PRELIMINARY & FINAL MAJOR SITE PLAN AND FINAL CONSTRUCTION PLANS

PREPARED FOR

1377 ROUTE 206

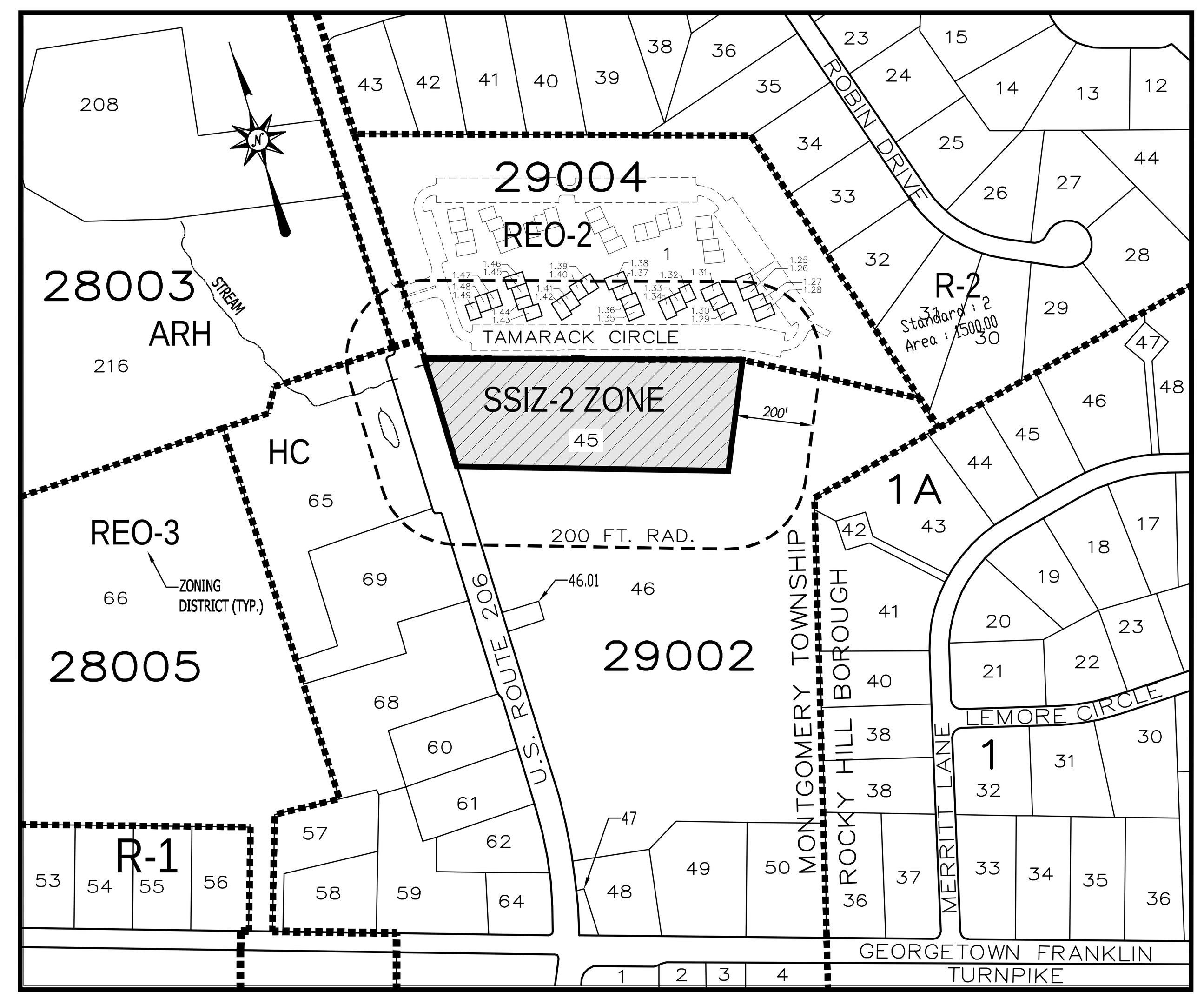
LOT 45 IN BLOCK 29002

SITUATED IN

MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

GENERAL NOTES

1. SUBJECT PROPERTY IS KNOWN AS LOT 45 IN BLOCK 29002 AS SHOWN ON SHEET 56 OF THE OFFICIAL TAX MAP OF MONTGOMERY TOWNSHIP.
2. ALL PROPOSED UTILITIES ARE TO BE LOCATED UNDERGROUND AND SHALL BE APPROVED BY THE APPLICABLE AGENCIES AND UTILITY COMPANY.
3. EXISTING UNDERGROUND UTILITY INFORMATION SHOWN HEREON IS APPROXIMATE AND IS NOT GUARANTEED AS TO ACCURACY OR COMPLETENESS. THE CONTRACTOR SHALL VERIFY ALL INFORMATION PRIOR TO BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT ON CALL SERVICE AT 811 (OR 1-800-272-1000) AND OTHER LOCAL UTILITY COMPANIES AS REQUIRED FOR MARKOUT PRIOR TO ANY EXCAVATION. WHERE EXISTING UNDERGROUND UTILITIES ARE TO BE CROSSED BY PROPOSED CONSTRUCTION, TEST PITS SHALL BE DUG BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO ASCERTAIN EXISTING LOCATIONS, ELEVATIONS, MATERIALS AND SIZES. TEST PIT INFORMATION SHALL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION TO PERMIT ADJUSTMENT AS REQUIRED TO AVOID CONFLICTS.
4. PROPOSED UTILITY LOCATIONS SHOWN HEREON ARE FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REPRESENT ALL REQUIRED UTILITY RELOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING AND/OR COORDINATING ALL REQUIRED UTILITY RELOCATIONS IN COOPERATION WITH THE RESPECTIVE UTILITY COMPANY/AUTHORITIES.
5. THERE SHALL BE NO ON-SITE BURIAL OF CONSTRUCTION MATERIAL, TREES, TREE STUMPS, BRUSH OR OTHER SURPLUS MATERIAL. ALL SUCH MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
6. MAXIMUM PROPOSED GRADING SLOPE ON SITE IS 3:1 UNLESS OTHERWISE NOTED.
7. ALL WHEELCHAIR ACCESSIBLE RAMPS AND PARKING SPACES SHALL MEET THE REQUIREMENTS OF CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN.
8. TRAFFIC SIGNAGE AND STRIPING SHALL CORRESPOND TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), LATEST EDITION. SIGNS SHALL CONFORM TO STANDARD MUTCD SIZES UNLESS OTHERWISE APPROVED BY THE GOVERNING AUTHORITY.
9. ALL CONSTRUCTION IS TO BE PERFORMED IN STRICT COMPLIANCE WITH ALL APPLICABLE MUNICIPAL, COUNTY AND STATE AGENCY REQUIREMENTS.
10. CONSTRUCTION MATERIALS AND METHODS NOT OTHERWISE SPECIFIED OR SHOWN HEREIN SHALL CONFORM TO NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION AND AMENDMENTS).
11. SITE AND UTILITY WORK ARE TO BE PERFORMED IN A MANNER TO MINIMIZE DAMAGE TO EXISTING VEGETATION AND TREES. ALL AREAS NOT AFFECTED BY CONSTRUCTION ARE TO REMAIN NATURAL, AND PROTECTED BY APPROPRIATE FENCING.
12. TREE CLEARING SHALL BE MINIMIZED TO THE MAXIMUM EXTENT PRACTICABLE AND SHALL INCLUDE THE REMOVAL FROM THE SITE OF ALL STUMPS, ROOTS AND VEGETATIVE DEBRIS REMNANTS.
13. COMPACTION OF FILL AREAS, BACKFILL FOR PROPOSED UTILITIES AND UNDER CONCRETE STRUCTURES, SHALL MEET ALL CODE REQUIREMENTS AND BE EQUAL TO A MINIMUM 95% MODIFIED PROCTOR DENSITY.
14. ALL TRENCHES SHALL BE BACKFILLED WITHOUT DELAY. OPEN TRENCHES SHALL BE KEPT TO A MINIMUM. OPEN TRENCHES SHALL BE STEEL PLATED AND/OR BARRICADED WHEN WORK IS NOT IN PROGRESS.
15. ALL EXISTING CONTOUR LINES, PROFILES AND SPOT ELEVATIONS ARE APPROXIMATE. ALL PROPOSED CONTOURS SHALL BE GRADED TO BLEND EVENLY WITH EXISTING CONTOURS.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO SURROUNDING PROPERTY AND SHALL RESTORE ANY PROPERTY DAMAGED AS A RESULT OF HIS OPERATIONS. ALL RESTORATION COSTS WILL BE BORNE BY THE CONTRACTOR AT NO ADDITIONAL COST.
17. APPLICANT SHALL COORDINATE A PRE-CONSTRUCTION MEETING WITH THE MUNICIPAL ENGINEER'S OFFICE AND PROVIDE MINIMUM 48 HOURS NOTICE PRIOR TO COMMENCING CONSTRUCTION.
18. THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL RESPONSIBLE FOR CONSTRUCTION SITE SAFETY DURING THE COURSE OF SITE IMPROVEMENTS PURSUANT TO NJAC 5:28-2.21 OF THE NJ UNIFORM CONSTRUCTION CODE AND CFR 1926.32(F) (OSHA COMPETENT PERSON).
19. THIS SET OF PLANS HAS BEEN PREPARED FOR THE PURPOSES OF MUNICIPAL AND AGENCY REVIEW AND APPROVAL. THIS SET OF PLANS SHALL NOT BE UTILIZED AS CONSTRUCTION DOCUMENTS UNTIL ALL APPROVALS HAVE BEEN SATISFIED AND PLANS MARKED AS "ISSUED FOR CONSTRUCTION".
20. ANY DISCREPANCIES ENCOUNTERED BETWEEN FIELD CONDITIONS AND DESIGN PLANS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO INSTALLATION OF IMPROVEMENTS.
21. FOR SITE ENVIRONMENT CLEANUP AND/OR GROUNDWATER REMEDIATION ACTION SEE PLANS AND DOCUMENTS PREPARED BY ENVIRONMENTAL RESOURCES MANAGEMENT (ERM), EWING NJ 609-403-7557. INFORMATION SHOWN ON THIS PLANS SITE PLAN IN THESE REGARD IS FOR ILLUSTRATIVE PURPOSE ONLY AND INFORMATION BY ERM SHALL GOVERN THIS WORK. THIS INCLUDES EXISTING WELLS, PIPELINES AND EXISTING ONSITE UTILITY BUILDING FOR GROUNDWATER TREATMENT.
22. THESE GENERAL NOTES SHALL APPLY TO ALL SHEETS IN THE SET.



MONTGOMERY TOWNSHIP TAX MAP SHEETS 53, 54, 55, 55.03, 56, 61,
ROCKY HILL BOROUGH TAX MAP SHEET 2

KEY MAP

SCALE: 1"=300'±

PROPERTY OWNERS WITHIN 200'

BLOCK No.	LOT No.	CURRENT PROPERTY OWNER
28003	216	SHARBELL PLAINSBORO INC.
28005	65	VILLAGE SHOPPER III,LLC%PUGLIESE
28005	69	VILLAGE SHOPPES AT MONTGOMERY LLC
29002	46	MONTPEN SC L.L.C.
29004	1	MONTGOMERY KNOLL OWNERS ASSOC
29004	1.25	SIGMA ACADEMY,LLC
29004	1.26	H. & E. REALTY L.L.C.
29004	1.27	H & E REALTY LLC,
29004	1.28	PINTO,LISA M.
29004	1.29	STUEBBEN, KURT & ANGELA
29004	1.30	MURPHY, HENRY B. & EILEEN M.
29004	1.31	PURVI & SUKETU HOLDINGS LLC
29004	1.32	KELLY, PAUL A. & FEIN, KAREN L.
29004	1.33	RAMZY, AYMAN M.D.
29004	1.34	LAUGHLIN REAL ESTATE INC
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29004	1.42	JMR GROUP,LLC
29004	1.43	HUANG, LIN & FREAKES ANTHONY
29004	1.44	JCCL ASSOCIATES L.L.C.
29004	1.45	STRODE, JOSEPH W. III
29004	1.46	NCC REALTY L.L.C.
29004	1.47	194 DEVELOPMENT LLC
29004	1.48	GREVE, HARALD TRUSTEE
29004	1.49	CHANG, FRANK TSE-FUI

PRELIMINARY & FINAL MAJOR SITE PLAN AND FINAL CONSTRUCTION PLANS
1377 ROUTE 206
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NJ

INDEX OF SHEETS

PREPARED BY

VAN CLEEF ENGINEERING ASSOCIATES
P.O. BOX 5877
32 BROWER LANE
HILLSBOROUGH, NEW JERSEY 08844

APPLICANT / OWNER

J. TODD VAN CLEEF
CC1377, LLC
36 BROWER LANE
HILLSBOROUGH, NJ 08844
908-359-3276

JULY 18, 2019

REVISED: JANUARY 17, 2020
REVISED: MARCH 2, 2020
REVISED: MARCH 13, 2020
REVISED: APRIL 21, 2020
REVISED: MAY 27, 2020
REVISED: JUNE 10, 2020
REVISED AUGUST 21, 2020
REVISED JANUARY 7, 2021
REVISED FEBRUARY 8, 2021
REVISED: APRIL 8, 2021
REVISED: JUNE 14, 2021

TOWNSHIP OF MONTGOMERY APPROVALS

APPLICATION NO. CASE PB-10-19
APPROVED BY:

CHAIRPERSON - PLANNING BOARD DATE

SECRETARY - PLANNING BOARD DATE

TOWNSHIP ENGINEER DATE

Know what's below. Call before you dig. 811
1-800-272-1000

REVISIONS	AUTH.	DATE
PER TOWNSHIP ENG.	M.K.F.	6/14/21
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	2/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20
PER SCD	M.K.F.	4/21/20
PER DRCC	M.K.F.	3/13/20
PER TOWNSHIP	M.K.F.	3/2/20

DATE: JULY 18, 2019
SCALE: AS NOTED
DESIGNED BY: K.H./M.K.F.
DRAWN BY: K.H./A.B.
CHECKED BY: M.K.F.
JOB NO. 03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC
With Offices In New Jersey, Pennsylvania & Delaware
32 BROWER LANE, PO BOX 5877, HILLSBOROUGH, NJ 08844
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Consulting Civil Engineering
Bridge Design
Highway Design
Construction Inspection
Geotechnical Engineering
Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture
NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

COVER SHEET
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

1

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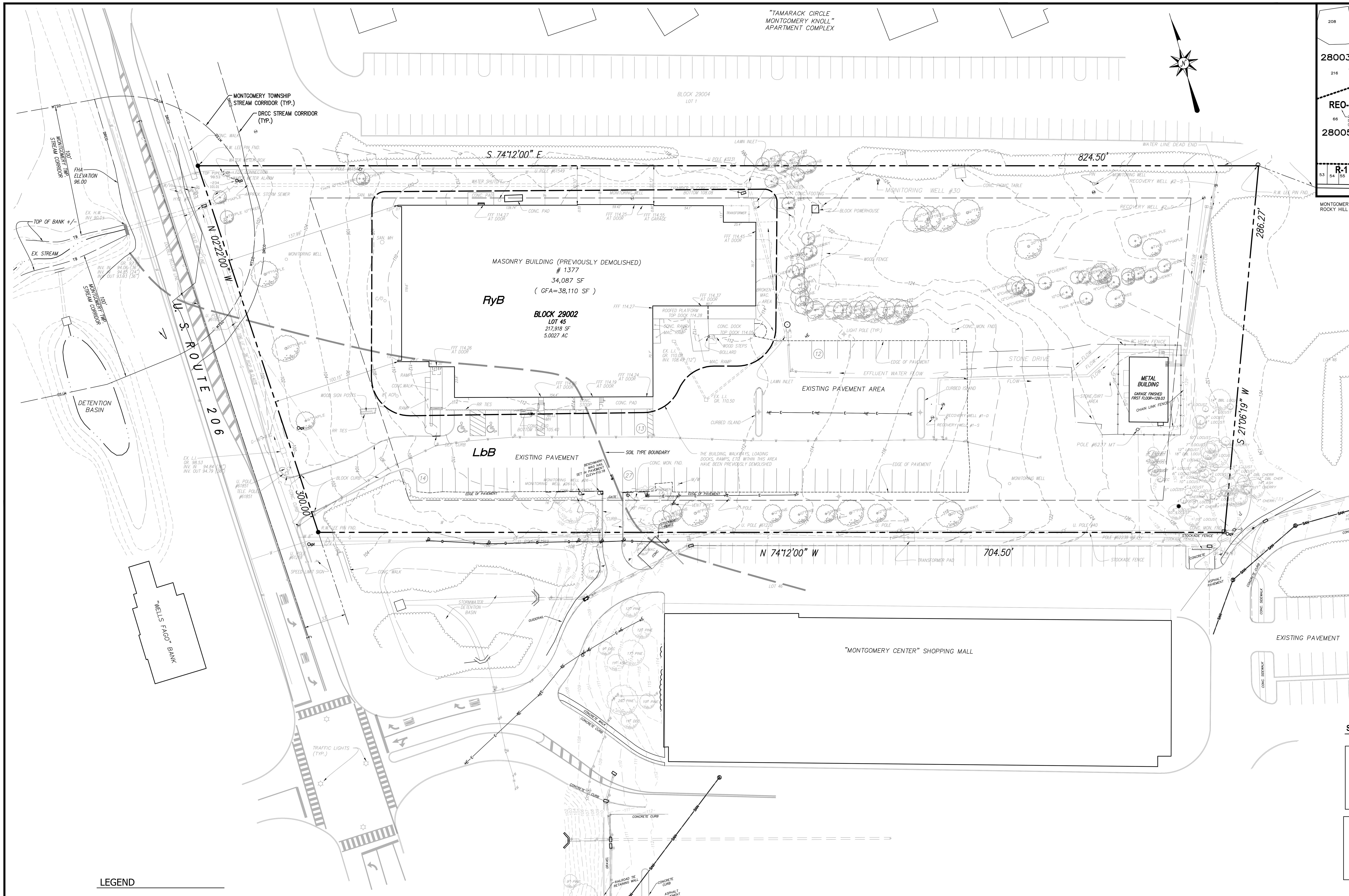

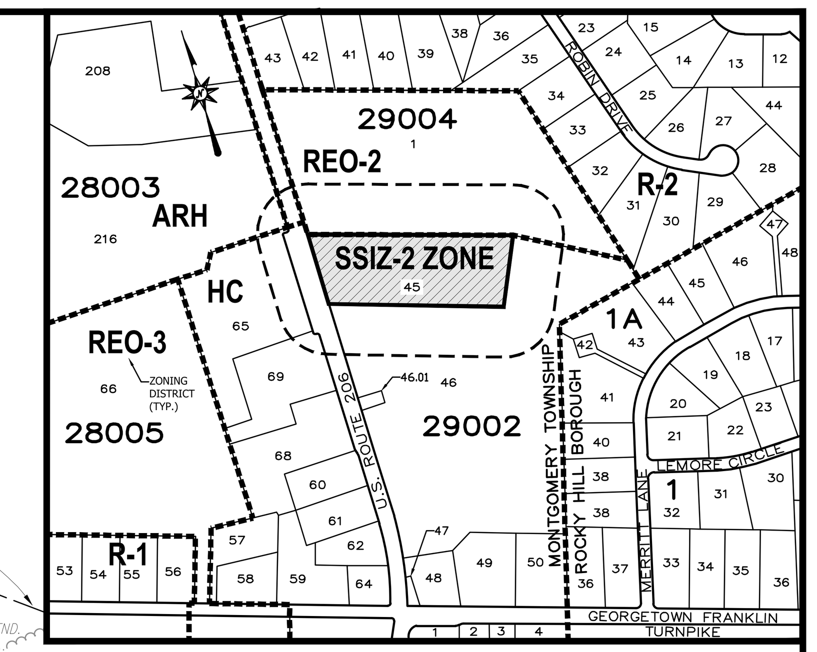

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SOIL TYPES

LbB – LAWRENCEVILLE SILT LOAM

SLOPES....................2–6%
DEPTH TO BED ROCK....................> 55 FT.
HAZARD OF EROSION....................SLIGHT
HYDROLOGIC GROUP – C

RyB – ROYCE SILT LOAM

SLOPES....................2–6%
DEPTH TO BED ROCK....................> 48 FT.
HAZARD OF EROSION....................SLIGHT
HYDROLOGIC GROUP – C

LEGEND

- BOUNDARY LINE
- CONTOUR LINE
- SPOT ELEVATION
- STORM DRAINAGE SEWER
- SANITARY SEWER
- WATER MAIN
- GAS MAIN
- HYDRANT
- WATER VALVE
- GAS VALVE
- UTILITY POLE
- LIGHT POLE
- SOIL LIMIT LINE
- LbB SOIL TYPE
- EXISTING TREES
- LIMIT OF VEGETATION

APPLICANT / OWNER

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PLAN REFERENCES:

1. "LOCATION SURVEY FOR 1377 RT. 206 BLOCK 29002 LOT 45, MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY", PREPARED BY VAN CLEEF ENGINEERING ASSOCIATES, ROBERT B. HEIBELL, N.J.P.E. & L.S. LIC. No. 20792, DATED JANUARY 7, 2004 LAST REVISED AUGUST 14, 2007.
2. EPA'S AS-BUILT DRAWINGS AS PROVIDED BY LAN ASSOCIATES, ENGINEERING, PLANNING, ARCHITECTURE, SURVEYING, Inc. BY LETTER DATED MAY 9, 2007.
3. TREES LOCATION SURVEY PERFORMED BY VAN CLEEF ENGINEERING ASSOCIATES ON NOVEMBER 2004.

SCALE: 1"=30'

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	7/27/20
PER TOWNSHIP	M.K.F.	6/10/20
PER TWP. COMMENTS	M.K.F.	3/2/20
PER TWP. COMMENTS	M.K.F.	1/17/20

DATE:	JULY 18, 2019
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Land Surveying
Professional Planning
Landscape Architecture
NJ LLC CERT. No. 24GA28132300

BY: Pamela Mathews
Pamela Mathews
New Jersey Professional Engineer and Land Surveyor
No. 41181

EXISTING FEATURES PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY

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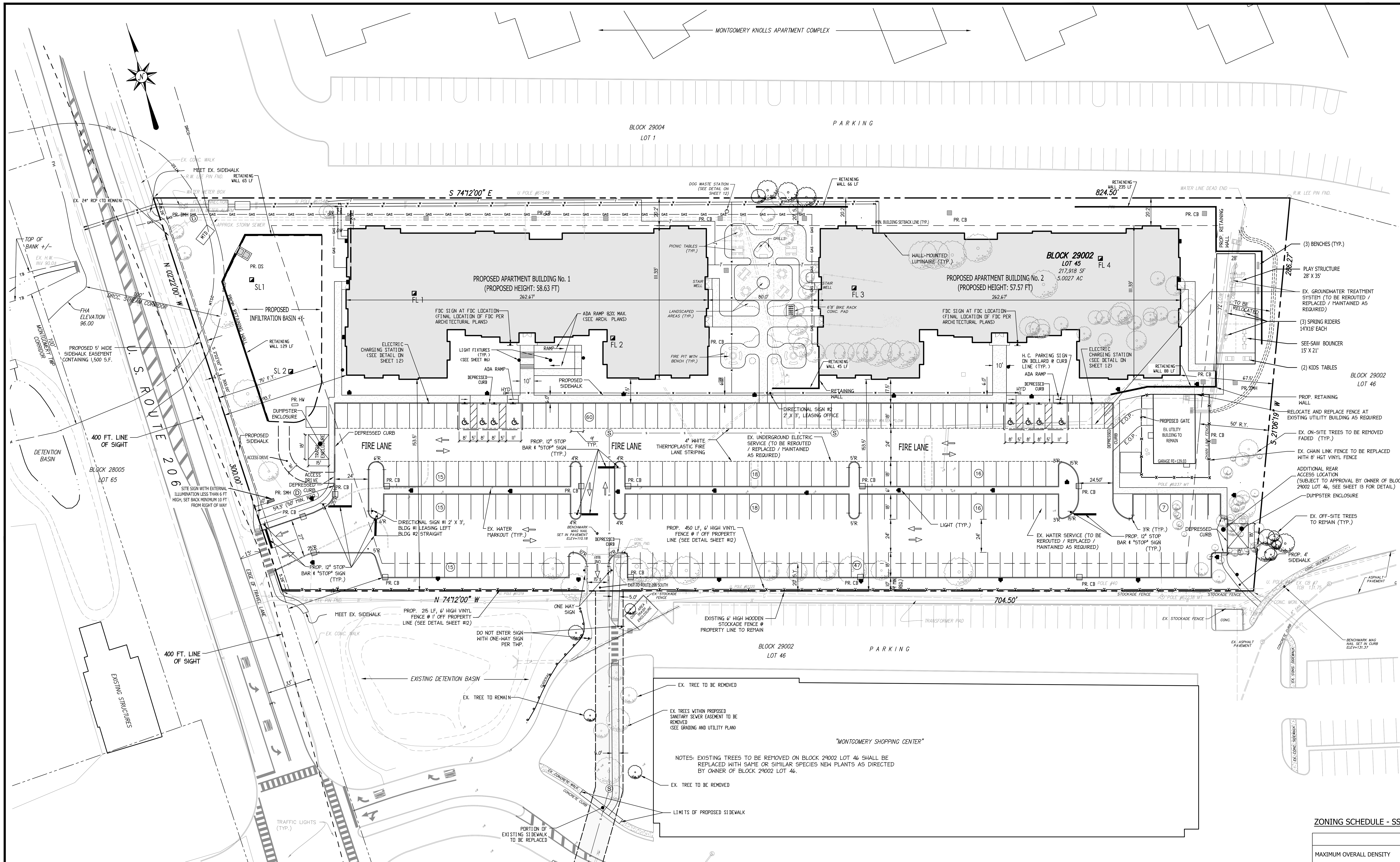

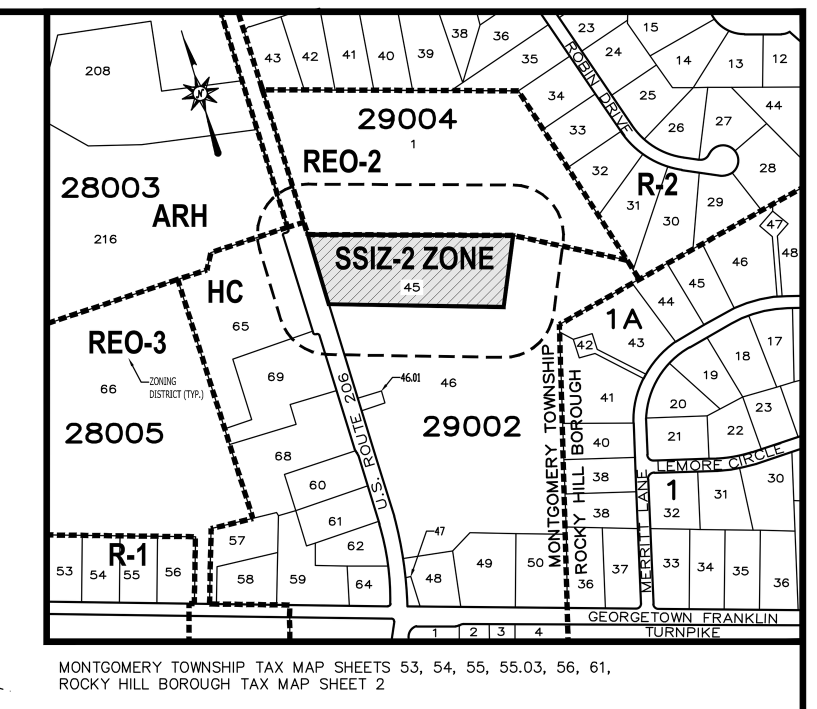

MONTGOMERY TOWNSHIP TAX MAP SHEETS 53, 54, 55, 55.03, 56, 61, ROCKY HILL BOROUGH TAX MAP SHEET 2

KEY MAP

SCALE: 1"=500'±

PARKING SUMMARY:

REQUIRED: (PER NJAC 5:21 - RESIDENTIAL SITE IMPROVEMENT STANDARDS (RSIS)

GARDEN APARTMENTS:		
1 BEDROOM - 1.8 SPACES PER UNIT:	42 UNITS x 1.8 SP./UNIT	= 75.6 SPACES
2 BEDROOMS - 2.0 SPACES PER UNIT:	67 UNITS x 2.0 SP./UNIT	= 134 SPACES
3 BEDROOMS - 2.1 SPACES PER UNIT:	6 UNITS x 2.1 SP./UNIT	= 12.6 SPACES
TOTAL SPACES REQUIRED:	115 UNITS	= 222.2 SPACES

PROPOSED:

227 SPACES (INCLUDING 8 ACCESSIBLE SPACES)

ZONING SCHEDULE - SSIZ-2 (SITE SPECIFIC INCLUSIONARY ZONE 2)

	REQUIRED	PROVIDED	COMPLIES
MAXIMUM OVERALL DENSITY	23 UNITS/ACRE	23 UNITS/ACRE	YES
MINIMUM LOT AREA	5 ACRES	5.003 ACRES	YES
MINIMUM LOT WIDTH	150 FEET	300.0 FEET	YES
MINIMUM LOT DEPTH	150 FEET	726.4 FEET	YES
MAXIMUM BUILDING HEIGHT	59 FEET / 4 STY	BLDG 1: 58.63 FEET / 4 STY BLDG 2: 57.57 FEET/4 STY	BLDG 1:YES BLDG 2: YES
MAXIMUM BUILDING COVERAGE	30 %	22.8%	YES
MAXIMUM IMPERVIOUS COVERAGE	70%	60.1%	YES
MINIMUM REAR YARD	50 FEET	67.5 FEET	YES
MINIMUM FRONT YARD	75 FEET	93.1 FEET	YES
MINIMUM SIDE YARD	20 FEET	20.2 FEET	YES
MINIMUM SEPARATION BETWEEN BUILDINGS	70 FEET	80 FEET	YES
MINIMUM SEPARATION BETWEEN BUILDING AND PARKING	10 FEET	17.5 FEET	YES
MAXIMUM ACCESSORY BUILDING HEIGHT	25 FEET/1.5 STORIES	21.0 FEET	YES

NOTES :

1. PER OWNER OF BLOCK 29002 LOT 46 FOR CONSTRUCTION ON THAT SITE GRANTEE, AT GRANTEE'S COST, AGREES TO REPAVE BY MILLING TWO (2) INCHE-S OF THE BLACKTOP AND REPLACING SAME WITH TWO (2) INCHES OF ASPHALT SURFACE CO-URSE AN AREA OF APPROXIMATELY THIRTY (30') FEET ON EITHER SIDE OF THE SANITARY SEWER EASEMENT WHERE IT CROSSES THE DRIVEWAY AND THE ADDITIONAL AREA NEAR THE SIDEWALK EASEMENTS AS SHOWN HEREON.
2. RELIEF REQUESTED FROM PROPOSED RETAINING WALL HEIGHT ALONG SIDE BUILDING NO. 1, 10.1 FEET MAX. PROPOSED VERSUS 4 FEET PERMITTED PER CODE 16-5.3B.
3. THE LOT SHALL BE DEED RESTRICTED TO REQUIRE THE PERPETUAL MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM IN ACCORDANCE WITH THE APPROVED STORMWATER MANAGEMENT MAINTENANCE PLAN, ENTITLED "STORMWATER MANAGEMENT FACILITIES, OPERATION AND MAINTENANCE MANUAL, FOR, BLOCK 29002, LOT 45, MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY", LAST REVISED 9/2/20. FURTHER, THE RESTRICTION SHALL ALLOW THAT, IN THE EVENT THAT THE RESPONSIBLE PART FAILS TO MAINTAIN THE SYSTEM, THE TOWNSHIP SHALL HAVE THE RIGHT (BUT NOT THE OBLIGATION) TO ENTER UPON THE PROPERTY TO PERFORM THE REQUISITE MAINTENANCE AT THE RESPONSIBLE PARTIES EXPENSE. THIS SHALL BE MADE A CONDITION OF ANY APPROVAL GRANTED BY THE BOARD.
4. THE MATURE TREES SPECIFIED TO BE REMOVED WITHIN THE SANITARY SEWER EASEMENT ON LOT 46 HAVE BEEN IDENTIFIED TO BE REPLACED WITH THE SAME OR SIMILAR SPECIES OF NEW PLANTS AS DIRECTED BY OWNER OF BLOCK 29002, LOT 46. THESE TREES WERE A PART OF THE SHOPPING CENTER APPROVAL, REPLACEMENT SHALL CONFIRM TO TOWNSHIP STANDARDS FOR MINIMUM SIZE AND THE REPLACEMENT PLANTINGS SHALL BE A REQUIREMENT OF THE CERTIFICATE OF OCCUPANCY FOR THIS PROJECT (SEE SHEET 5).

AFFORDABLE HOUSING BEDROOM MIX CHART:

# OF BEDROOMS	UHAC REQUIREMENTS	REQUIRED	PROPOSED
1 BEDROOM	NO MORE THAN 20%	5 UNITS (MAX.)	4 UNITS
2 BEDROOM	AT LEAST 30%	7 UNITS	14 UNITS
3 BEDROOM	AT LEAST 20%	5 UNITS	5 UNITS
	TOTAL:	23 UNITS	23 UNITS

PLAN REFERENCES:

1. "LOCATION SURVEY FOR 1377 RT. 206 BLOCK 29002 LOT 45, MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY", PREPARED BY VAN CLEEF ENGINEERING ASSOCIATES, ROBERT B. HEIBELL, N.J.P.E. & L.S. LIC. No. 20792, DATED JANUARY 7, 2004 LAST REVISED AUGUST 14, 2007.
2. EPA'S AS-BUILT DRAWINGS AS PROVIDED BY LAN ASSOCIATES, ENGINEERING, PLANNING, ARCHITECTURE, SURVEYING, Inc. BY LETTER DATED MAY 9, 2007.
3. "PARTIAL TOPOGRAPHY SURVEY FOR COUNTRY CLASSICS THROUGH BLOCK 29002, LOT 46, MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY" BY VAN CLEEF ENGINEERING ASSOCIATES, PAMELA MATHEWS, N.J.E. & L.S. LIC. No. 41181, LAST REVISED MAY 29, 2019.

LEGEND

BOUNDARY LINE
ROW LINE
EASEMENT LINE
CONTOUR LINE
TREE LINE
STORM SEWER
SANITARY SEWER
CURB LINE
HANDICAP RAMP
ELECTRIC CHARGING STATION (SEE DETAIL ON SHEET 12)
EDGE OF PAVEMENT
SOIL LIMIT LINE
WATER MAIN
GAS MAIN
HYDRANT
WATER VALVE
GAS VALVE
UTILITY POLE
SPOT GRADE
PROPOSED LIGHT
PROPOSED TYPE 'B' INLET
PROPOSED TYPE 'A' INLET

GRAPHIC SCALE

30' 0' 15' 30' 60' 90'

1 inch = 30 ft.

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REVISIONS	AUTH.	DATE
PER CLIENT	M.K.F.	6/3/21
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20
PER TWP. COMMENTS	M.K.F.	1/17/20

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DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

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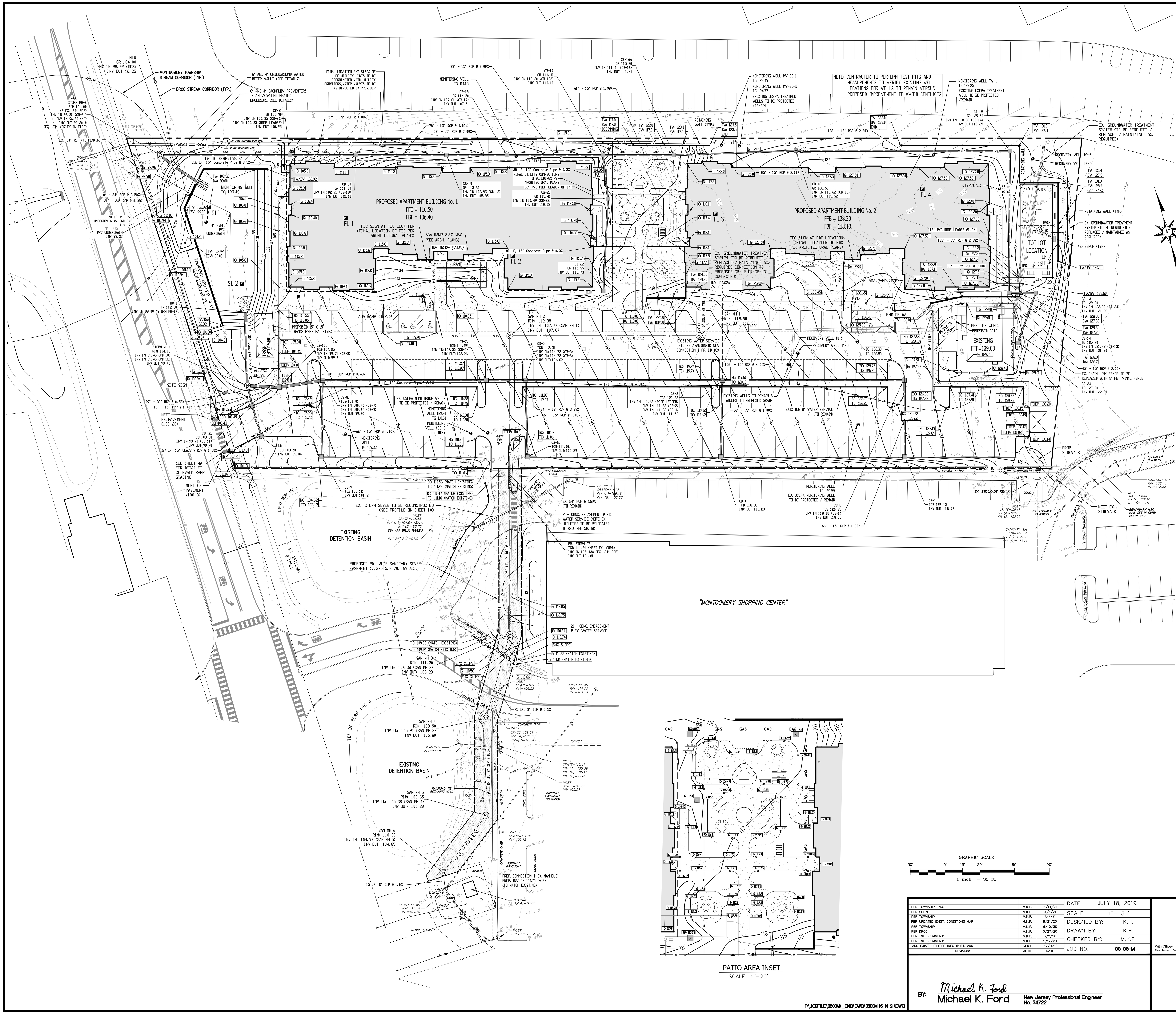
Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture
NJ LLC CERT. No. 24GA28132300

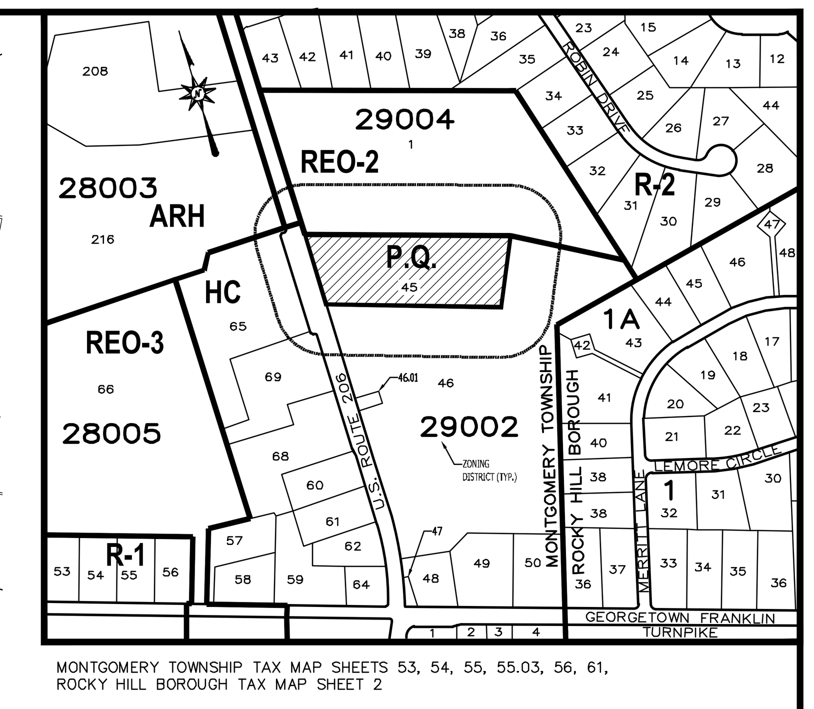
BY: Michael K. Ford

Michael K. Ford New Jersey Professional Engineer No. 34722

SITE PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

FILE No. 3476-X





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KEY MAP

SCALE: 1"=500'±

NOTES (Regarding Improvements @ Lot 46):

1. Grantee, at Grantee's cost, agrees to repave by milling two (2) inches of the blacktop and replacing same with two (2) inches of asphalt surface course an area of approximately thirty (30') feet on either side of the Sanitary Sewer Easement where it crosses the driveway and the additional area near the Sidewalk Easements as shown hereto.

