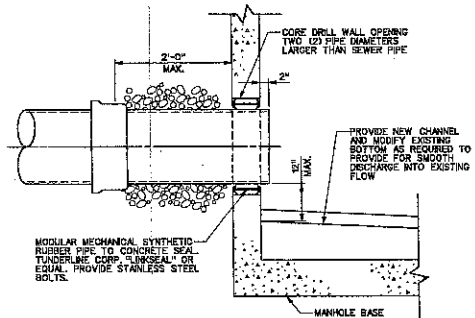
PIPE BEDDING/ENVELOPE DETAIL
 N.T.S.



TRENCH BACKFILL
 N.T.S.



PIPE CONNECTION TO AN EXISTING MANHOLE
 N.T.S.



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 phone: 610-667-7177
 fax: 610-667-0216

Gregory C. Newell



PRELIM. LAND DEVELOPMENT SUBMISSION
 Revision
 Date December 5, 2014
 Title Construction Detail Sheet
 Scale N.T.S.
 Drawn By MMB

C6.1

Sheet No. 19 of 30

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.

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 RAMSA**

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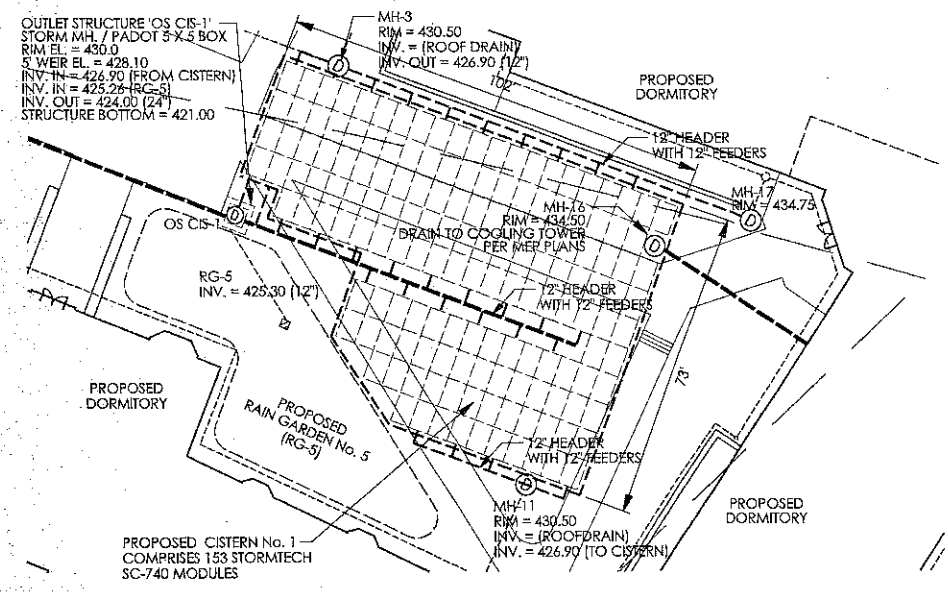
PRELIM. LAND DEVELOPMENT
 SUBMISSION

Revision
 Date December 5, 2014
 Title Construction Detail Sheet
 Scale N.T.S.
 Drawn By LRL

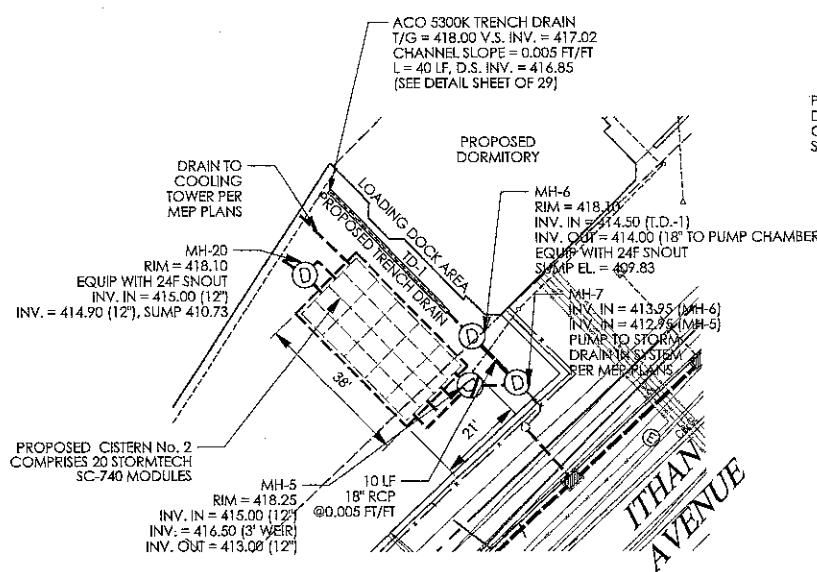
C6.2

Sheet No. 20 of 30

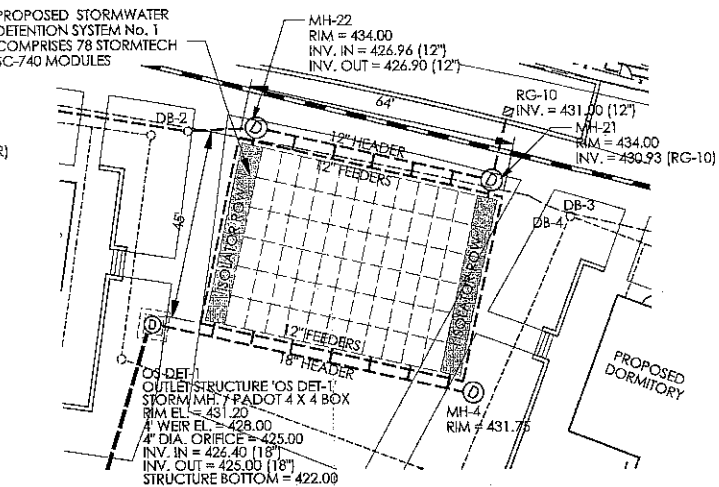
Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



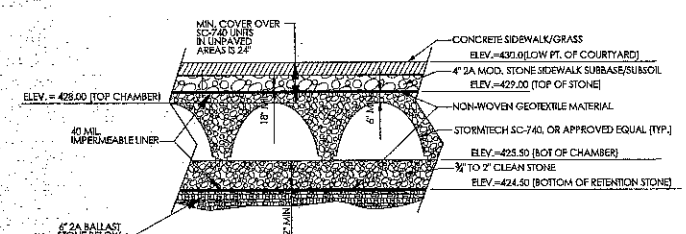
CISTERN No. 1 - PLAN VIEW
 SCALE: 1" = 20'



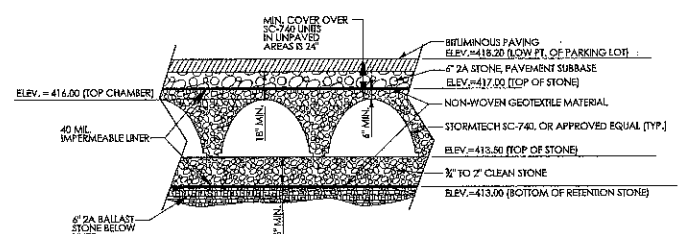
CISTERN No. 2 - PLAN VIEW
 SCALE: 1" = 20'



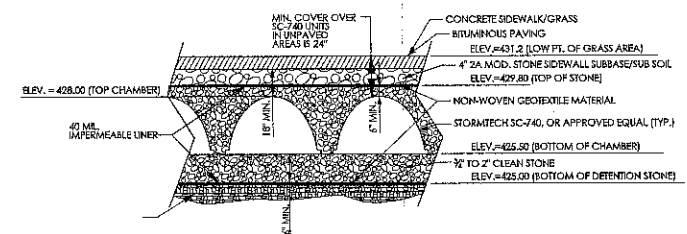
DETENTION No. 1 - PLAN VIEW
 SCALE: 1" = 20'



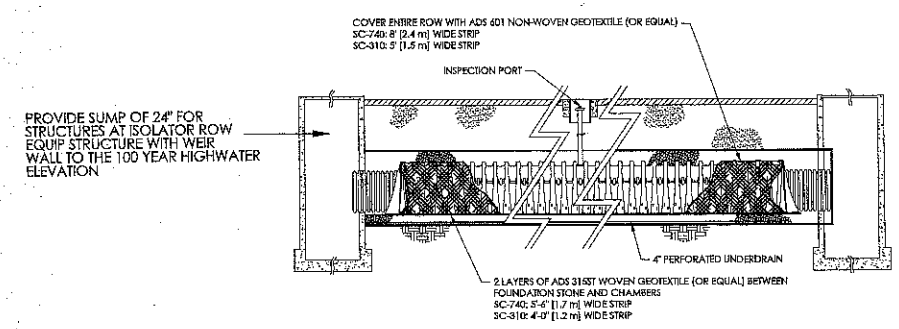
TYPICAL SECTION THROUGH CISTERN No. 1
 N.T.S.



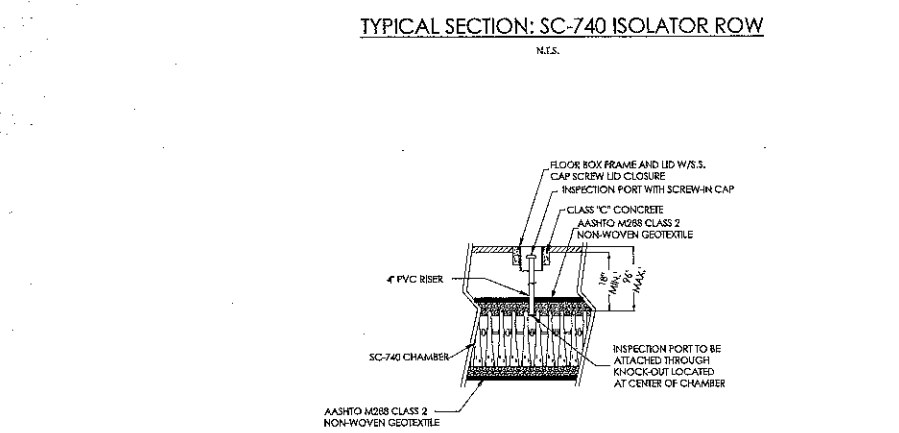
TYPICAL SECTION THROUGH CISTERN No. 2
 N.T.S.



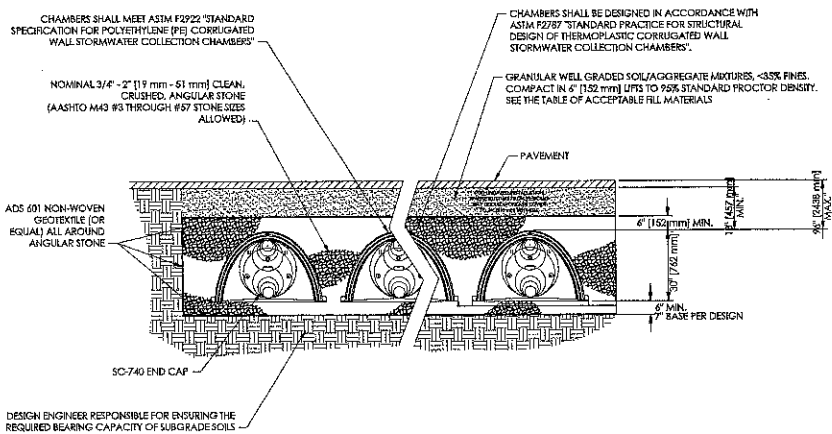
TYPICAL SECTION THROUGH DETENTION SYSTEM No. 1
 N.T.S.



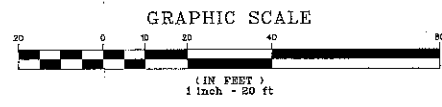
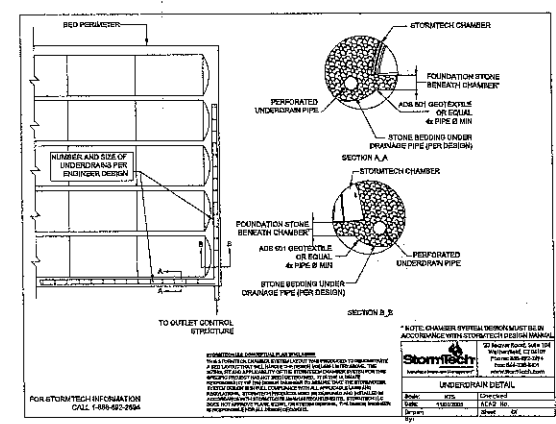
TYPICAL SECTION: SC-740 ISOLATOR ROW
 N.T.S.



TYPICAL SECTION: SC-740 INSPECTION PORT
 N.T.S.



TYPICAL SECTION: SC-740 CROSS SECTION
 N.T.S.



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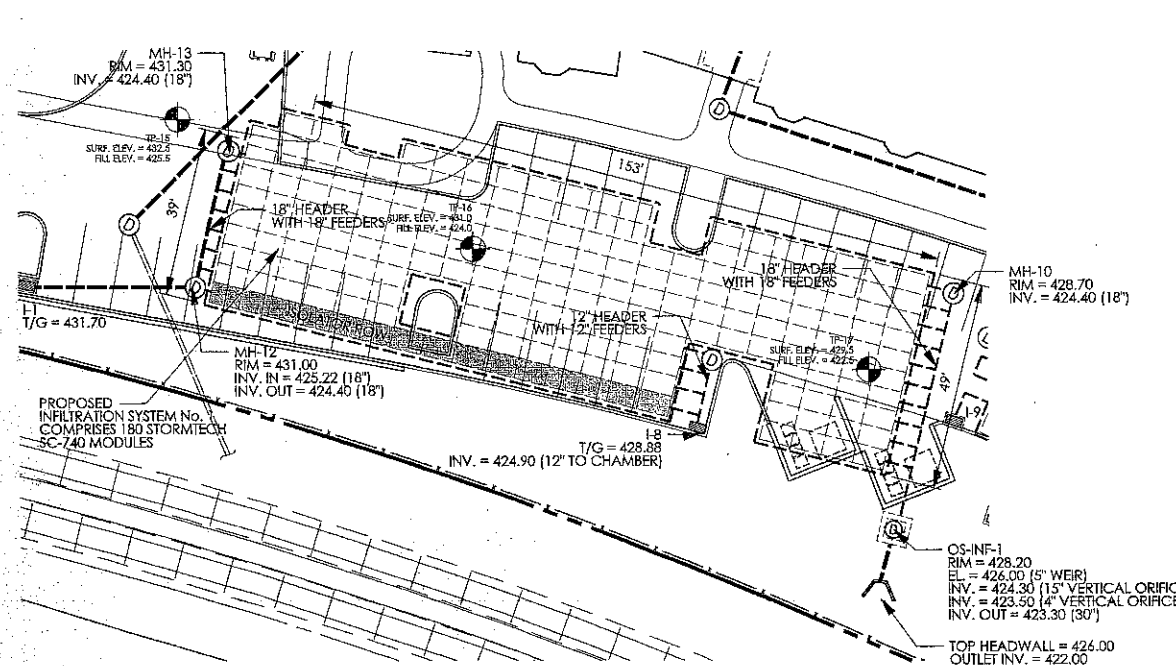
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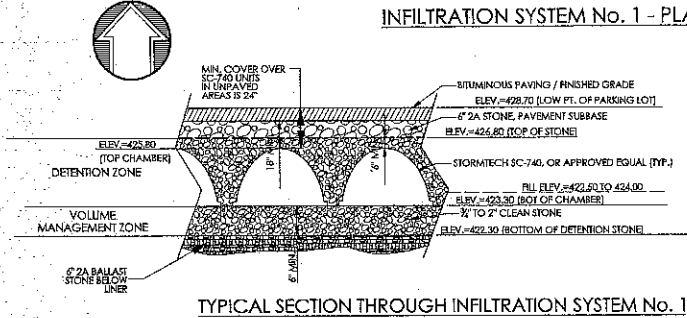
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REGISTERED PROFESSIONAL
ARCHITECT
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SUBMISSION
Revision
Date: December 5, 2014
Title: Construction Detail Sheet
Scale: As Noted
Drawn By: JLN

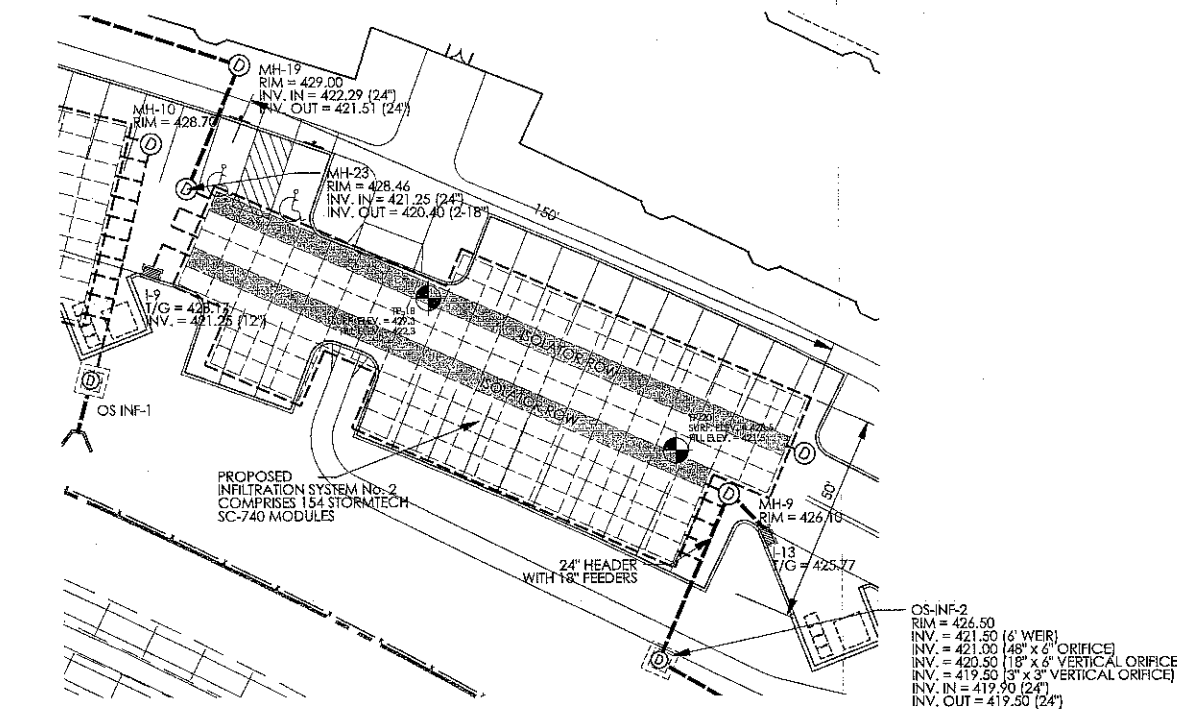
C6.3
Sheet No. 21 of 30
Contractor to verify all dimensions in field and return
Architect of any discrepancies before starting work.



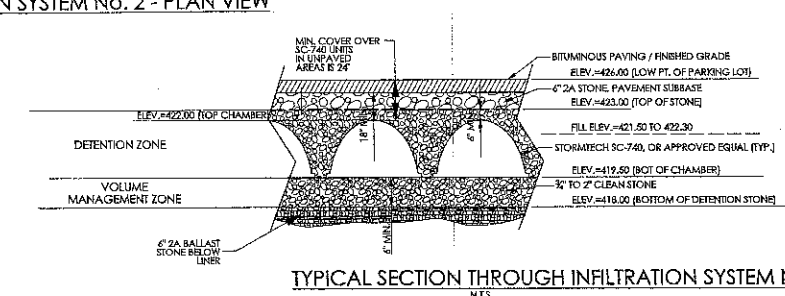
INFILTRATION SYSTEM No. 1 - PLAN VIEW



TYPICAL SECTION THROUGH INFILTRATION SYSTEM No. 1



INFILTRATION SYSTEM No. 2 - PLAN VIEW

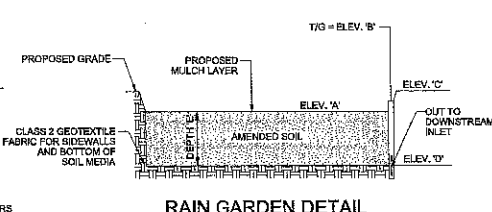


TYPICAL SECTION THROUGH INFILTRATION SYSTEM No. 2

AMENDED SOIL:
CLAY CONTENT: LESS THAN 5%
SAND CONTENT: 10% - 15%
LEAF COMPOST OR AGED LEAF MULCH: 20% - 30%
HIGH QUALITY TOPSOIL: 20% - 30%
PERMEABILITY OF AT LEAST 1.0 FEET PER DAY (0.5" PER HOUR)
FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL
OVER 1" IN DIAMETER
FREE OF BRUSH OR SEEDS FROM NOXIOUS WEEDS

MULCH LAYER:
AGED, DOUBLE-SHREDED, HARDWOOD BARK MULCH, PLACED
ON SURFACE TO DEPTH OF 2-3 INCHES.