GENERAL NOTES:

1. ROOF LEADERS SHALL TIE INTO THE STORM SEWER SYSTEM.
2. A FOUNDATION LOCATION PLAN SHALL BE SUBMITTED TO MONTGOMERY TOWNSHIP PRIOR TO THE CONSTRUCTION OF THE SUPERSTRUCTURE.
3. AN AS-BUILT PLAN CERTIFIED BY A PROFESSIONAL LAND SURVEYOR SHALL BE SUPPLIED AT THE COMPLETION OF CONSTRUCTION.
4. A NEW JERSEY PROFESSIONAL ENGINEER SHALL CERTIFY THE CONSTRUCTED IMPROVEMENTS ARE BUILT IN ACCORDANCE WITH THE APPROVED PLANS.
5. ALL HANDICAP RAMPS SHALL MEET THE REQUIREMENTS OF ADA STANDARDS FOR HANDICAPPED ACCESS.
6. MAXIMUM PROPOSED GRADING SLOPE ON THE SITE IS 3 HORIZONTAL TO 1 VERTICAL.
7. THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES ARE APPROXIMATE AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING CONSTRUCTION.
8. ALL EXISTING STRUCTURES SHALL BE REMOVED AND DISPOSED OF PROPERLY AND BACKFILLED WITH MATERIAL TO PROVIDE A 95% COMPACTION RATING.
9. STANDARD HEIGHT OF PROPOSED CURB IS 6 INCHES.
10. ALL PROPOSED LAWN AREAS AND UNDERGROUND DETENTION BASIN SYSTEM TO BE GRADED WITH LIGHT WEIGHT CONSTRUCTION EQUIPMENT. BOBCAT, SKIDSTEER, M-SERIES OR EQUIVALENT.
11. THE USE OF LIGHTWEIGHT, LOW IMPACT EARTH MOVING EQUIPMENT FOR SITE GRADING OF ALL PROPOSED LAWN AREAS IS REQUIRED IN ORDER TO CONFORM TO THE NON-STRUCTURAL STRATEGIES POINT SYSTEM. TO QUALIFY AS LIGHTWEIGHT AND LOW IMPACT, THE EQUIPMENT MUST EXERT A MAXIMUM PRESSURE OF EIGHT POUNDS PER SQUARE INCH ON THE GROUND SURFACE DURING GRADING OPERATIONS OF PROPOSED LAWN AREAS, SUCH AS OVER SIZED WIDE TRACKED EARTH MOVING EQUIPMENT. RUBBER TIRED EARTH MOVING EQUIPMENT NOT ACCEPTABLE.

LEGEND

Symbol	Description
100	EXISTING CONTOUR LINE
100	PROPOSED CONTOUR LINE
x 100.0	EXISTING SPOT ELEVATION
TC 100.00	PROPOSED SPOT ELEVATION
TC	TOP OF CURB ELEVATION
BC	BOTTOM OF CURB ELEVATION
TW	TOP OF WALL ELEVATION
BW	BOTTOM OF WALL ELEVATION
1.00%	PROPOSED SLOPE DRAINAGE
	PROPOSED STORM DRAINAGE PIPE W/CATCH BASIN
	PROPOSED STORM DRAINAGE PIPE W/SEWER MANHOLE
	PROPOSED HEADWALL
	PROPOSED STONE RIP-RAP
S	PROPOSED SANITARY SEWER PIPING
S	PROPOSED SANITARY SEWER MANHOLE
W	WATER MAIN
G	GAS MAIN
	HYDRANT
	WATER VALVE
	GAS VALVE
	UTILITY POLE
C.O. •	PROPOSED CLEANOUT

GRAPHIC SCALE

30' 0' 15' 30' 60' 90'

1 inch = 30 ft.

REVISIONS	AUTH.	DATE
PER TOWNSHIP ENG.	M.K.F.	6/14/21
PER CLIENT	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20
PER TWP. COMMENTS	M.K.F.	3/2/20
PER TWP. COMMENTS	M.K.F.	1/17/20
ADD EXIST. UTILITIES INFO @ RT. 206	M.K.F.	12/9/19

DATE: JULY 18, 2019
SCALE: 1"= 30'
DESIGNED BY: K.H.
DRAWN BY: K.H.
CHECKED BY: M.K.F.
JOB NO. 03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC

With Offices In New Jersey, Pennsylvania & Delaware

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PHONE (908) 359-8291 FAX (908) 359-1580

Consulting Civil Engineering
Bridge Design
Highway Design
Construction Inspection
Geotechnical Engineering
Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture

NJ LLC CERT. No. 24GA28132300

GRADING AND UTILITY PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

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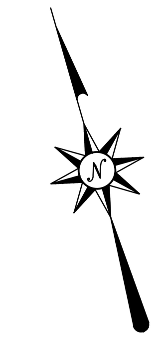
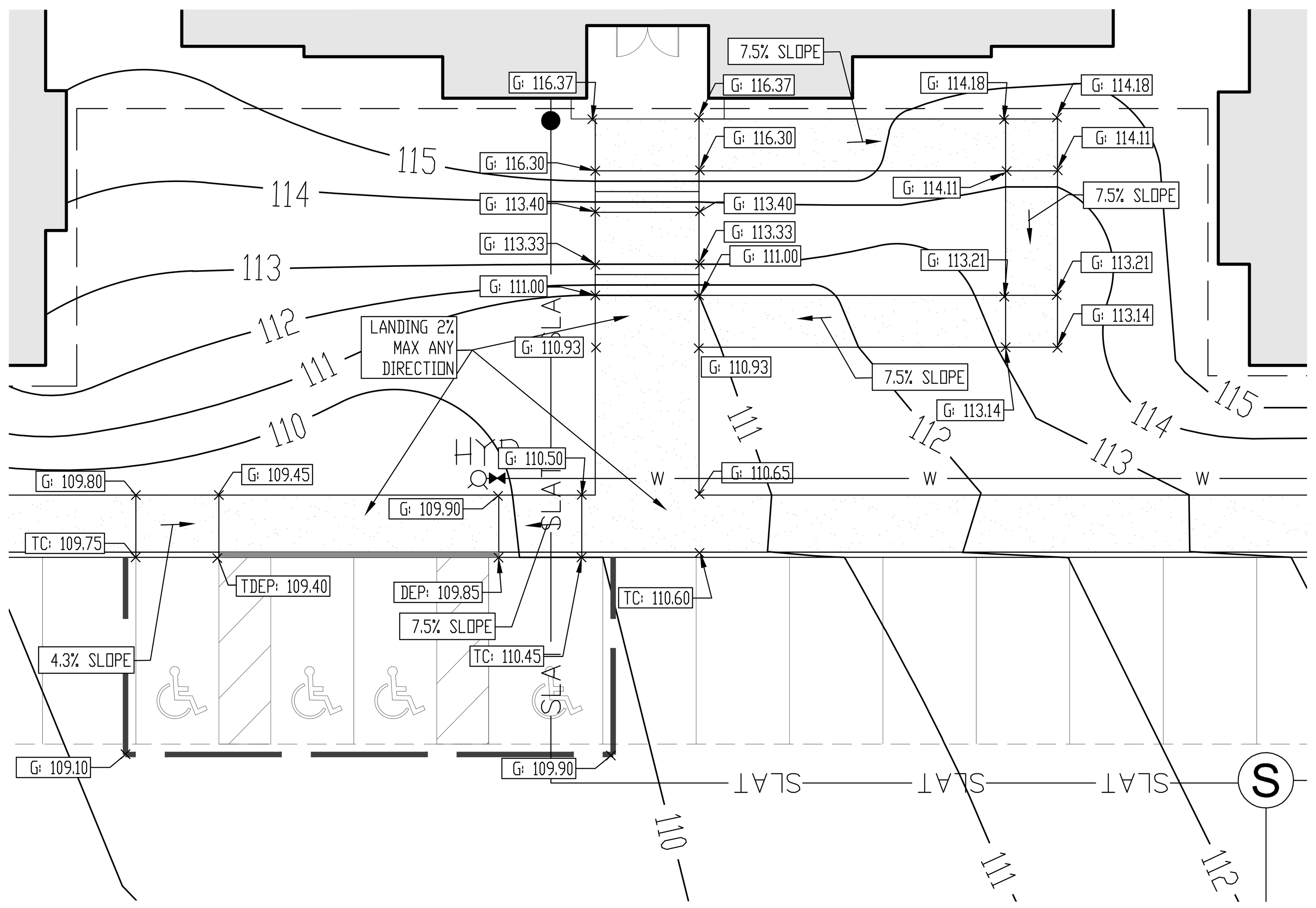
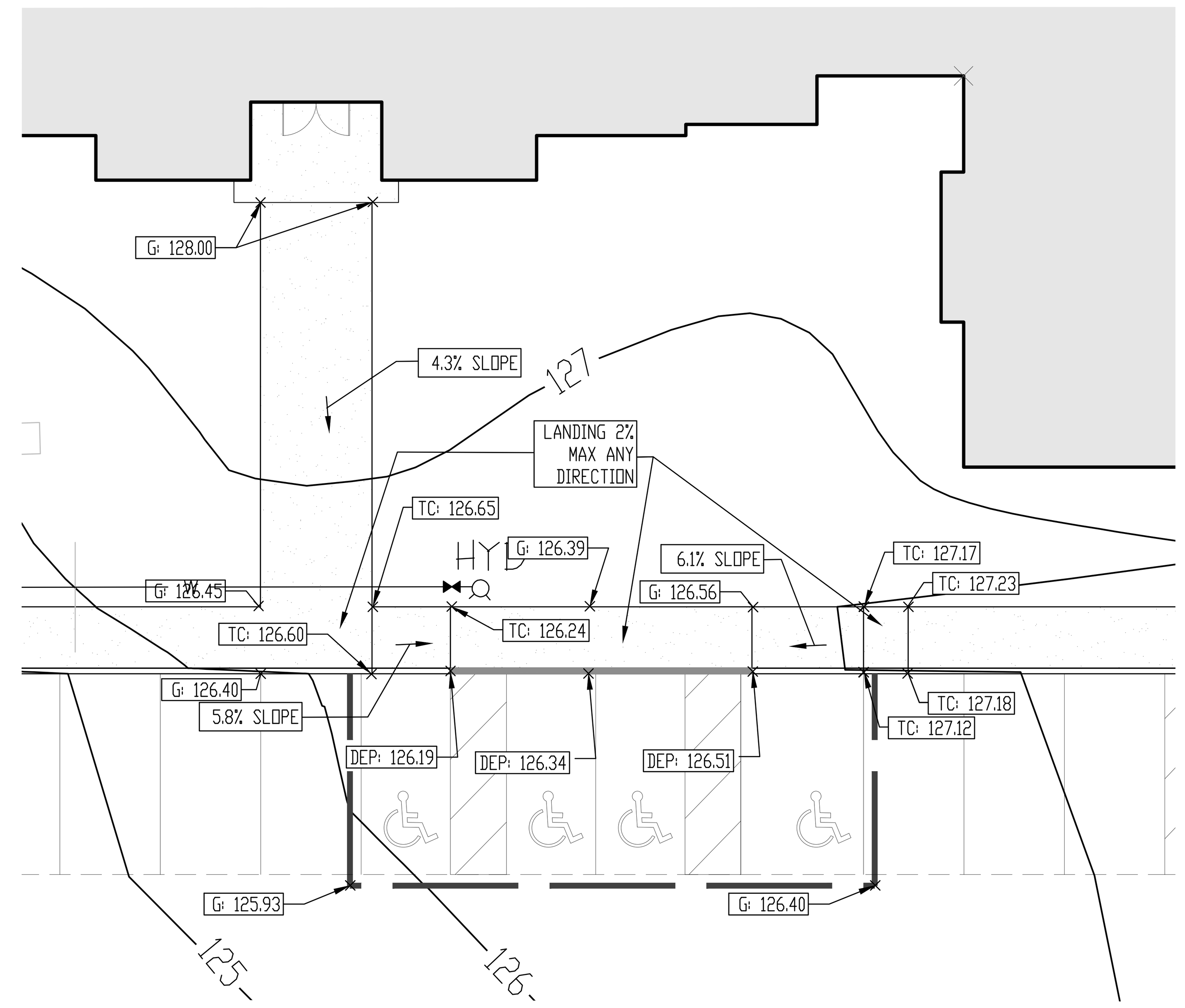


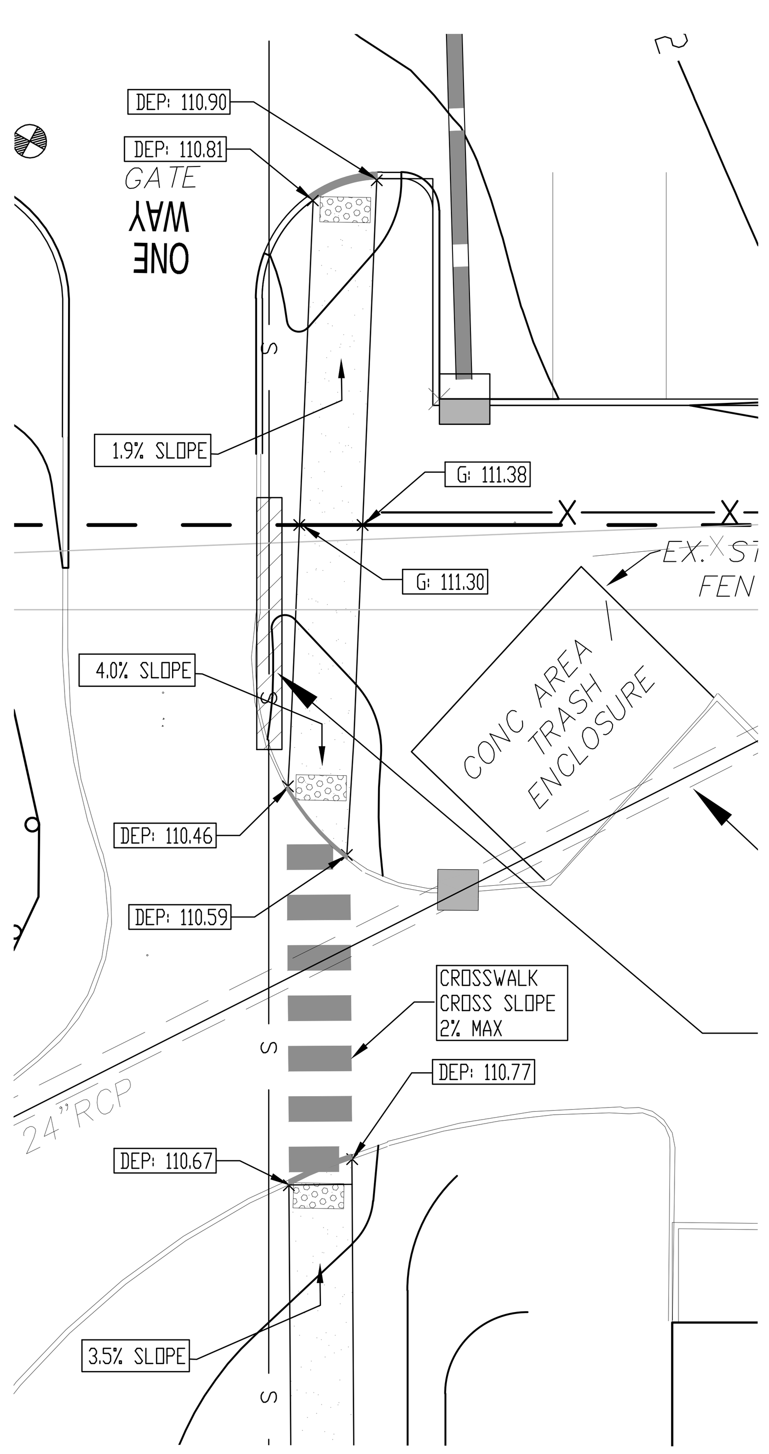


BUILDING NUMBER 1
SCALE: 1"=10'

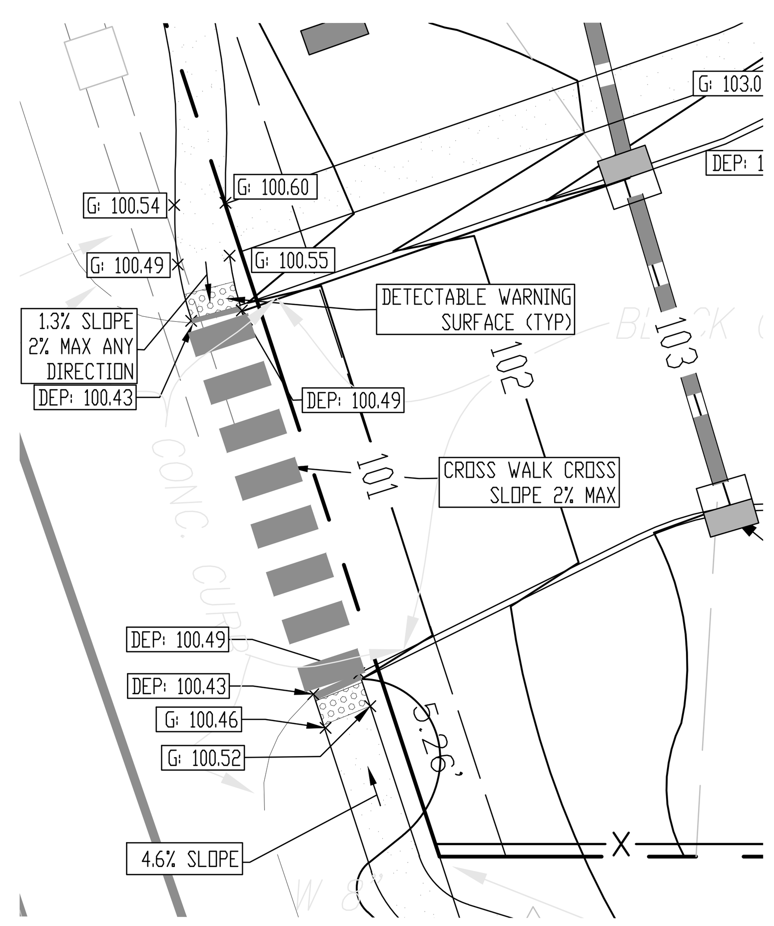
NOTE:
PROVIDE RAILING @ H.C. RAMP AS REQUIRED BY CODE



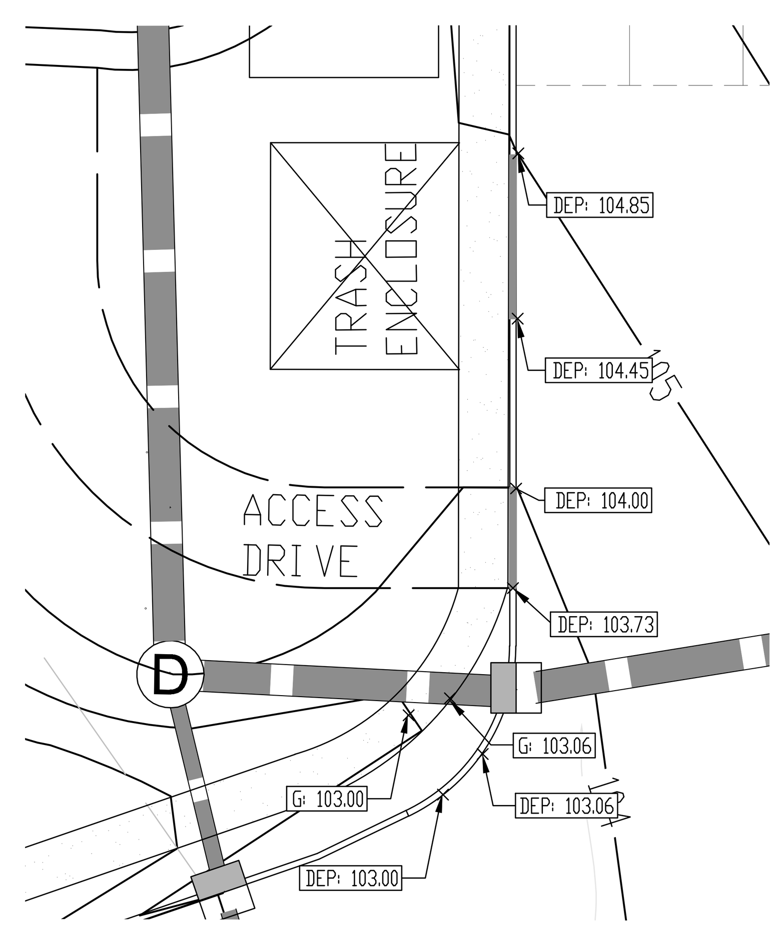
BUILDING NUMBER 2
SCALE: 1"=10'



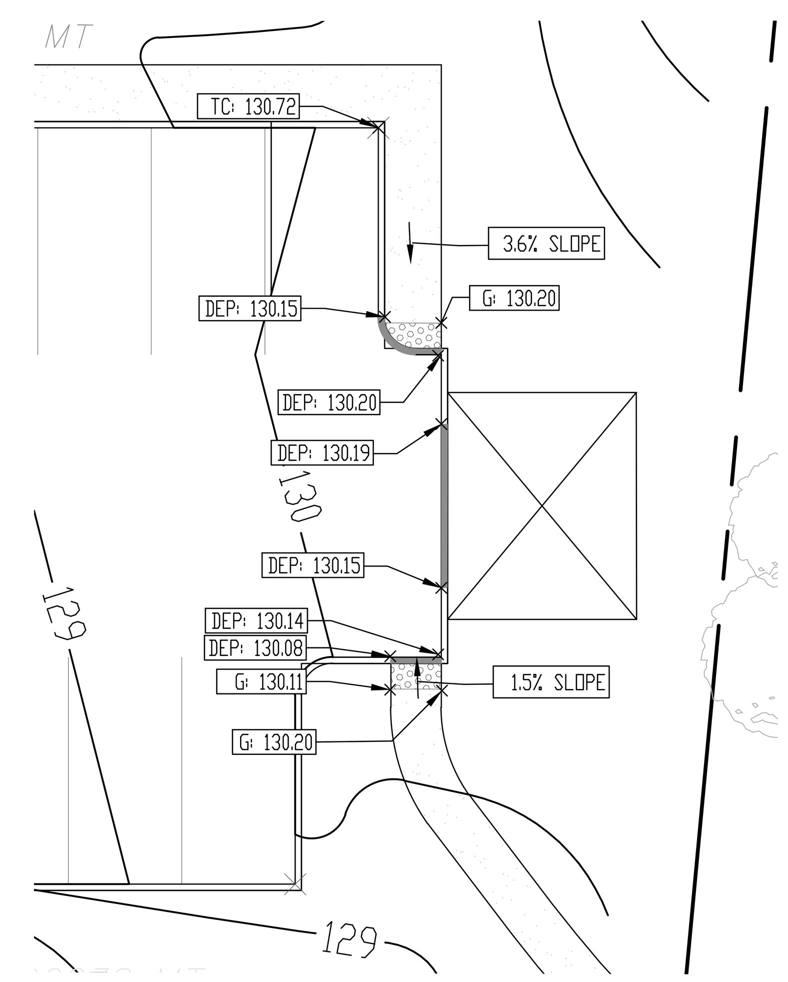
SIDEWALK ADJACENT TO EGRESS
SCALE: 1"=10'



ROUTE 206 CROSSWALK
SCALE: 1"=10'



BASIN ACCESS ROAD/DUMPSTER/SITE ACCESS DRIVE
SCALE: 1"=10'



EASTERN DUMPSTER
SCALE: 1"=10'

NOTES:

1. AS A CONDITION OF C.O. THE RAMPS WILL BE SURVEYED AND CERTIFIED BY AN APPROPRIATELY LICENSED AND KNOWLEDGEABLE PROFESSIONAL TO BE COMPLIANT WITH APPLICABLE STANDARDS.

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER TOWNSHIP	M.K.F.	6/10/20

DATE:	JULY 18, 2019
SCALE:	AS NOTED
DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC
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Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture

NJ LLC CERT. No. 24GA28132300

CURB RAMPS GRADING PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

4A

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer No. 34722

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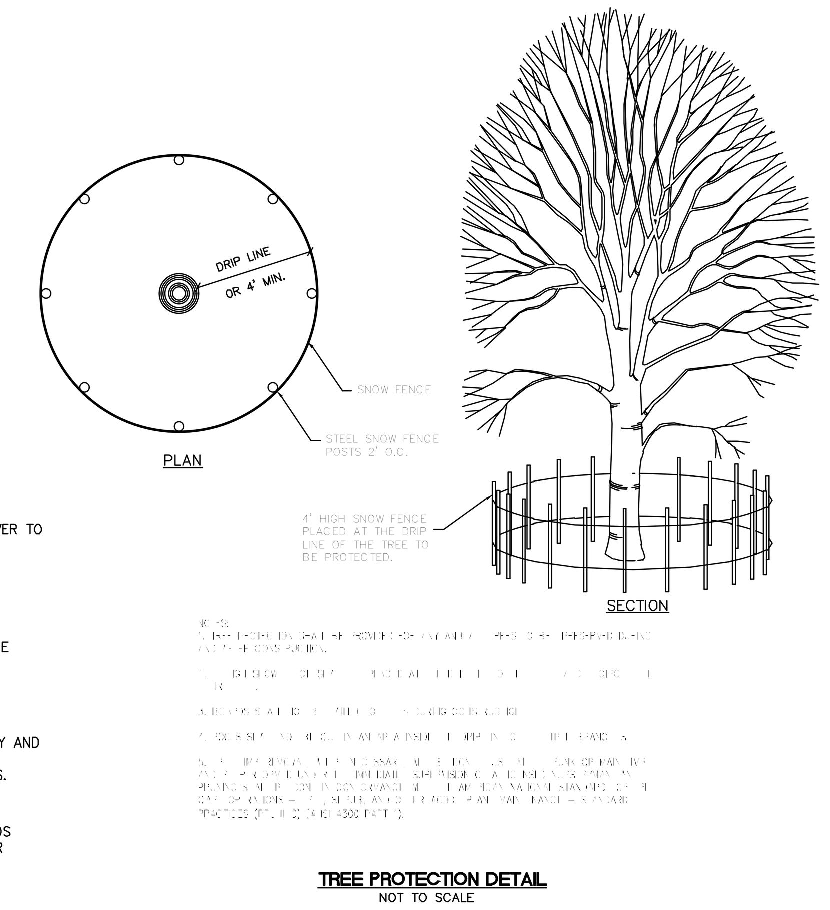
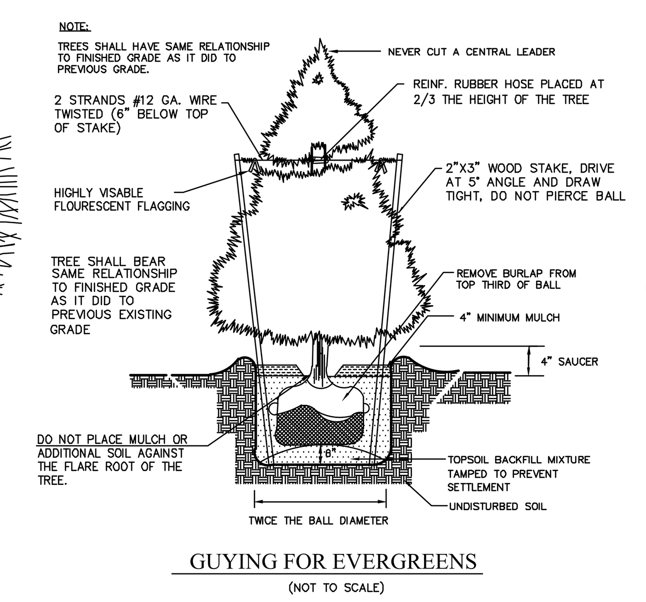
FILE No. 3476-X

GENERAL LANDSCAPING NOTES

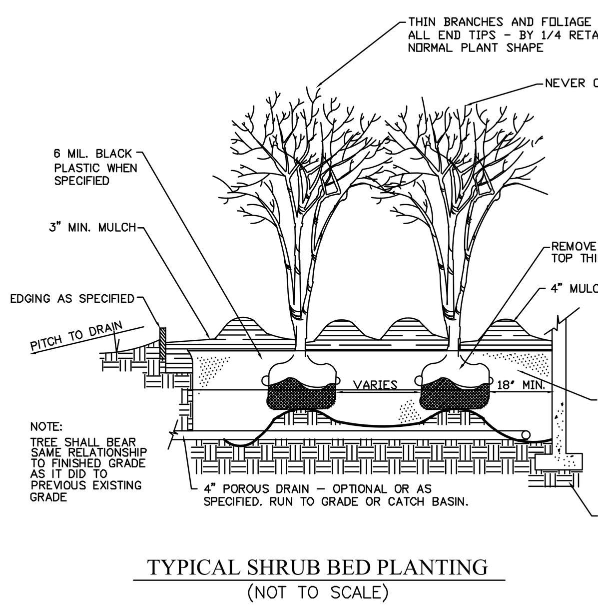
1. THIS PLAN SHALL BE USED FOR LANDSCAPE PLANTING AND LIGHTING LAYOUT PURPOSES ONLY. EXAMINE ALL ENGINEERING DRAWINGS AND FIELD CONDITIONS FOR SPECIFIC LOCATIONS OF UTILITIES AND STRUCTURES AND NOTIFY THE LANDSCAPE ARCHITECT OF ANY DISCREPANCIES OR LOCATION CONFLICTS PRIOR TO PLANT INSTALLATION.
2. ALL PLANT MATERIAL SHALL BE TWICE TRANSPLANTED, NURSERY–GROWN OF SPECIMEN QUALITY. THEY SHALL BE OF SYMMETRICAL GROWTH OR TYPICAL OF THE VARIETY AND SUPPLIED FROM SOURCES IN THE SAME HARDINESS ZONE AS THE DEVELOPMENT IS LOCATED AND FREE OF INSECT AND DISEASE PROBLEMS OR OBJECTIONABLE DISFIGUREMENTS. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
3. THE LOCATIONS OF ALL PLANT MATERIAL INDICATED ON THE LANDSCAPE PLANS ARE APPROXIMATE. THE FINAL LOCATION OF ALL PLANT MATERIAL AND PLANTING BED LINES SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT AND MUNICIPAL ENGINEER.
4. THE PLANTING PLAN SHALL TAKE PRECEDENCE OVER THE PLANT SCHEDULE SHOULD ANY PLANT QUANTITY DISCREPANCIES OCCUR.
5. ALL SHADE TREES PLANTED NEAR PEDESTRIAN OR VEHICULAR ACCESS SHOULD NOT BE BRANCHED LOWER THAN 7'-0" ABOVE GRADE. ALL SHRUBBERY MATERIAL LOCATED WITHIN SIGHT TRIANGLES SHALL NOT EXCEED A MATURE HEIGHT OF 2'-6". ALL SHADE TREES PLANTED IN SIGHT TRIANGLES SHALL BE PRUNED SO AS NOT TO HAVE BRANCHES BELOW 7'-0".
6. ALL PLANT MATERIAL SHALL BE PROPERLY GUYED, STAKED, WRAPPED AND PLANTED IN CONFORMANCE WITH THE TYPICAL PLANTING DETAILS. GUY WIRES SHALL BE ATTACHED TO THE TREE AT TWO–THIRDS THE HEIGHT OF THE TREE AND SHOULD BE LOCATED AT POINTS SO AS NOT TO SPLIT THE TRUNKS OF MULTI–STEMMED TREES. PROVIDE TWO TO THREE TREE STAKES PER TREE AS NOTED ON THE PLANS. INSTALL ALL PLANT MATERIAL ON UNDISTURBED GRADE. PROVIDE BURLAP WRAPPING WITH A 50% OVERLAP. CUT AND REMOVE BURLAP FROM TOP ONE–THIRD OF THE ROOT BALL.
7. PROVIDE PLANTING PITS AS INDICATED ON PLANTING DETAILS. BACKFILL PLANTING PITS WITH ONE PART EACH OF TOPSOIL, PEAT MOSS AND PARENT MATERIAL. IF WET SOIL CONDITIONS EXIST, THEN PLANTING PITS SHALL BE EXCAVATED AN ADDITIONAL 12" AND FILLED WITH SAND.
8. ALL PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT DID TO EXISTING GRADE.
9. NEWLY INSTALLED PLANT MATERIAL SHALL BE WATERED AT THE TIME OF INSTALLATION. REGULAR WATERING SHALL BE PROVIDED TO ENSURE THE ESTABLISHMENT, GROWTH AND SURVIVAL OF ALL PLANTS.
10. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR AT LEAST TWO (2) YEARS FROM THE DATE OF LANDSCAPE INSPECTION FOR APPROVAL AND ANY PLANT MATERIAL THAT DOES NOT SURVIVE WITHIN THAT TIME PERIOD OR IS IN POOR CONDITION BASED UPON THE OPINION OF THE TOWNSHIP LANDSCAPE ARCHITECT SHALL BE REPLACED BY PLANT MATERIAL OF THE SAME SIZE AND SPECIES AT THE EXPENSE OF THE DEVELOPER.
11. ALL DISTURBED LAWN AREAS SHALL BE STABILIZED WITH SEED AS INDICATED ON THE LANDSCAPE PLANS. SEED MIXTURE SHALL BE AS LISTED IN THE SEEDING SCHEDULE ON THE SOIL EROSION AND SEDIMENT CONTROL NARRATIVE SHEET. ALL DISTURBED LAWN AREAS SHALL BE TOPSOILED, LIMED, FERTILIZED AND FINE GRADED PRIOR TO LAWN INSTALLATION.
12. ALL PLANTING BEDS SHALL RECEIVE MINIMUM 4" OF SHREDDED HARDWOOD BARK MULCH.
13. USE A ROOT BARRIER WHERE PROPOSED TREES ARE WITHIN 8 FT OF ANY CURBING, PARKING AND WALKWAY. BIOBARRIER ROOT CONTROL SYSTEM, OR APPROVED EQUAL, SHALL BE INSTALLED AS PER MANUFACTURER SPECIFICATIONS.
14. A TEMPORARY FENCE, SUCH AS A SNOW FENCE, SHALL BE ERECTED AT THE PERIMETER OF THE DRIP LINE OF ALL EXISTING VEGETATION INDICATED TO REMAIN PRIOR TO ANY EXCAVATION, CONSTRUCTION, OR OTHER SITE WORK. THIS FENCE MAY BE REMOVED ONLY AT THE TIME OF COMPLETION OF ALL CONSTRUCTION AND FINAL GRADING.
15. PRIOR TO ANY SITE CLEARANCE, GRADING OR DISTURBANCE FOR PREMISES SUBJECT TO THE PROVISIONS OF THIS SUBSECTIONS, THE APPLICANT SHALL DELINEATE WITH SNOW FENCE, INSTALLED BEYOND THE DRIPLINE OF TREES WHICH ARE TO BE PROTECTED, ALL AREAS WHICH ARE TO REMAIN UNDISTURBED AND SHALL INDIVIDUALLY PROTECT, TO THE SATISFACTION OF THE TOWNSHIP ENGINEER, ALL TREES OR SPECIMEN TREES WHICH ARE TO REMAIN WITHIN THE AREA OF DISTURBANCE APPROVED BY THE BOARD.
16. EXISTING DEBRIS, BRUSH, DEAD/OR DISEASED TREES SHALL BE REMOVED FROM THE EXISTING HEDGE ROWS TO MAIN UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT AND MUNICIPAL ENGINEER.
17. ALL OTHER AREAS OF ANY LOT NOT OCCUPIED BY PROPOSED LANDSCAPE PLANTINGS, BUILDINGS, PAVEMENT OR OTHER SURFACING OR OTHERWISE IMPROVED OR USED IN ACCORDANCE WITH AN APPROVED SITE PLAN OR SUBDIVISION SHALL BE LANDSCAPED BY THE PLANTING OF GRASS SEED MIX INDICATED IN PLANS.
18. NO TOP SOIL SHALL BE REMOVED FROM AREAS INTENDED FOR LAWN AND OPEN SPACE. TOP SOIL MOVED DURING THE COURSE OF CONSTRUCTION SHALL BE REDISTRIBUTED ON THE LOT SO AS TO PROVIDE AT LEAST FOUR (4) INCHES OF COVER TO ALL AREAS, WHICH COVER SHALL BE STABILIZED BY APPROVED SEEDING AND/OR PLANTING.
19. NO SOIL SHALL BE REMOVED FROM OR BE IMPORTED TO ANY SITE IN EXCESS OF TWENTY (20) CUBIC YARDS PER YEAR WITHOUT THE PRIOR APPROVAL OF THE PLANNING BOARD. FOR THIS PURPOSE, A PLAN SHALL BE SUBMITTED SHOWING HOW THE SOIL IS TO BE DISTRIBUTED AND STABILIZED INCLUDING GRADING CONTOURS. IF THE SOIL IS TO BE IMPORTED, A PLAN SHALL BE SUBMITTED DESCRIBING METHODOLOGY AND FREQUENCY OF TESTING THE SOIL TO ENSURE ITS SAFE QUALITY. FINALLY, THE PLAN SHALL DESCRIBE THE SIZE AND NUMBER OF VEHICLES THAT ARE PROPOSED FOR HAULING THE REMOVED OR IMPORTED SOIL TOGETHER WITH THE HAULING ROUTE.
20. ALL PLANTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION, PREPARED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
21. ALL TREE AND SHRUB PLANTINGS SHALL BE COORDINATED WITH PROPOSED UNDERGROUND WATER, STORM SEWER, SANITARY AND ELECTRIC UTILITY. TREES AND SHRUBS TO BE INSTALLED AFTER UNDERGROUND UTILITIES HAVE BEEN INSTALLED. IT IS THE RESPONSIBILITY OF LANDSCAPE CONTRACTOR TO COORDINATE AND IDENTIFY UNDERGROUND UTILITIES NOTED ON THE PLANS.
22. THE MATURE TREES SPECIFIED TO BE REMOVED WITHIN THE SANITARY SEWER EASEMENT ON LOT 46 HAVE BEEN IDENTIFIED TO BE REPLACED WITH THE SAME OR SIMILAR SPECIES NEW PLANTS AS DIRECTED BY OWNER OF BLOCK 29002, LOT 46. THESE TREES WERE A PART OF THE SHOPPING CENTER APPROVAL, REPLACEMENT SHALL CONFIRM TO TOWNSHIP STANDARDS FOR MINIMUM SIZE AND THE REPLACEMENT PLANTINGS SHALL BE A REQUIREMENT OF THE CERTIFICATE OF OCCUPANCY FOR THIS PROJECT.



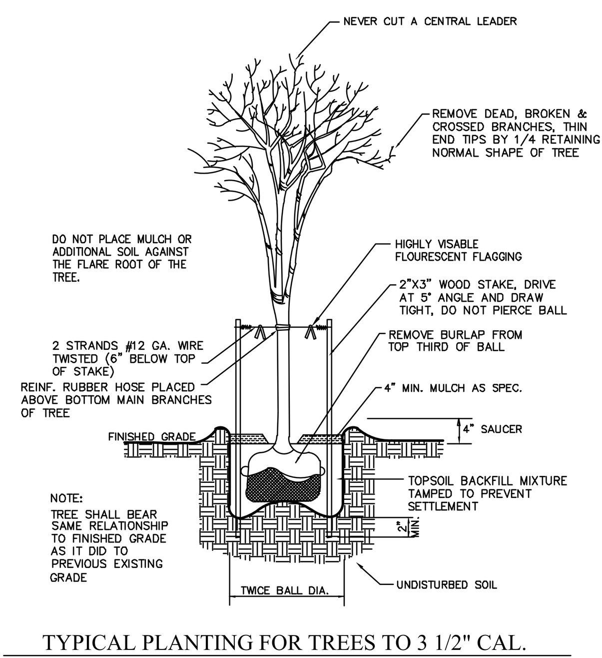
TREE PROTECTION DETAIL
NOT TO SCALE



GUYING FOR EVERGREENS
(NOT TO SCALE)



TYPICAL SHRUB BED PLANTING
(NOT TO SCALE)

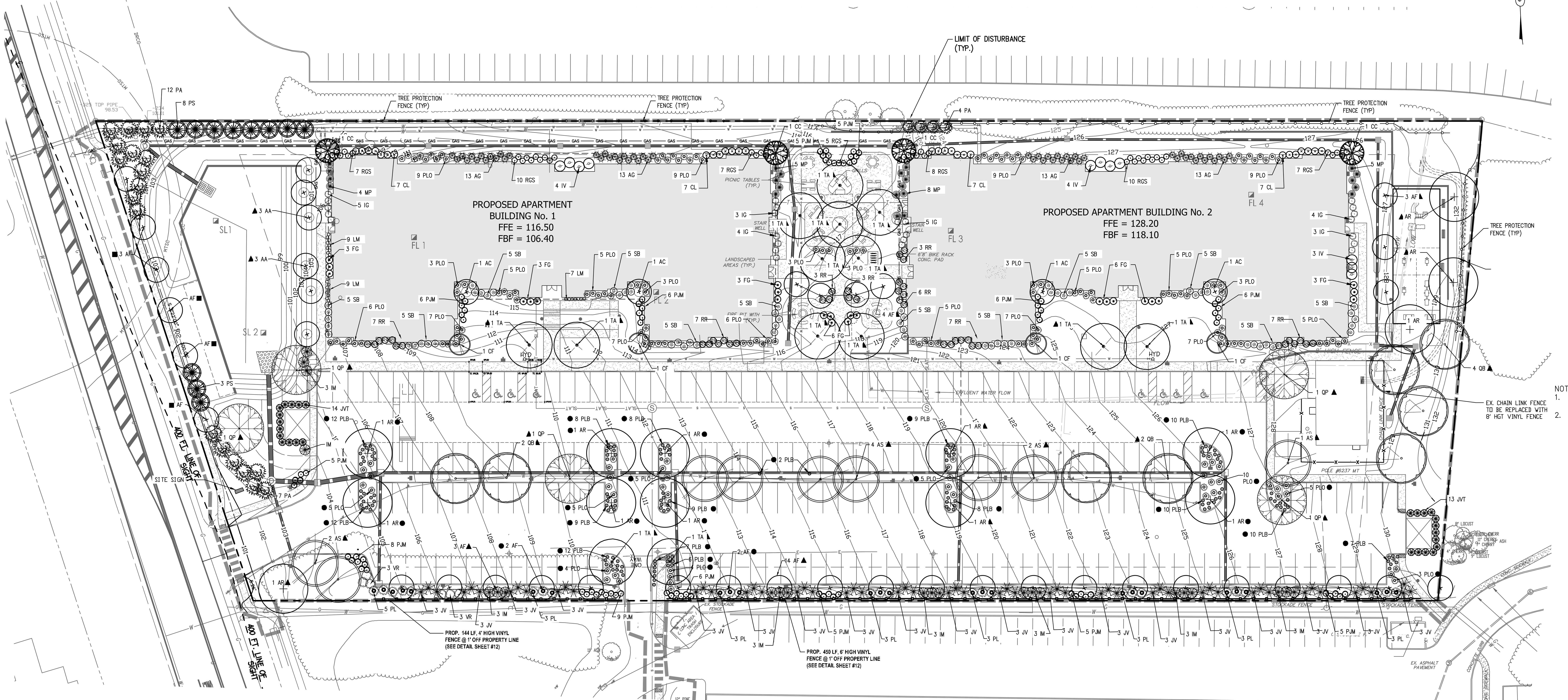


TYPICAL PLANTING FOR TREES TO 3 1/2" CAL.
(NOT TO SCALE)

LANDSCAPE SCHEDULE:

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	MIN. SIZE	REMARKS
SHADE TREES					
AA	6	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	1.25 CALIPER & 8'-10' HT.	B&B
AR	14	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2.5"-3" CAL. 12'-14'Ht.	B&B
AF	34	ACER X FREEMANIII 'ARMSTRONG'	ARMSTRONG MAPLE	2.5"-3" CAL. 12'-14'Ht.	B&B
AS	9	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2.5"-3" CAL. 12'-14'Ht.	B&B
QB	8	QUERCUS BICOLOR	SWAMP WHITE OAK	2.5"-3" CAL. 12'-14'Ht.	B&B
QP	5	QUERCUS PHELLOS	WILLOW OAK	2.5"-3" CAL. 12'-14'Ht.	B&B
TA	14	TILIA AMERICANA 'BOULEVARD'	BOULEVARD AMERICAN BASSWOOD	2.5"-3" CAL. 12'-14'Ht.	B&B
BUFFER PLANTINGS					
EVERGREEN SHRUBS					
IM	22	ILEX X MESERVEAE BLUE PRINCESS	BLUE PRINCESS HOLLY	30-36" HT.	
PL	26	PRUNUS LAUROCERASUS 'SCHIPKAENSIS'	SKIP CHERRY LAUREL	30-36" HT.	
PJM	77	RHODODENDRON 'PJM'	PJM RHODODENDRON	30-36" HT.	
VR	6	VIBURNUM RHYTIDOPHYLLUM	LEATHERLEAF VIBURNUM	30"-36" HT.	
EVERGREEN TREES					
PA	23	PICEA ABIES	NORWAY SPRUCE	6'-8' HT.	B&B
JV	57	JUNIPERUS VIRGINIANA 'CANAERTII'	CANAERTII EASTERN RED CEDAR	4'-5' HT.	
PS	11	PINUS STROBUS	WHITE PINE	6'-8' HT.	B&B
TRASH ENCLOSURE PLANTINGS					
JVT	27	JUNIPERUS VIRGINIANA 'TAYLORI'	TAYLOR EASTERN RED CEDAR	6'-7' HT.	B&B
FOUNDATION PLANTINGS					
ORNAMENTAL TREES					
CF	4	CORNUS FLORIDA 'CHEROKEE CHIEF'	CHEROKEE CHIEF FLOWERING DOGWOOD	1.25 CALIPER & 8'-10' HT.	B&B
CC	4	CERCIS CANADENSIS	REDBUD	1.25 CALIPER & 8'-10' HT.	B&B
AC	4	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	1.25 CALIPER & 8'-10' HT.	B&B
SHRUBS					
AG	52	AZALEA PINK GUMPO	DWARF PINK GUMPO AZALEA	24-30" HT.	
CL	28	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE SUMMERSWEET	24-30" HT.	
FG	24	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	24-30" HT.	
IG	24	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	18-24" HT.	
IV	11	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET VIRGINIA SWEETSPIRE	18-24" HT.	
MP	22	MYRICA PENSYLVANICA 'MORTON'	SILVER SPRITE NORTHERN BAYBERRY	24-30" HT.	
PLO	124	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN CHERRYLAUREL	30-36" HT.	
PJM	77	RHODODENDRON 'PJM'	PJM RHODODENDRON	30-36" HT.	
RR	43	ROSA X 'RADRAZZ'	KNOCK OUT SHRUB ROSE	24-30" HT.	
RGS	54	RHODODENDRON 'GIRARD'S ROSE'	GIRARD'S ROSE AZALEA	30-36" HT.	
SB	60	SPIREA BUMALDA 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	18-24" HT.	
PERENNIALS					
LM	25	LIRIOPE MUSCARI	BIG BLUE LILYTURF	1 GALLON	
PARKING LOT SHRUB PLANTINGS					
PLO	46	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN CHERRYLAUREL	30-36" HT.	
PERENNIALS					
PLB	139	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	1 GALLON	

NOTES:
1. IN THE EVENT THERE IS A CONFLICT BETWEEN THE LANDSCAPING PLAN AND THE LANDSCAPING SCHEDULE, THE PLAN SHALL GOVERN
2. TREE CALIPER TO BE MEASURED AT 4'-6" ABOVE FINISH GRADE.



LEGEND

- BOUNDARY LINE
- ROW LINE
- EASEMENT LINE
- CONTOUR LINE
- TREE LINE
- STORM SEWER
- SANITARY SEWER
- CURB LINE
- HANDICAP RAMP
- PROPOSED LIGHT
- EDGE OF PAVEMENT
- SOIL LIMIT LINE
- WATER MAIN
- GAS MAIN
- HYDRANT
- WATER VALVE
- GAS VALVE
- UTILITY POLE
- SPOT GRADE

TREE REQUIREMENT (14 TREES PER ACRE)
MONTGOMERY TOWNSHIP SECTION 16-5.6.D.3

PROPOSED REQUIRED SHADE TREE

"TRIANGLE" AFTER SYMBOL INDICATES REQUIRED SHADE TREE
MONTGOMERY TOWNSHIP SECTION 16-5.6.D.3

PARKING LOT LANDSCAPE REQUIREMENT
MONTGOMERY TOWNSHIP SECTION 16-5.8.A.3

PROPOSED REQUIRED SHADE TREE/ SHRUB

"DOT" AFTER SYMBOL INDICATES REQUIRED SHADE TREE/SHRUB
MONTGOMERY TOWNSHIP SECTION 16-5.8.A.3

STREET TREE REQUIREMENT
MONTGOMERY TOWNSHIP SECTION 16-5.8.A.3

PROPOSED REQUIRED SHADE TREE

300' OF STREET FRONTAGE
300 / 50=6 TREES REQUIRED
6 STREET TREES PROVIDED

"SQUARE" AFTER SYMBOL INDICATES REQUIRED SHADE TREE/
MONTGOMERY TOWNSHIP SECTION 16-5.60.15

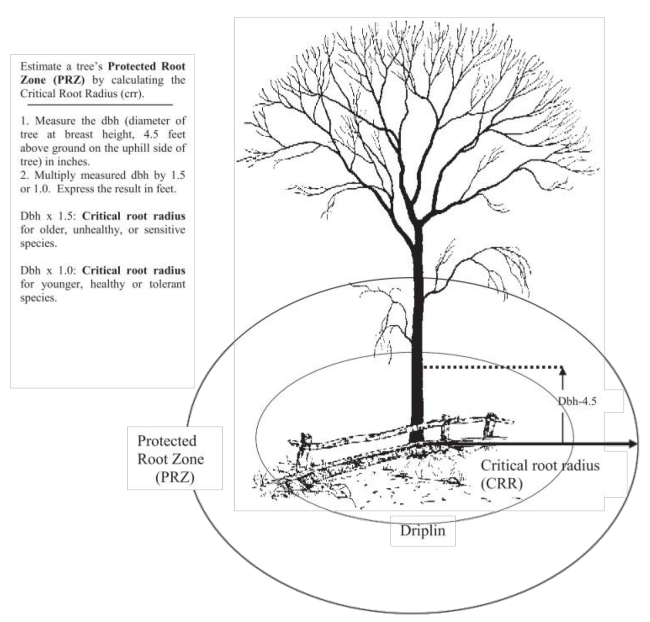
GRAPHIC SCALE

30 0 15 30 60 120

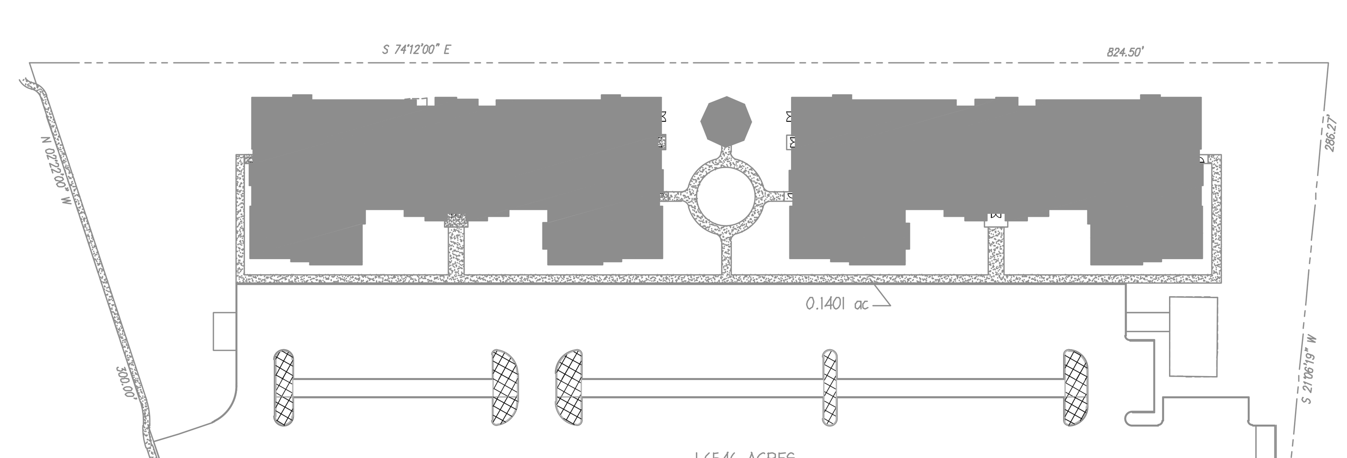
(IN FEET)
1 inch = 30 ft.

Standards for Soil Erosion and Sediment Control in New Jersey — January 2014

Figure 9-3: Root Protection During Construction Guide



1. Protecting Trees from Construction Damage: A Homeowners Guide, Gary R. Johnson, University Of Minnesota Extension Service, Saint Paul, MN, 1999.



NOTE:

SITE TO BE INSPECTED BY CERTIFIED ARBORIST. ALL NORWAY MAPLE AND TREE OF HEAVEN TREES TO BE TAGGED FOR REMOVAL. ROOTS OF TREE OF HEAVEN TO BE REMOVED OR STUMPS TO BE PAINTED WITH SYSTEMIC HERBICIDE.

PARKING LANDSCAPE AREA SUMMARY
(MONTGOMERY TOWNSHIP CODE SECTION 16-5.8.A.3):

LANDSCAPE AREA:

TOTAL PROPOSED PARKING SPACES: 227
PARKING SPACE DIMENSIONS : 9'X18'=162 SQ. FT.
227/30=8
8 X 162=1,296 SQ. FT.
REQUIRED LANDSCAPE AREA: 1,296 SQ. FT.
PROVIDED LANDSCAPE AREA: 1,745 SQ. FT.

LANDSCAPE 20% of LOT AREA SUMMARY
(MONTGOMERY TOWNSHIP CODE SECTION 16-4.14b.12b):

LOT AREA: 5.003 ACRES
IMPERVIOUS COVERAGE: 3.007 ACRES (60.1%)

REQUIRED LANDSCAPE AREA: 1.001 ACRES (20%)
PROVIDED LANDSCAPE AREA: 1.996 ACRES (39.9%)

LOT AREA SHADE TREE REQUIREMENT
(MONTGOMERY TOWNSHIP CODE SECTION 16-5.6.D.3):

LOT AREA: 5.0027 ACRES
REQUIRED 14 TREES PER ACRE
REQUIRED SHADE TREES: 70
PROVIDED SHADE TREES: 90

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER TOWNSHIP	M.K.F.	7/27/20
PER TWP. COMMENTS	M.K.F.	1/17/20

DATE:	JULY 18, 2019
SCALE:	1" = 30'
DESIGNED BY:	B.A.R.
DRAWN BY:	B.A.R.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC
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NJ LLC CERT. No. 24GA28132300

LANDSCAPE PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer No. 34722

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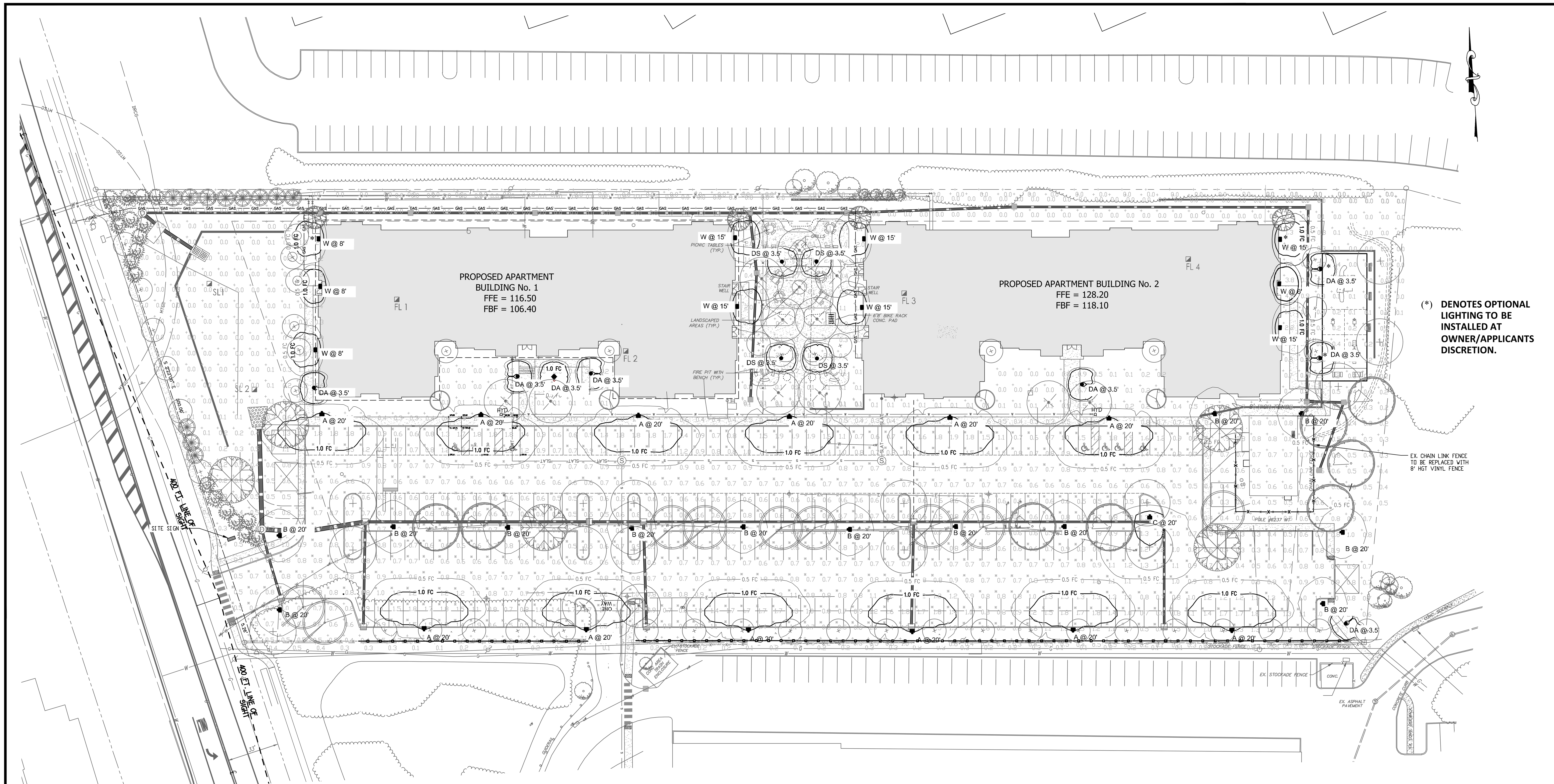


(*) DENOTES OPTIONAL LIGHTING TO BE INSTALLED AT OWNER/APPLICANTS DISCRETION.

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

NOTE:
LIGHTING DESIGN BY:

Illuminations Inc
1157 Phoenixville Pike - Suite 105,
West Chester, PA 19380

LEGEND

BOUNDARY LINE	EDGE OF PAVEMENT
ROW LINE	SOIL LIMIT LINE
EASEMENT LINE	WATER MAIN
CONTOUR LINE	GAS MAIN
TREE LINE	HYDRANT
STORM SEWER	WATER VALVE
SANITARY SEWER	GAS VALVE
CURB LINE	UTILITY POLE
HANDICAP RAMP	SPOT GRADE

PROPOSED "A","B","C"

PROPOSED LIGHT "DA" "DS"

PROPOSED LIGHT "W"

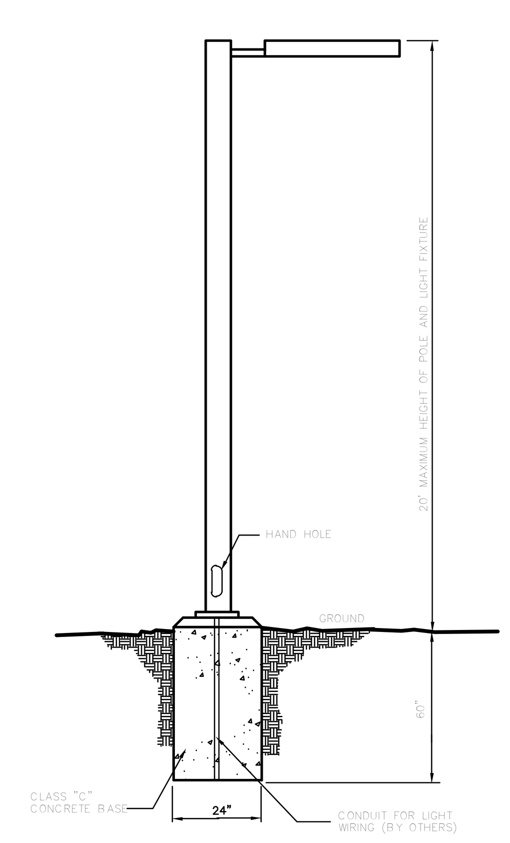
Schedule

Symbol	Label		QTY	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens per Lamp	Lumen Multiplier	LLF	Wattage	Efficiency	Distribution		Notes
	A		12	Lithonia Lighting	DSX0 LED P1 30K BLC MVOLT SPA [CONTROL] [OPTIONS] DDBXD + KW POLE #SSP20-4.0-11-BRZ-DM10-BC-VDI	SINGLE LUMINAIRE POLE MOUNT WITH BACK LIGHT CONTROL AND IN DARK BRONZE FINISH.	LED-3000K	1	DSX0_LED_P1_30K_BLC_MVOLT.ies	3585	1	0.95	38	100%	TYPE III, SHORT, BUG RATING: B1 - U0 - G1		
	B		13	Lithonia Lighting	DSX0 LED P1 30K T5W MVOLT SPA [CONTROL] [OPTIONS] DDBXD + KW POLE #SSP20-4.0-11-BRZ-DM10-BC-VDI	SINGLE LUMINAIRE POLE MOUNT WITH TYPE 5 WIDE DISTRIBUTION AND IN DARK BRONZE FINISH.	LED-3000K	1	DSX0_LED_P1_30K_T5W_MVOLT.ies	4510	1	0.95	38	100%	TYPE VS, BUG RATING: B3 - U0 - G2		
	C		1	Lithonia Lighting	DSX0 LED P1 30K TFTM MVOLT SPA [CONTROL] HS [OPTIONS] DDBXD + KW POLE #SSP20-4.0--11-BRZ-DM10-BC-VDI	SINGLE LUMINAIRE POLE MOUNT WITH FORWARD THROW DISTRIBUTION AND HOUSE SIDE SHIELD AND IN DARK BRONZE FINISH.	LED-3000K	1	DSX0_LED_P1_30K_TFTM_MVOLT_HS.ies	3414	1	0.95	38	100%	TYPE III, VERY SHORT, BUG RATING: B1 - U0 - G1		
	DA		7	Lithonia Lighting	KBR8 LED 12C 530 30K ASY MVOLT [CONTROL] [OPTIONS] DDBXD	ASYMMETRIC DISTRIBUTION 8IN DIA X 40IN HIGH BOLLARD IN DARK BRONZE FINISH.	LED-3000K	1	KBR8_LED_12C_530_30K_ASY_MVOLT.ies	946	1	0.95	22	100%	TYPE III, SHORT, BUG RATING: B1 - U1 - G1		
	DS		5	Lithonia Lighting	KBR8 LED 16C 350 30K SYM MVOLT [CONTROL] [OPTIONS] DDBXD	SYMMETRIC DISTRIBUTION 8IN DIA X 40IN HIGH BOLLARD IN DARK BRONZE FINISH.	LED-3000K	1	KBR8_LED_16C_350_30K_SYM_MVOLT.ies	888	1	0.95	20	100%	TYPE VS, BUG RATING: B1 - U0 - G0		
	W		10	Lithonia Lighting	WDGE1 LED P1 30K 80CRI VW MVOLT SRM [OPTIONS] DDBXD	9IN WIDE X 8IN HIGH X 5.5IN DEEP FULL CUTOFF WALL PACK WITH VERY WIDE DISTRIBUTION IN DARK BRONZE FINISH.	LED-3000K	1	WDGE1_LED_P1_30K_80CRI_VW.ies	1163	1	0.95	10.0002	100%	TYPE II, VERY SHORT, BUG RATING: B0 - U0 - G0		

Statistics

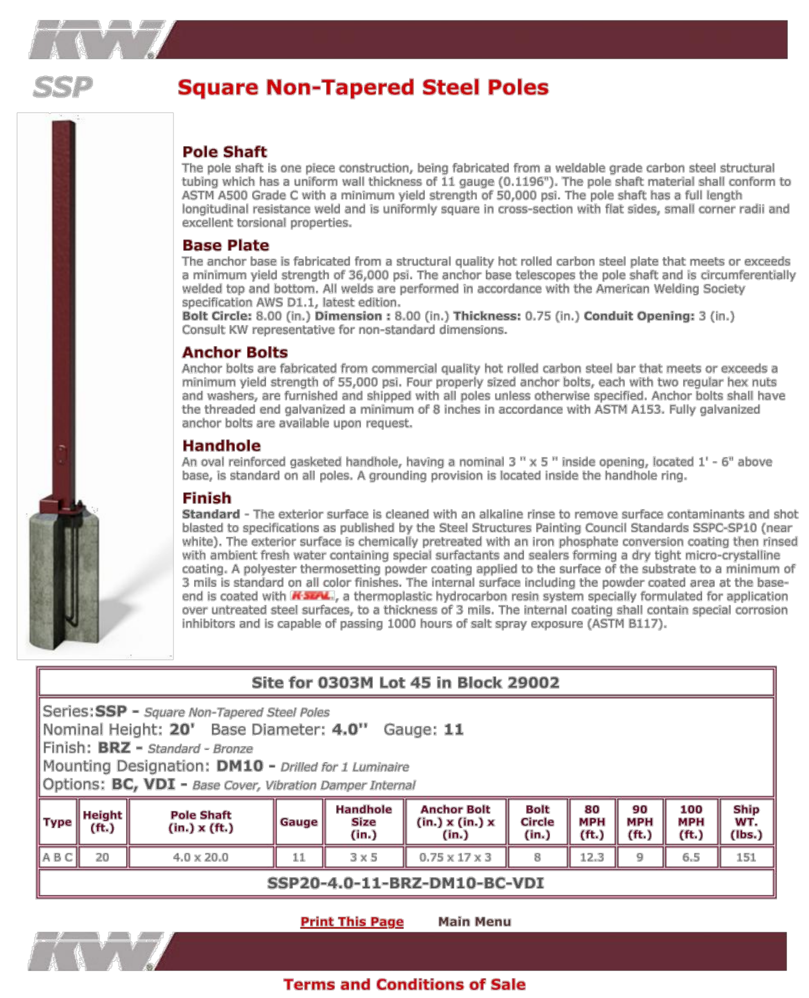
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Pavement	⋇	0.9 fc	1.9 fc	0.3 fc	6.3:1	3.0:1
Site	+	0.7 fc	9.4 fc	0.0 fc	N/A	N/A

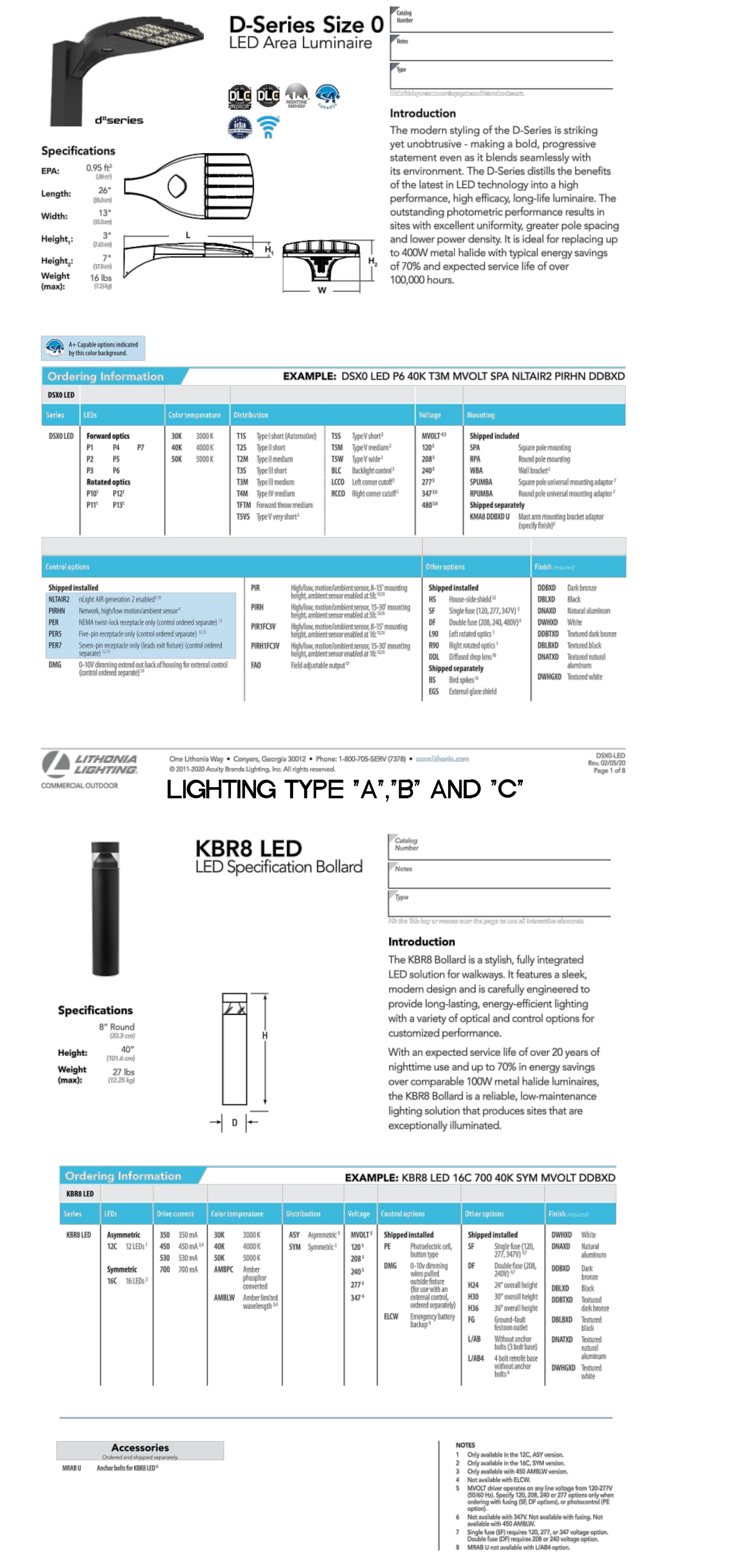
Note
1. CALCULATIONS ARE ESTIMATIONS BASED ON THE INFORMATION PROVIDED AND MAY VARY WITH ACTUAL CONDITIONS.
2. CALCULATIONS TAKEN AT GRADE.
3. MOUNTING HEIGHTS INDICATED IN TYPES.
4. FOOTCANDLE ISOCURVES ARE 0.5FC/1.0FC AVERAGE MAINTAINED.



LIGHT STANDARD AND POLE
NO SCALE

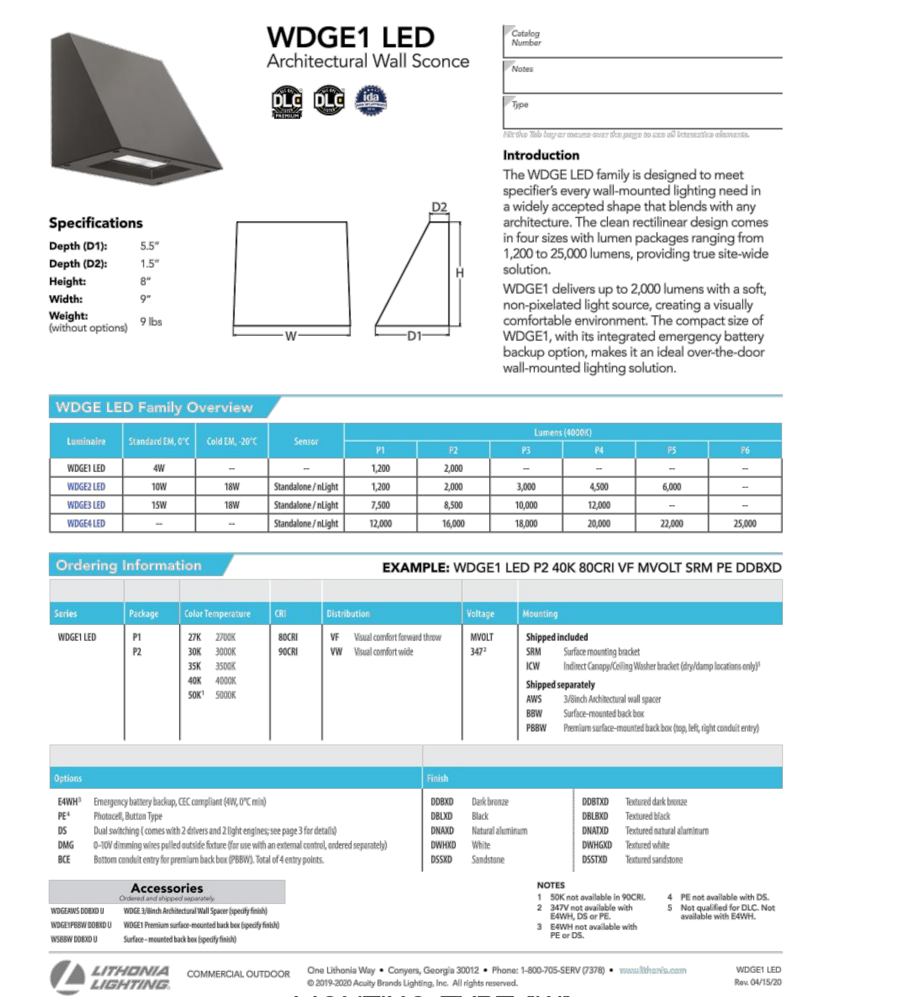
Note
1. CENTER OF LIGHT BASE TO BE 2' OFF EDGE OF PAVEMENT OR BACK OF CURB.
2. CONTRACTORS TO COORDINATE PLACEMENT OF LIGHTS BASES AND PARKING GUIDERAILS. LIGHT BASE TO BE PLACE BEHIND GUIDERAIL.