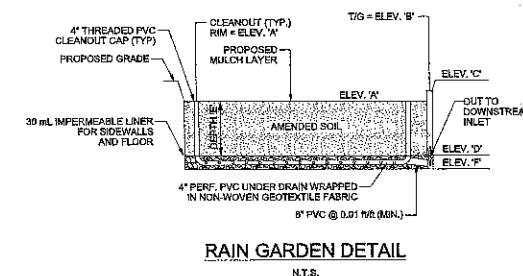
GEOTEXTILE FABRIC:
SHALL CONSIST OF NEEDLED NONWOVEN POLYPROPYLENE FIBERS
AND MEET THE FOLLOWING PROPERTIES:
GRAB TENSILE STRENGTH (ASTM - D4822) 120 LBS
MULLER BURST STRENGTH (ASTM - D3786) 225 PSI
FLOW RATE (ASTM-D4491) 55 GAL/MIN/FT²
UV RESISTANCE AFTER 500 HRS (ASTM-D4398) 70%
HEAT-SET OR HEAT-CALCINED FABRICS ARE
NOT PERMITTED, ACCEPTABLE TYPES INCLUDE
MIRAFI 140N, AMOCO 4647, AND GEOTEX 451



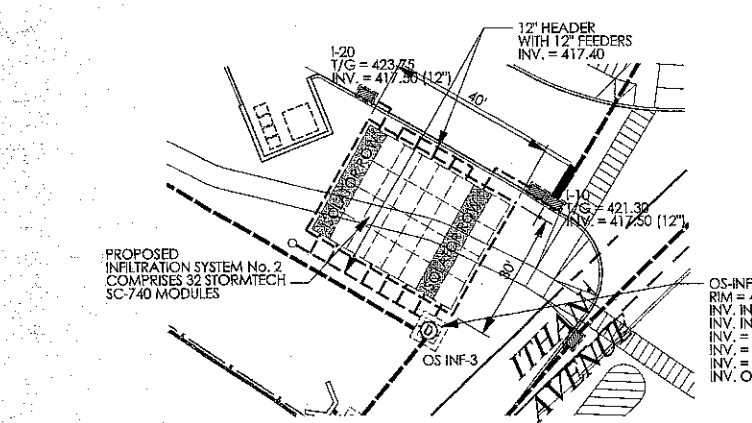
RAIN GARDEN DETAIL

RAIN GARDEN NO.	ELEV. 'A'	ELEV. 'B'	ELEV. 'C'	ELEV. 'D'	DEPTH 'E'	EX. GRADE	APPROX. FILL ELEV.	OVER EXCAVATION	INFIL. RATE*	TEST ELEV.
RG-1	435.80	436.50	437.00	433.50	24"	436.5	431.8	2.0	0.09	433.75
RG-2	434.50	435.10	435.25	432.50	24"	436.0	432.0	NOT REQ'D	2.03	432.50
RG-3	435.50	431.50	432.00	429.50	24"	433.5	NO FILL	NOT REQ'D	0.45	428.50
RG-4	428.00	426.75	429.00	425.00	24"	432.8	429.5	2.0	0.24	428.50
RG-5	428.00	426.75	429.00	425.00	24"	432.1	426.3	1.0	8.22	428.25
RG-6	431.50	432.50	433.00	429.50	24"	433.5	428.5	NOT REQ'D	N/A	N/A
RG-7	437.00	437.75	438.00	436.00	24"	438.5	432.5	3.5	N/A	N/A
RG-8	434.50	435.00	436.20	433.00	18"	438.5	429.5	NOT REQ'D	4.53	431.50
RG-9	433.00	433.50	434.70	431.50	18"	435.0	434.0	NOT REQ'D	0.99	431.00
RG-10	433.00	433.50	434.50	431.00	18"	435.0	430.0	1.5	0.31	430.00

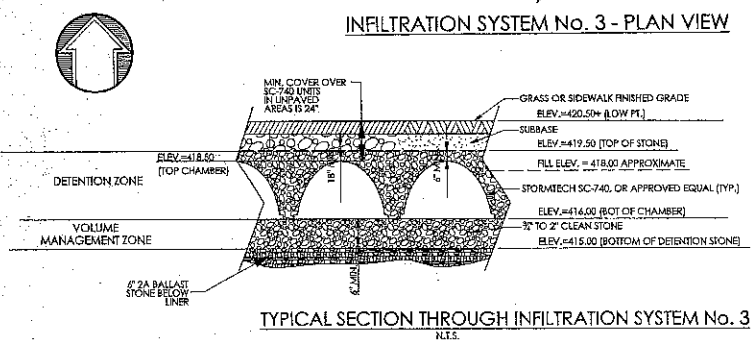
* MINIMUM OVER EXCAVATION DEPTH BELOW ELEV. 'D' TO REMOVE FILL MATERIAL. ACTUAL EXCAVATION DEPTH MAY VARY DEPENDING ON FIELD CONDITIONS OR SUBSEQUENT TESTING. CONTRACTOR TO BACKFILL OVER EXCAVATION WITH SUITABLE MATERIAL PROVIDING AN INFILTRATION RATE BETWEEN 0.1 AND 10.0 IN/HR.
** INCLUDES FACTOR OF SAFETY OF 2.0



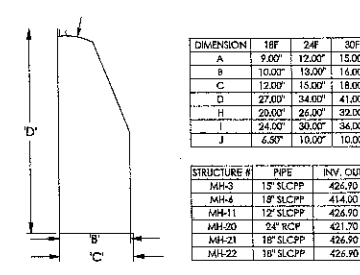
RAIN GARDEN DETAIL



INFILTRATION SYSTEM No. 3 - PLAN VIEW



TYPICAL SECTION THROUGH INFILTRATION SYSTEM No. 3

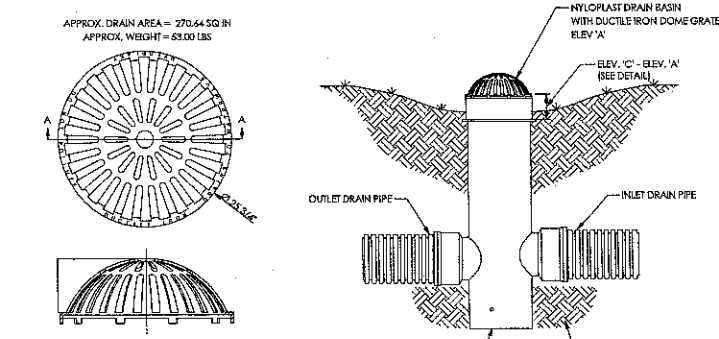


WATER QUALITY STRUCTURE DETAIL

- WATER QUALITY INSERT/BIRET INSTALLATION SEQUENCE
1. STABILIZE ALL CONTRIBUTING AREAS BEFORE INSTALLING WATER QUALITY INSERTS.
 2. INSTALL INSERTS ON THE STORMWATER STRUCTURES NOTED ON THE PCSM PLAN. FOLLOW THE MANUFACTURER'S GUIDELINES FOR INSTALLATION.
 3. DOCUMENT WITH PHOTOS OF SITE DURING PLANTING.
 4. DELETED: CRITICAL STAGE WHEN A LICENSED PROFESSIONAL IS TO BE PRESENT ON SITE.

DIMENSION	18"	24"	30"
A	9.00"	12.00"	15.00"
B	10.00"	13.00"	16.00"
C	12.00"	15.00"	18.00"
D	27.00"	34.00"	41.00"
H	28.00"	26.00"	32.00"
I	24.00"	30.00"	36.00"
J	6.50"	10.00"	10.00"

STRUCTURE #	PIPE	INVT. OUT	SWAMP	SHOUL	PADOT BOX
MH-5	18" SLCCP	426.30	423.77	18"	TYPE 4
MH-4	18" SLCCP	414.00	409.83	24"	TYPE 4
MH-11	12" SLCCP	426.90	423.77	18"	TYPE 4
MH-20	24" RCP	421.70	414.07	30"	TYPE 4
MH-21	18" SLCCP	426.90	422.73	24"	TYPE 4
MH-22	18" SLCCP	426.90	422.73	24"	TYPE 4



RAIN GARDEN OUTLET STRUCTURE DETAIL

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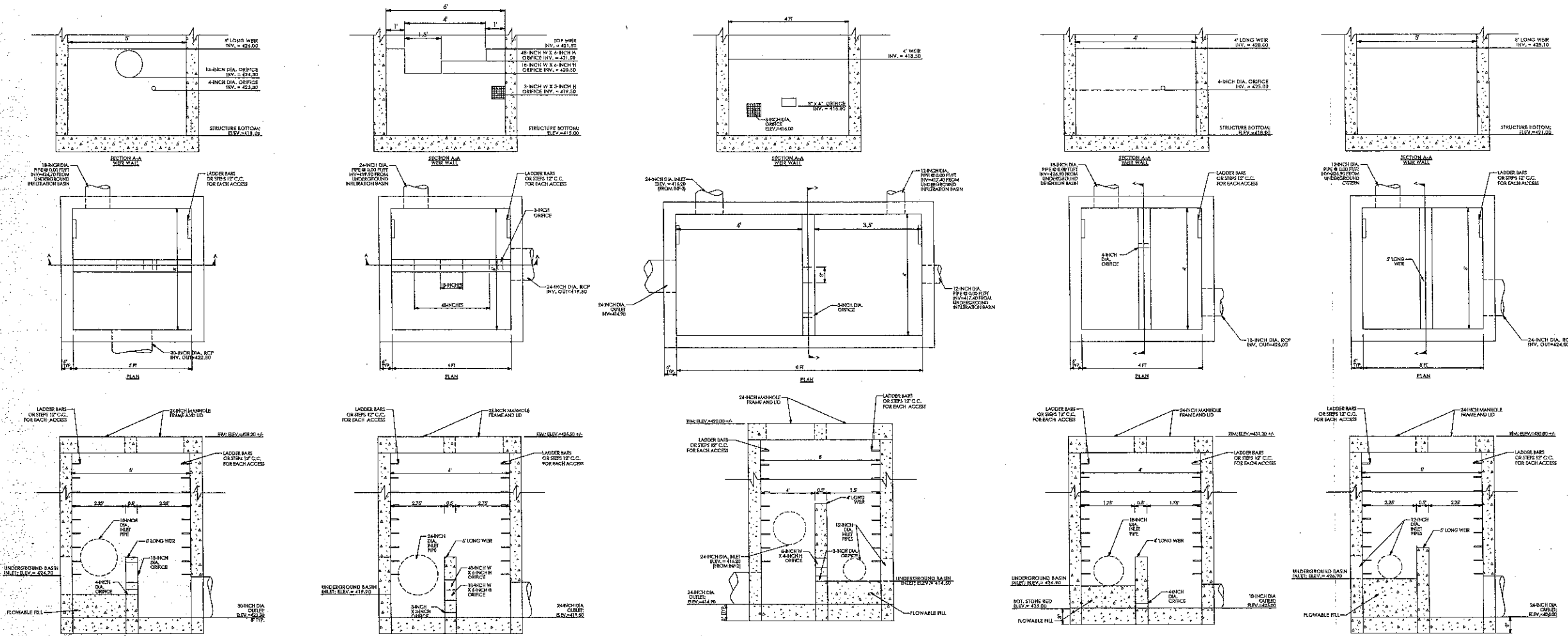
Gregory C. Newell



PRELIM. LAND DEVELOPMENT
 SUBMISSION
 Revision
 Date December 5, 2014
 Title Construction Detail Sheet
 Scale N.T.S.
 Drawn By MMB

C6.4

Sheet No. 22 of 30
 Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



**INFILTRATION BASIN - 1
 OUTLET CONTROL
 STRUCTURE, OS INF-1 DETAIL
 (5' x 5' BOX)
 N.T.S.**

INF-1 SYSTEM ELEVATIONS*	STORM FREQUENCY	ELEVATION
1 YR	424.51	
2 YR	424.71	
5 YR	425.09	
10 YR	425.47	
25 YR	426.02	
50 YR	426.31	
100 YR	426.80	

*SYSTEMS MODELED FROM TOP OF STONE BED. NO VOLUME CREDIT APPLIED TO STONE BED FOR PEAK RATE CALCULATIONS. ZERO INFILTRATION RATE APPLIED.