LIGHTING TYPE "A","B" AND "C"

LIGHTING TYPE "DA" AND "DS"



LIGHTING TYPE "W"

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			DATE:	JULY 18, 2019
PER TOWNSHIP	M.K.F.	2/8/21	SCALE:	1"= 30'
PER TOWNSHIP	M.K.F.	1/7/21	DESIGNED BY:	B.A.R.
PER TOWNSHIP	M.K.F.	7/27/20	DRAWN BY:	B.A.R.
PER TWP. COMMENTS	M.K.F.	1/17/20	CHECKED BY:	M.K.F.
REVISIONS	AUTH.	DATE	JOB NO.	03-03-M

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

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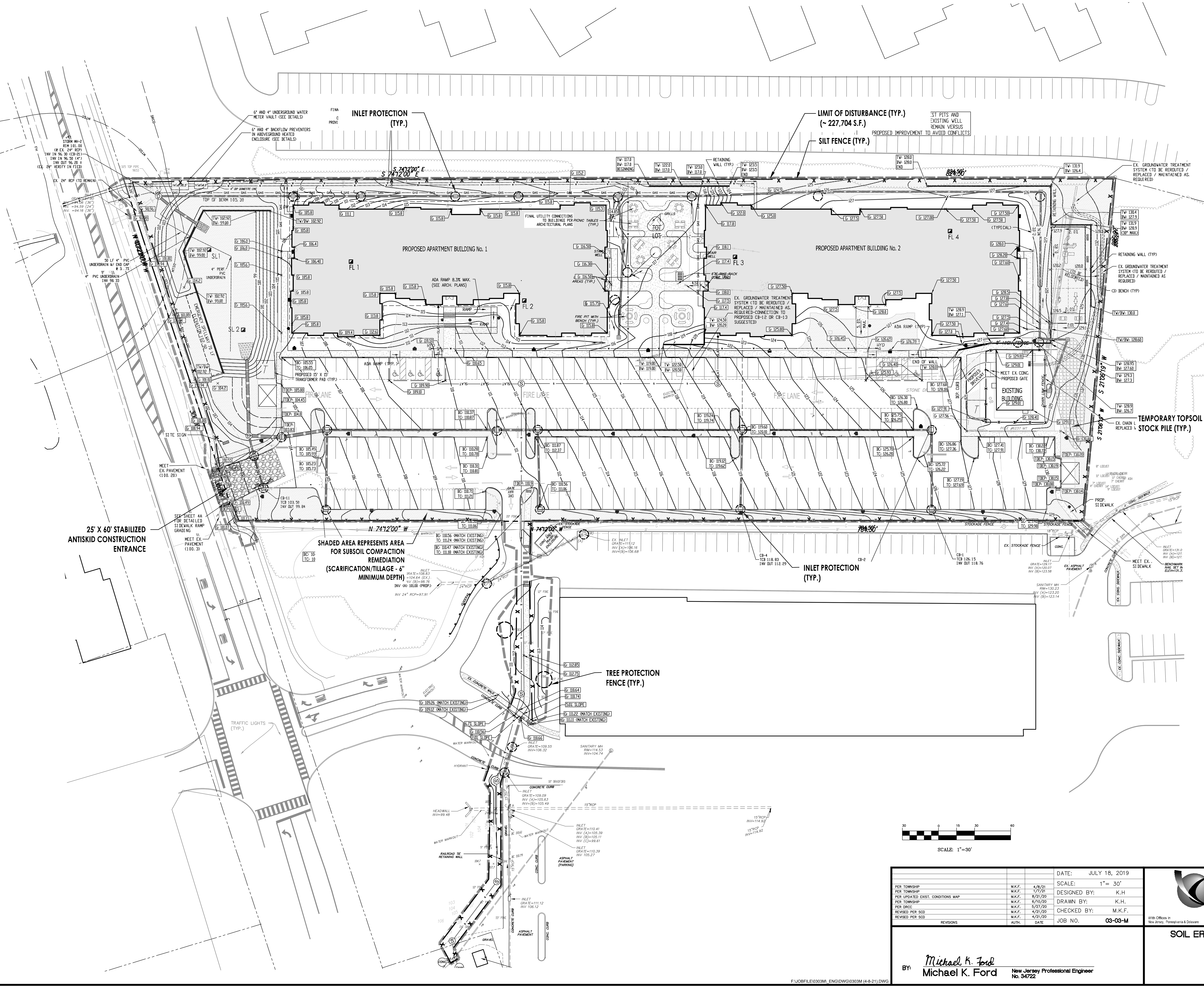
Landscape Architecture
NJ LLC CERT. No. 24GA28132300

LIGHTING PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

FILE No. 3476-X



LEGEND

	LIMIT OF DITURBANCE
	SILT FENCE
	TEMPORARY TOPSOIL STOCK PILE
	CONSTRUCTION ENTRANCE
	PROPOSED STORM DRAINAGE PIPE W/CATCH BASIN AND INLET PROTECTION
	PROPOSED STORM SEWER MANHOLE
	PROPOSED HEADWALL
	PROPOSED STONE RIP-RAP
S	PROPOSED SANITARY SEWER PIPING
	PROPOSED SANITARY SEWER MANHOLE
100	EXISTING CONTOUR LINE
100	PROPOSED CONTOUR LINE
100.0	EXISTING SPOT ELEVATION
TC 100.00	PROPOSED SPOT ELEVATION
TC	TOP OF CURB ELEVATION
BC	BOTTOM OF CURB ELEVATION
TW	TOP OF WALL ELEVATION
BW	BOTTOM OF WALL ELEVATION
1.00%	PROPOSED SLOPE DRAINAGE
W	WATER MAIN
G	GAS MAIN
	HYDRANT
	WATER VALVE
	GAS VALVE
	UTILITY POLE

30 0 15 30 60

SCALE: 1"=30'

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20
REVISED PER SCD	M.K.F.	4/21/20
REVISED PER SCD	M.K.F.	4/21/20

DATE: JULY 18, 2019
SCALE: 1"= 30'
DESIGNED BY: K.H
DRAWN BY: K.H.
CHECKED BY: M.K.F.
JOB NO. 03-03-M

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SOIL EROSION AND SEDIMENT CONTROL PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

7

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer No. 34722

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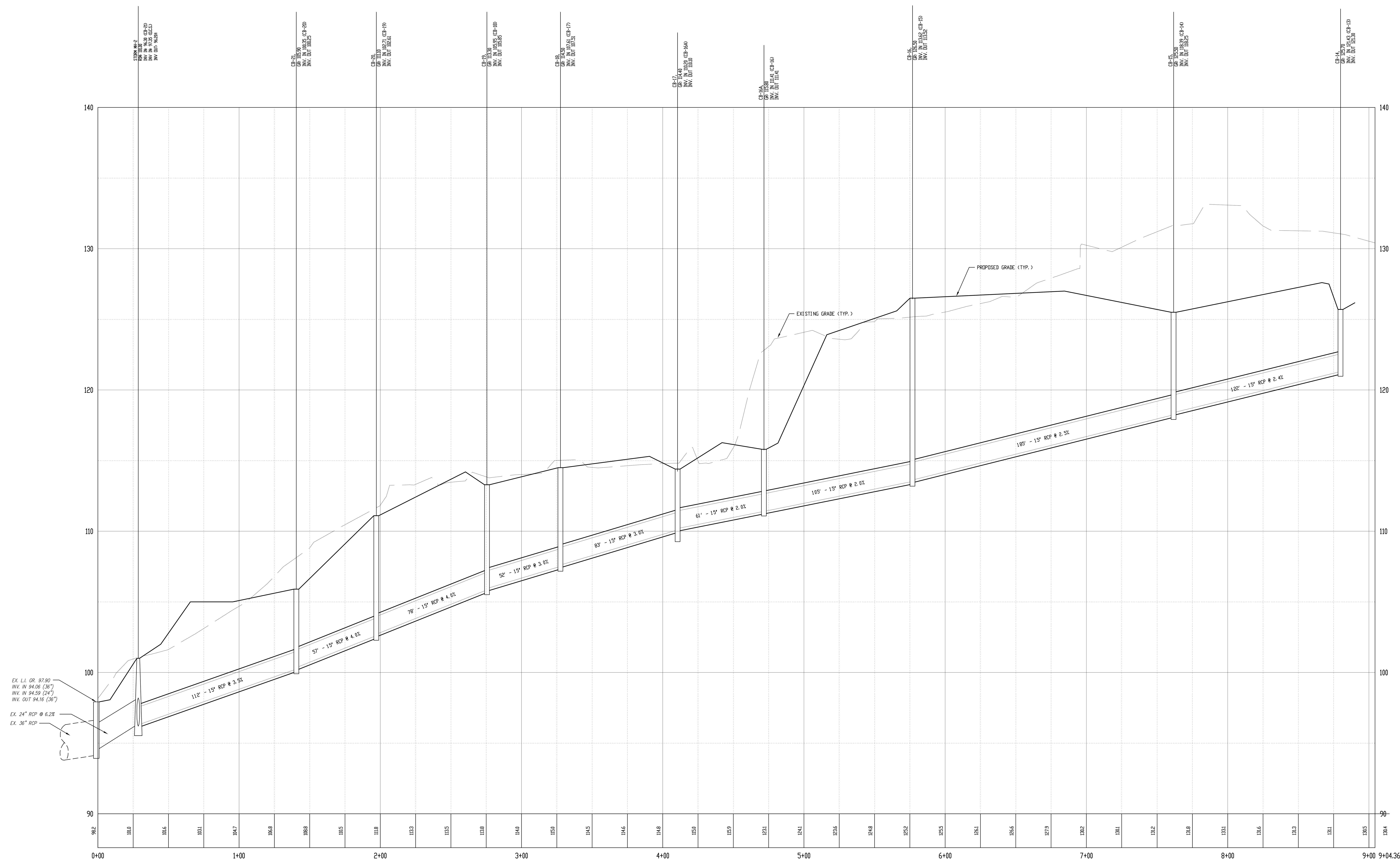
FILE No. 3476-X



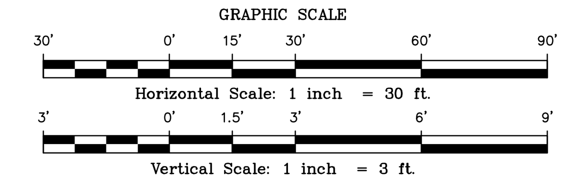
STORM DRAINAGE PROFILE FROM EXISTING L.I. TO PROPOSED CB-14

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'

NOTES:

1. STORM PIPES SHALL BE REINFORCED CONCRETE (RCP) UNLESS SPECIFICALLY NOTED OTHERWISE.
2. ALL STORM DRAINAGE INLETS AT CURBED LOCATIONS SHALL BE TYPE "B" AND TYPE "E" IN LAWN AREA UNLESS SPECIFICALLY NOTED OTHERWISE.
3. CURB UNDERDRAINS AND/OR STORM SEWER PIPE BEDDING DRAINS SHALL BE INSTALLED IF AND WHERE DEEMED NECESSARY BY THE TOWNSHIP ENGINEER AT THE TIME OF CONSTRUCTION.
4. ALL PROPOSED WATER MAINS SHALL BE MIN. 8" DIA CLASS 52 CEMENT-LINED D.I.P. UNLESS NOTED OTHERWISE.

GRAPHIC SCALE



REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20
PER TWP. COMMENTS	M.K.F.	1/17/20

DATE: JULY 18, 2019
SCALE: 1"= 30'
DESIGNED BY: K.H.
DRAWN BY: K.H.
CHECKED BY: M.K.F.
JOB NO. 03-03-M

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NJ LLC CERT. No. 24GA28132300

STORM DRAINAGE PROFILES
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

8

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

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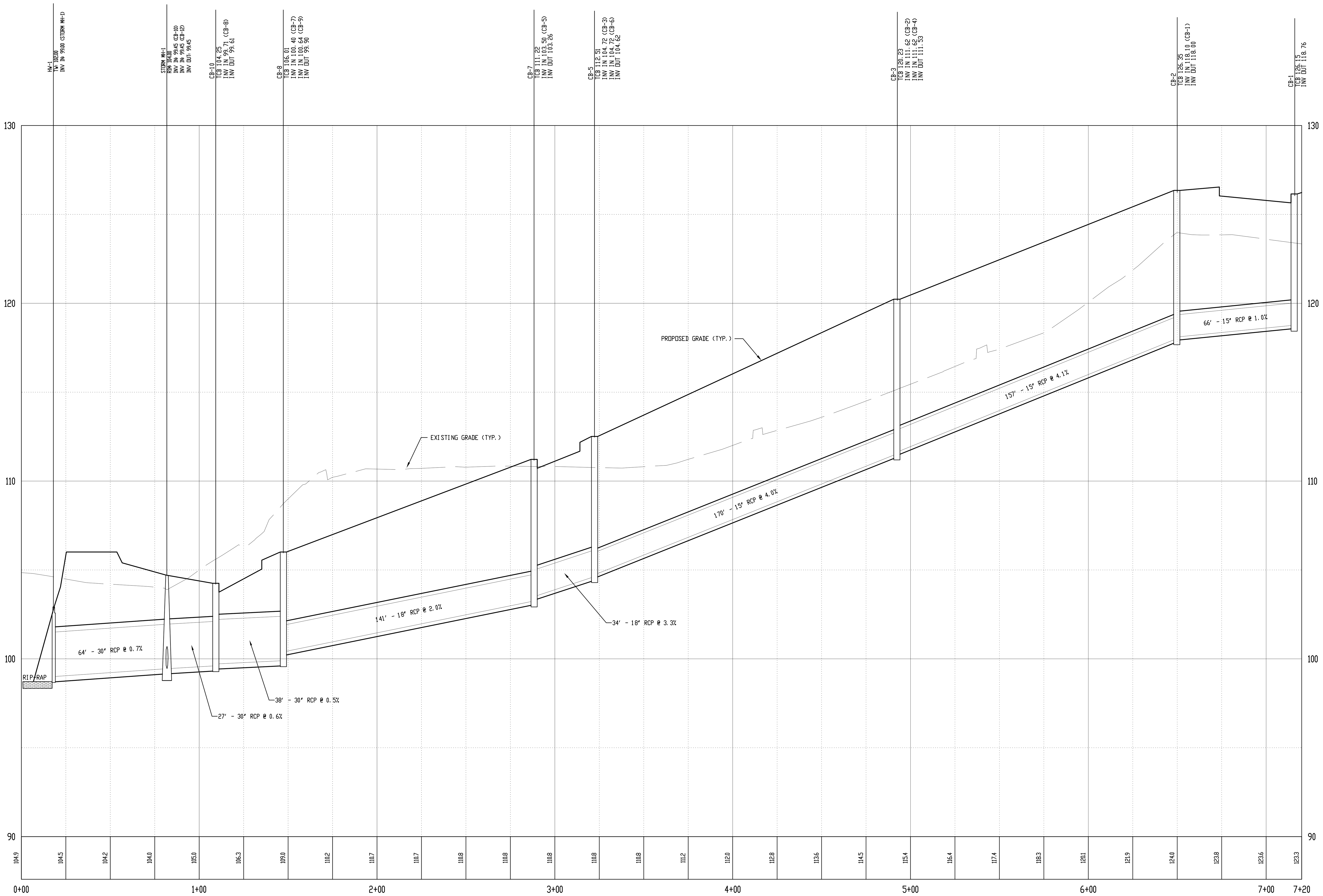
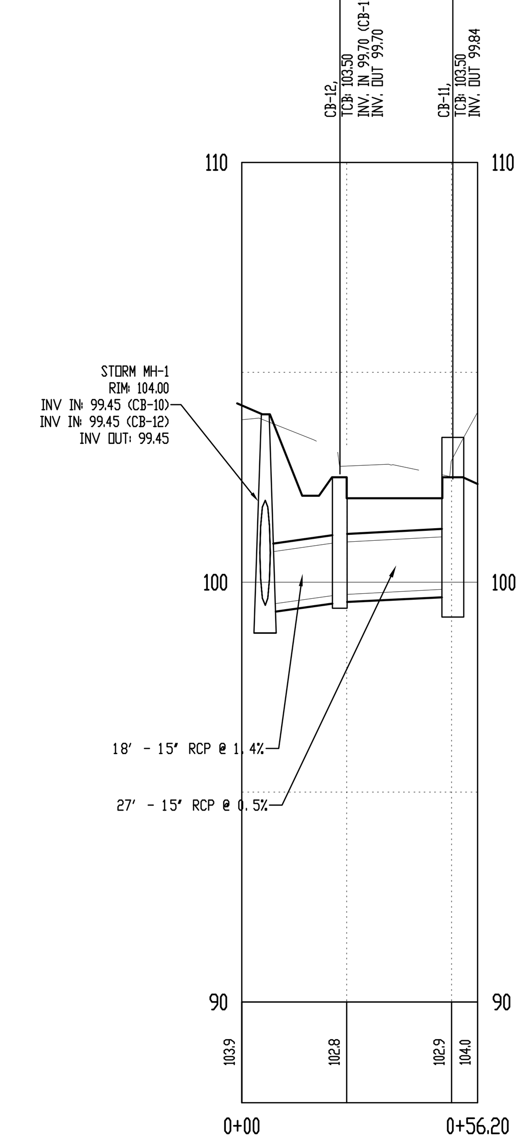
FILE No. 3476-X



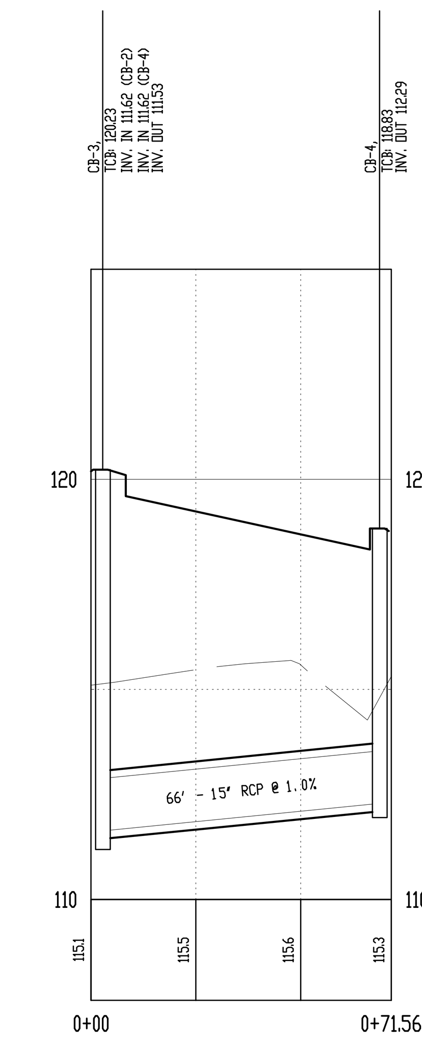
STORM DRAINAGE PROFILE FROM PROPOSED HW-1 TO PROPOSED CB-1

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



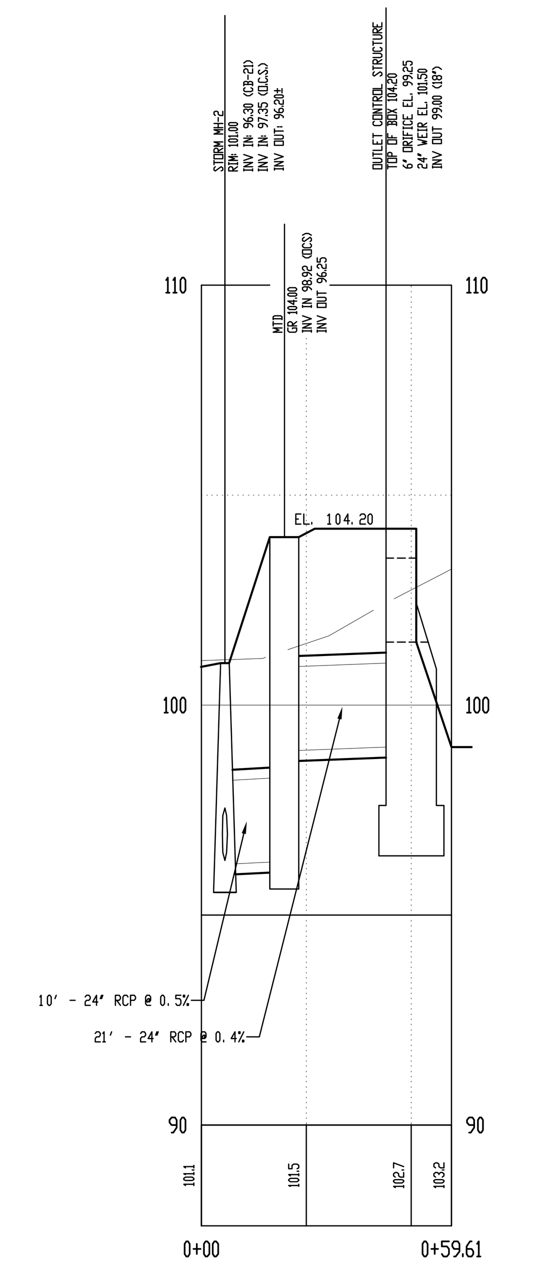
STORM DRAINAGE PROFILE FROM PROPOSED STORM MH-1 TO PROPOSED CB-11

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



STORM DRAINAGE PROFILE FROM PROPOSED CB-3 TO PROPOSED CB-4

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



STORM DRAINAGE PROFILE FROM PROPOSED STORM MH-2 TO OUTLET STRUCTURE

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'

NOTES:

1. ALL STORM DRAINAGE INLETS AT CURBED LOCATIONS SHALL BE TYPE "B" AND TYPE "E" IN LAWN AREA UNLESS SPECIFICALLY NOTED OTHERWISE.
2. CURB UNDERDRAINS AND/OR STORM SEWER PIPE BEDDING DRAINS SHALL BE INSTALLED IF AND WHERE DEEMED NECESSARY BY THE TOWNSHIP ENGINEER AT THE TIME OF CONSTRUCTION.
3. ALL PROPOSED WATER MAINS SHALL BE MIN. 8" DIA CLASS 52 CEMENT-LINED D.I.P. UNLESS NOTED OTHERWISE.

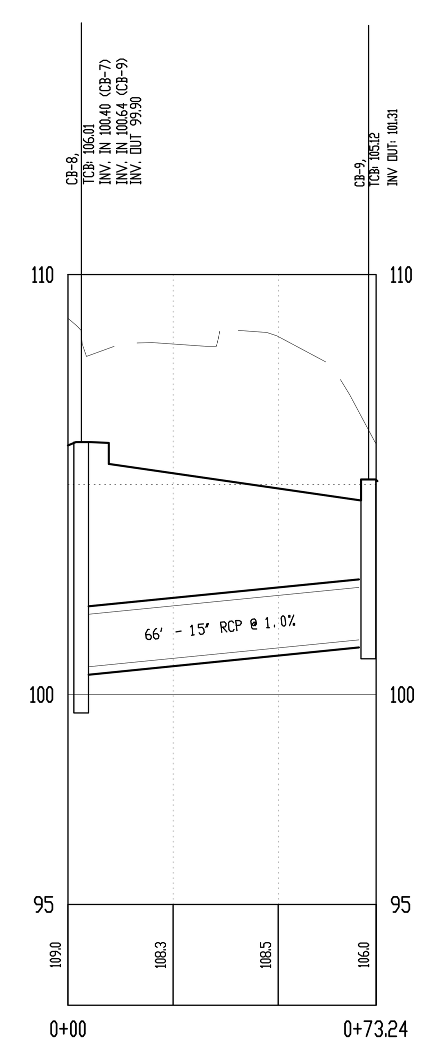
GRAPHIC SCALE

30' 0' 15' 30' 60' 90'

Horizontal Scale: 1 inch = 30 ft.

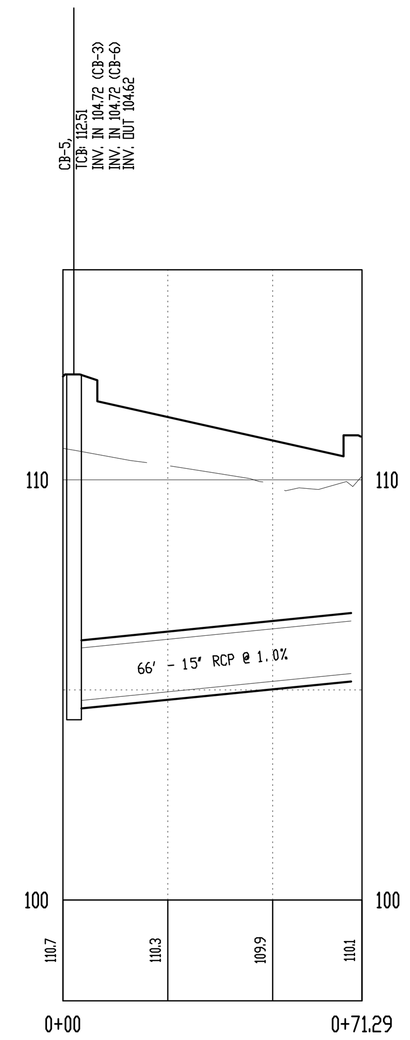
3' 0' 1.5' 3' 6' 9'

Vertical Scale: 1 inch = 3 ft.



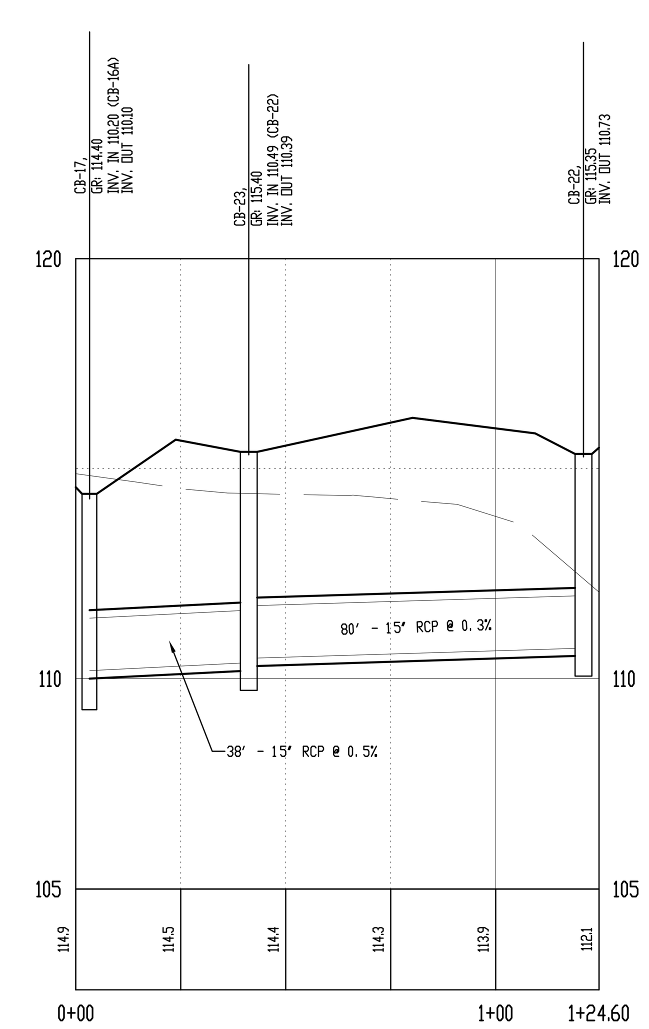
STORM DRAINAGE PROFILE FROM PROPOSED CB-8 TO PROPOSED CB-9

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



STORM DRAINAGE PROFILE FROM PROPOSED CB-5 TO PROPOSED CB-6

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



STORM DRAINAGE PROFILE FROM PROPOSED CB-17 TO PROPOSED CB-22

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP	M.K.F.	1/7/21
PER TOWNSHIP	M.K.F.	7/27/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20

DATE:	JULY 18, 2019
SCALE:	1"= 30'
DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

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NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford

Michael K. Ford New Jersey Professional Engineer No. 34722

STORM DRAINAGE PROFILES

FOR

LOT 45 IN BLOCK 29002

MONTGOMERY TOWNSHIP,

SOMERSET COUNTY, NEW JERSEY

9

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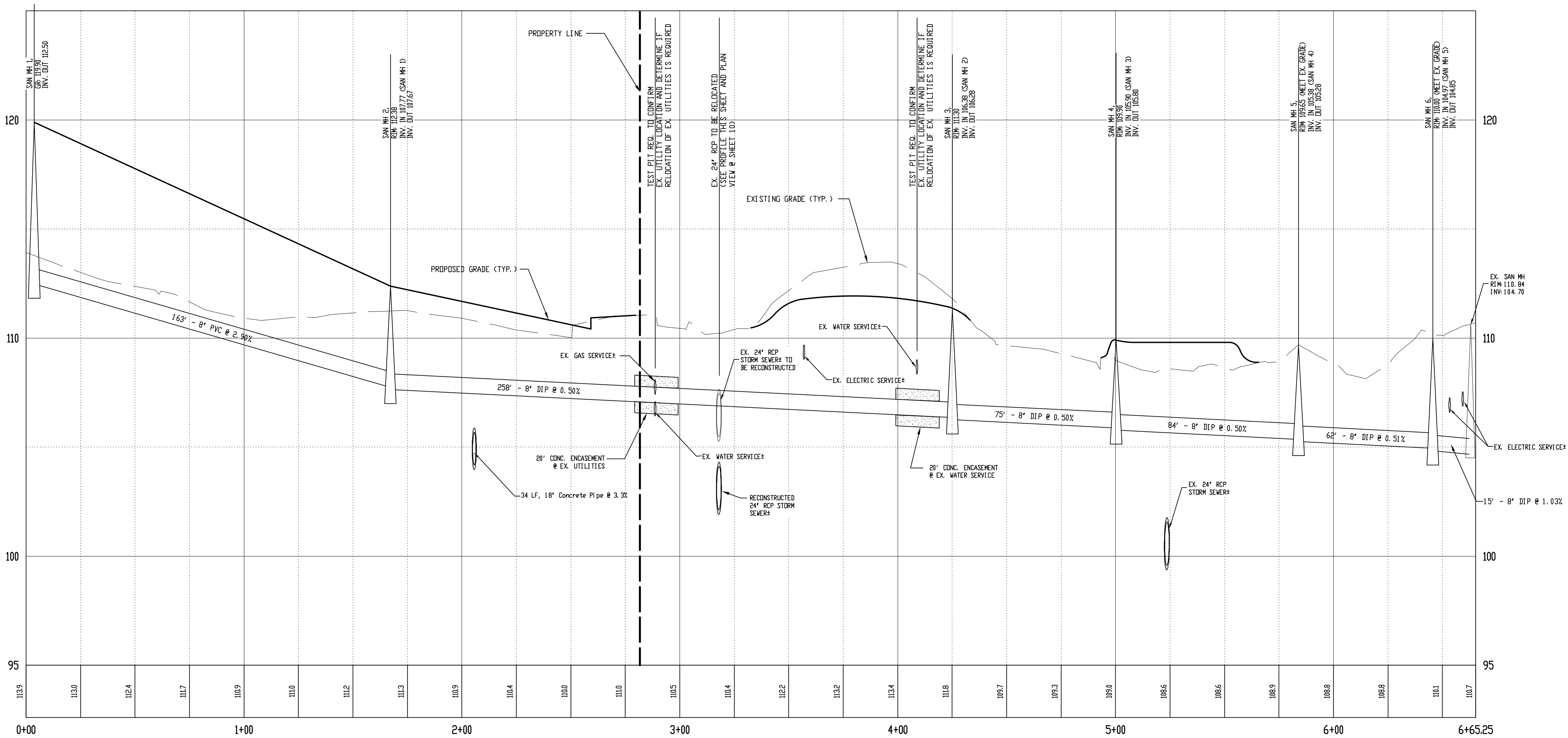
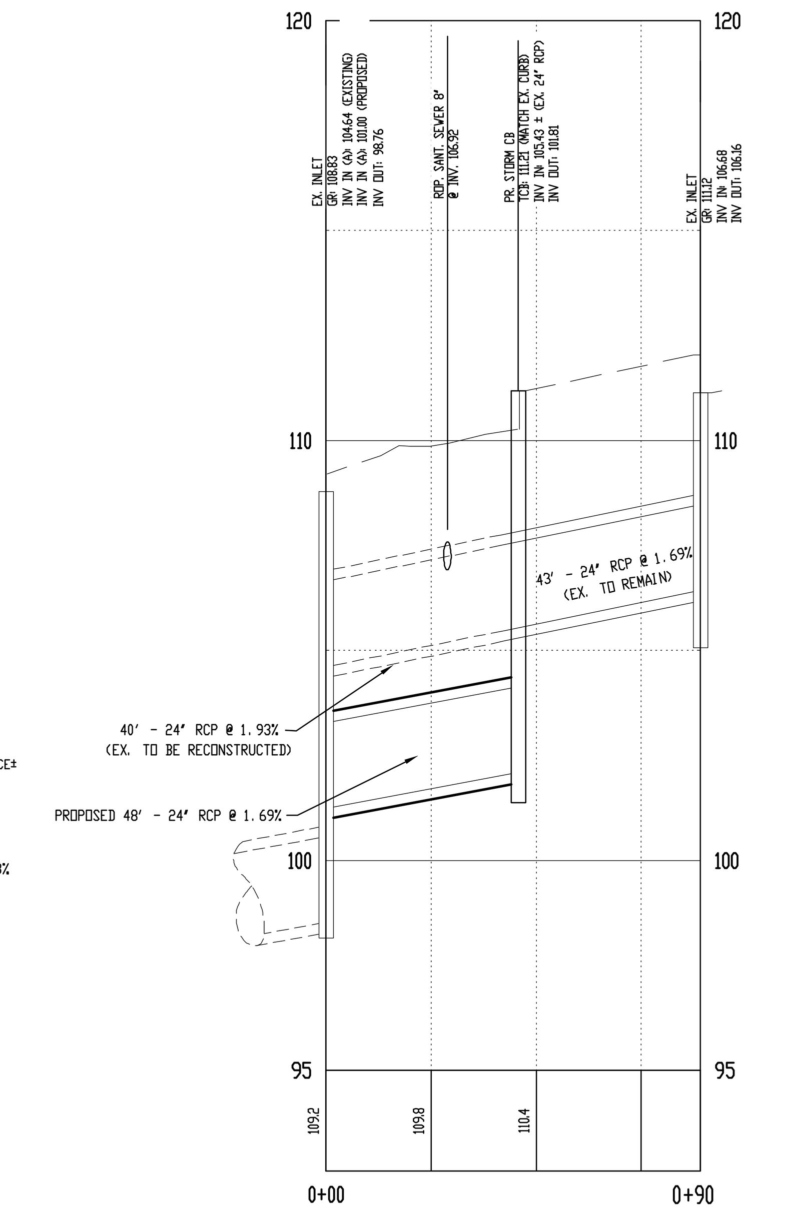
FILE No. 3476-X



NOTE: ALL GAS AND ELECTRICITY SERVICE CROSSINGS SHOWN ARE ASSUMED TO BE 8" IN DIAMETER AND LOCATED 3' BELOW GRADE. ALL WATER SERVICE CROSSINGS SHOWN ARE ASSUMED TO BE 8" IN DIAMETER AND LOCATED 4' BELOW GRADE. WHERE CONFLICTS EXIST, UTILITIES ARE TO BE REROUTED/REPLACED AS REQUIRED.

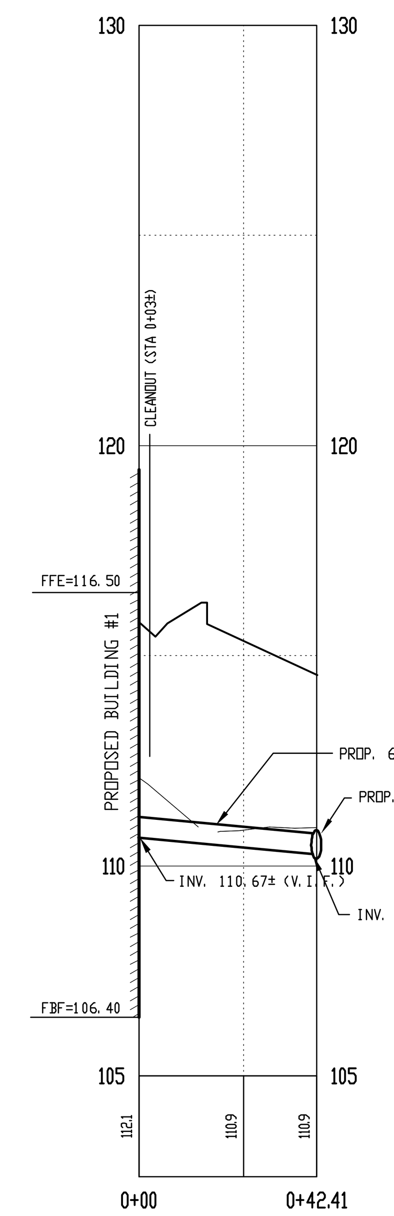
SANITARY SEWER PROFILE FROM MH-1 TO EX. MH

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



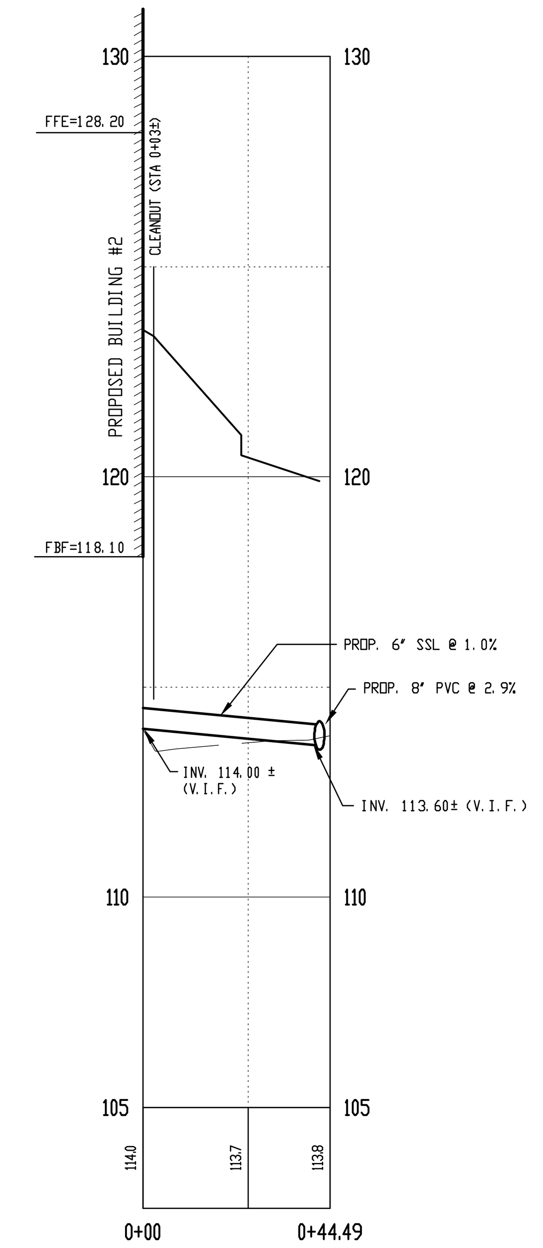
EX. STORM SEWER TO BE RECONSTRUCTED

HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



EX. SANITARY LATERAL @ BUILDING #1

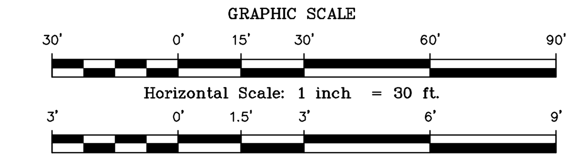
HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'



EX. SANITARY LATERAL @ BUILDING #2

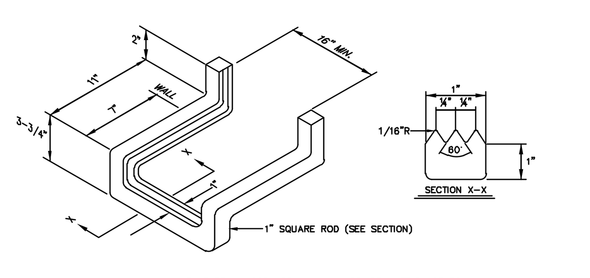
HORIZONTAL SCALE: 1"=30'; VERTICAL SCALE: 1"=3'

GRAPHIC SCALE



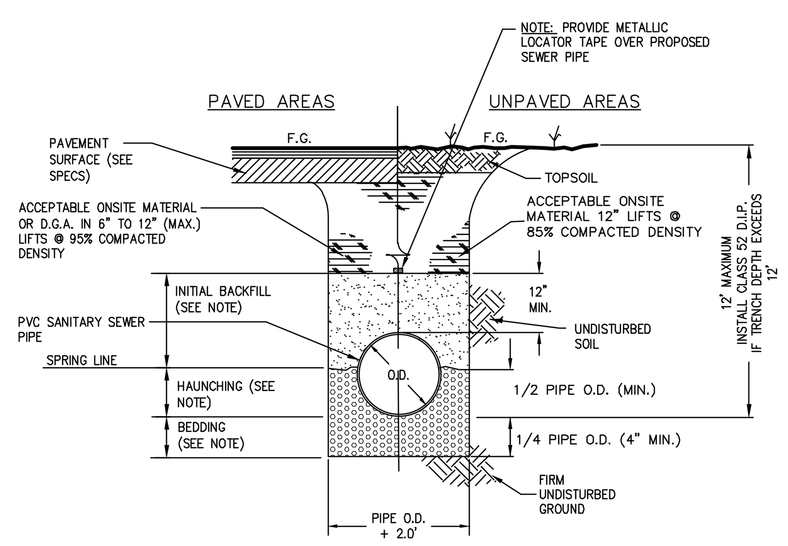
Horizontal Scale: 1 inch = 30 ft.

Vertical Scale: 1 inch = 3 ft.



ALUMINUM RUNG DETAIL

N.T.S.

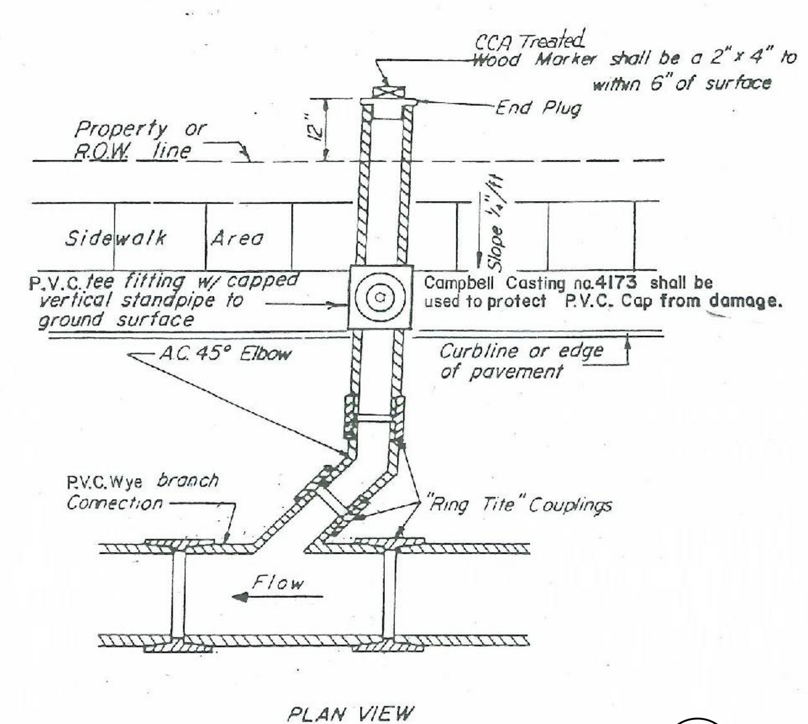


Bedding, haunching, and initial backfill material shall be placed in six-inch lifts and be Class IA, IB, or tt embedment material conforming with ASTM D2321, unless otherwise approved by the municipal or utility authority engineer. Soil aggregate I- 8 conforming to Article 901.09, Table 901-2 of the 1989 New Jersey Department of Transportation's Standard Specifications for Road and Bridge Construction when compacted to 95 percent maximum dry density, and stone crushing conforming with AASHTO designation M43-88 (ASTM designation D448) size no. 8, 1/8 inch to 3/8 inch (2.36 mm to 9.25 mm) meet this requirement. All material shall be clean and free flowing, and shall meet all ASTM C33 specifications for quality and soundness.

TRENCH DETAIL FOR PVC
GRAVITY SANITARY SEWER PIPE

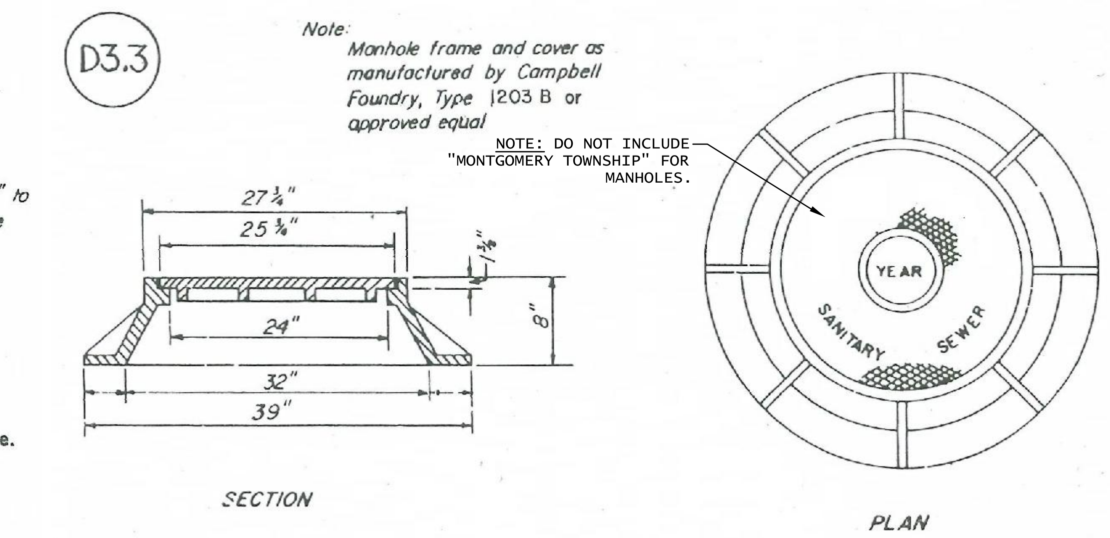
NOT TO SCALE
(N.J. RESIDENTIAL SITE STANDARD)

When dry sewers are installed, house connections shall extend inside the foundation and shall have a tamper-proof plug or cap temporarily sealed with a material that can be removed to utilize the fitting when the system is activated.



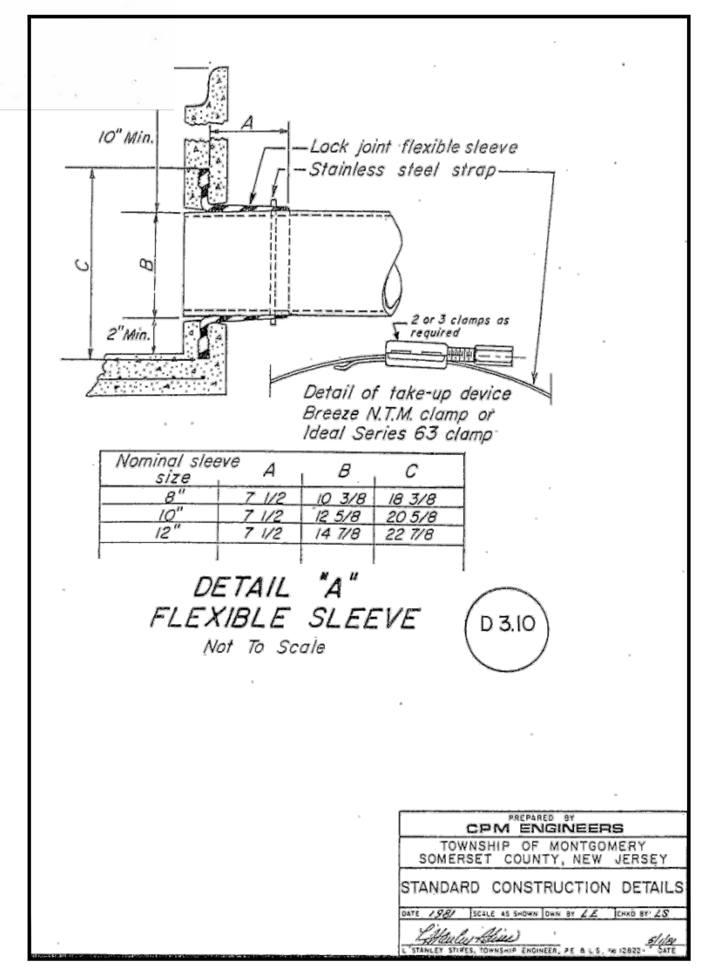
TYPICAL HOUSE CONNECTION

Not to Scale



MANHOLE FRAME AND COVER

Not to Scale



DETAIL "A"
FLEXIBLE SLEEVE

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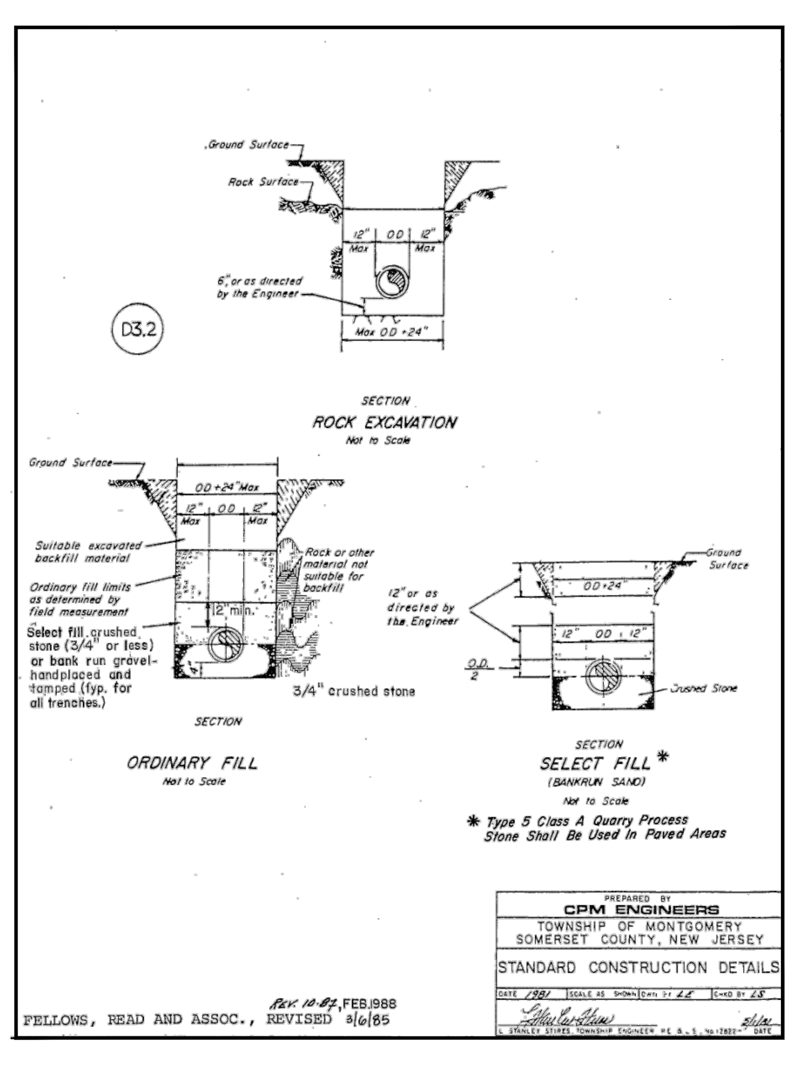
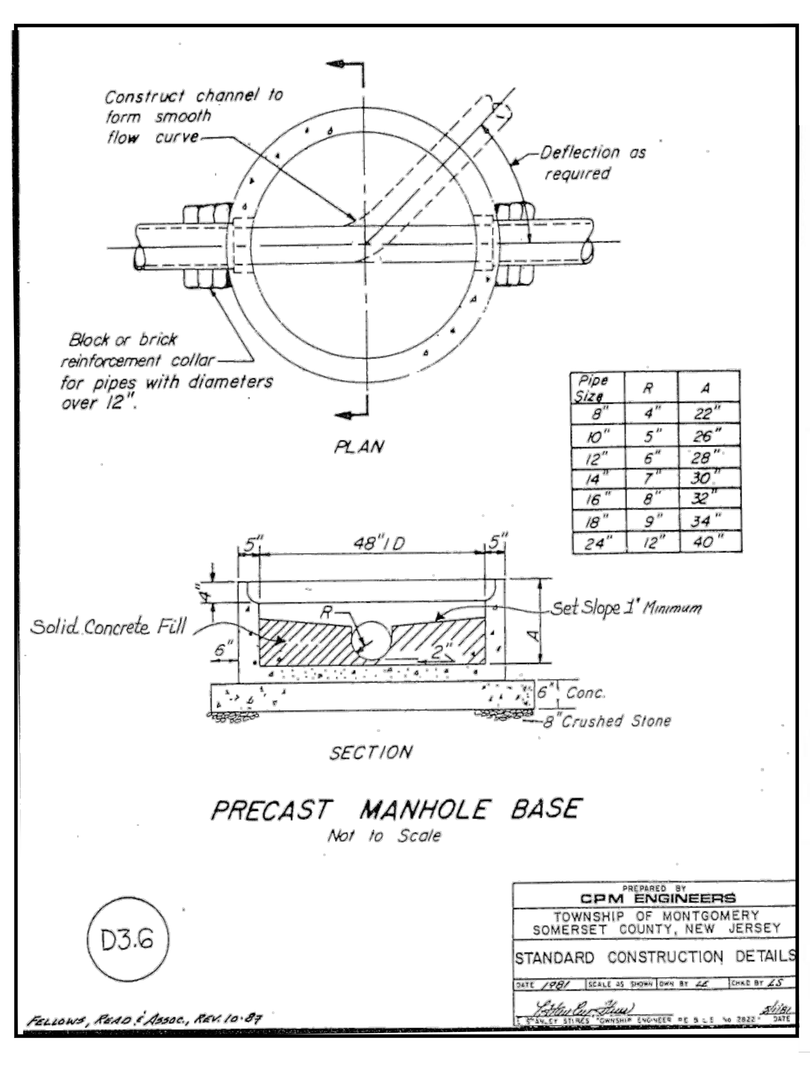
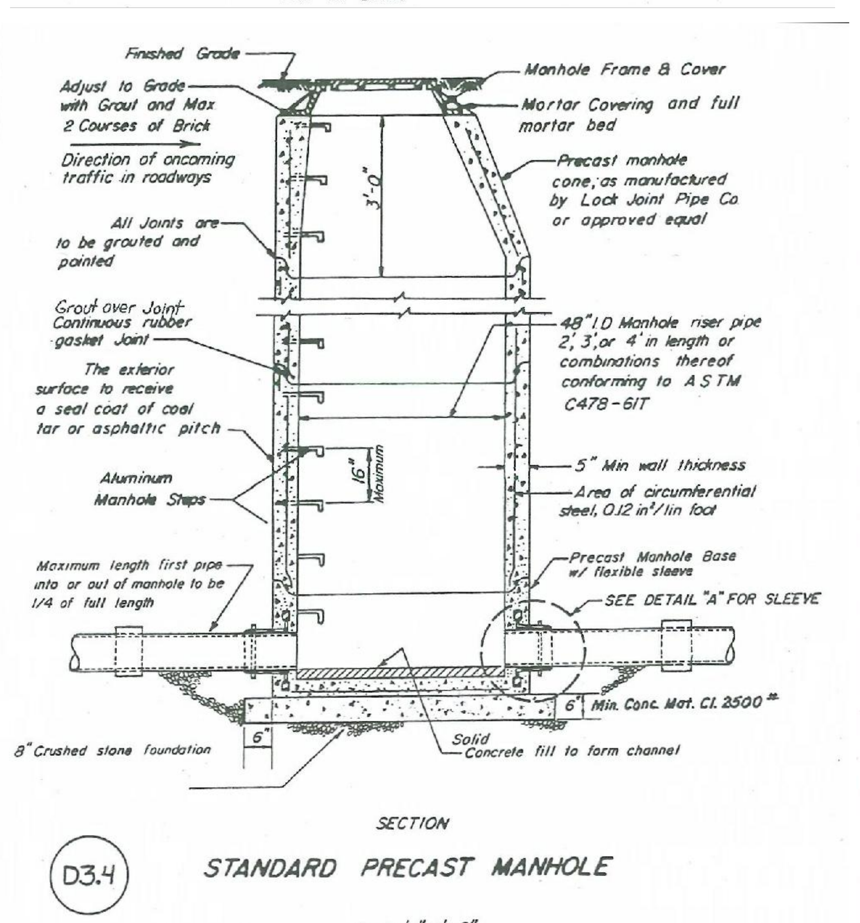


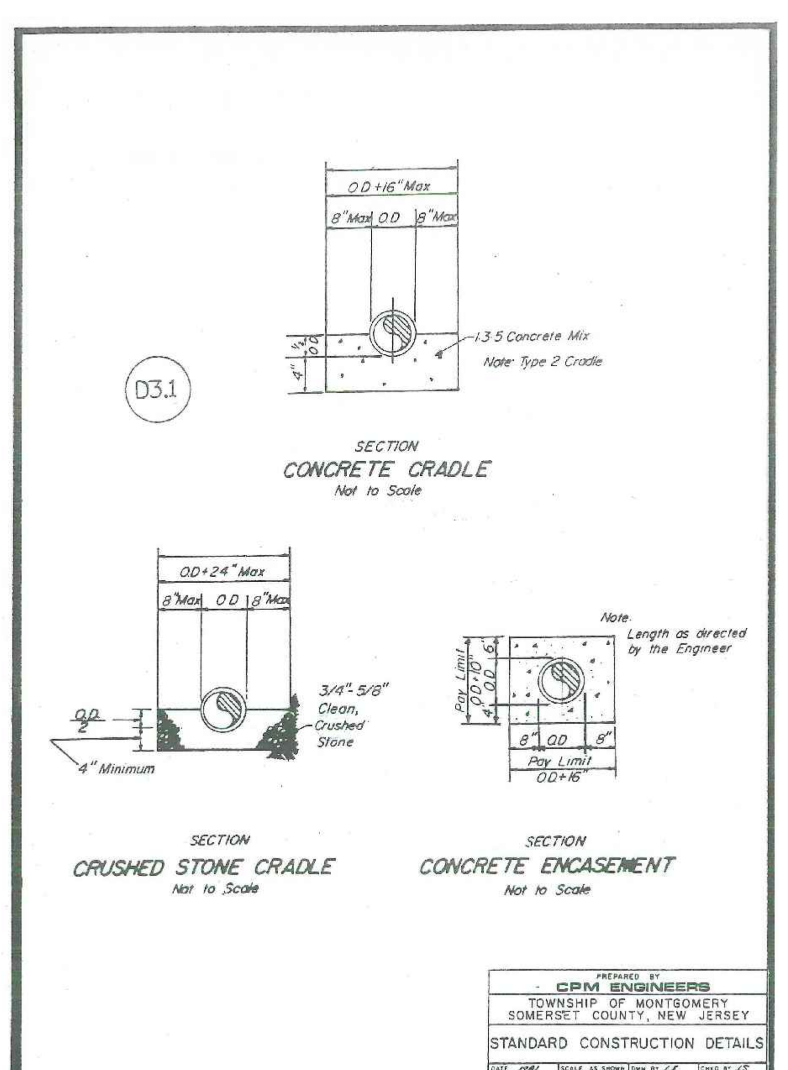


PRECAST MANHOLE BASE

Not to Scale



STANDARD PRECAST MANHOLE



SANITARY SEWER NOTES

1. SEE CONSTRUCTION DETAILS SHEET AND PROJECT SPECIFICATION IN ENGINEERS REPORT FOR ADDITIONAL INFORMATION.
2. TEST PITS MUST BE PERFORMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION, AT THE CROSSINGS OF THE EXISTING WATER MAIN WITH THE PROPOSED SEWER LATERALS TO INSURE ADEQUATE CLEARANCE.
3. CONNECTION OF THE NEW SANITARY LINE INTO THE EXISTING SANITARY MANHOLE SHALL BE CORE-DRILLED.
4. ALL CONSTRUCTION SHALL COMPLY WITH A CURRENT RULES AND REGULATIONS OF THE MONTGOMERY TOWNSHIP.
5. SANITARY SEWER SHALL BE INSTALLED 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY AWAY FROM POTABLE WATER.
6. MONTGOMERY TOWNSHIP SEWAGE AUTHORITY IS NOT RESPONSIBLE FOR THE OWNERSHIP AND MAINTENANCE OF THE SEWER SYSTEM ON THE PRIVATE PROPERTY THAT IS NOT IN A TOWNSHIP EASEMENT.
7. ALL SANITARY SEWER LINES SHALL BE AIR AND MANDREL TESTED. ADDITIONALLY, ALL LINES SHALL BE TELEVISED AND A VIDEOTAPE OF THE LINES SHALL BE PROVIDED TO THE TOWNSHIP ENGINEER IMMEDIATELY PRIOR TO THE ACTIVATION OF THE SEWER LINES.
8. ALL SANITARY SEWER MANHOLES SHALL BE AIR TESTED.
9. PLUG SHALL BE INSTALLED WHERE REQUIRED TO PREVENT UNAUTHORIZED USE OF THE SANITARY SEWER. THE PLUG SHALL BE REMOVED WHEN AUTHORIZED BY THE TOWNSHIP ENGINEER.
10. DUCTILE IRON PIPE SHALL HAVE A HYDROGEN SULFIDE/ CORROSION RESISTANT INTERIOR LINING SUITABLE FOR SANITARY SEWER APPLICATIONS. STANDARD CEMENT LINED DUCTILE IRON PIPE WILL NOT BE PERMITTED.
11. PROVIDE METALLIC LOCATOR TAPE OVER THE PROPOSED SEWER PIPE.
12. SANITARY SEWER MANHOLES SHALL SEALED FOR WATERPROOFING PER TOWNSHIP STANDARDS.

GENERAL NOTES FOR P.V.C. SEWER CONSTRUCTION

1. All 8" PVC pipe and fittings shall be SDR 35 and shall conform to ASTM-D3034. The poly vinyl chloride compounds for pipe shall have a cell classification of 12454-B or 13364-B (with minimum tensil modulus of 500,00 psi) as defined in ASTM-D1784. Maximum lengths of pipe shall be thirteen (13') feet.

2. Pipe joints shall be integral bell gasketed joints which when assembled, form a positive seal. The joints shall be designed in accordance with ASTM-D3211 and the lubricant used for assembly shall be as provided or recommended by the pipe manufacturer and shall have no detrimental effect on the gasket or the pipe.

3. All fittings including wyes and tees and pipe lubricant shall be made by the same manufacturer as the sewer main pipe.

4. In addition to air testing, a mandrill test will be performed to insure that a no greater than 5% deflection has occurred in the sewer main. Deflections greater than 5% will require the removal and reinstallation of the section of pipe failing the test.

5. PVC pipe shall be delivered to the site in banded pallet loads only. The bands shall not be removed until that pipe is ready for installation. Unbanded pipe not immediately installed has the tendency to warp beyond repair.

6. Manhole connections will be made with a flexible sleeve precast in the manhole or with an A.C. material manhole adapter.

REVISIONS	AUTH.	DATE		
			DATE:	JULY 18, 2019
			SCALE:	1"= 30'
PER TOWNSHIP	M.K.F.	2/8/21	DESIGNED BY:	K.H.
PER TOWNSHIP	M.K.F.	1/7/21	DRAWN BY:	K.H.
PER TOWNSHIP	M.K.F.	6/10/20	CHECKED BY:	M.K.F.
			JOB NO.	03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC
Consulting Civil Engineering
Bridge Design
Highway Design
Construction Inspection
Geotechnical Engineering
Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture
With Offices In New Jersey, Pennsylvania & Delaware
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PHONE (908) 359-8291 FAX (908) 359-1580
NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

SANITARY SEWER PROFILES AND CONSTRUCTION DETAILS
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

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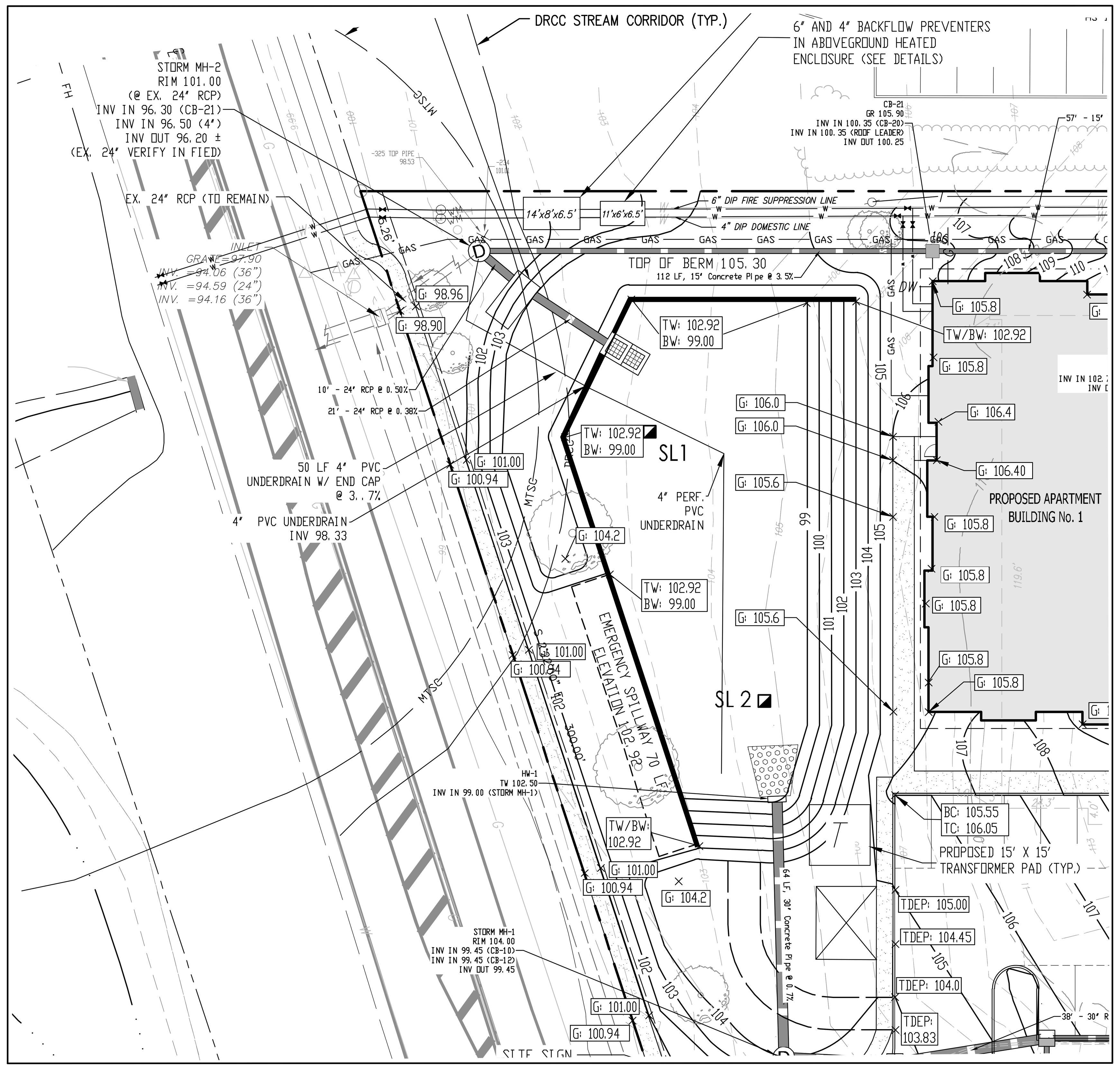
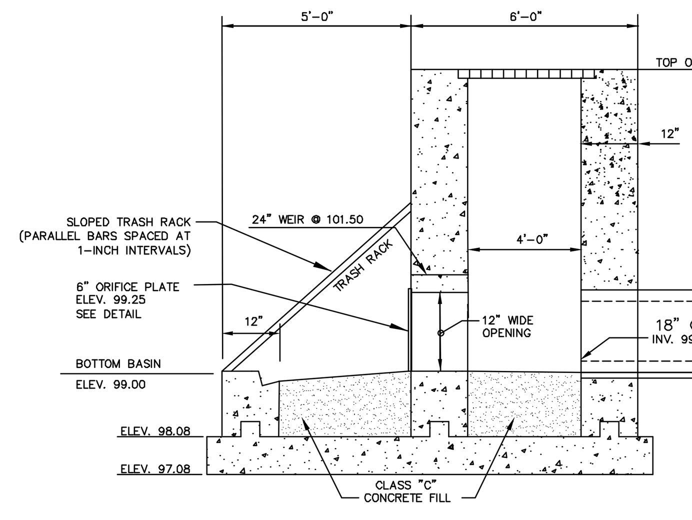
FILE No. 3476-X



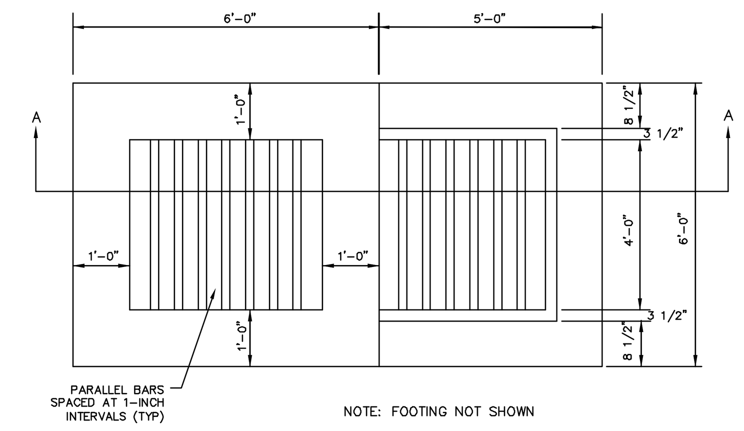
DETENTION BASIN AREA

SCALE: 1"=20'



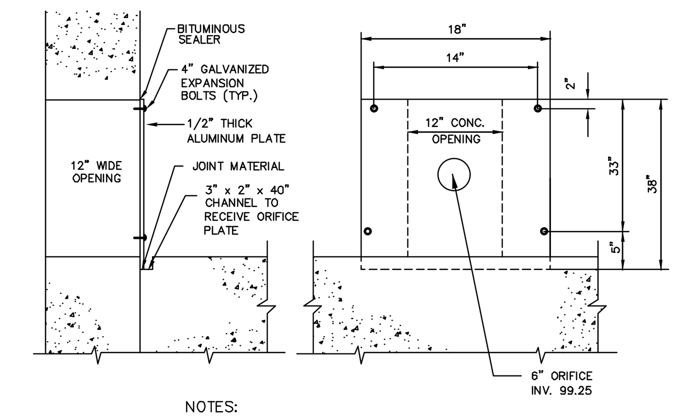
OUTLET STRUCTURE SECTION "A-A"

N.T.S.



OUTLET STRUCTURE PLAN VIEW

N.T.S.

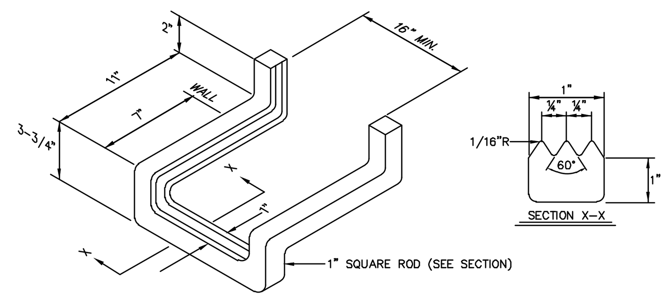


NOTES:

1. ORIFICE PLATE TO BE INSTALLED AS SOON AS OUTLET BOX IS COMPLETED.
2. PAINT SURFACE OF ALL ALUMINUM IN CONTACT WITH CONCRETE WITH A HEAVY COAT OF ALUMINUM PIGMENTED ALKALINE RESISTANT BITUMINOUS PAINT.

ORIFICE PLATE DETAIL

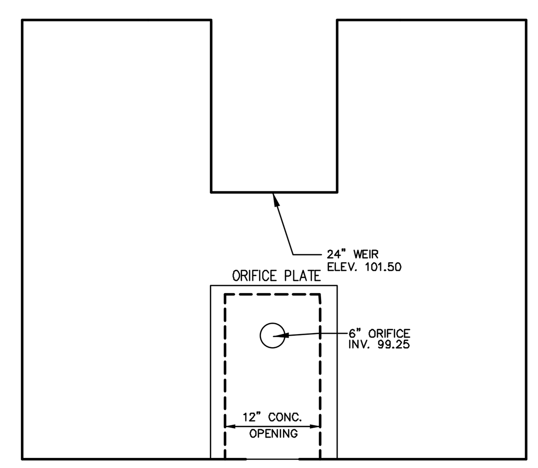
N.T.S.



ALLOY TYPE NO. 6061-TC ALUMINUM CO. OF AMERICA OR EQUAL

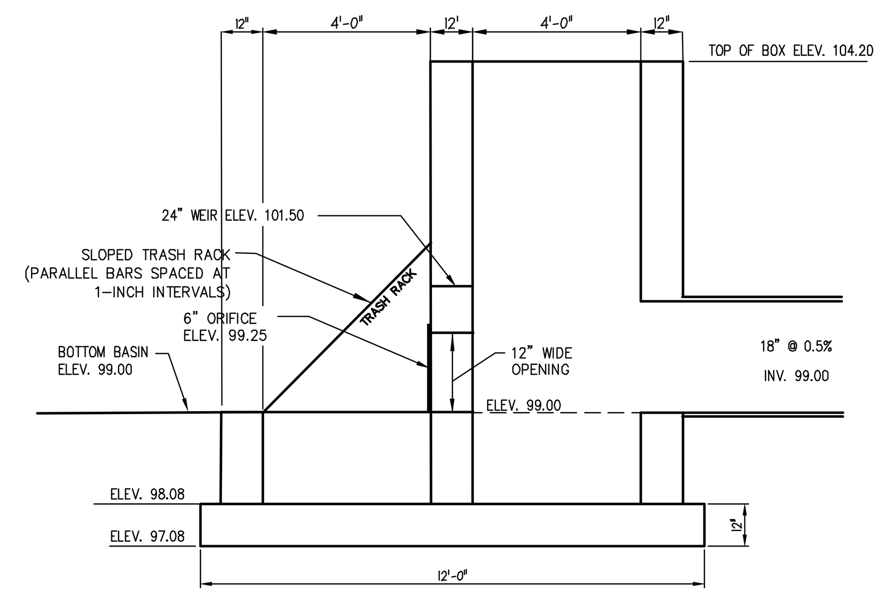
DETAIL OF ALUMINUM RUNG

N.T.S.



OUTLET STRUCTURE ELEVATION VIEW

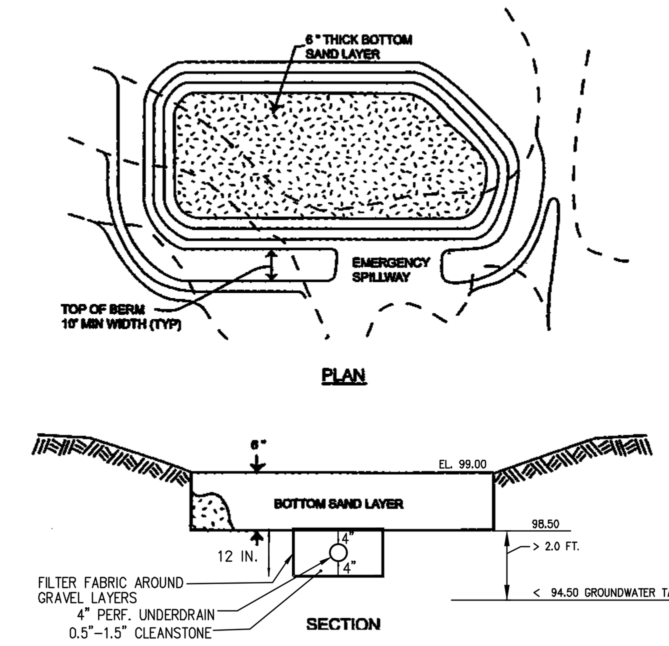
N.T.S.



OUTLET STRUCTURE GRADING DETAIL

N.T.S.

Figure 9.5-1: Infiltration Basin Components



NOTES:

1. K-4 SOIL TO REPLACE EXISTING SOIL OVER ENTIRE INFILTRATION AREA DOWN TO ELEVATION 98.5.
2. TO ENSURE THAT THE DESIGN PERMEABILITY RATE IS MAINTAINED OVER TIME, A SAND LAYER IS REQUIRED AT THE BOTTOM OF EVERY SURFACE TYPE INFILTRATION BASIN. THE MINIMUM DEPTH IS 6 INCHES.
3. THE SAND MUST MEET ALL THE SPECIFICATIONS FOR CLEAN, MEDIUM-AGGREGATE CONCRETE SAND IN ACCORDANCE WITH AASHTO M-6 OR ASTM C-33, AS CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW JERSEY. THE MAXIMUM PERCENTAGE OF FINES IS 15%.
4. THE MINIMUM TESTED PERMEABILITY RATE IS 20 INCHES/HOUR.
5. THE USE OF TOP SOIL AND VEGETATION IS PROHIBITED.
6. FILTER FABRIC IS REQUIRED ALONG THE SIDES OF THE INFILTRATION BASIN TO PREVENT THE MIGRATION OF FINE PARTICLES FROM THE SURROUNDING SOIL. FILTER FABRIC MAY NOT BE USED ALONG THE BOTTOM OF THE BASIN BECAUSE IT MAY RESULT IN A LOSS OF PERMEABILITY.
7. NO CONSTRUCTION EQUIPMENT PERMITTED IN THE AREA OF THE BASIN BOTTOM.

WATER QUALITY DETENTION BASIN DETAIL

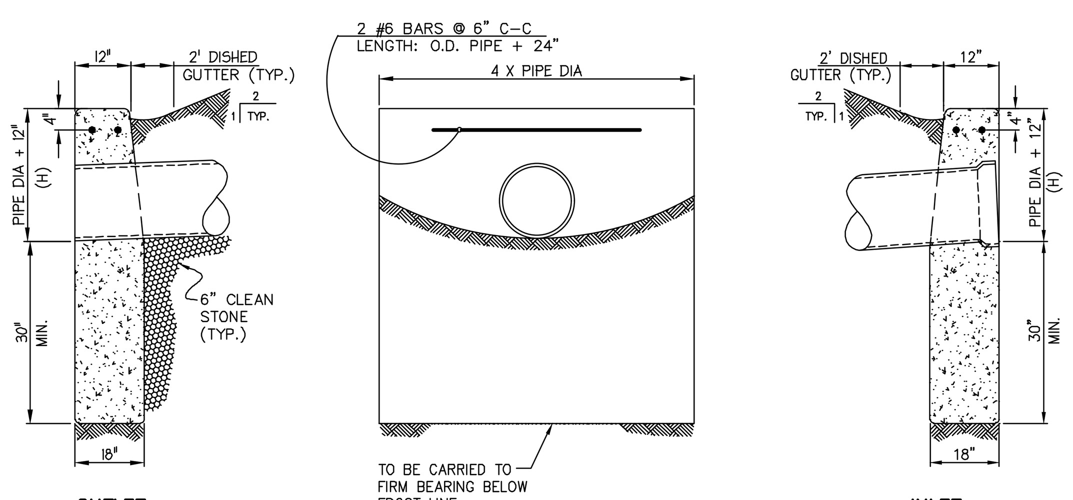
N.T.S.

Basin Summary:

Storm Event (Year)	Detention Basin: Allowable Peak Flow (cfs)	Water Surface Elevation (ft)	Basin Outflow (cfs)	Total Post Development Peak Flow (cfs)
Water Quality	N/A	100.15	0.75	1.88
2	4.06	101.21	1.23	3.99
10	10.80	102.04	3.93	7.85
100	22.04	102.92	12.00	21.93

Basin Elevation Area:

Elevation	Area
99.00	5,718
99.25	5,827
99.50	5,938
100.00	6,162
100.50	6,393
101.00	6,629
101.50	6,865
102.00	7,106
102.50	7,346
103.00	7,590



OUTLET

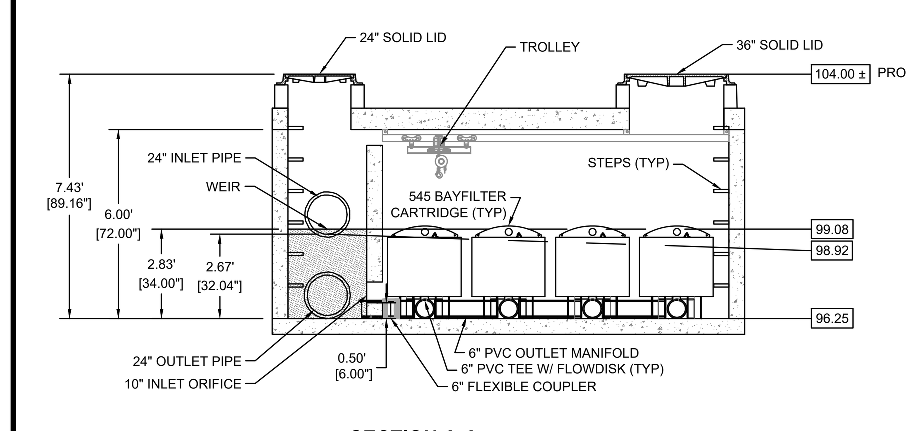
INLET

NOTES:

1. FOR ARCH OR ELLIPTICAL PIPE LENGTH OF HEADWALL IS 3H + SPAN.
2. ALL EDGES TO BE CHAMFERED 1".
3. THE RUBBING OF HEADWALLS TO REMOVE FORM MARKS WILL NOT BE REQUIRED AT THE BOTTOM OF EMBANKMENTS IN RURAL AREAS.
4. CONCRETE: 3500 P.S.I. AT 28 DAYS WITH 6% ± 1% AIR ENTRAINMENT.
5. THIS HEADWALL MAY BE CONSTRUCTED OF PRECAST CONCRETE. IF A PRECAST STRUCTURE IS TO BE UTILIZED MANUFACTURES SHOP DRAWINGS ARE TO BE SUBMITTED TO THE TO THE TOWNSHIP ENGINEER FOR APPROVAL.