**INFILTRATION BASIN - 2
 OUTLET CONTROL
 STRUCTURE, OS INF-2 DETAIL
 (6' x 6' BOX)
 N.T.S.**

INF-2 SYSTEM ELEVATIONS*	STORM FREQUENCY	ELEVATION
1 YR	420.42	
2 YR	420.72	
5 YR	421.06	
10 YR	421.31	
25 YR	421.50	
50 YR	421.64	
100 YR	421.77	

*SYSTEMS MODELED FROM TOP OF STONE BED. NO VOLUME CREDIT APPLIED TO STONE BED FOR PEAK RATE CALCULATIONS. ZERO INFILTRATION RATE APPLIED.

**INFILTRATION BASIN - 3
 OUTLET CONTROL
 STRUCTURE, OS INF-3 DETAIL
 (4' x 8' BOX)
 N.T.S.**

INF-3 SYSTEM ELEVATIONS*	STORM FREQUENCY	ELEVATION
1 YR	414.44	
2 YR	416.65	
5 YR	416.65	
10 YR	417.06	
25 YR	417.29	
50 YR	417.34	
100 YR	417.89	

*SYSTEMS MODELED FROM TOP OF STONE BED. NO VOLUME CREDIT APPLIED TO STONE BED FOR PEAK RATE CALCULATIONS. ZERO INFILTRATION RATE APPLIED.

**DETENTION BASIN - 1
 OUTLET CONTROL
 STRUCTURE, OS DET-1 DETAIL
 (4' x 4' BOX)
 N.T.S.**

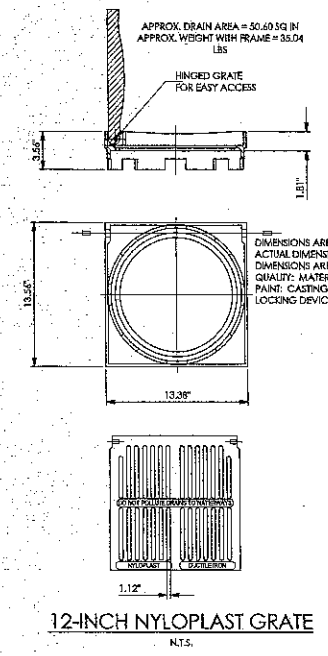
DET-1 SYSTEM ELEVATIONS*	STORM FREQUENCY	ELEVATION
1 YR	425.50	
2 YR	425.69	
5 YR	426.03	
10 YR	426.42	
25 YR	426.87	
50 YR	427.38	
100 YR	428.11	

*SYSTEMS MODELED FROM TOP OF STONE BED. NO VOLUME CREDIT APPLIED TO STONE BED FOR PEAK RATE CALCULATIONS.

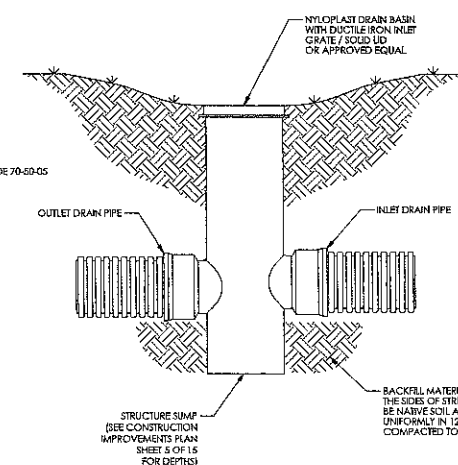
**CISTERN - 1
 OUTLET CONTROL
 STRUCTURE, OS CIS-1 DETAIL
 (5' x 5' BOX)
 N.T.S.**

CIS-1 SYSTEM ELEVATIONS*	STORM FREQUENCY	ELEVATION
1 YR	427.71	
2 YR	428.13	
5 YR	428.26	
10 YR	428.55	
25 YR	428.74	
50 YR	428.84	
100 YR	428.93	

*ALL STORAWATER CAPTURED FOR RE-USE IN COOLING TOWERS. NO DETENTION CREDIT APPLIED.

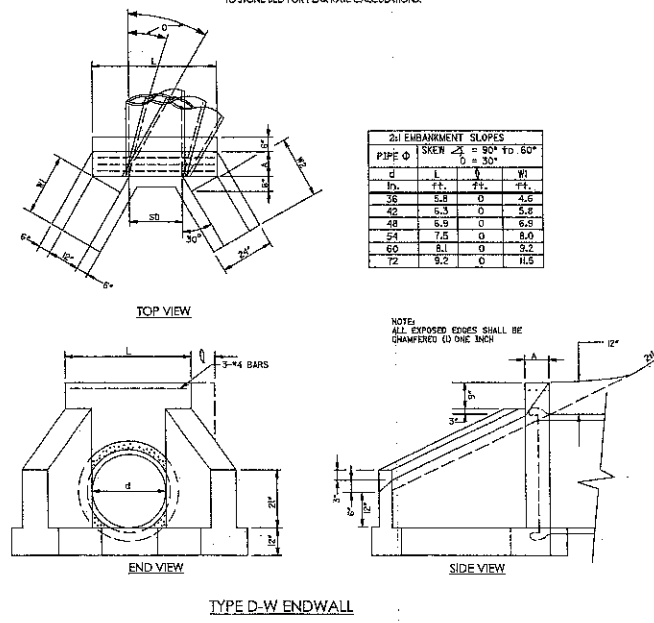


**12-INCH NYLOPLAST GRATE
 N.T.S.**



**NYLOPLAST DRAIN BASIN / CLEANOUT
 N.T.S.**

- NOTES:
- PVC SURFACE DRAINAGE INLETS SHALL INCLUDE THE DRAIN BASIN TYPE AS INDICATED ON THE DRAWINGS. THE DUCTILE IRON GRATES FOR EACH OF THESE TYPES ARE TO BE CONSIDERED AN INTEGRAL PART OF THE SURFACE DRAINAGE INLET AND SHALL BE FURNISHED BY THE SAME MANUFACTURER. THE SURFACE DRAINAGE INLETS SHALL BE AS MANUFACTURED BY NYLOPLAST, A DIVISION OF ADVANCED DRAINAGE SYSTEMS, INC. OR PRIOR APPROVED EQUAL.
 - THE DRAIN BASINS REQUIRED FOR THIS CONTRACT SHALL BE MANUFACTURED FROM PVC PIPE STOCK, UTILIZING A THERMO-MOLDING PROCESS TO REFORM THE PIPE STOCK TO THE SPECIFIED CONFIGURATION. THE DRAINAGE PIPE CONNECTION STUDS SHALL BE MANUFACTURED FROM PVC PIPE STOCK AND FORNED TO PROVIDE A WATER TIGHT CONNECTION WITH THE SPECIFIED SYSTEM. THIS JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR JOINTS FOR DRAIN AND SEWER PLASTIC PIPE USING FLEXIBLE ELASTOMERIC SEALS. THE FLEXIBLE ELASTOMERIC SEALS SHALL CONFORM TO ASTM F67. THE PIPE BELL SIZES SHALL BE JOINED TO THE MAIN BODY OF THE DRAIN BASIN OR CATCH BASIN. THE RAW MATERIAL USED TO MANUFACTURE THE PIPE STOCK THAT IS USED TO MANUFACTURE THE MAIN BODY AND PIPE STUDS OF THE SURFACE DRAINAGE INLETS SHALL CONFORM TO ASTM D1784 CELL CLASS 12454.
 - THE GRATES AND FRAMES FOR ALL SURFACE DRAINAGE INLETS SHALL BE DUCTILE IRON AND SHALL BE MADE SPECIFICALLY FOR EACH BASIN SO AS TO PROVIDE A ROUND BOTTOM FLANGE THAT CLOSELY MATCHES THE DIAMETER OF THE SURFACE DRAINAGE INLET. GRATES FOR DRAIN BASINS SHALL BE CAPABLE OF SUPPORTING 14-20 WHEEL LOADING FOR TRAFFIC AREAS OR H-10 LOADING FOR PEDESTRIAN AREAS. METAL USED IN THE MANUFACTURE OF THE CASTINGS SHALL CONFORM TO ASTM A536 GRADE 70-80-05 FOR DUCTILE IRON. GRATE SHALL BE PROVIDED PAINTED BLACK.
 - THE SPECIFIED PVC SURFACE DRAINAGE INLET SHALL BE INSTALLED USING CONVENTIONAL FLEXIBLE PIPE BACKFILL MATERIALS AND PROCEDURES. THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS 2 MATERIAL AS DEFINED IN ASTM D2321. BEDDING AND BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED AND COMPACTED UNIFORMLY. IN ACCORDANCE WITH ASTM D2321, THE DRAIN BASIN BODY WILL BE CUT AT THE TIME OF THE FINAL GRADE. NO BLOCK, STONE OR CONCRETE BLOCK WILL BE REQUIRED TO SET THE GRATE TO THE FINAL GRADE HEIGHT. FOR H-20 LOAD RATED INSTALLATIONS, A CONCRETE RING WILL BE FOUNDED UNDER AND AROUND THE GRATE AND FRAME. THE CONCRETE SLAB MUST BE DESIGNED TAKING INTO THE CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, AND OTHER APPLICABLE DESIGN FACTORS. FOR OTHER INSTALLATION CONSIDERATIONS SUCH AS MIGRATION OF FINES, GROUND WATER, AND SOFT FOUNDATIONS, REFER TO ASTM D2321 GUIDELINES.
 - ALL PIPING JOINTS ON SITE ARE TO BE WATER TIGHT.