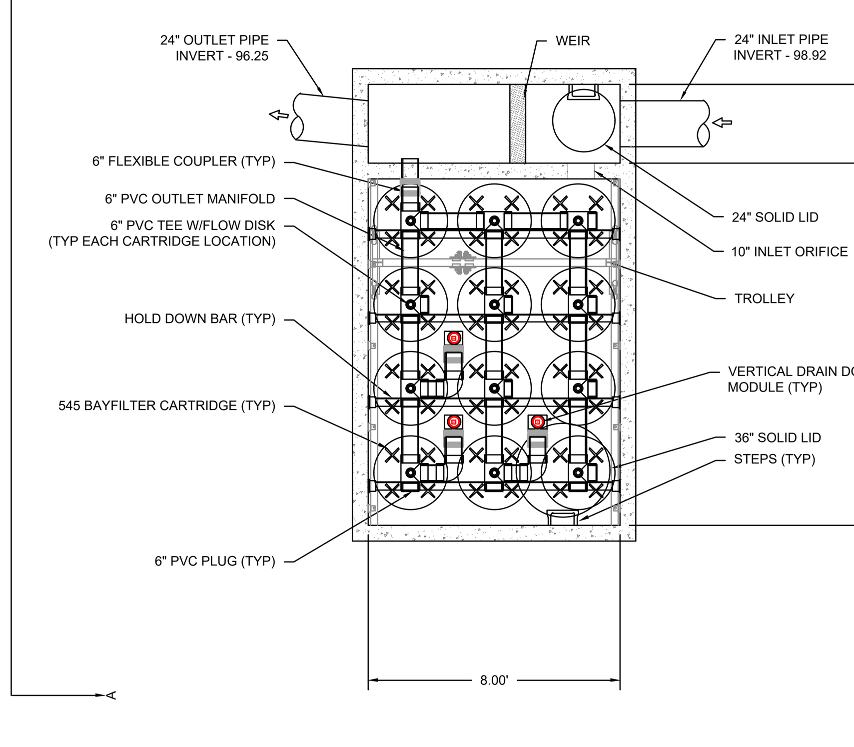
HEADWALL DETAIL

N.T.S.



SECTION A-A

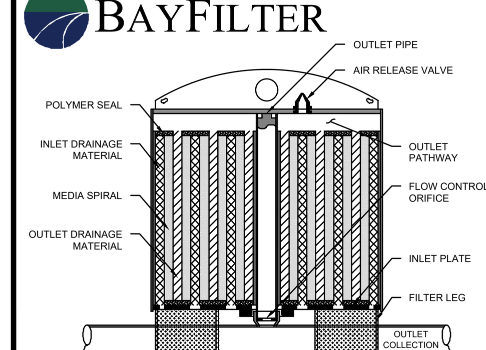
SCALE : 1/4" = 1'



PLAN VIEW

SCALE : 1/4" = 1'

BAYFILTER



545 BAYFILTER 8-14-12	MTD
WATER QUALITY FLOW RATE	
DRAINAGE AREA	---
CARTRIDGE DESIGN FLOW RATE	45 GPM
# BAYFILTER CARTRIDGES	12
TREATED SEDIMENT CAPACITY	3,668 LBS

*SEDIMENT CAPTURE PER CURRENT NJDEP APPROVAL

THE BAYFILTER STORMWATER MANAGEMENT SYSTEM IS A STORMWATER FILTRATION DEVICE DESIGNED TO REMOVE FINE SEDIMENTS, HEAVY METALS, AND PHOSPORUS. THE BAYFILTER SYSTEM RELIES ON A SPIRAL WOUND MEDIA FILTER CARTRIDGE WITH APPROXIMATELY 90 SQUARE FEET OF FILTRATION AREA. THE FILTER CARTRIDGES ARE HOUSED IN A CONCRETE STRUCTURE THAT EVENLY DISTRIBUTES THE FLOW BETWEEN CARTRIDGES. THE SYSTEM IS INLINE WITH AN INTERNAL BYPASS THAT ROUTES HIGH INTENSITY STORMS AROUND THE CARTRIDGES. THE FILTER CARTRIDGES REMOVE POLLUTANTS FROM RUNOFF BY FILTRATION (INTERCEPTION/ATTACHMENT) AND ADSORPTION.

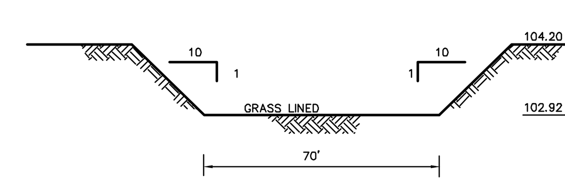
BAYSAVER TECHNOLOGIES

AS NOTED

11-BASIN #

INFILTRATION BASIN CONSTRUCTION NOTES:

1. DURING CLEARING AND GRADING OF THE SITE, MEASURES MUST BE TAKEN TO ELIMINATE SOIL COMPACTION AT THE LOCATION OF A PROPOSED INFILTRATION BASIN. THE LOCATION OF THE PROPOSED INFILTRATION BASIN MUST BE CORDONED OFF DURING CONSTRUCTION TO PREVENT COMPACTION OF THE SUBSOIL BY CONSTRUCTION EQUIPMENT OR STOCKPILES.
2. THE USE OF THE LOCATION PROPOSED FOR AN INFILTRATION BASIN TO PROVIDE SEDIMENT CONTROL DURING CONSTRUCTION IS DISCOURAGED; HOWEVER, WHEN UNAVOIDABLE, EXCAVATION FOR THE SEDIMENT CONTROL BASIN MUS TBE AT LEAST 2 FEET ABOVE THE FINAL DESIGN ELEVATION OF THE BASIN BOTTOM.
3. EXCAVATION AND CONSTRUCTION OF AN INFILTRATION BASIN MUST BE PERFORMED USING EQUIPMENT PLACED OUTSIDE THE LIMITS OF THE BASIN.
4. THE EXCAVATION TO THE FINAL DESIGN ELEVATION OF THE INFILTRATION BASIN BOTTOM MAY ONLY OCCUR AFTER ALL CONSTRUCTION WITHIN ITS DRAINAGE AREA IS COMPLETED AND THE DRAINAGE AREA IS STABILIZED.IF CONSTRUCTION OF THE INFILTRATION BASIN CANNOT BE DELAYED, BERMS MUST BE PLACED AROUND THE PERIMETER OF THE BASIN DURING ALL PHASES OF CONSTRUCTION TO DIVERT ALL FLOWS AWAY FROM THE BASIN. THE BERMS MAY NOT BE REMOVED UNTIL ALL CONSTRUCTION WITHIN THE DRAINAGE AREA IS COMPLETED,AND THE AREA IS STABILIZED.
5. THE CONTRIBUTING DRAINAGE AREA MUST BE COMPLETELY STABILIZED PRIOR TO INFILTRATION BASIN USE.
6. POST-CONSTRUCTION TESTING MUST BE PERFORMED ON THE AS-BUILT INFILTRATION BASIN IN ACCORDANCE WITH THE CONSTRUCTION AND POST-CONSTRUCTION OVERSIGHT AND SOIL PERMEABILITY TESTING SECTION IN APPENDIX E: SOIL TESTING CRITERIA OF THIS MANUAL. WHERE AS-BUILT TESTING SHOWS A LONGER DRAIN TIME THAN DESIGNED, CORRECTIVE ACTION MUST BE TAKEN. THE DRAIN TIME IS DEFINED AS THE TIME IT TAKES TO FULLY INFILTRATE THE MAXIMUM DESIGN STORM RUNOFF VOLUME THROUGH THE MOST HYDRAULICALLY RESTRICTIVE LAYER.
7. WHERE "ENGINEER" IS STATED, IT IS MEANT TO E THE DESIGN ENGINEER, LICENSED ENGINEER WORKING ON BEHALF OF THE OWNER/CONTRACTORY, OR HIS/THEIR DESIGNATED REPRESENTATIVE(S) AS APPROPRIATE.
8. IT IS EXPECTED THAT, TO THE MAXIMUM EXTENT PRACTICABLE, THE REPRESENTATIVES WILL BE ONSITE AND PROVIDING GUIDANCE TO THE CONTRACTOR FOR THE ENTIRE DURATION OF SYSTEM CONSTRUCTION (I.E. THE REPRESENTATIVE WILL BE ONSITE OR AVAILABLE FROM PLACEMENT OF GEOTEXTILE ON SIDES OF BOTTOM OF BED AFTER EXCAVATION THROUGH TO SEEDING AND SLOPE STABILIZATION.)
9. THE REPRESENTATIVES OR ENGINEER MUST BE ONSITE TO INSPECT, AT A MINIMUM, THE FOLLOWING: VERIFICATION OF SUBGRADE PREPARATION AS IT RELATES TO THE INFILTRATION BASIN, INSPECTION AND APPROVAL OF K-5 SAND MATERIAL, AND IN-PLACE DEPTH OF K-5 SAND.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE ANTICIPATED SCHEDULE WITH THE REPRESENTATIVE AND/OR ENGINEER AT LEAST TWO (2) WEEKS IN ADVANCE OF ANY ACTIVITIES THEY MUST CERTIFY PRIOR TO CONTINUING CONSTRUCTION ACTIVITIES SO THAT PARAMETERS AND EXPECTATIONS CAN BE DISCUSSED.
11. THE REPRESENTATIVE AND ENGINEER MUST PROVIDE A CERTIFICATION STATING THAT, WHILE THEY WERE ONSITE ON (DATES) AND (TIMES), ALL CONSTRUCTION WAS PERFORMED IN ACCORDANCE WITH THE DESIGN PLANS AND/OR MANUFACTURER RECOMMENDATIONS. THE CONTRACTOR SHALL COMPLETE AN AS-BUILT SURVEY FOR THE ENGINEER TO CONFIRM VOLUME AND STORM ROUTINGS TO COMPARE TO THE DESIGN. IN ADDITION, THE CONTRACTOR AND/OR ENGINEER SHALL COMPLETE POST-CONSTRUCTION TESTING ON THE AS-BUILT INFILTRATION BASIN. THE PERMEABILITY TESTING MUST BE COMPLETED IN ACCORDANCE WITH NJ STORMWATER BMP MANUAL APPENDIX E, SECTION 4. IF THE AS-BUILT PERMEABILITY TESTING SHOWS A LONGER DRAIN TIME THAN 0.5 IN/HR OR BASIN DRAIN-DOWN TIME EXCEEDING 72 HOURS, CORRECTIVE ACTION MUST BE TAKEN. THE TOWNSHIP ENGINEER MUST BE NOTIFIED AT LEAST ONE WEEK IN ADVANCE OF THE TESTING AND COPIED ON THE RESULTS, INCLUDING PROPOSED SUBSEQUENT CORRECTIVE ACTION(S), IF NEEDED.
12. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE MOST RECENT N.J. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS AND SUPPLEMENTS.
13. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 3000 P.S.I. ALLOWABLE EXTREME FIBER STRESS IN COMPRESSION SHALL BE 1200 P.S.I.
14. ALL CONCRETE SHALL BE PLACED ON FIRM UNDISTURBED SOIL OR CLEAN ROCK.
15. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 1 INCH, 45 DEGREE CHAMFER UNLESS OTHERWISE APPROVED.
16. COMPACTED POROUS FILL WHERE REQUIRED, SHALL BE NO. 8 BROKEN STONE.
17. ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE, NEW PREFORMED BILLET-STEEL CONFORMING TO A.S.T.M. A615 (LATEST EDITION), GRADE 60 MINIMUM. ALLOWABLE STRESS IN TENSION SHALL BE 24,000 P.S.I.
18. ALL REINFORCEMENT STEEL SPLICES SHALL BE MINIMUM 30 BAR DIAMETERS UNLESS NOTED OTHERWISE.
19. FINAL REINFORCEMENT STEEL BAR LIST SHALL BE SUBMITTED PRIOR TO FINAL APPROVAL.
20. ALL REINFORCEMENT SHALL BE SUITABLY SUPPORTED AND SECURELY HELD IN PLACE WHILE PLACING CONCRETE.
21. ALL EARTH SHALL BE FREE FROM BRUSH, ROOTS AND OTHER ORGANIC MATERIAL SUBJECT TO DECOMPOSITION.
22. MAXIMUM SLOPES FOR ALL EMBANKMENTS ARE 3 HORIZONTAL TO 1 VERTICAL.
23. CUTOFF TRENCHES ARE TO BE EXCAVATED ALONG THE EMBANKMENT CENTERLINE TO IMPERVIOUS SUBSOIL OR BEDROCK.
24. THE FILL MATERIAL IN ALL EARTH EMBANKMENTS SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DENSITY OBTAINED FROM COMPACTION TESTS PERFORMED BY THE APPROPRIATE METHOD OF A.S.T.M. D698.
25. PRIOR TO PLACEMENT OF FILL MATERIAL, THE EXISTING GROUND SURFACE BENEATH THE EMBANKMENT SHALL BE CLEARED OF ALL TREE STUMPS, UNDERBRUSH AND ALL OTHER ORGANIC MATERIAL. FOLLOWING CLEARING, THE SURFACE ON OR AGAINST WHICH THE FILL IS TO BE PLACED SHALL BE THOROUGHLY BROKEN TO A DEPTH OF SIX (6) INCHES. THE BREAKING OF THE SURFACE SHALL BE DONE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT.
26. THE DESIGN DIMENSIONS OF THE DETENTION BASIN SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION UNLESS IT IS TO BE USED AS A SILTATION BASIN DURING CONSTRUCTION IN THE WATERSHED. IF SO, IT SHALL BE IMMEDIATELY RETURNED TO DESIGN DIMENSIONS FOLLOWING THE COMPLETION OF SUCH CONSTRUCTION.
27. ALL OUTLET PIPES ARE TO BE REINFORCED CONCRETE PIPE CONFORMING TO A.S.T.M. C76 WITH RUBBER GASKETS PURSUANT TO A.S.T.M. C443.
28. THE BASIN IS TO BE SODDED OR TOPSOILED AND SEEDED, INCLUDING THE BOTTOM SIDE SLOPES AND ALL EARTHEN EMBANKMENTS.
29. ALL PIPES AND STUBS ARE TO BE MONOLITHICALLY CAST IN STRUCTURES.
30. OUTLET STRUCTURE IS TO BE PRECAST. STRUCTURAL CALCULATIONS AND SHOP DRAWINGS PREPARED BY THE PRECAST MANUFACTURES MUST BE SUBMITTED FOR COUNTY APPROVAL PRIOR TO FABRICATION. SINCE THE STRUCTURE IE GREATER THAN 7' IN HEIGHT STRUCTURE IS TO BE CONSTRUCTED IN TWO SEPARATE POURS. CONSTRUCTION JOINTS BETWEEN THE POURS SHALL BE ROUGH AND THE REINFORCING STEEL SHALL EXTEND 1'-6" FROM THE JOINT FOR SPLICING. ALL CONSTRUCTION JOINTS ARE TO BE WATERTIGHT. ALL PIPES, STUBS, AND/OR FITTINGS ARE TO BE CAST MONOLITHICALLY IN THE STRUCTURE. STRUCTURAL CALCULATIONS (USING THE WORKING STRESS METHOD) ARE TO BE SUBMITTED FOR OUTLET STRUCTURE REVIEW. ALL EXPOSED EDGES SHALL HAVE A 1" CHAMFER AND ALL REINFORCING SHALL HAVE A MINIMUM COVER OF 3".



EMERGENCY SPILLWAY DETAIL

N.T.S.

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	1/7/21
PER TOWNSHIP	M.K.F.	7/27/20
PER TOWNSHIP	M.K.F.	6/10/20
PER DRCC	M.K.F.	5/27/20
PER DRCC	M.K.F.	3/13/20
PER TWP. COMMENTS	M.K.F.	1/17/20

DATE:	JULY 18, 2019
SCALE:	AS SHOWN
DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

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Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture

NJ. LLC CERT. No. 24GA28132300

DETENTION BASIN PLAN & DETAILS

FOR

LOT 45 IN BLOCK 29002

MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

BY: Michael K. Ford

Michael K. Ford

New Jersey Professional Engineer No. 34722

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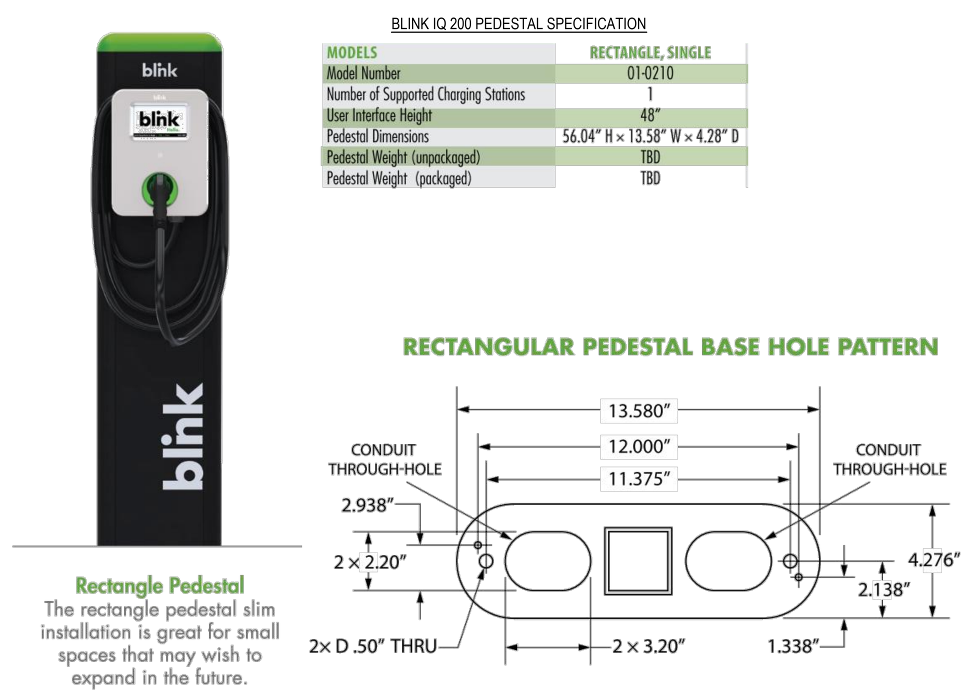
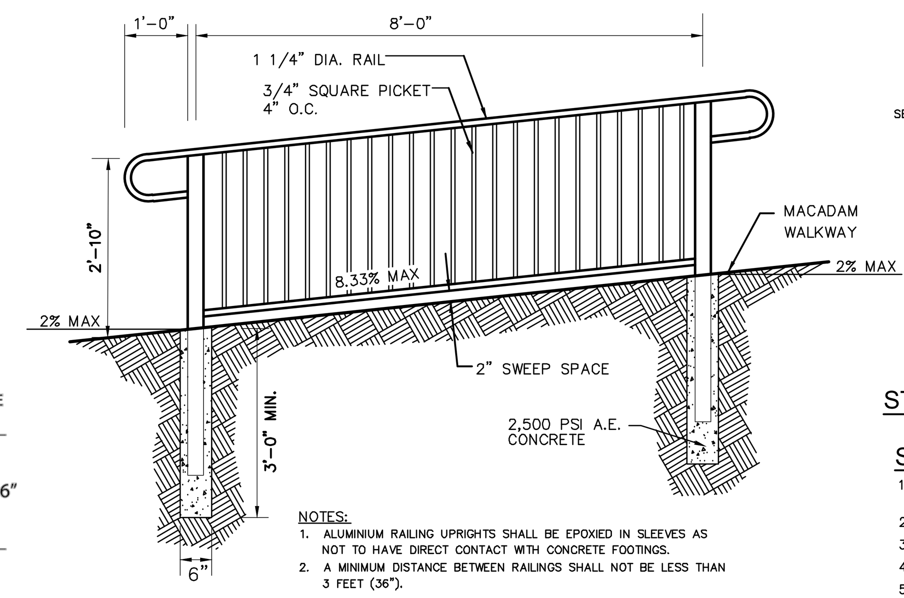
FILE No. 3476-X

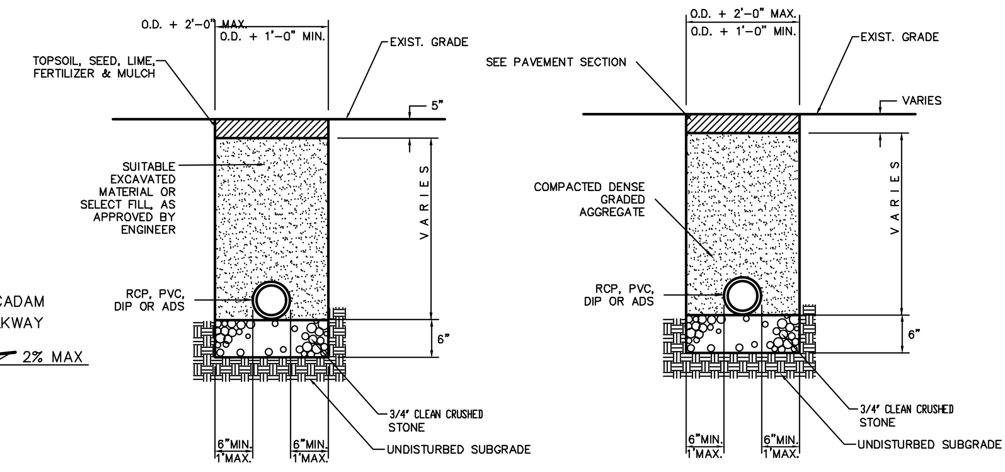


LEVEL 2 AC EV IQ 200 CHARGING STATION DETAIL
N.T.S.



ADA RAMP RAILING DETAIL
N.T.S.

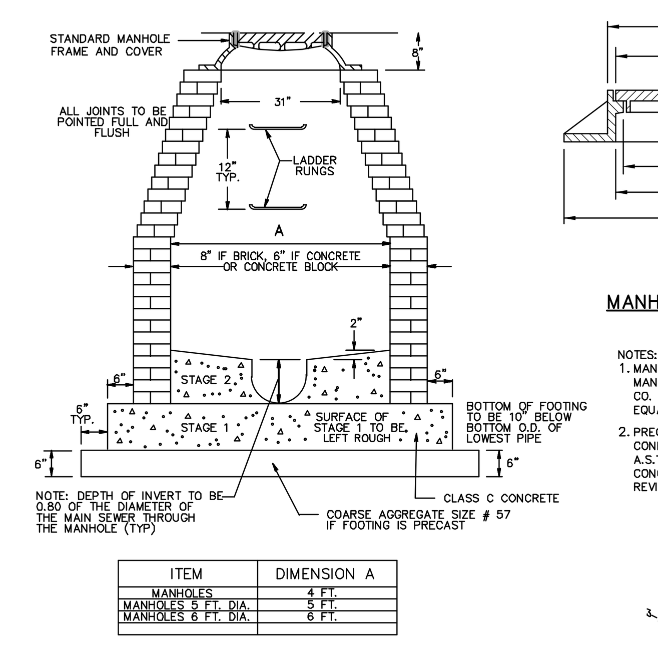
NOTES:
1. ALUMINIUM RAILING UPRIGHTS SHALL BE EPOXIED IN SLEEVES AS NOT TO HAVE DIRECT CONTACT WITH CONCRETE FOOTINGS.
2. A MINIMUM DISTANCE BETWEEN RAILINGS SHALL NOT BE LESS THAN 3 FEET (36").
3. RAILINGS SHALL COMPLY WITH THE REQUIREMENTS OF THE A.D.A.
4. SHOP DRAWINGS TO BE SUBMITTED TO AND APPROVED BY TOWNSHIP ENGINEER & CONSTRUCTION COMPANY PRIOR TO CONSTRUCTION.
5. FINAL MATERIAL & COLOR TO BE DETERMINED BY ARCHITECT OR APPLICANT.



STORM SEWER TRENCH: OFF-ROAD
N.T.S.

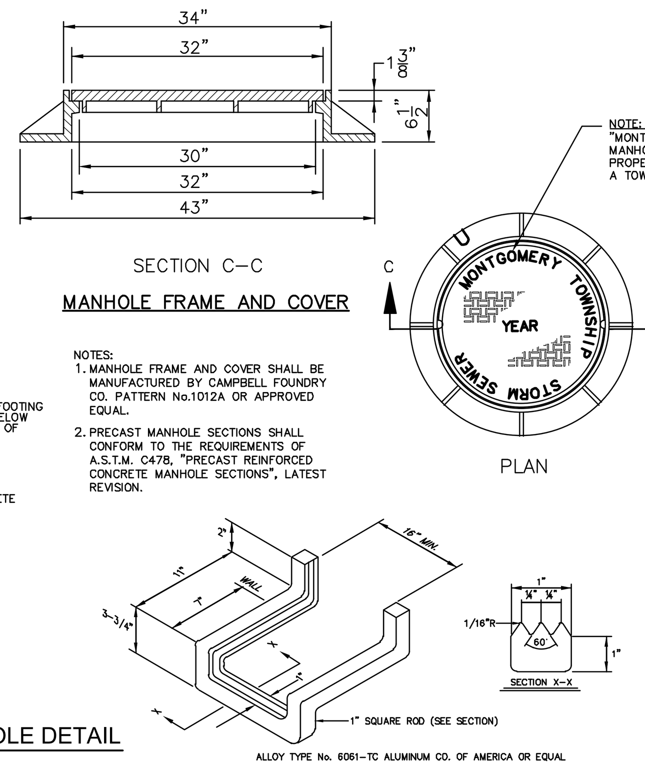
STORM SEWER TRENCH: DRIVEWAY
N.T.S.

STORM SEWER CONSTRUCTION NOTES
1. MATERIALS USED IN THE CONSTRUCTION OF STORM SEWERS SHALL BE CONSTRUCTED OF REINFORCED CONCRETE, DUCTILE IRON, HDPE OR CORRUGATED POLYETHYLENE, OR, WHEN APPROVED BY THE MUNICIPAL ENGINEER, CORRUGATED METAL.
2. CIRCULAR REINFORCED CONCRETE PIPE AND FITTINGS SHALL MEET THE REQUIREMENTS OF ASTM C76.
3. ELLIPTICAL REINFORCED CONCRETE PIPE SHALL MEET THE REQUIREMENTS OF ASTM C507.
4. JOINT DESIGN AND JOINT MATERIAL FOR CIRCULAR PIPE SHALL CONFORM TO ASTM C443.
5. JOINTS FOR ELLIPTICAL PIPE SHALL BE BELL AND SPIGOT OR TONGUE AND GROOVE SEALED WITH BUTYL, RUBBER TAPE, RUBBER RING GASKETS, OR EXTERNAL SEALING BANDS CONFORMING TO ASTM C877.
6. ALL PIPE SHALL BE CLASS III, MINIMUM UNLESS LOADING CONDITIONS CALL FOR STRONGER PIPE (i.e. HIGHER CLASS).
7. THE MINIMUM DEPTH OF COVER OVER THE CONCRETE PIPE SHALL BE AS DESIGNATED BY THE AMERICAN CONCRETE PIPE ASSOCIATION.
8. MINIMUM DEPTH OF COVER STANDARDS FOR DUCTILE IRON AND CORRUGATED POLYETHYLENE PIPE SHALL CONFORM TO MANUFACTURER STANDARDS.
9. MANHOLES SHALL BE PRECAST CONCRETE OR CONCRETE BLOCK COATED WITH TWO (2) COATS OF PORTLAND CEMENT MORTAR OUTSIDE THE MANHOLE. MASONRY BRICK MAY BE USED TO MAKE VERTICAL ADJUSTMENT TO RIMS, AS LONG AS THE ADJUSTMENT ARE 12 INCHES OR LESS. IN ACIDIC SOILS, ALL MANUFACTURERS' INSTRUCTION.
10. IF PRECAST MANHOLE BARRELS AND CONES ARE USED, THEY SHALL CONFORM TO ASTM SPECIFICATION C478, WITH ROUND RUBBER GASKETED JOINTS, CONFORMING TO ASTM SPECIFICATION C923.



MANHOLES, MANHOLES 5 FT. DIAMETER, MANHOLES 6 FT. DIAMETER

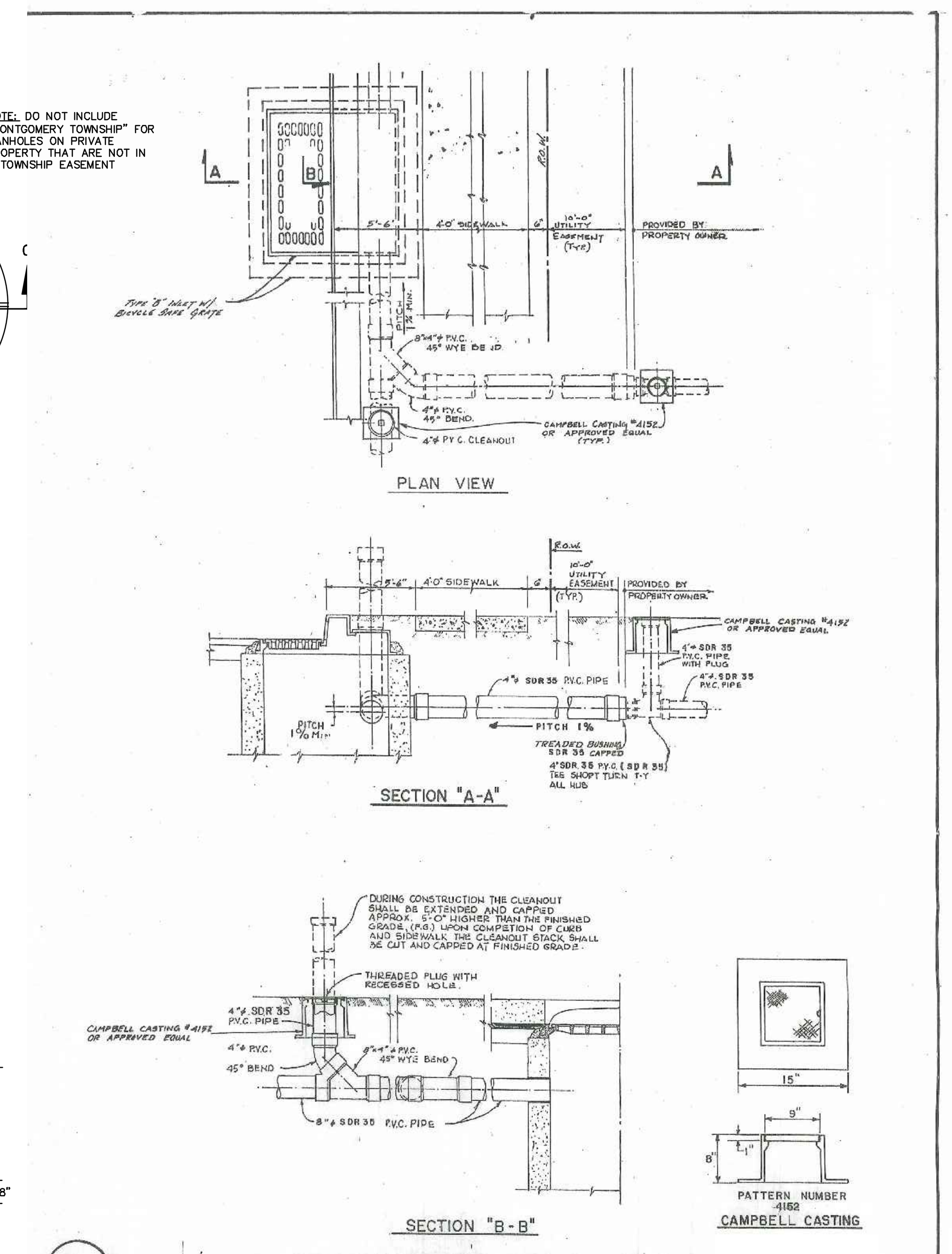
STANDARD STORM SEWER MANHOLE DETAIL
N.T.S.



SECTION C–C

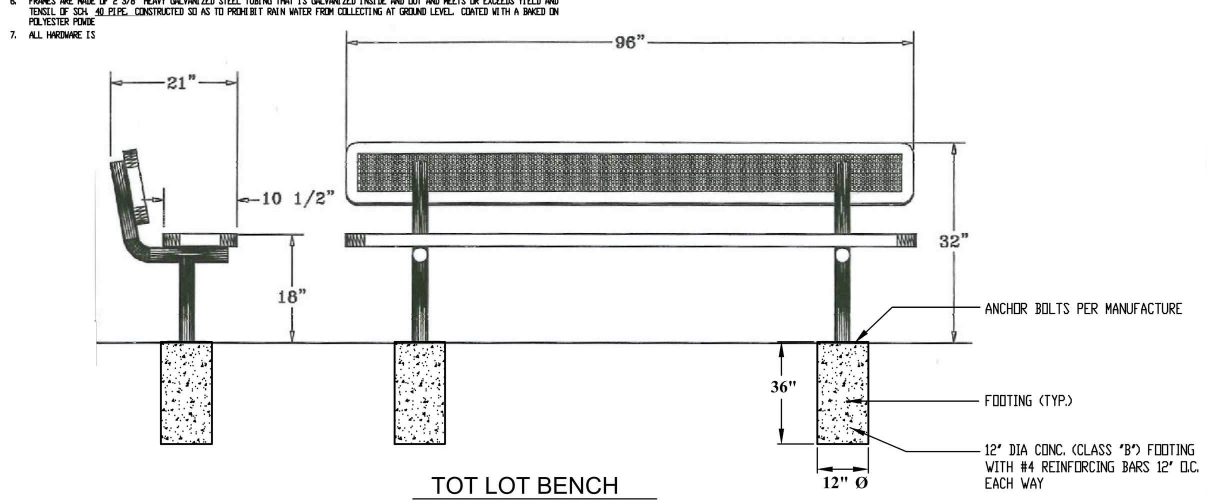
MANHOLE FRAME AND COVER

ALUMINUM RUNG DETAIL
N.T.S.



DRAINAGE DISCHARGE HEADER DETAIL
NO SCALE

TOWNSHIP OF MONTGOMERY
SOMERSET COUNTY, NEW JERSEY
DRAINAGE DISCHARGE HEADER DETAIL
PREPARED BY
FELLOWS, READ AND ASSOC.
OCTOBER, 1987



TOT LOT BENCH
N.T.S.

PLAY LAND 8' VEBCOAT INNOVATED STYLE BENCH WITH BACK BBVBENNV (OR APPROVED EQUAL)

TOT LOT PLAY EQUIPMENT DETAIL
N.T.S.
AMERICAN PARKS COMPANY OR APPROVED EQUAL.

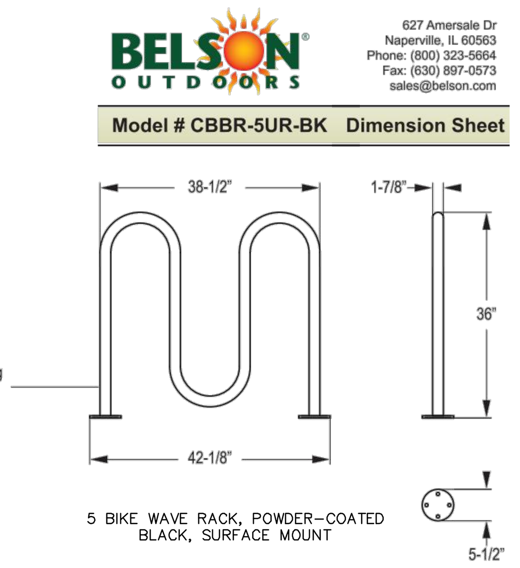
"Plans, details, and calculations for the proposed tot lot shall be provided to the municipal engineer for review and approval prior to any materials being ordered and any construction being performed. Space in the tot lot shall be provided for 2-5 year and 6-12 year age groups. All construction shall be performed in accordance with Consumer Product Safety Commission (CPSC) and American Society of Testing Materials (ASTM) requirements."

TerraBound Elite Dog Waste Station

Product Summary

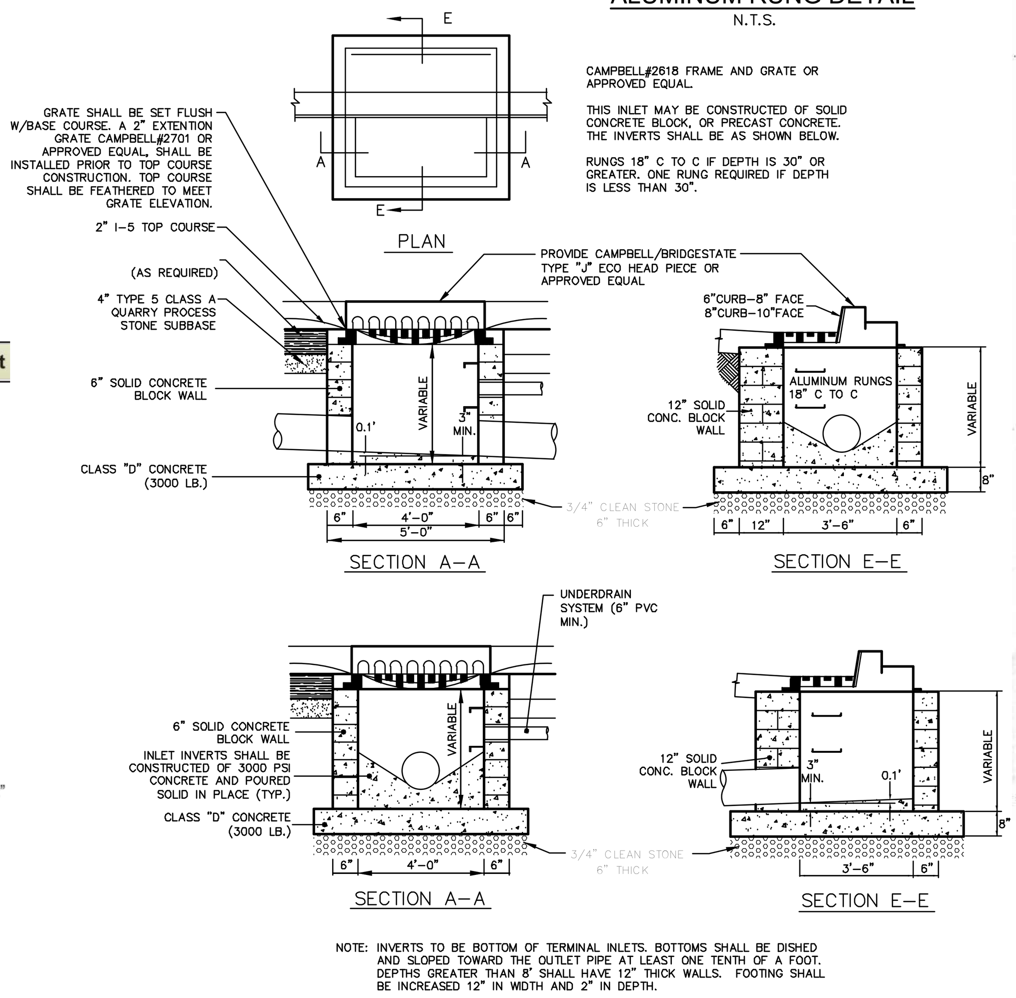
The TerraBound Elite Dog Waste Station is available with a Single Pull® or Roll Bag dispenser system & lidded, 11 gallon aluminum can. This waste station is constructed from commercial grade aluminum and powder coated in forest green.

DOG WASTE STATION DETAIL
N.T.S.



5 BIKE WAVE RACK, POWDER-COATED BLACK, SURFACE MOUNT

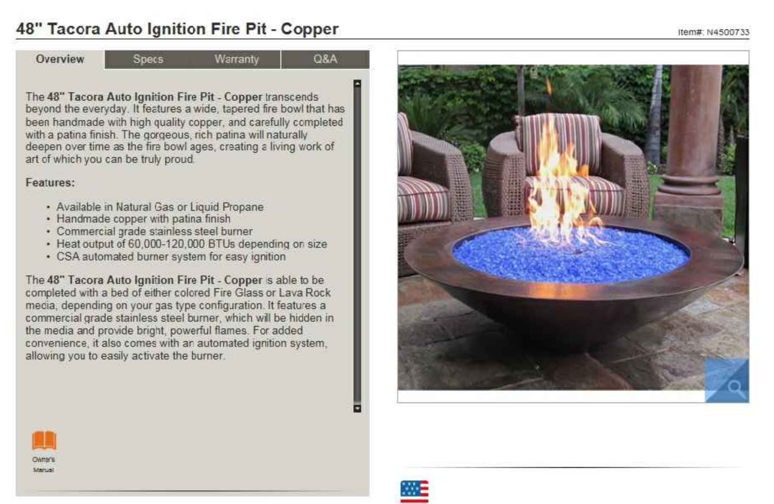
BIKE RACK DETAIL
N.T.S.



DRAINAGE INLET TYPE 'B' WITH C.I. CURB PIECE-RACK-FRAME AND GRATE
N.T.S.

NOTES:
1. FENCE IS TO BE "ADOBE" NON-WHITE NATURAL COLOR (SEE SITE PLAN FOR FENCE HEIGHT).
2. DETAIL PROVIDED BY "COUNTRY ESTATE FENCE" CO, UWCHLAND, PA. WWW.COUNTRYESTATE.COM

PROPOSED VINYL FENCE DETAIL @ SOUTHERN PROPERTY LINE
N.T.S.



FIRE PIT DETAIL
N.T.S.
NOTE: OR APPROVED EQUAL

01 BEST OUTDOOR KITCHEN AND GRILL FOR SUMMER BACKYARD IDEAS

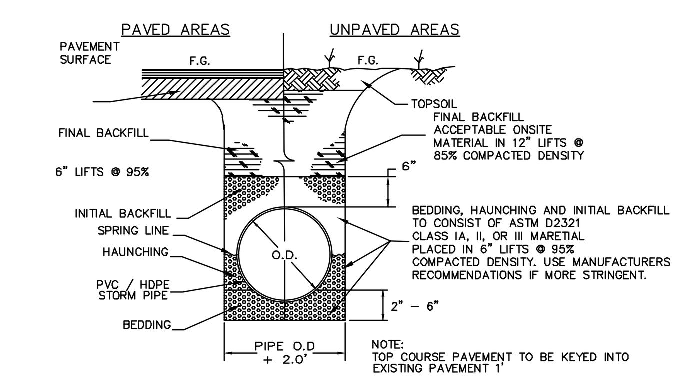
01 best outdoor kitchen and grill for summer backyard ideas

NOTE: OR APPROVED EQUAL

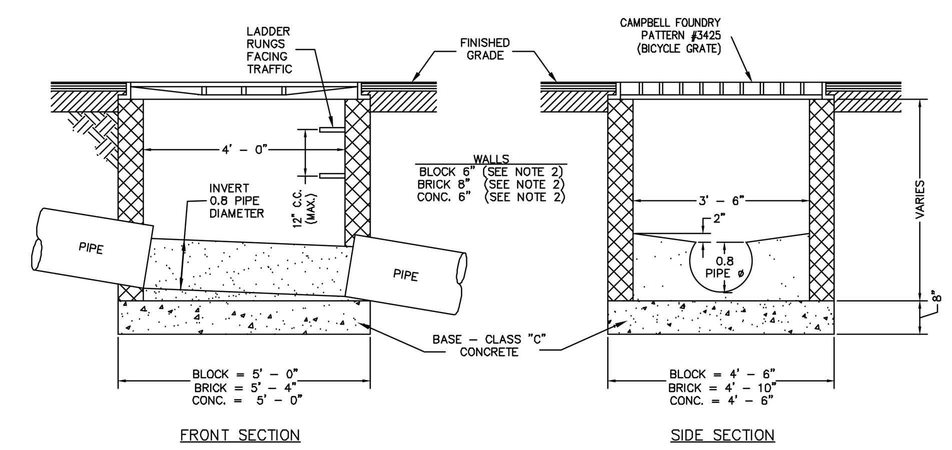
GRILL DETAIL
N.T.S.

MODEL: BFP1020
MANUFACTURER: BRIGHT IDEAS SHOPS
TABLE SHAPE: HEXAGONAL
FRAME CONSTRUCTION: RECYCLED PLASTIC
TABLE TOP MATERIAL: RECYCLED PLASTIC
LENGTH: 72 INCHES
WIDTH: 72 INCHES
HEIGHT: 31 INCHES
WEIGHT: 212 LBS

HEXAGONAL PICNIC TABLE
(OR EQUAL)
N.T.S.



TRENCH DETAIL FOR PVC OR HDPE STORM DRAIN PIPE
N.T.S.



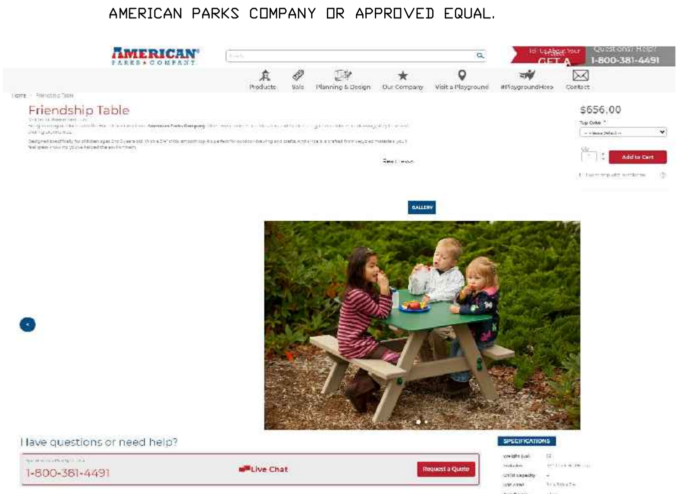
NOTES:
1. PRECAST STRUCTURES MAY BE USED WITH PRIOR APPROVAL OF TOWNSHIP ENGINEER
2. STRUCTURES DEEPER THAN 8' CONSTRUCTED IN PLACE SHALL BE DOUBLE-WALLED, PRECAST UNITS PER MANUFACTURER.
3. PROVIDE (2) 6" DIA. BLOCKOUTS FOR CONNECTION OF UNDERDRAIN (IF DICTATED BY FIELD CONDITIONS).

TYPE "E" INLET DETAIL
NOT TO SCALE

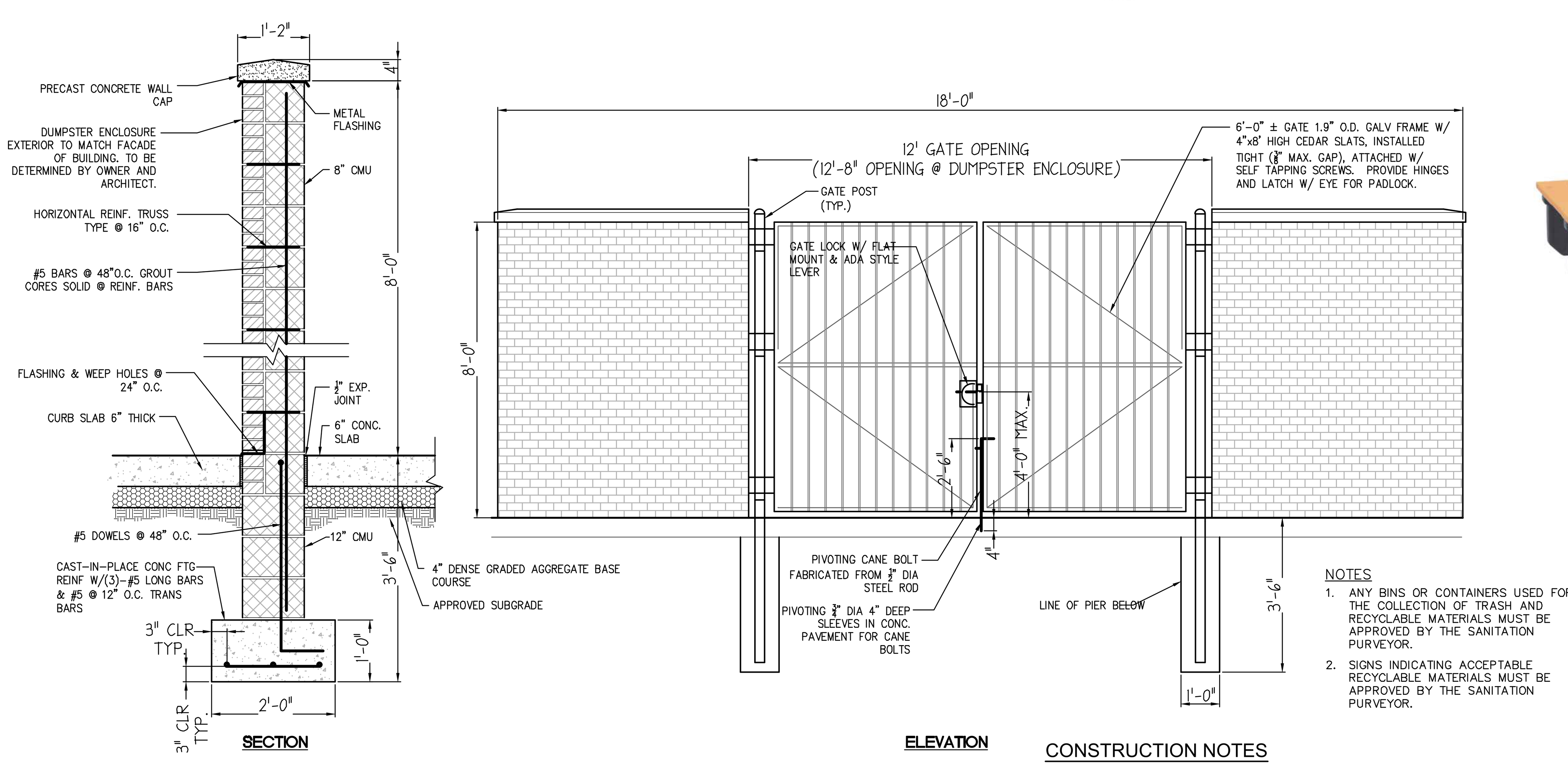
HORSE SPRING RIDER — DOLPHIN SPRING RIDER — TRUCK SPRING RIDER

TOT LOT PLAY SPRING RIDER DETAILS
N.T.S.
AMERICAN PARKS COMPANY OR APPROVED EQUAL.

TOT LOT SEE-SAW BOUNCER DETAILS
N.T.S.
AMERICAN PARKS COMPANY OR APPROVED EQUAL.



TOT LOT FRIENDLY TABLE DETAIL
N.T.S.



SECTION — ELEVATION

NOTES
1. ANY BINS OR CONTAINERS USED FOR THE COLLECTION OF TRASH AND RECYCLABLE MATERIALS MUST BE APPROVED BY THE SANITATION PURVEYOR.
2. SIGNS INDICATING ACCEPTABLE RECYCLABLE MATERIALS MUST BE APPROVED BY THE SANITATION PURVEYOR.

DUMPSTER ENCLOSURE DETAIL
N.T.S.

CONSTRUCTION NOTES
1. ALL SITE CONCRETE WITHIN THREE FEET OF FINISHED GRADE SHOULD BE 4500 P.S.I. AT 28 DAYS WITH 6% AIR ENTRAINMENT.

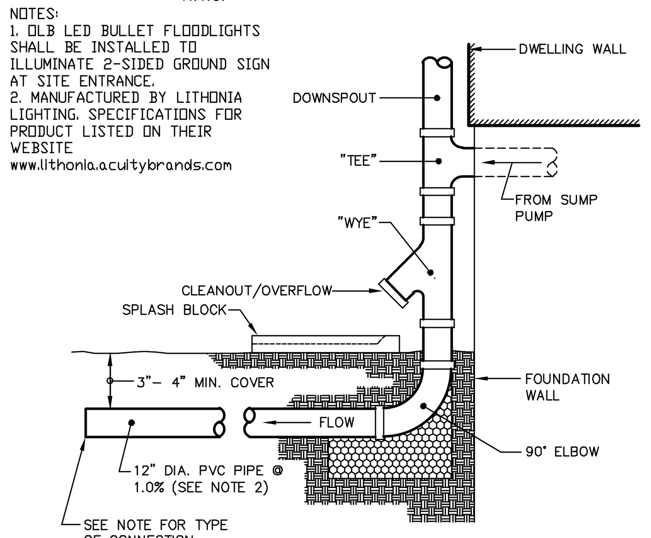
MODEL: KPJPPT63
MANUFACTURER: KAY PARK
CONSTRUCTION: RECYCLED PLASTIC
FRAME STYLE: RECYCLED PLASTIC
LENGTH: 72 INCHES
HEIGHT: 31 INCHES
WEIGHT: 475 LBS

RECTANGULAR PICNIC TABLE
(OR EQUAL)
N.T.S.

ENTRANCE 2 SIDED SITE SIGN DETAIL
N.T.S.

OLB LED BULLET FLOOD LIGHT
N.T.S.

NOTES:
1. OLB LED BULLET FLOODLIGHTS SHALL BE INSTALLED TO ILLUMINATE 2-SIDED GROUND SIGN AT SITE ENTRANCE.
2. MANUFACTURED BY LITHONIA LIGHTING. SPECIFICATIONS FOR PRODUCT LISTED ON THEIR WEBSITE
www.lithonia.acuitybrands.com



NOTE:
1. ROOF LEADERS ARE TO BE CONNECTED TO THE STORM DRAINAGE SYSTEM.
2. FINAL PIPE SIZE TO BE VERIFIED BY ARCHITECT AT TIME OF BUILDING PERMIT APPLICATION.

ROOF LEADER CONNECTION DETAIL
N.T.S.

REVISIONS		AUTH.	DATE
PER CLIENT		M.K.F.	6/3/21
PER TOWNSHIP		M.K.F.	4/8/21
PER TOWNSHIP		M.K.F.	1/7/21
PER TOWNSHIP		M.K.F.	7/27/20
PER TOWNSHIP		M.K.F.	6/10/20
PER TWP. COMMENTS		M.K.F.	1/17/20

DATE:	JULY 18, 2019
SCALE:	AS SHOWN
DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC

Consulting Civil Engineering, Bridge Design, Highway Design, Construction Inspection, Geotechnical Engineering, Water / Wastewater, Municipal Engineering, Land Surveying, Professional Planning, Landscape Architecture

With Offices in New Jersey, Pennsylvania & Delaware

32 BROWER LANE, PO BOX 5877, HILLSBOROUGH, NJ 08844
EMAIL: CONTACTUS@VANCLEEFENGINEERING.COM
WEB: WWW.VANCLEEFENGINEERING.COM
PHONE (908) 359-8291 FAX (908) 359-1580
NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer No. 34722

CONSTRUCTION DETAILS
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

12

F:\JOBFILE\0303M_ENG\DWG\0303M (6-3-21).DWG

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	1/7/21
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER UPDATED EXIST. CONDITIONS MAP	M.K.F.	8/21/20
PER TOWNSHIP	M.K.F.	6/10/20

DATE:	JULY 18, 2019
SCALE:	AS SHOWN
DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
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BY: Michael K. Ford
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CONSTRUCTION DETAILS
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

Soil De-compaction and Testing Requirements

Soil Compaction Testing Requirements

1. Subgrade soils **prior to the application of topsoil** (see permanent seeding and stabilization notes for topsoil requirements) shall be free of excessive compaction to a depth of 6.0 inches to enhance the establishment of permanent vegetative cover.

2. Areas of the site which are subject to compaction testing and/or mitigation are **graphically denoted** on the certified soil erosion control plan.

3. **Compaction testing locations** are denoted on the plan. A copy of the plan or portion of the plan shall be used to mark locations of tests, and attached to the compaction remediation form, available from the local soil conservation district. This form must be filled out and submitted prior to receiving a certificate of compliance from the district.

4. In the event that testing indicates compaction in excess of the maximum thresholds indicated for the simplified testing methods (see details below), the contractor/owner shall have the option to perform either (1) compaction mitigation over the entire mitigation area denoted on the plan (excluding exempt areas), or (2) perform additional, more detailed testing to establish the limits of excessive compaction whereupon only the excessively compacted areas would require compaction mitigation. Additional detailed testing shall be performed by a trained, licensed professional.

Compaction Testing Methods

A. Probing Wire Test (see detail)
B. Hand-held Penetrometer Test (see detail)
C. Tube Bulk Density Test (licensed professional engineer required)
D. Nuclear Density Test (licensed professional engineer required)

Note: Additional testing methods which conform to ASTM standards and specifications, and which produce a dry weight, soil bulk density measurement may be allowed subject to District approval.

Soil compaction testing is not required if/when subsoil compaction remediation (scarification/tillage (6" minimum depth) or similar) is proposed as part of the sequence of construction.

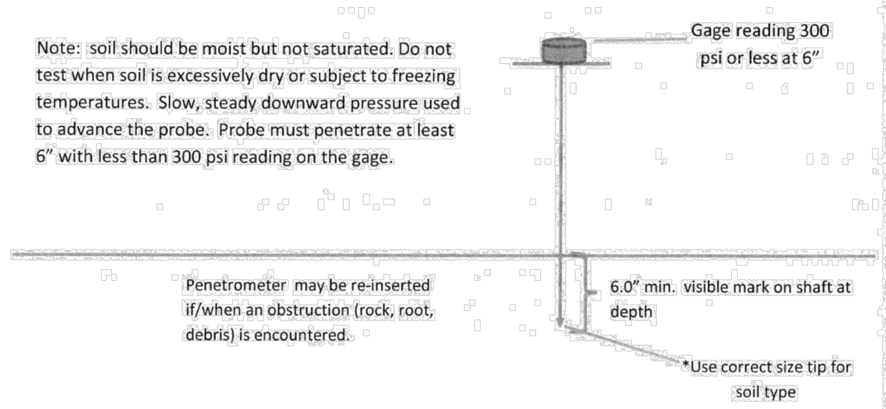
Procedures for Soil Compaction Mitigation

Procedures shall be used to mitigate excessive soil compaction **prior to placement of topsoil** and establishment of permanent vegetative cover.

Restoration of compacted soils shall be through deep scarification/tillage (6" minimum depth) where there is no danger to underground utilities (cables, irrigation systems, etc.). In the alternative, another method as specified by a New Jersey Licensed Professional Engineer maybe substituted subject to District Approval.

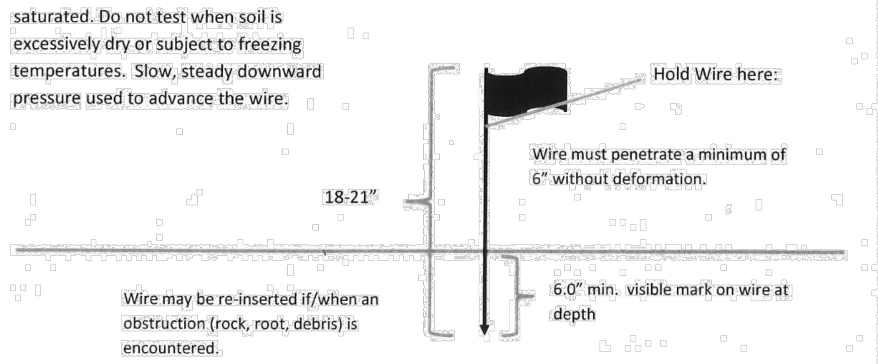
Handheld Soil Penetrometer Test

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the probe. Probe must penetrate at least 6" with less than 300 psi reading on the gage.



Probing Wire Test- 15.5 ga steel wire (survey flag)

Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



BASIN COMPACTION NOTES

1. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" INCHES WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
2. INSPECT SITE JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILED AND FIRMED IN ACCORDANCE WITH ABOVE.
3. IMMEDIATELY PRIOR TO TOPSOILING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" INCHES WHERE THERE HAS BEEN SOIL COMPACTION. THIS WILL HELP INSURE A GOOD BOND BETWEEN THE TOPSOIL AND SUBSOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).
4. SOIL COMPACTION RESULTING FROM LAND GRADING ACTIVITIES CAN IMPACT THE INFILTRATION RATE OF THE SOIL. RESTORATION OF COMPACTED SOILS THROUGH DEEP TILLAGE (6" TO 12") AND THE ADDITION OF ORGANIC MATTER MAY BE REQUIRED IN PLANNED PERVIOUS AREAS TO ENHANCE THE INFILTRATION RATE OF THE DISTURBED SOIL. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLE, IRRIGATION SYSTEMS, ETC.).
5. TO PREVENT COMPACTION OF THE SUBSOIL WHICH WILL REDUCE ITS INFILTRATION CAPACITY, BASINS SHOULD BE EXCAVATED WITH LIGHT EARTH MOVING EQUIPMENT, PREFERABLY WITH TRACKS OR OVER-SIZED TIRES RATHER THAN THE NORMAL RUBBER TIRES,. ONCE THE FINAL CONSTRUCTION PHASE IS REACHED, THE FLOOR OF THE BASIN SHALL BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW AND SMOOTHED OVER WITH A LEVELING DRAG OR EQUIVALENT GRADING EQUIPMENT.
6. FOR BASINS, ANNUAL TILLING OPERATIONS MAINTAIN INFILTRATION CAPACITY. THESE TILLED AREAS SHOULD BE RE-VEGETATED IMMEDIATELY TO PREVENT EROSION. DEEP TILLING CAN BE USED TO BREAKUP CLOGGED SURFACE LAYERS FOLLOWED BY REGARDING AND LEVELING. SAND OR ORGANIC MATTER CAN BE TILLED INTO THE BASIN FLOOR TO PROMOTE A RESTORED INFILTRATION CAPACITY. SEDIMENT REMOVAL PROCEDURES SHOULD NOT BE UNDERTAKEN UNTIL THE BASIN IS THOROUGHLY DRY. THE TOP LAYER SHOULD BE REMOVED BY LIGHT EQUIPMENT TO PREVENT COMPACTION. THE REMAINING SOIL CAN BE RETILED AND DISTURBED VEGETATION REPLANTED.

GENERAL NOTES FOR SOIL EROSION AND SEDIMENT CONTROL PLANS

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES APPLICABLE TO THIS PROJECT SHALL BE IN ACCORDANCE WITH "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY" ADOPTED, REVISED JULY 1999, BY THE NEW JERSEY SOIL CONSERVATION COMMITTEE.
2. THESE STANDARDS SHALL SPECIFICALLY APPLY TO ALL:
   - TEMPORARY AND PERMANENT REVEGETATION
   - LAND GRADING
   - DIVERSIONS
   - SEEDING
3. ALL SEDIMENT AND EROSION CONTROL PRACTICES TO BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
4. PERMANENT REVEGETATION FOR ALL EXPOSED AREAS SHALL COMMENCE TEN (10) DAYS AFTER FINAL GRADING OR IF AREAS ARE TO BE ROUGH OR STOCKPILES OF SOIL OR EXCEED THIRTY (30) DAYS, TEMPORARY REVEGETATION SHALL BE REQUIRED AND PROTECTION BY A BERM AT THE BASE OF THE PILE, IF NECESSARY. MULCH TO BE USED AS NECESSARY FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
5. ALL SEDIMENT FILTER CONTROL SHALL BE IN PLACE PRIOR TO GRADING OPERATIONS AND INSTALLATION OF UTILITIES.
6. USE TOPSOIL TO CREATE DIVERSION BERMS RATHER THAN STOCKPILING.
7. THE FILL MATERIAL SHALL BE TAKEN FROM THE SITE AND IT SHALL BE FREE OF WOODY VEGETATION, ROOTS, STONES OVER 6 INCHES OR OTHER OBJECTIONABLE MATERIAL. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE FOR PROPER COMPACTION.
8. ALL DISTURBED AREAS SHALL REMAIN IN ROUGH GRADED CONDITION AND TEMPORARILY SEEDED AND/OR MULCHED UNTIL PROPER WEATHER CONDITIONS EXIST FOR ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
9. PROTECTED INLETS ARE TO BE CLEANED OF EXCESSIVE SILT ACCUMULATION IF AND WHEN NECESSARY.
10. A SUBBASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS.
11. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN CONSTRUCTION TRACKING FILTERS THROUGHOUT DURATION OF PROJECT.
12. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF SOIL EROSION FACILITIES DURING CONSTRUCTION.
13. AFTER THE PROJECT HAS BEEN COMPLETED, THE GENERAL CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR INSURING THAT ALL PERMANENT SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE IN PROPER WORKING CONDITIONS AND THAT ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED OR REPLACED BY PERMANENT CONTROLS.
14. ALL DISTURBED AREAS THAT WILL BE LEFT EXPOSED MORE THAN 30 DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHING OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL, AT A RATE OF 2 TONS PER ACRE, ACCORDING TO THE STATE STANDARDS.
15. SOIL EROSION AND SEDIMENT CONTROL SHALL INCLUDE, BUT NOT BE LIMITED TO, THE ABOVE MEASURES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE TO CORRECT ANY OMISSIONS, ERRORS OR SUBSEQUENT FIELD OPERATIONS WHICH MIGHT DEVIATE FROM THE INTENT OF THIS LAW. THE GENERAL CONTRACTOR SHALL CORRECT SAID OMISSIONS, ERRORS OR FIELD OPERATIONS IMMEDIATELY AND IN ACCORDANCE WITH THE NEW JERSEY STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL.
16. SEEDBED PREPARATION SHALL CONFORM TO THE "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY".
17. A SUBBASE COURSE WILL BE APPLIED IMMEDIATELY FOLLOWING ROUGH GRADING AND INSTALLATION OF IMPROVEMENTS IN ORDER TO STABILIZE STREETS, ROADS, DRIVEWAYS AND PARKING AREAS. IN AREAS WHERE NO UTILITIES ARE PRESENT THE SUBBASE SHALL BE INSTALLED WITHIN 15 DAYS OF THE PRELIMINARY GRADING.
18. IMMEDIATELY FOLLOWING INITIAL DISTURBANCES OR ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (IE STEEP SLOPES AND ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE ACCORDING TO STATE STANDARDS.
19. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (IE SLOPES GREATER THAN 3:1).
20. TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A TRACKING PAD OF SIZE NO. 2 OR 3 STONE AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE (SEE DETAIL).
21. IN ACCORDANCE WITH THE STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, ANY SOIL HAVING A PH OF 4 OR LESS OR CONTAINING SULFIDES SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE PRIOR TO SEEDBED PREPARATION.
22. THE SOMERSET-UNION SOIL CONSERVATION DISTRICT, 308 MILLTOWN ROAD, BRIDGEWATER, NEW JERSEY, SHALL BE NOTIFIED IN WRITING 72 HOURS PRIOR TO CONSTRUCTION.
23. AT THE TIME WHEN THE SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS GOING TO BE ACCOMPLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER, SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER.

    IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
24. IN THAT NJSA 4:24 ET SEQ REQUIRES THAT NO CERTIFICATES OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH 4 PERMANENT MEASURES, ALL SITE WORK FOR SITE PLANS AND ALL WORK AROUND INDIVIDUAL LOTS IN SUBDIVISIONS, WILL HAVE TO BE COMPLETED PRIOR TO THE DISTRICT ISSUING A REPORT OF COMPLIANCE FOR THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY BY THE MUNICIPALITY.

AGRONOMIC RECOMMENDATIONS

SEED, FERTILIZE, LIME AND TOPSOIL (IF REQUIRED) ALL SCALPED AREAS IMMEDIATELY AFTER FINISHED GRADING IS COMPLETED. LIME AND FERTILIZER RECOMMENDATIONS ARE AS FOLLOWS OR ACCORDING TO SOIL TESTS:

A. FERTILIZER TO BE APPLIED AT THE RATE OF 500 LBS. PER ACRE, 10-20-10.

B. TEMPORARY SEEDING:

LIME: 2 TONS PER ACRE GROUND AREA
FERTILIZER: 500 LBS. PER ACRE 10-20-10
SEED: USE THE FOLLOWING SEED MIXTURE(S) AND RATES BASED ON TIME OF YEAR:
- EARLY SPRING/LATE SUMMER TO EARLY FALL
  100 % PERENNIAL RYEGRASS
  RATE = 100 LBS/ACRE
- LATE FALL
  100 % CEREAL RYE
  RATE = 112 LBS/ACRE
- MID-SUMMER
  40 % PEARL MILLET
  40 % MILLET (GERMAN OR HUNGARIAN)
  20 % WEEPING LOVEGRASS
  RATE = 100 LBS/ACRE

C. PERMANENT SEEDING: (TO BE APPLIED DURING PERIODS OF 3/01 - 11/15, TEMPORARY SEEDING TO BE APPLIED ALL OTHER TIMES OF THE YEAR)

LIME: 2 TONS PER ACRE GROUND AREA
FERTILIZER: 500 LBS. PER ACRE 10-20-10
SEED: LAWNS - QUALITY SUN AND SHADE
45 % PERENNIAL RYEGRASS*
20 % CHEWING FESCUE
20 % CREEPING RED FESCUE
15 % KENTUCKY BLUEGRASS
(* INCLUDE AT LEAST TWO DIFFERENT VARIETIES IN MIX)
RATE = 200 LBS/ACRE

MINIMUM STABILIZATION REQUIREMENTS

I. SITE PREPARATION

A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION AND ANCHORING AND MAINTENANCE. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.

B. INSTALL NEEDED EROSION CONTROL PRACTICES AND FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS AND WATERWAYS.

II. SEEDBED PREPARATION

A. APPLY LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS THOSE OFFERED BY RUTGERS UNIVERSITY SOIL TESTING LABORATORY. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL COOPERATIVE EXTENSION SERVICE OFFICE. IF SOIL TESTING IS NOT FEASIBLE ON SMALL OR VARIABLE SITE OR WHERE TIMING IS CRITICAL, FERTILIZER MAY BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-20-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE. APPLY LIMESTONE AS FOLLOWS:

SOIL TEXTURE	TONS/ACRE	LBS./1,000 SQ. FT.
CLAY, CLAY LOAM AND HIGH ORGANIC SOIL	3	135
SANDY LOAM, LOAM, SILT LOAM	2	90
LOAMY SAND, SAND	1	45

PULVERIZED DOLOMITIC LIMESTONE IS PREFERRED FOR MOST SOILS SOUTH OF THE NEW BRUNSWICK-TRENTON LINE.

B. WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM, FINE SEEDBED IS PREPARED. ALL BUT CLAY OR SILTY SOILS AND COARSE SANDS SHOULD BE ROLLED TO FIRM THE SEEDBED WHEREVER FEASIBLE.

C. REMOVE FROM THE SURFACE ALL STONES 2 INCHES OR LARGER IN ANY DIMENSION. REMOVE ALL OTHER DEBRIS, SUCH AS WIRE, CABLE, TREE ROOTS, PIECES OF CONCRETE, CLODS, LUMPS OR OTHER UNSUITABLE MATERIAL.

D. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILLED AND FIRMED AS ABOVE.

ACID SOIL CONDITIONS

SOILS HAVING A PH OF 4 OR LESS OR CONTAINING IRON SULFIDE SHALL BE COVERED WITH A MINIMUM OF 12 INCHES OF SOIL HAVING A PH OF 5 OR MORE BEFORE SEEDBED PREPARATION. THE ADDED SOIL SHALL BE LIMED AS ABOVE.

III. SEEDING

A. SEE AGRONOMIC RECOMMENDATIONS OR USE MIXTURE RECOMMENDED BY THE COOPERATIVE EXTENSION SERVICE OR SOIL CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT.

B. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL, CULTIPACKER SEEDER OR HYDROSEEDER. THE LATTER MAY BE JUSTIFIABLE FOR LARGE, STEEP AREAS WHERE CONVENTIONAL VEHICLES CANNOT TRAVEL. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH THE SEED. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL, TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/2 INCH DEEPER ON COARSE TEXTURED SOIL.

C. AFTER SEEDING, FIRMING THE SOIL WITH A CORRUGATED ROLLER WILL ASSURE GOOD SEED-TO-SOIL CONTACT, RESTORE CAPILLARITY AND IMPROVE SEEDLING EMERGENCE. THIS IS THE PREFERRED METHOD. WHEN PERFORMED ON THE CONTOUR, SHEET EROSION WILL BE MINIMIZED AND WATER CONSERVATION ON SITE WILL BE MAXIMIZED.

IV. MULCHING

MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL INSURE AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. (THE EXISTENCE OF SATISFACTORY PERMANENT VEGETATION AT THE TIME OF PROJECT OR UNIT COMPLETION SHALL BE DEEMED AS COMPLIANCE WITH THIS MULCHING REQUIREMENT).

A. MULCH MATERIALS SHOULD BE UNROTTED SMALL GRAINS OF STRAW, HAY FREE OF SEEDS OR SALT HAY TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION MUST BE DOUBLE THE LOWER RATE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MATERIAL.

B. SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75 PERCENT TO 95 PERCENT OF THE SOIL SURFACE WILL BE COVERED. FOR UNIFORM DISTRIBUTION OF HAND-SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1,000 SQUARE FEET SECTIONS AND DISTRIBUTE 70 TO 90 POUNDS WITHIN EACH SECTION.

C. MULCH ANCHORING SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES AND COSTS.

1. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.
2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.
3. CRIMPER (MULCH ANCHORING TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC-HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.
4. LIQUID MULCH-BINDERS - MAYBE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCHES.
   A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.
   B. USE OF THE FOLLOWING:
      SYNTHETIC OR ORGANIC BINDERS - BINDERS SUCH AS CURASOL, DCA-70, PETRO-SET AND TERRA-TACK MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS.

   NOTE: ALL NAMES GIVEN ABOVE ARE REGISTERED TRADE NAMES. THIS DOES NOT CONSTITUTE A RECOMMENDATION OF THESE PRODUCTS TO THE EXCLUSION OF OTHER PRODUCTS.

D. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE MAY BE APPLIED BY A HYDROSEEDER. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

V. IRRIGATION (WHERE FEASIBLE)

IF SOIL MOISTURE IS DEFICIENT AND MULCH IS NOT USED, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

VI. TOPDRESSING*

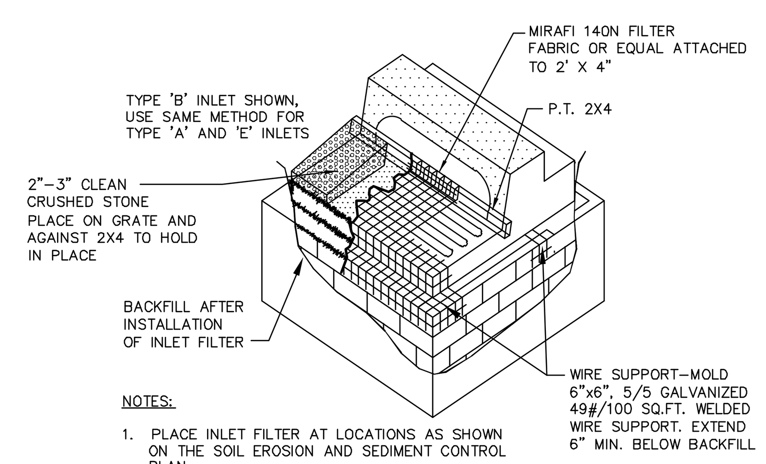
A. SPRING SEEDINGS WILL REQUIRE AN APPLICATION OF FERTILIZER SUCH AS 10-10-10 OR EQUIVALENT AT 400 POUNDS PER ACRE OR 10 POUNDS PER 1,000 SQUARE FEET BETWEEN SEPTEMBER 1 AND OCTOBER 15.

B. FALL SEEDINGS WILL REQUIRE THE ABOVE BETWEEN MARCH 15 AND MAY 1.

C. MIXTURES DOMINATED BY WEEPING LOVEGRASS OR LEGUMES MAY NOT NEED TOPDRESSING.

D. BERMUDAGRASS SHOULD BE TOPDRESSED BEFORE AUGUST 15.

*IF SLOW RELEASE NITROGEN (300 POUNDS 38-0-0 PER ACRE OR EQUIVALENT) IS USED IN ADDITION TO SUGGESTED FERTILIZER, THIS FOLLOW-UP OF TOPDRESSING IS NOT MANDATORY).



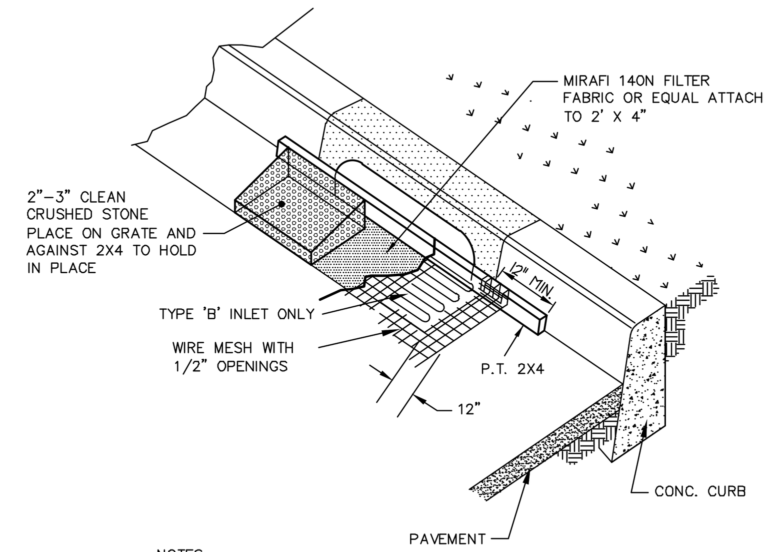
NOTES:

1. PLACE INLET FILTER AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. INSPECT THE FILTER AFTER EACH RAINSTORM, CLEAN AND REPLACE ANY FILTERS AS REQUIRED.
3. INLET FILTER SHALL BE REMOVED JUST PRIOR TO PAVING. "INLET FILTER AFTER PAVING" SHALL BE INSTALLED IMMEDIATELY AFTER PAVEMENT COMPACTION.

INLET FILTER BEFORE PAVING

NOT TO SCALE

NOTE: PROVIDE "SILTSACK" AS MANUFACTURED BY ACF ENVIRONMENTAL OR APPROVED EQUAL QT ALL INLETS TO REMAIN IN PLACE UNTIL THE FINAL GRADING AND PAVEMENT ARE INSTALLED AND THE PERMANENT BMP'S ARE INSTALLED.

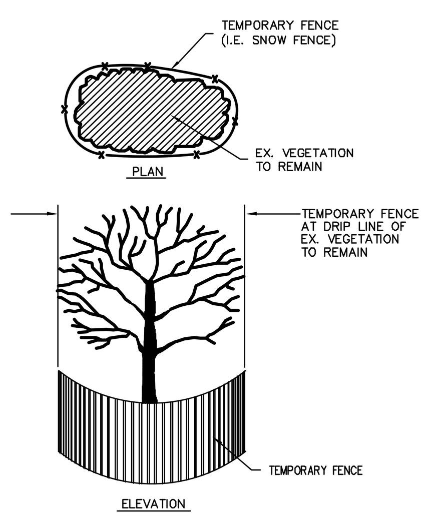


NOTES:

1. PLACE INLET FILTERS AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLN.
2. STONE SHALL BE PILED SO THAT ALL OPENINGS IN THE INLET ARE NOT COMPLETELY COVERED AND FILTER POSITION TO ALLOW FLOW INTO THE CATCH BASIN.
3. INLETS ARE TO BE CLEANED AFTER EVERY STORM.