**TYPE D-W ENDWALL
 N.T.S.**

EMBRANKMENT SLOPES

PIPE Ø	SKEN	α = 90° TO 60°	β = 30°
18	11	7 1/2	7 1/2
24	15	8	8
30	20	9	9
36	25	10	10
42	30	11	11
48	35	12	12
54	40	13	13
60	45	14	14
72	55	16	16

ALL EXPOSED EDGES SHALL BE CHAMFERED TO ONE INCH

VMA
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 fax: 910-649-8475

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 25 Bala Avenue, Suite 201
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 phone: 610-669-1717
 fax: 610-669-0216

Gregory C. Newell

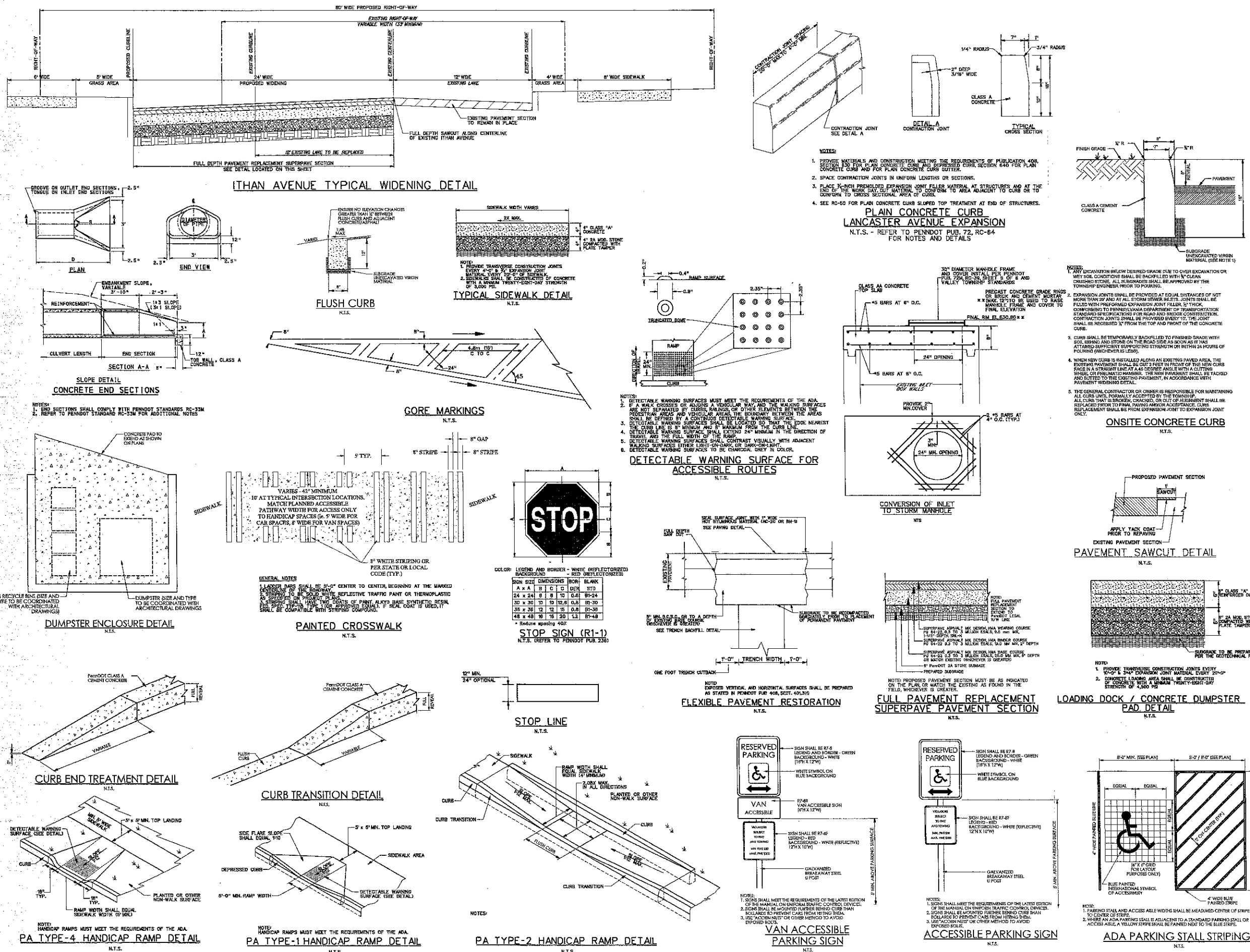


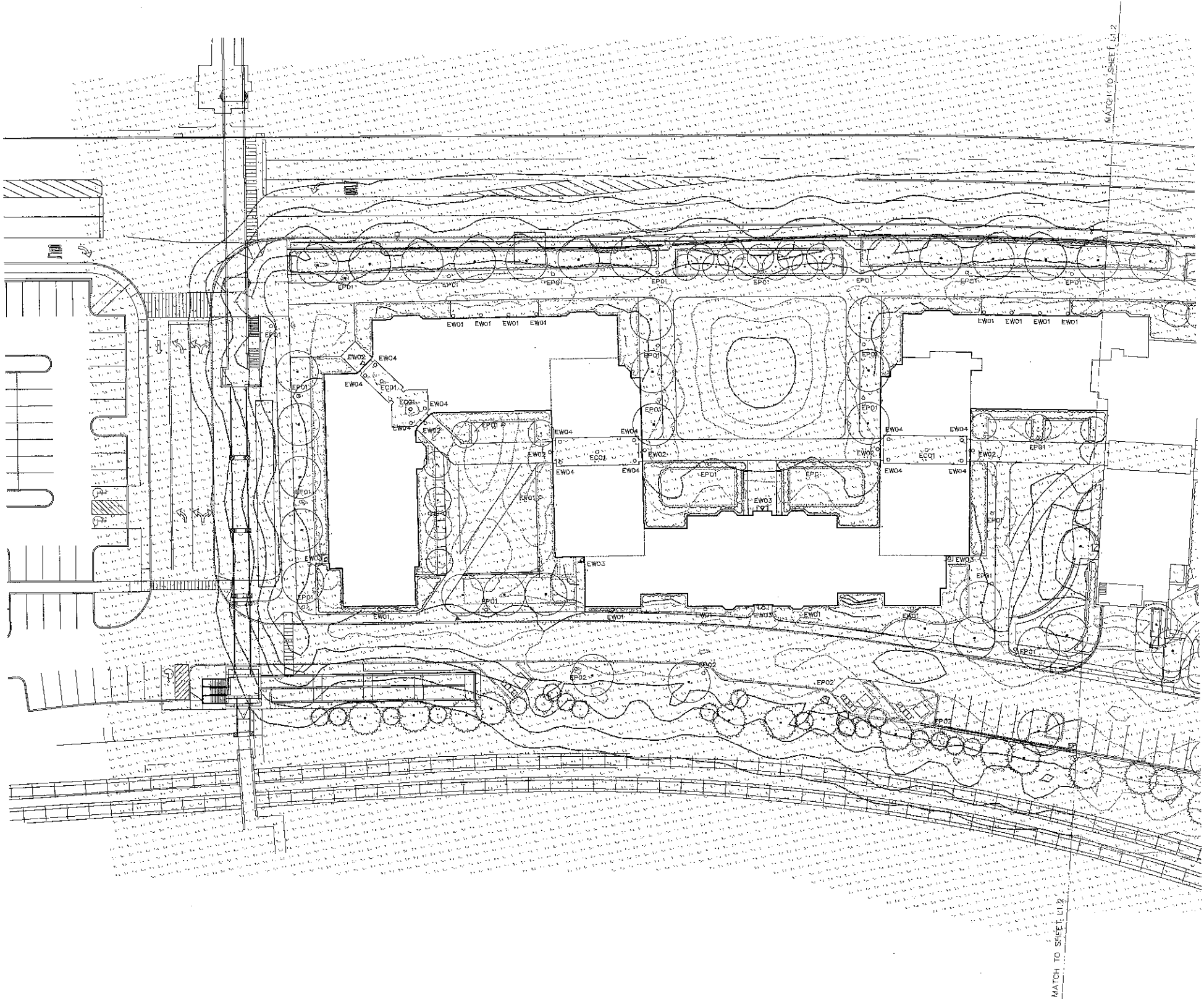
PRELIM. LAND DEVELOPMENT
 SUBMISSION
 Revision
 Date December 5, 2014
 Title Construction Detail Sheet
 Scale N.T.S.
 Drawn By MMB

C6.5

Sheet No. 23 of 30

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.





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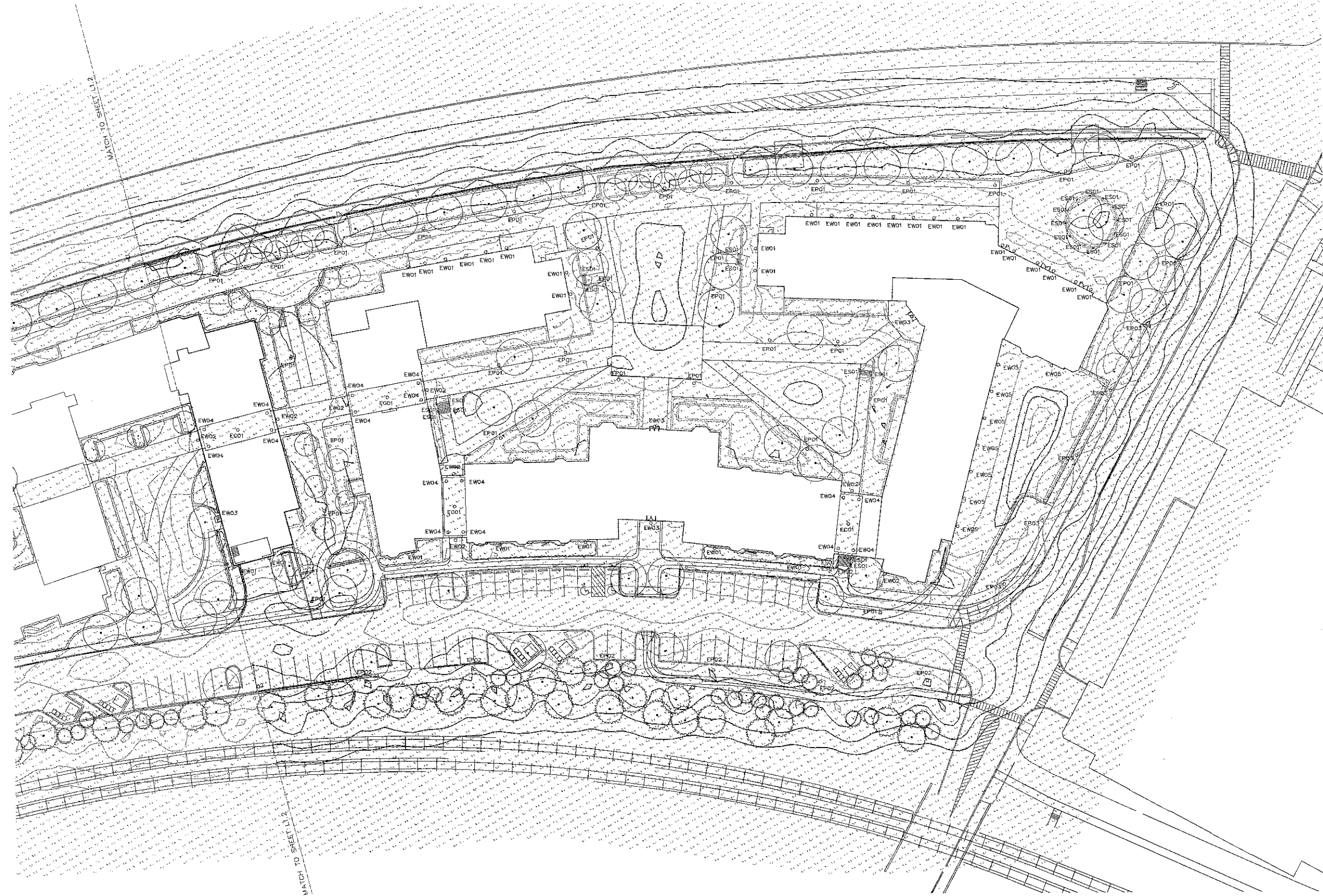
**LANCASTER AVENUE HOUSING
 NOT FOR CONSTRUCTION**

Revision .
 Date December 5, 2014
 Title Site Lighting Plan
 Scale 1" = 30'-0"
 Drawn By JL

C7.1

Sheet No. 24 of 30

Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



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LANCASTER AVENUE HOUSING
 NOT FOR CONSTRUCTION

Revision
 Date December 5, 2014
 Title Site Lighting Plan
 Scale 1" = 30'-0"
 Drawn By JL

C7.2

Sheet No. 25 of 30
 Contradict to verify all dimensions in field and inform
 Architect of any discrepancies before starting work.

PERFORMANCE LIGHTING

EC01 (1 of 1)

MANUFACTURER: INSIGHT

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Type EC01

MS080A/MS080B LED MAIN STREET

EP Series (1 of 3)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Types EP01, EP02 & EP03

440 Lighting Lantern Fixtures

BUILDING A PART NUMBER

EP Series (2 of 3)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

EP Series (3 of 3)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

ES01 (1 of 2)

QUADRA

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Type ES01

ES01 (2 of 2)

QUADRA

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

D342 LED LUMINAIRE

D342

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Type EW01

D342 LED LUMINAIRE

D342

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

D342 LED LUMINAIRE

D342

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Types EW02 & EW03

EW02/EW03 (2 of 2)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

TYPE	DESCRIPTION	MANUFACTURER	CATALOG #	LAMP	LAMP TYPE	WATT	VOLTS	APERTURE	DEPTH
EC01	DECORATIVE FLUORESCENT FIXTURE WITH (2) INTEGRAL ELECTRONIC BALLASTS, (2) LAMPS, DIE CAST ALUM. HOUSING, HEAVY DUTY PRESSED GLASS DIFFUSER AND TEXTURED WHITE FINISH	FRISMA LIGHTING	074930	PHILIPS	22W T5 CIRCLE 4.4IN T5 CIRCLE	1	62	120	20.23" Dia. Ext.
EP01	MOUNTED LANTERN FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENSES, INTEGRAL DIMMING DRIVER, ROOF MOUNTED CUT OFF OPTIC WITH TYPE II DISTRIBUTION ON 12-0" DECORATIVE POLE, BLACK TEXTURED	STERNBERG LIGHTING	MS05ALED/3/OTHER/44/R-45-T3/MDL/CA/8KT	INCLUDED		57	120	15"W	26"H
EP02	MOUNTED LANTERN FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENSES, INTEGRAL DIMMING DRIVER, ROOF MOUNTED CUT OFF OPTIC WITH TYPE II DISTRIBUTION & HOUSE SIDE SHIELD ON 12-0" DECORATIVE POLE.	STERNBERG LIGHTING	MS05ALED/3/OTHER/44/R-45-T3/MDL/HSS/CA/8KT	INCLUDED		57	120	15"W	26"H
EP03	MOUNTED LANTERN FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENSES, INTEGRAL DIMMING DRIVER, ROOF MOUNTED CUT OFF OPTIC WITH TYPE II DISTRIBUTION ON 12-0" DECORATIVE POLE, BLACK TEXTURED	STERNBERG LIGHTING	MS05ALED/3/OTHER/44/R-45-T3/MDL/CA/8KT	INCLUDED		57	120	15"W	26"H
ES01	LED STEP LIGHT WITH CAST ALUMINUM HOUSING, CLEAR ACRYLIC LENS, INTEGRAL DIMMABLE DRIVER, NEUTRAL WHITE OUTPUT AND EXTERNAL VISOR FOR FULL CUT OFF. COLOR TO BE SELECTED BY ARCHITECT.	INSIGHT LIGHTING	QD-1240XX-15-2XX-VVS	INCLUDED		12	277	11 5/8" X 1 1/4"	3 7/8"
EW01	DECORATIVE LED FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENS, INTEGRAL DIMMABLE DRIVER, NEUTRAL WHITE LIGHT ROOF TOP OUTPUT FOR TYPE II DISTRIBUTION WITH CUT OFF AND BLACK TEXTURED	AMERLUX LIGHTING KING LUMINAIRE	D342-CA-AM-AS-3H-TBK (Fixture)	INCLUDED		57	120	15"W	26"H
EW02	DECORATIVE LED FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENS, INTEGRAL DIMMABLE DRIVER, NEUTRAL WHITE LIGHT ROOF TOP OUTPUT FOR TYPE II DISTRIBUTION WITH CUT OFF AND BLACK TEXTURED	AMERLUX LIGHTING KING LUMINAIRE	D342-CA-AM-AS-3H-TBK (Fixture)	INCLUDED		57	120	15"W	26"H
EW03	DECORATIVE LED FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENS, INTEGRAL DIMMABLE DRIVER, NEUTRAL WHITE LIGHT ROOF TOP OUTPUT FOR TYPE II DISTRIBUTION WITH CUT OFF AND BLACK TEXTURED	AMERLUX LIGHTING KING LUMINAIRE	K457-S-1-BK (Bracket arm)	INCLUDED		57	120	15"W	26"H
EW04	DECORATIVE LED FIXTURE WITH CAST ALUM. HOUSING, CLEAR ACRYLIC LENS, INTEGRAL DIMMABLE DRIVER, NEUTRAL WHITE LIGHT ROOF TOP OUTPUT FOR TYPE II DISTRIBUTION WITH CUT OFF AND BLACK TEXTURED	BEACON LIGHTING	LAJ20AC24NE-27-4K-UNV-DIR388T	INCLUDED		27	120	10 3/4" W	21 3/4" H
EW04 Alt.	DECORATIVE LED FIXTURE WITH NEUTRAL WHITE OUTPUT, CLEAR ACRYLIC LENS, DIRECT TYPE III CUT OFF DISTRIBUTION AND BLACK TEXTURED FINISH ON ALL ITEMS. LOCATED IN PASSAGEWAYS.	DABMAR LIGHTING	GM116-LED20-TEXTURED BLACK-CUT OFF	INCLUDED		20	120	9 3/8" Dia.	18 3/4" H
EW05	TRAPAZOIDAL WEDGE LED DOWNLIGHT SCENE WITH INTEGRAL DRIVER, TYPE II OPTICS, NEUTRAL WHITE LIGHT OUTPUT AND PAINT COLOR FINISH TO BE SELECTED BY ARCHITECT.	GARDCO	101L-TYPE III H55-NW/UNV-DC	INCLUDED		55	120	16 1/4" W x 120" T/H	9" Ext.

BEACON

EW04 (1 of 2)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Type EW04

BEACON

EW04 (2 of 2)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

GM116 WALL FIXTURE

EW04 Alt. (1 of 1)

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Type EW04 Alt.

EW05 (1 of 1)

100 Line LED

101 Performance Scene LED

DESCRIPTION: 120V LED, 100W, 1200lm, 120° beam angle, 5000K, 5-year warranty.

DETAILS: Includes mounting hardware and cut-off details.

Fixture Type EW05

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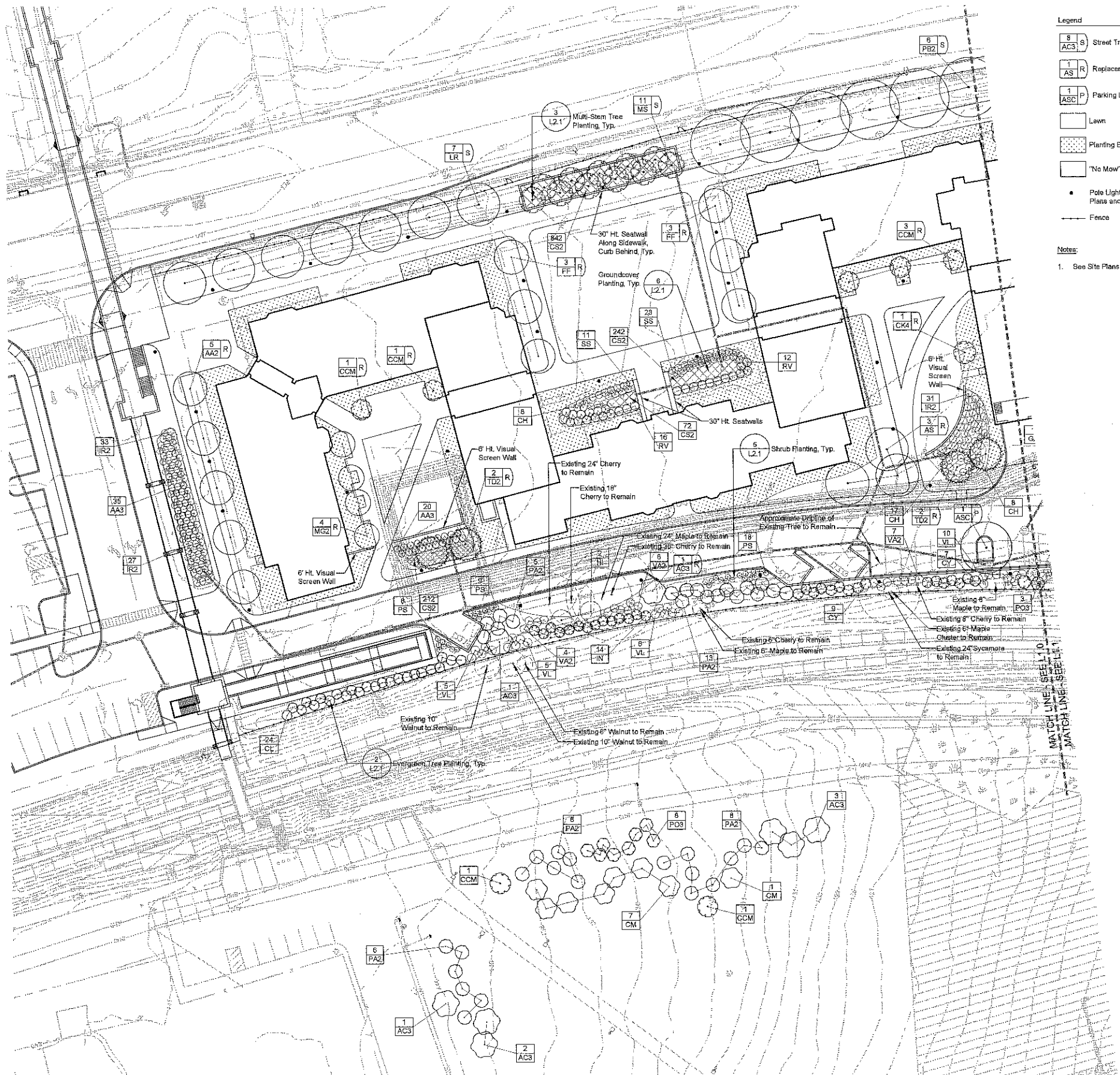
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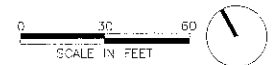
Revision
Date December 5, 2014
Title Site Lighting Schedule and Details
Scale Not to scale
Drawn By J.L.

C7.3



- Legend**
- 8 AC3 S Street Trees
 - 1 AS R Replacement Trees
 - 1 ASC P Parking Lot Trees
 - Lawn
 - Planting Beds
 - "No Mow" Seed Mix
 - Pole Light; See Lighting Plans and Details
 - Fence

Notes:
 1. See Site Plans for all proposed paving information.



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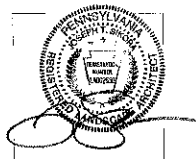
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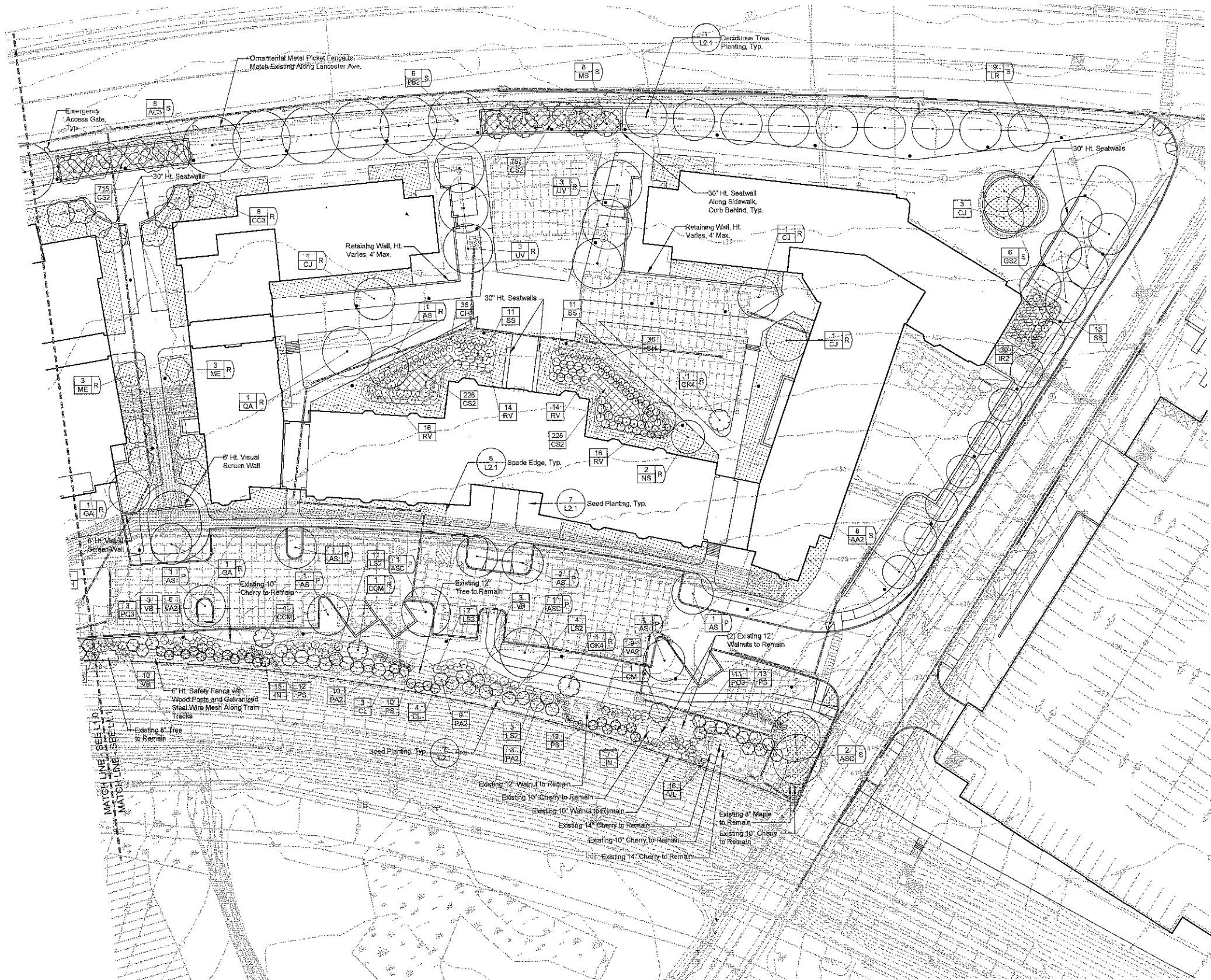
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Joseph Sikora
 P.A.L.A. # LAC02030

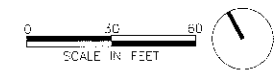
PRELIM. LAND DEVELOPMENT
 SUBMISSION
 Revision
 Date December 5, 2014
 Title Planting Plan
 Scale 1" = 30'-0"
 Drawn By RM

L1.0
 Sheet No. 27 of 30
 Contractor to verify all dimensions in field and inform Architect of any discrepancies before starting work.



- Legend**
- 8 AC3 S Street Trees
 - 1 AS R Replacement Trees
 - 1 ABC P Parking Lot Trees
 - Lawn
 - Planting Beds
 - "No Mow" Seed Mix
 - Pole Light; See Lighting Plans and Details
 - Fence

Notes:
 1. See Site Plans for all proposed paving information.



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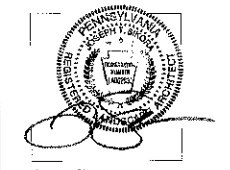
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PRELIM. LAND DEVELOPMENT SUBMISSION

Revision	
Date	December 5, 2014
Title	Planting Plan
Scale	1" = 30'-0"
Drawn By	RM

TREE REQUIREMENT TABLE		
	REQUIRED	PROPOSED
STREET TREES		
LANCASTER AVENUE = 1,220 FT. SECTION 255-38.B. - INTERVALS OF NOT MORE THAN 30 FEET	1,220/30' = 41 TREES	55 TREES
SOUTH ITHAN AVENUE = 466 FT. SECTION 255-38.B. - INTERVALS OF NOT MORE THAN 30 FEET	466/30' = 16 TREES	16 TREES
BUFFER SCREENS		
SOUTHERN PROPERTY LINE ADJACENT TO R-100 TRAIN RIGHT OF WAY SECTION 255-42 CLASS 'B' BUFFER SCREEN OPTION SELECTED: (1) EVERGREEN PER 15 FEET (INFORMALLY ARRANGED) PLUS; (1) EVERGREEN SHRUB PER 8 FEET (INFORMALLY ARRANGED)	827/15' = 62 EVERGREEN TREES 827/8' = 116 EVERGREEN SHRUBS	140 EVERGREEN TREES 2 UNDERSTORY DECIDUOUS TREES* 124 EVERGREEN SHRUBS 75 DECIDUOUS SHRUBS* SEE NOTE #1
ALDWIN TRIANGLE	NOT APPLICABLE	28 EVERGREEN TREES 16 UNDERSTORY DECIDUOUS TREES
REPLACEMENT TREES		
HOUSING PROJECT SITE 8 TO 18 INCH DBH REMOVED = (1) REPLACEMENT TREE 19 TO 29 INCH DBH REMOVED = (3) REPLACEMENT TREES** 30 INCH DBH OR GREATER REMOVED = (8) REPLACEMENT TREES**	(38) REMOVALS @ 8 TO 18 INCH = 38 REPLACEMENTS (3) REMOVALS @ 19 TO 29 INCH = (3)(3) = 9 REPLACEMENTS TOTAL REPLACEMENT TREES REQUIRED = 48 TREES	LARGE CANOPY TREES = 33 TREES* ORNAMENTAL TREES = 29 TREES*
PARKING LOT		
SECTION 255-28.B. - (1) ONE TREE FOR EVERY FIVE PARKING SPACES IN SINGLE BAYS AND ONE TREE FOR EVERY TEN PARKING SPACES IN DOUBLE BAYS	62 SPACES/10 = 6.2	10

NOTES:

- QUANTITY, AND ARRANGEMENT OF PLANT MATERIAL WITHIN BUFFER SCREEN WILL PRODUCE A VISUAL SCREEN NOT TO BE SEEN THROUGH AND PROVIDE IMMEDIATE VISUAL SCREENING TO THE ADJUTING PROPERTY OR DISTRICT AS PER SECTION 280-71.A. OF THE TOWNSHIP ZONING ORDINANCE.

PLANT SCHEDULE						
CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
AA2	13	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE	B & B	2 1/2" - 3"	
AS	11	ACER RUBRUM 'SOMERSET'	SOMERSET RED MAPLE	B & B	2" - 2 1/2"	
ASC	5	ACER SACCHARUM 'COMMEMORATION'	COMMEMORATION SUGAR MAPLE	B & B	2" - 2 1/2"	
CJ	6	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	B & B	2" - 2 1/2"	
FF	6	FAGUS SYLVATICA 'FASTIGIATA'	EUROPEAN BEECH	B & B	2" - 2 1/2"	
GA	2	GINKGO BILOBA 'AUTUMN GOLD' TM	MAIDENHAIR TREE	B & B	2" - 2 1/2"	
GS2	6	GLEDITSIA TRIACANTHOS 'SKYLINE'	SKYLINE HONEY LOCUST	B & B	2 1/2" - 3"	
LR	16	LIQUIDAMBAR STYRACIFLUA 'ROTUNDILOBA' TM	ROUND-LOBED SWEET GUM	B & B	2 1/2" - 3"	
NS	2	NYSSA SYLVATICA	SOUR GUM	B & B	2" - 2 1/2"	
PB2	12	PLATANUS X ACERIFOLIA 'BLOODGOOD'	LONDON PLANE TREE	B & B	2 1/2" - 3"	
QA	1	QUERCUS ALBA	WHITE OAK	B & B	2" - 2 1/2"	
TD2	4	TAXODIUM DISTICHUM	BALD CYPRESS	B & B		8'-10' HT.
UV	6	ULMUS AMERICANA 'VALLEY FORGE'	AMERICAN ELM	B & B	2" - 2 1/2"	
EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
CY	16	CRYPTOMERIA JAPONICA 'YOSHINO'	YOSHINO CRYPTOMERIA	B & B		8'-10' HT.
JN	36	ILEX X 'NELLIE R STEVENS'	NELLIE STEVENS HOLLY	B & B		8'-10' HT.
PA2	60	PICEA ABIES	NORWAY SPRUCE	B & B		8'-10' HT.
PC3	25	PICEA OMORIKA	SERBIAN SPRUCE	B & B		8'-10' HT.
CL	31	X CUPRESSOCYPARIS LEYLANDII	LEYLANDI CYPRESS	B & B		8'-10' HT.
ORNAMENTAL TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
AC3	16	AMELANCHIER CANADENSIS	SHADELOW SERVICEBERRY MULTI-TRUNK	B & B		8'-10' HT.
CCM	9	CERCIS CANADENSIS	EASTERN REDBUD MULTI-TRUNK	B & B		8'-10' HT.
CC3	8	CORNUS FLORIDA 'CHEROKEE CHIEF'	CHEROKEE CHIEF DOGWOOD	B & B	2" - 2 1/2"	
CK4	3	CORNUS KOUSA	KOUSA DOGWOOD	B & B		8'-10' HT.
CM	9	CORNUS MAS	CORNELIAN CHERRY DOGWOOD	B & B		8'-10' HT.
ME	6	MAGNOLIA GRANDIFLORA 'EDITH BOGUE'	EDITH BOGUE SOUTHERN MAGNOLIA	B & B		8'-10' HT.
MS	19	MAGNOLIA VIRGINIANA	SWEET BAY MULTI-TRUNK	B & B		8'-10' HT.
MG2	4	MAGNOLIA X 'GALAXY'	GALAXY MAGNOLIA	B & B	2" - 2 1/2"	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	
AA3	55	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	BRILLIANT RED CHOKEBERRY/RED CHOKEBERRY	3 GAL	24"-30" HT.	
CH	105	CLETHRA ALNIFOLIA 'HUMMINGBIRD'	SUMMERSWEET	3 GAL	18"-24" SPREAD	
HI	2	HAMAMELIS X INTERMEDIA 'ARNOLD PROMISE'	ARNOLD PROMISE HYBRID WITCH HAZEL	B & B	4'-5' HT.	
IR2	121	ILEX VERTICILLATA 'RED SPRITE'	RED SPRITE WINTERBERRY	3 GAL	24"-30" HT	
LS2	25	LINDERA GLAUCA SALICIFOLIA	SPICEBUSH	B & B	4'-5' HT.	
PS	83	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	SCHIPKA LAUREL	B & B	3' - 4' HT.	
RV	88	RHODODENDRON VISCOSUM	SWAMP AZALEA	3 GAL	18"-24" HT.	
SS	71	SPIRAEA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS JAPANESE SPIREA	3 GAL	18"-24" SPREAD	
VA2	32	VIBURNUM DENTATUM	VIBURNUM	B & B	6'-8' HT.	
VL	42	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	B & B	5'-6' HT.	
VB	16	VIBURNUM X BURKWOODII	BURKWOOD VIBURNUM	B & B	4'-5' HT.	
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT		
CS2	3,296	CAREX SPP. @ 15" O.C.		FLAT		

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**VMA
RAMSA**

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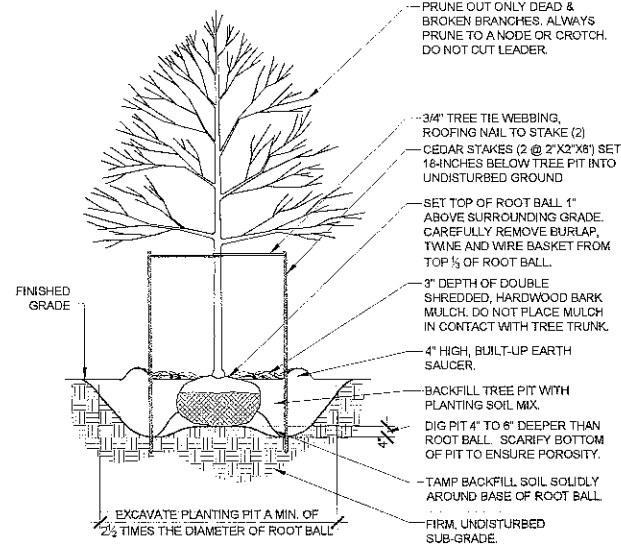
**PRELIM. LAND DEVELOPMENT
SUBMISSION**

Revision
Date December 5, 2014
Title Planting Schedule and
Tabulations
Scale As Indicated
Drawn By DF

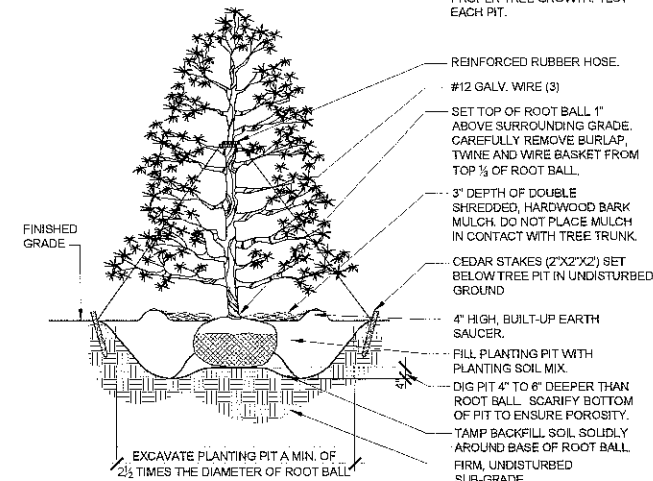
L2.0

Sheet No. 29 of 30

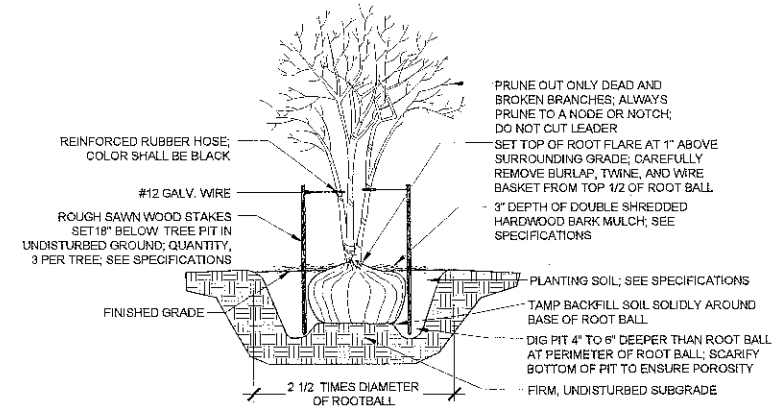
Consultant to verify all dimensions in field and inform
Architect of any discrepancies before starting work.



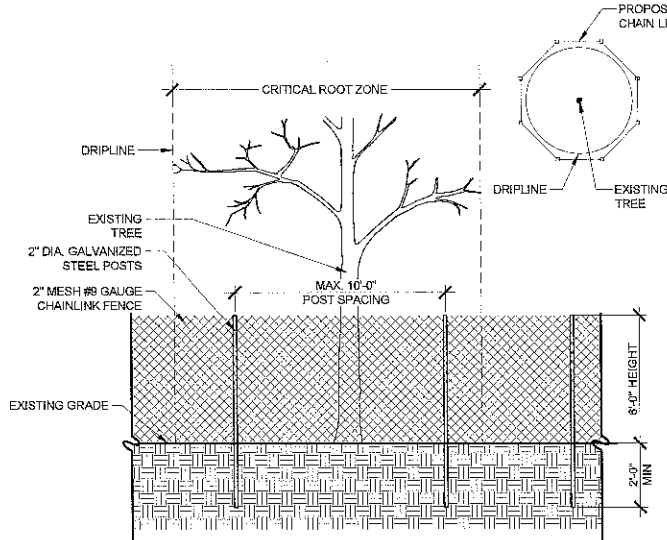
1 Deciduous Tree Planting
L2.1 N.T.S.



2 Evergreen Tree Planting
L2.1 N.T.S.

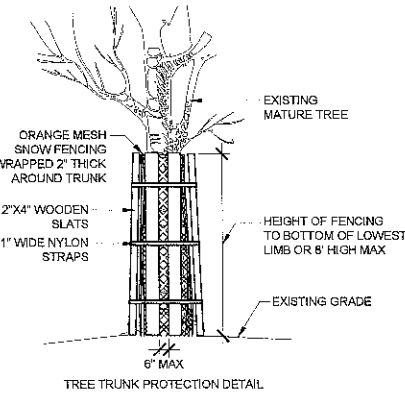


3 Multi-Stem Tree Planting
L2.1 Scale: 0 1' 2' 4' Scale: 1/2"=1'-0"

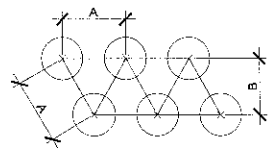


4 Tree Protection Detail
L2.1 Scale: 0 2' 4' 8' Scale: 1/4"=1'-0"

- NOTES:
1. NO STORAGE OF MATERIALS OR OPERATION OF EQUIPMENT SHALL BE PERMITTED WITHIN TREE PROTECTION FENCING.
 2. A 4" LAYER OF COARSE MULCH OR WOODCHIPS IS TO BE PLACED BENEATH THE DRIPLINE OF THE PROTECTED TREES. MULCH IS TO BE KEPT 12" FROM THE TRUNK.
 3. A PROTECTIVE BARRIER OF 6' CHAIN LINK FENCING SHALL BE INSTALLED AROUND THE DRIPLINE OF THE PROTECTED TREE(S). THE FENCING CAN BE MOVED WITHIN THE DRIPLINES IF AUTHORIZED BY THE CONSULTING ARBORIST BUT NOT CLOSER THAN 2' FROM THE TRUNK OF ANY TREE. FENCE POSTS SHALL BE 2.0" IN DIAMETER AND ARE TO BE DRIVEN 2" INTO THE GROUND. THE DISTANCE BETWEEN POSTS SHALL NOT BE MORE THAN 10'. THIS ENCLOSED AREA IS THE TREE PROTECTION ZONE (TPV2).
 4. FENCING SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE WORK AT THE SITE OR UNTIL REMOVAL IS APPROVED BY OWNERS REPRESENTATIVE.
 5. ADDITIONAL WARNING SIGNS SHOULD ALSO BE PLACED ON THE FENCING AND IN APPROPRIATE AREAS NEAR THE WORK ZONE.
 6. TREE PROTECTION FENCE SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AT THE END OF EVERY DAY FOR THE DURATION OF THE PROJECT. THE FENCE SHALL BE REPAIRED WHERE NECESSARY. WHERE FENCE MUST BE LOCATED WITHIN FIVE(5) FEET OF EXISTING TREE TRUNK, THE TRUNK PROTECTION DETAIL SHALL ALSO BE USED.
 7. TREE PROTECTION MEASURES SHALL COMPLY WITH ALL TOWNSHIP REGULATIONS AND ORDINANCES.



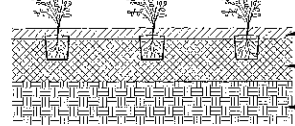
5 Shrub Planting
L2.1 Scale: 0 1' 2' 4' Scale: 1/2"=1'-0"



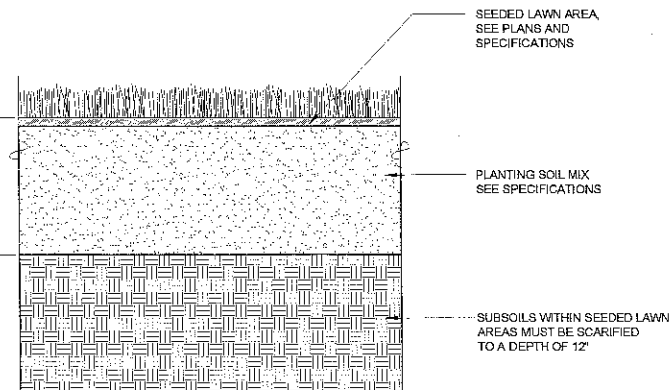
6 Groundcover Planting
L2.1 N.T.S.

A O.C. SPACING	B O.C. SPACING
8"	7"
9"	7 3/4"
10"	8 5/8"
12"	10 1/2"
15"	13"
18"	15 1/2"
24"	21"

- NOTES:
1. PRIOR TO BACKFILLING CUT POT-BOUND ROOTS. AFTER PLANTING, THE ENTIRE BED SHALL BE EDGED AND THOROUGHLY WATERED.
 2. SEE SPECIFICATIONS FOR LANDSCAPE BED PREPARATION



7 Seed Planting
L2.1 N.T.S.



8 Spade Edge
L2.1 N.T.S.