INLET FILTER AFTER PAVING

NOT TO SCALE



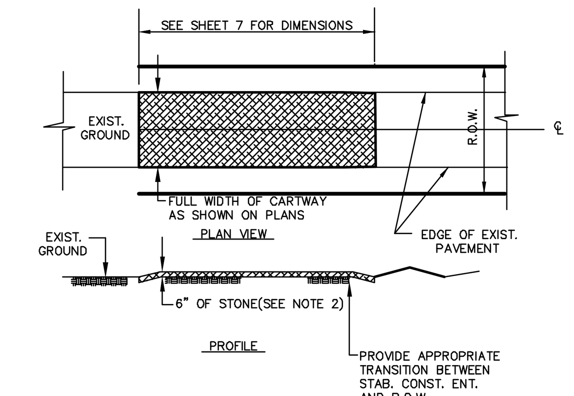
TREE PROTECTION BARRIER DETAIL

N.T.S.

SEQUENCE OF CONSTRUCTION

1. INSTALL ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON PLANS.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON THE SOIL EROSION SEDIMENT CONTROL PLANS AND DETAILS.
3. CLEAR AND GRUB ALL AREAS IN ACCORDANCE WITH THE LIMITS OF DISTURBANCE AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN. IMMEDIATELY REMOVE DEBRIS FROM SITE.
4. STRIP, STOCKPILE AND STABILIZE TOPSOIL AT LOCATIONS AS SHOWN ON PLANS.
5. CONSTRUCT SEDIMENT BASIN AND TEMPORARY RISE, ROUGH GRADE SITE.
6. CONSTRUCT ALL ONSITE AND OFFSITE UTILITIES. SOIL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS CONSTRUCTION PROGRESSES.
7. INSTALL CURBING, BACKFILL AS SOON AS CURB HAS ATTAINED SUFFICIENT SUPPORTING STRENGTH. FINE GRADE PAVEMENT AREAS.
8. INSTALL SUBBASE IF REQUIRED.
9. CONSTRUCT STRUCTURE. SOIL EROSION SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS CONSTRUCTION PROGRESSES.
10. PERFORM SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE - 6" MINIMUM DEPTH)
11. FINE GRADE AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE MINIMUM STABILIZATION REQUIREMENTS.
12. STABILIZE ANY REMAINING DISTURBED AREAS.
13. REMOVE ALL SOIL EROSION AND SEDIMENT CONTROL DEVICES.
14. INSTALL ALL SIGNS, FENCES, LIGHTING AND LANDSCAPING AS SHOWN ON THE PLANS.
15. REMOVE AND REPLACE ALL BROKEN CURB, SIDEWALK AND DISTRESSED PAVEMENT.
16. INSTALL POROUS PAVEMENT.
17. INSTALL F.A.B.C. TOP COURSE PAVING, ON NON POROUS PAVEMENT AREAS.

ESTIMATED DURATION OF BUILDING CONSTRUCTION: 10 MONTHS.

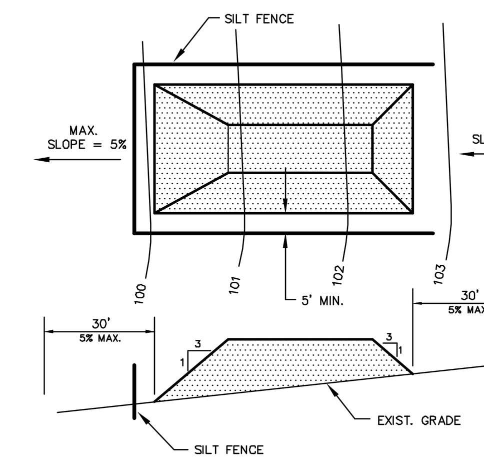


NOTES

1. PLACE STABILIZED CONSTRUCTION ENTRANCE AT LOCATION AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. STONE SIZE SHALL BE ASTM C-33, SIZE No. 2 OR 3, CRUSHED STONE.
3. THE THICKNESS OF THE STAB. CONST. ENT. SHALL NOT BE LESS THAN 6".
4. THE WIDTH AT THE EXIST. PAVEMENT SHALL NOT BE LESS THAN THE FULL WIDTH OF POINT OF INGRESS AND EGRESS.
5. THE STAB. CONST. ENT. SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE R.O.W./PAVEMENT. THIS REQUIRES PERIODIC TOP DRESSING WITH ADDITONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURE USED TO TRAP SEDIMENT.
6. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO THE PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. WHERE TRACKING OF SOIL ONTO ROADWAYS IS A CONTINUAL OCCURRENCE, ALL CONTRCTORS, BOTH SITE AND DWELLING CONTRACTORS, SHALL BE REQUIRED TO BROOMSWEEP THE ROADWAY AT TWO-HOUR INTERVALS MINIMUM AND PRIOR TO LEAVING THE CONSTRUCTION SITE AT THE DAY END.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

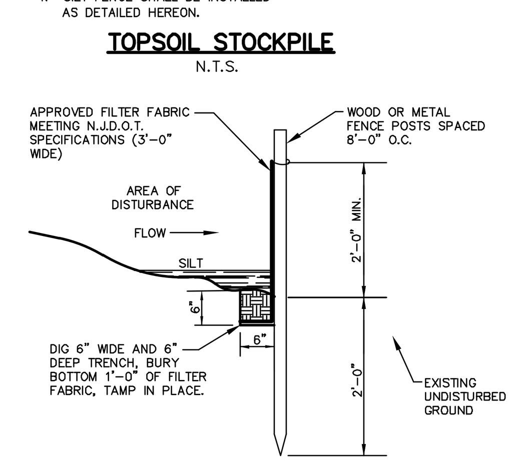


NOTES

1. PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. ALL SIDE SLOPES SHALL BE 3 TO 1 OR FLATTER.
3. STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQUIREMENTS.
4. SILT FENCE SHALL BE INSTALLED AS DETAILED HEREON.

TOPSOIL STOCKPILE

N.T.S.

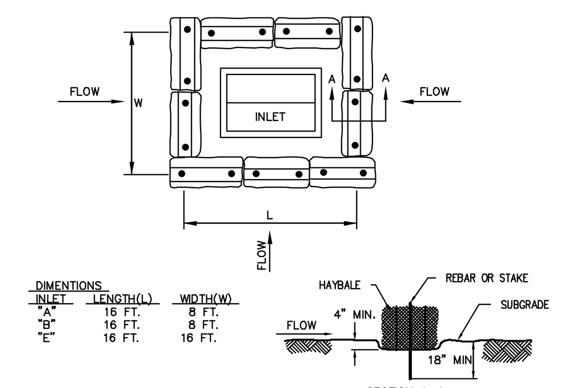


NOTES

1. PLACE SILT FENCE AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. THE SLOPE OF THE LAND FOR AT LEAST 30 FEET ADJACENT TO ANY SILT FENCE SHALL NOT EXCEED 5%.
3. SILT FENCE SHALL BE INSTALLED SO WATER CANNOT BYPASS THE FENCE AROUND IT'S ENDS.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIIBLE.

SILT FENCE

N.T.S.

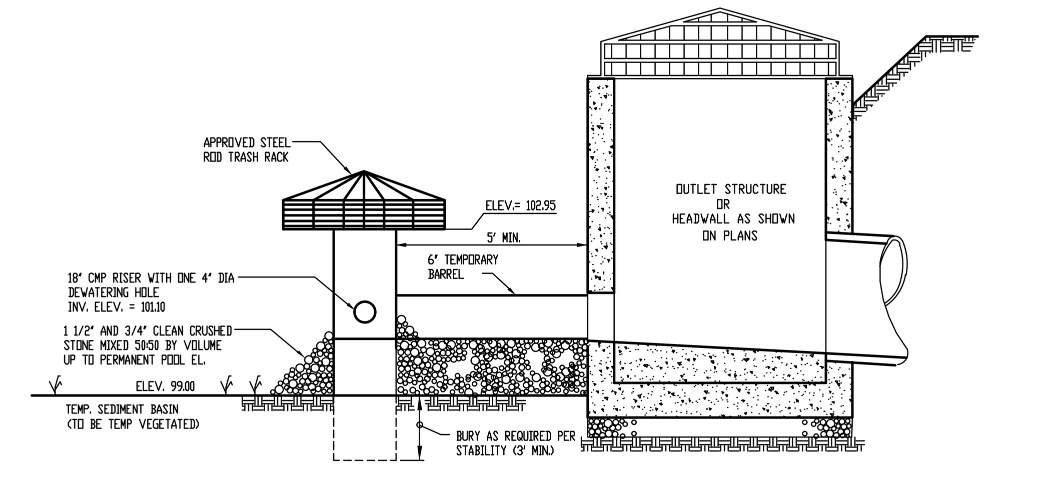


NOTES

1. PLACE STORM SEWER INLET PROTECTION AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. ALL BALES SHALL BE SECURELY TIED AND PLACED AS SHOWN WITH TIGHTLY ABUTTING THE ADJACENT BALES.
3. EACH BALE SHALL BE EMBEDDED IN THE SUBGRADE A MINIMUM OF 4".
4. EACH BALE SHALL BE SECURELY ANCHORED IN PLACE BY TWO #4 REBARS OR 2" x 2" WOODEN STAKES DRIVEN THROUGH THE BALES AND INTO THE GROUND A MINIMUM OF 1½". THE FIRST ROD IN EACH BALE SHALL BE DRIVEN TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
5. IF BALES CANNOT BE STAKED THEY SHALL BE TIED TOGETHER WITH HEAVY TWINE.
6. INSPECT HAYBALE INLET FILTERS AFTER EACH RAINSTORM. REPAIR OR REPLACE ANY DAMAGED HAYBALES. SILT SHALL BE REMOVED AFTER EACH RAINSTORM.

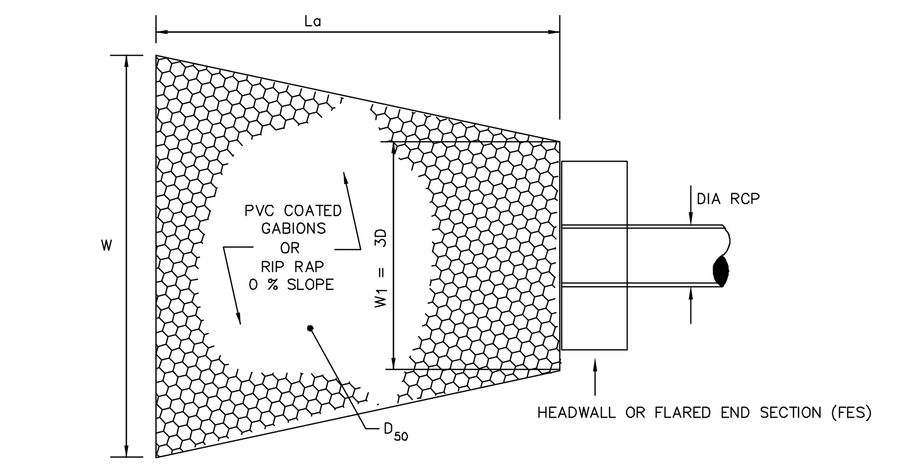
HAYBALE INLET FILTER

N.T.S.

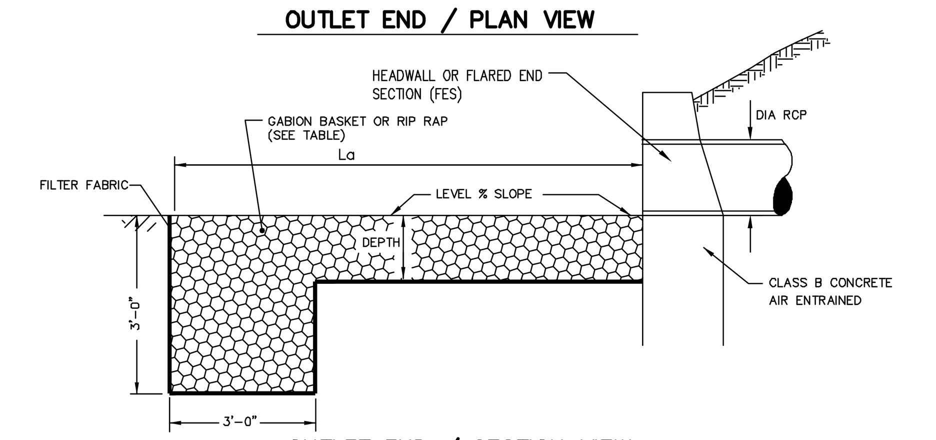


SEDIMENT BASIN TEMPORARY RISER

N.T.S.



OUTLET END / PLAN VIEW



OUTLET END / SECTION VIEW

LOCATION	La	W	D_{50}	Dia	Depth (in)
HW-1	12.5'	12.5'	0.9"	30"	9"

RIP RAP APRON OUTLET PROTECTION

N.T.S.

REVISIONS	AUTH.	DATE
PER TOWNSHIP	M.K.F.	4/8/21
PER TOWNSHIP/SUSCD	M.K.F.	7/27/20
PER TOWNSHIP/SUSCD	M.K.F.	6/10/20
REVISED PER SCD	M.K.F.	4/21/20
REVISED PER SCD	M.K.F.	1/17/20

DATE:	JULY 18, 2019
SCALE:	AS SHOWN
DESIGNED BY:	K.H.
DRAWN BY:	K.H.
CHECKED BY:	M.K.F.
JOB NO.	03-03-M

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Municipal Engineering
Land Surveying
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Landscape Architecture
NJ LLC CERT. No. 24GA28132300

SOIL EROSION AND SEDIMENT CONTROL PLAN DETAILS
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

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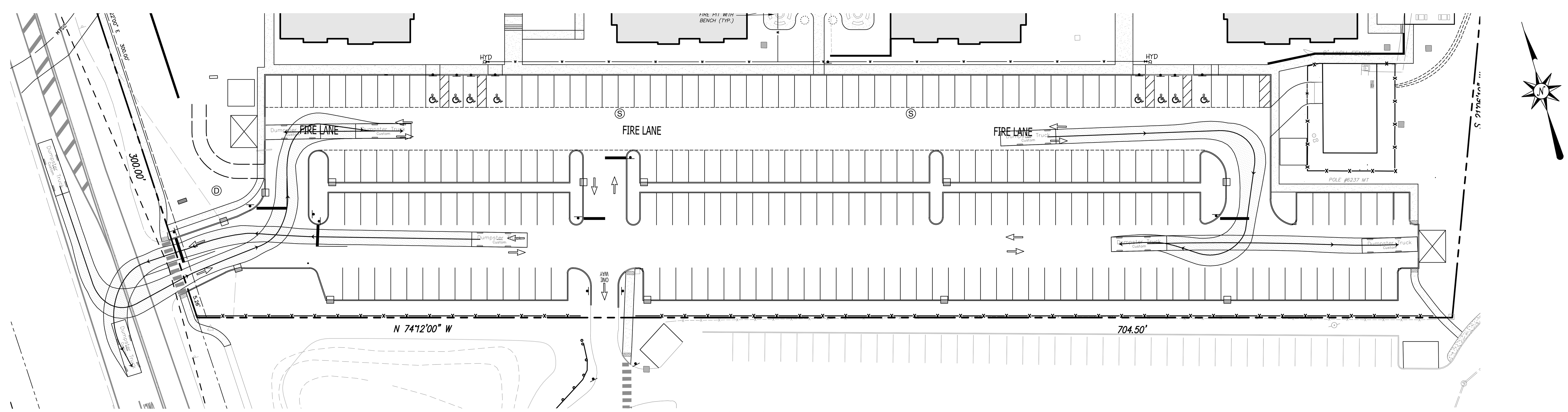
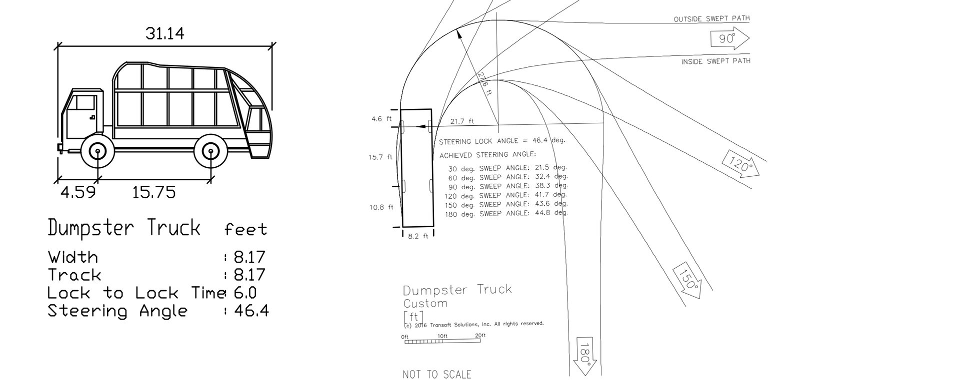
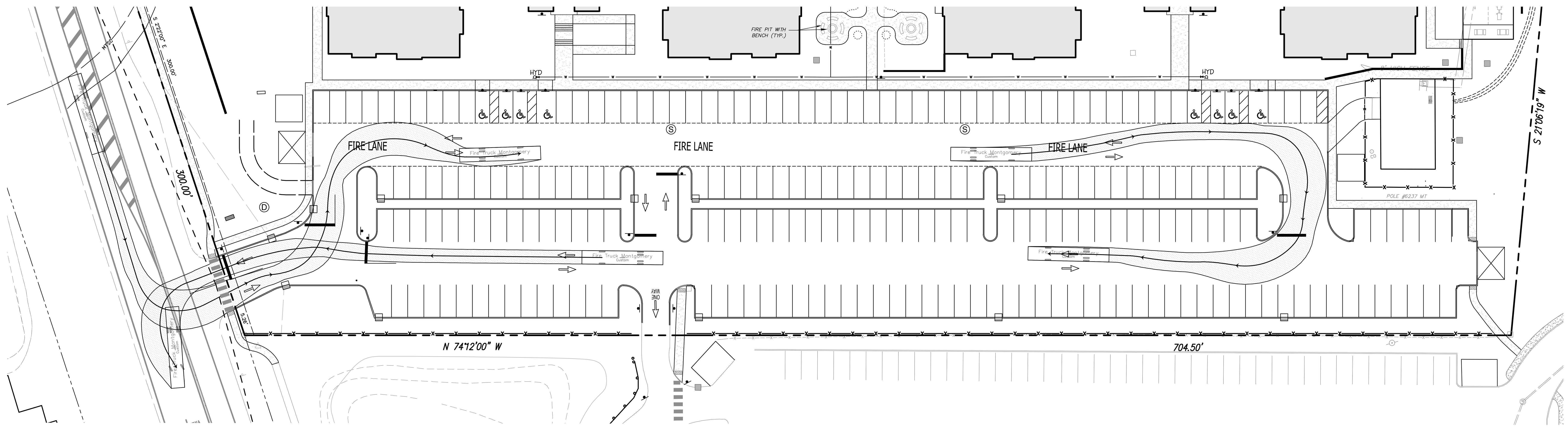
FILE No. 3476-X

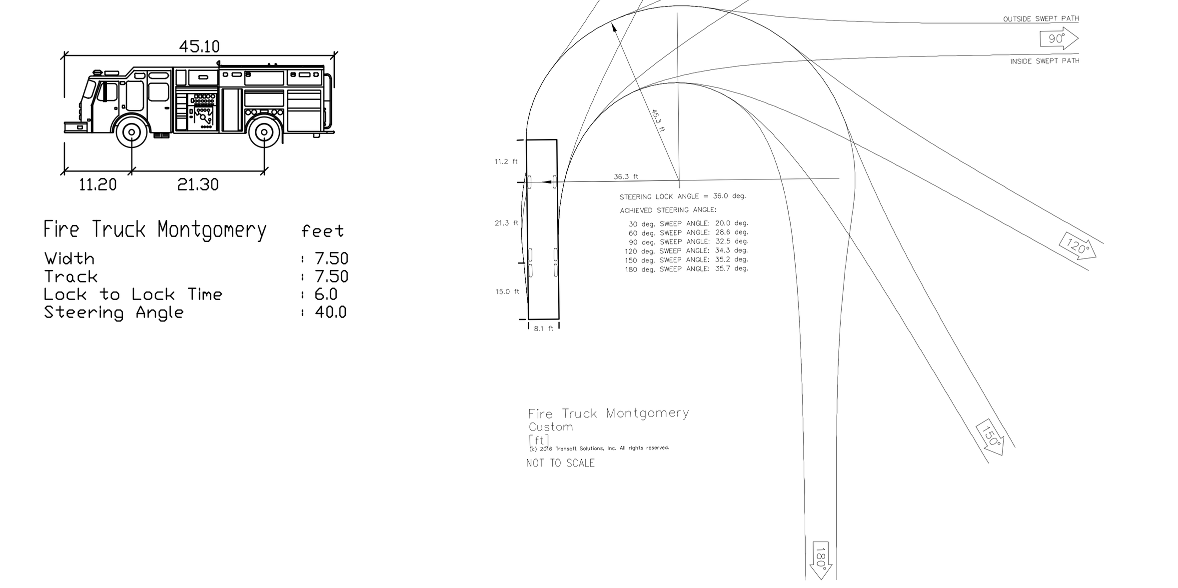


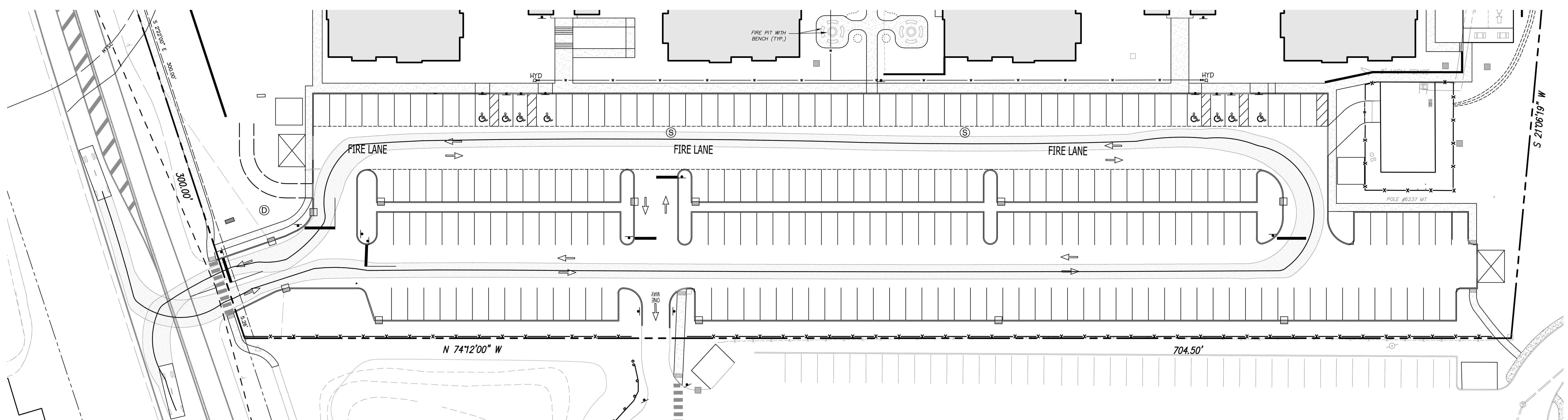
GARBAGE TRUCK TURNING TEMPLATE
SCALE: 1"=30'



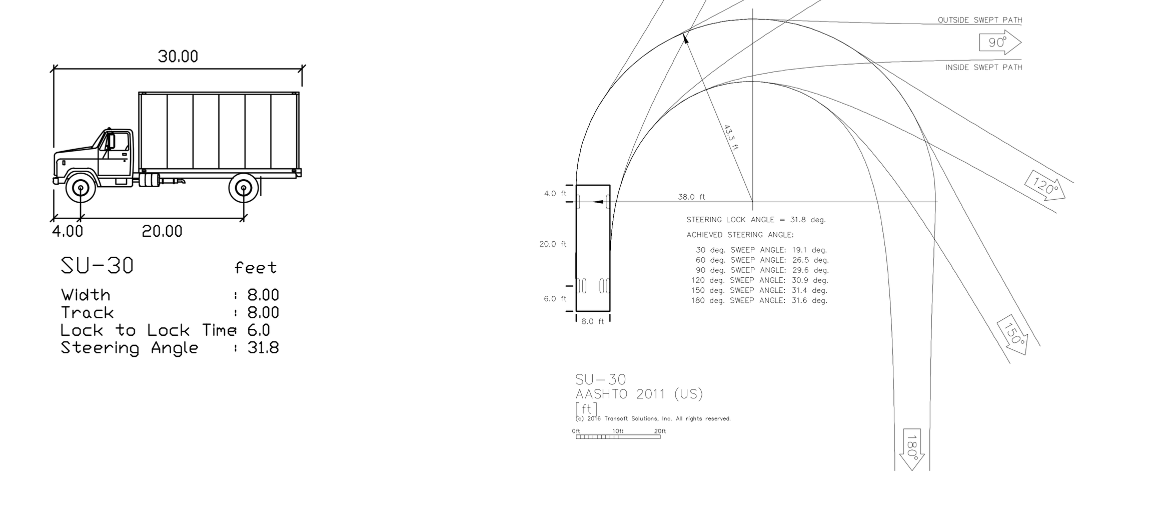


FIRE TRUCK TURNING TEMPLATE
SCALE: 1"=30'





SU-30 TRUCK TURNING TEMPLATE
SCALE: 1"=30'



			DATE:	JULY 18, 2019
			SCALE:	AS NOTED
PER TOWNSHIP	M.K.F.	1/7/21	DESIGNED BY:	M.K.F.
PER TOWNSHIP	M.K.F.	7/27/20	DRAWN BY:	A.B.
PER TOWNSHIP	M.K.F.	6/10/20	CHECKED BY:	M.K.F.
REVISIONS	AUTH.	DATE	JOB NO.	03-03-M

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Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture
NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

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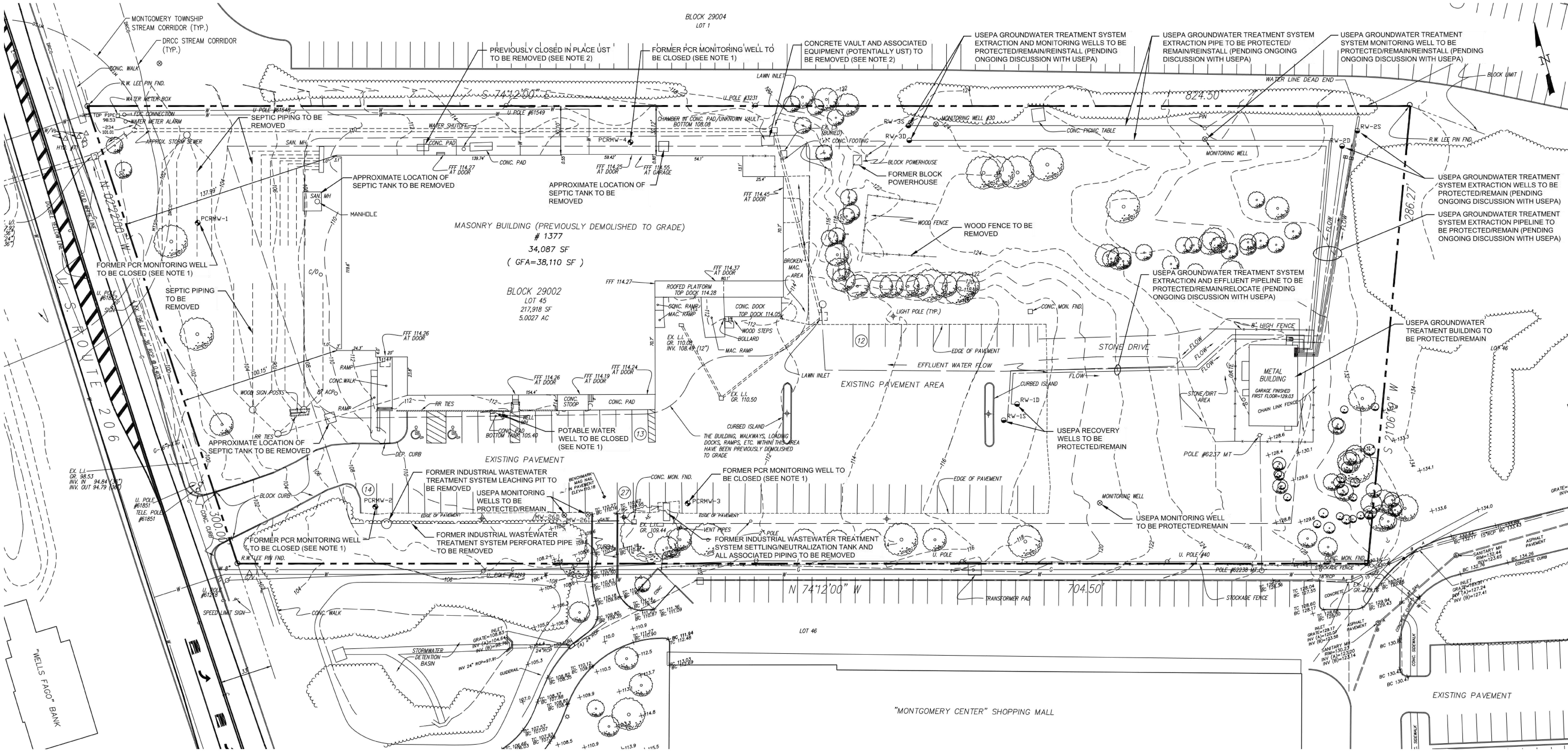
TRUCK TURNING TEMPLATES
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

15

FILE No. 3476-X



LEGEND

- BOUNDARY LINE
- CONTOUR LINE
- SPOT ELEVATION
- STORM DRAINAGE SEWER
- SANITARY SEWER
- WATER MAIN
- GAS MAIN
- HYDRANT
- WATER VALVE
- GAS VALVE
- UTILITY POLE
- LIGHT POLE
- EXISTING TREES
- LIMIT OF VEGETATION
- FORMER PCR MONITORING WELL
- USEPA MONITORING WELL
- USEPA RECOVERY WELL

APPLICANT / OWNER

J. TODD VAN CLEEF
CC1377, LLC
36 BROWER LANE
HILLSBOROUGH, NJ 08844
908-359-3276

DEMOLITION WORK WILL BE PERFORMED UNDER THE OVERSIGHT AND DIRECTION OF THE SITE LSRP RELATIVE TO NJDEP SITE REMEDIATION REQUIREMENTS AS DOCUMENTED IN THE PRELIMINARY ASSESSMENT/AMENDED REMEDIAL INVESTIGATION REPORT AND AMENDED REMEDIAL ACTION WORK PLAN DATED DECEMBER 2019. THE DEMOLITION PLAN HAS BEEN REVIEWED BY THOMAS T. GRIFFIN, THE LSRP FOR THE SITE (LSRP LICENSE 585381), AND IS FOUND TO BE CONSISTENT WITH THE REFERENCED REPORT:

Thomas T Griffin, 7/15/2020
THOMAS T. GRIFFIN, LSRP — DATE

NOTES:

1. MONITORING WELLS SLATED FOR DECOMMISSIONING WILL BE CLOSED IN ACCORDANCE WITH NJDEP REQUIREMENTS BY A LICENSED WELL DRILLER.
2. UNDERGROUND STORAGE TANKS WILL BE REMOVED AND DISPOSED OFF-SITE IN ACCORDANCE WITH THE N.J.A.C 7:14B-9.2 UNDER THE DIRECT SUPERVISION OF A LICENSED SITE REMEDIATION PROFESSIONAL (LSRP), AS SET FORTH IN N.J.S.A. 58:10B-1.3B (1) THROUGH (9).
3. WITH THE EXCEPTION NOTED IN THE DRAWING, ALL EXISTING BUILDING SLABS, FOOTERS, OTHER CONCRETE SLABS, ASPHALT PAVEMENT, SEPTIC TANKS, LEACH FIELD AND PIPING, STORMWATER CATCH BASINS, STORMWATER PIPELINES, SEWER PIPELINES, OTHER UTILITIES, AND STRUCTURES TO BE REMOVED, SIZED AND OFF-SITE DISPOSED IN ACCORDANCE WITH THE APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. THE PROPOSED DEMOLITION PLAN WILL BE IMPLEMENTED IN A PHASED MANNER TO MINIMIZE SOIL EROSION AND DUST.
4. BULK PCB REMEDIATION WASTE (INCLUDING SOIL AND DEBRIS, AS DEFINED UNDER 40 CFR PART 761) WILL BE SHIPPED TO EITHER A TSCA PERMITTED FACILITY OR A RCRA SUBTITLE C LANDFILL AUTHORIZED TO ACCEPT PCB REMEDIATION WASTE AS PERMITTED UNDER 40 CFR 761.61(A) OR 40 CFR 761.61(C), OR OTHER AUTHORIZED FACILITY.
5. BASE MAP REFERENCE: VAN CLEEF ENGINEERING ASSOCIATES, LLC, EXISTING FEATURES PLAN, JULY 18, 2019, REV. 6/10/20, FILE NO. 3476-L.

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NO.	DATE	APPR.	REVISION
0	7/15/20	US	ISSUED TO MONTGOMERY TOWNSHIP

FORMER PRINCETON CHEMICAL RESEARCH SITE
1377 Route 206 Montgomery Township
SOMERSET COUNTY — NEW JERSEY

Environmental Resources Management
Ewing, New Jersey, 08628 (609) 895-0050

ERM

UPENDRA SONI
Professional Engineer
NJ Lic. No. 24GE05259700

CHECKED	DATE
DESIGN ENGINEER	U.S.
PROJECT ENGINEER	M.G.
PROJECT MANAGER	S.P.
APPROVED	
APPROVED	

DEMOLITION PLAN

DRAWING NO. 3
REV. NO. 0

DRAWN	DATE	CLIENT APPROVAL	
CAK	26 JUNE 2020		
SCALE	W.O. No. / Drawing No.	ISSUED FOR / DATE	SHEET OF
AS SHOWN	0338637 / C-103	MONTGOMERY TOWNSHIP / 7/15/2020	1 / 8

REVISIONS	AUTH.	DATE	
			DATE: JUNE 25, 2020
			SCALE: 1"= 30'
			DESIGNED BY: K.H.
			DRAWN BY: K.H.
			CHECKED BY: M.K.F.
			JOB NO. 03-03-M

Van Cleef
ENGINEERING ASSOCIATES, LLC

32 BROWER LANE, PO BOX 5877, HILLSBOROUGH, NJ 08844
EMAIL: CONTACTUS@VANCLEEFENGINEERING.COM
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Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture

NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer
No. 34722

DEMOLITION PLAN
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

16

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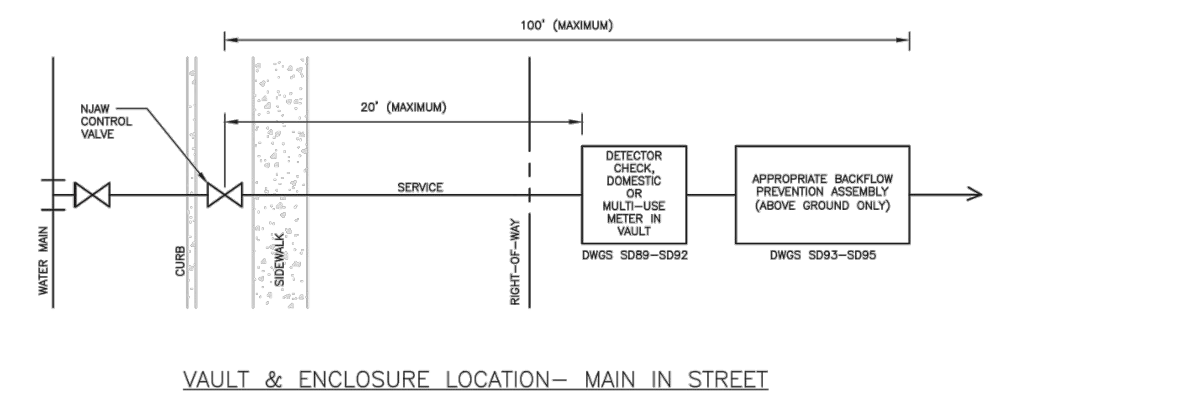
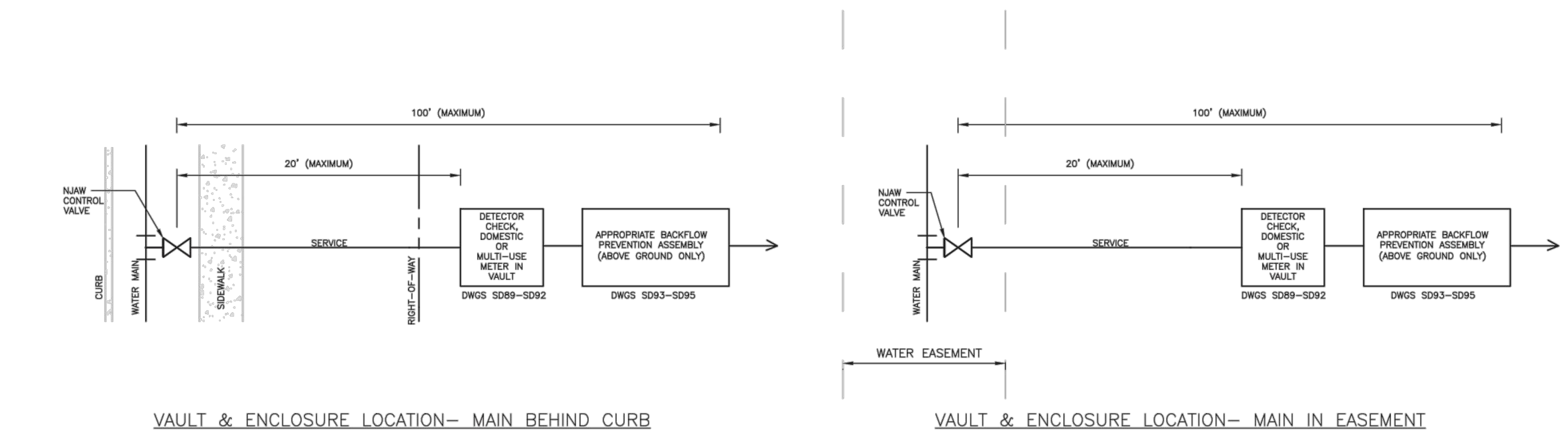
FILE No. 3476-L



VAULT & ENCLOSURE LOCATION– MAIN IN STREET

NOTES:

1. ALL METERS (3" & LARGER) SHALL BE INSTALLED IN A CONCRETE VAULT.
2. ALL BACKFLOW PREVENTION DEVICES SHALL BE INSTALLED IN AN ABOVEGROUND ENCLOSURE, IMMEDIATELY ADJACENT (I.E. AS CLOSE AS PRACTICABLE) TO THE DISCHARGE SIDE OF THE METER.
3. NOT WITHSTANDING THE ABOVE, IF A METER VAULT AND HEATED BP ENCLOSURE ARE INSTALLED, BOTH STRUCTURES SHALL BE INSTALLED WITHIN 100 FEET OF THE NJAW CONTROL VALVE (MAXIMUM).
4. NJAW MAY WAIVE HEATED BP ENCLOSURE AND ALLOW BACKFLOW PREVENTER INSTALLATION IN BUILDING IF THE 100 FOOT REQUIREMENT IS MAINTAINED.
5. THE INSTALLATION MUST ALSO MEET ALL APPLICABLE CODE & REGULATORY REQUIREMENTS INCLUDING THE NATIONAL STANDARD PLUMBING CODE AND NEW JERSEY STATUTES AND REGULATIONS.



VAULT & ENCLOSURE LOCATION– MAIN BEHIND CURB

VAULT & ENCLOSURE LOCATION– MAIN IN EASEMENT

NEW JERSEY AMERICAN WATER

REVISIONS

STANDARD DETAIL
DOMESTIC, FIRE & MULTI-USE SERVICE LOCATION SCHEMATIC

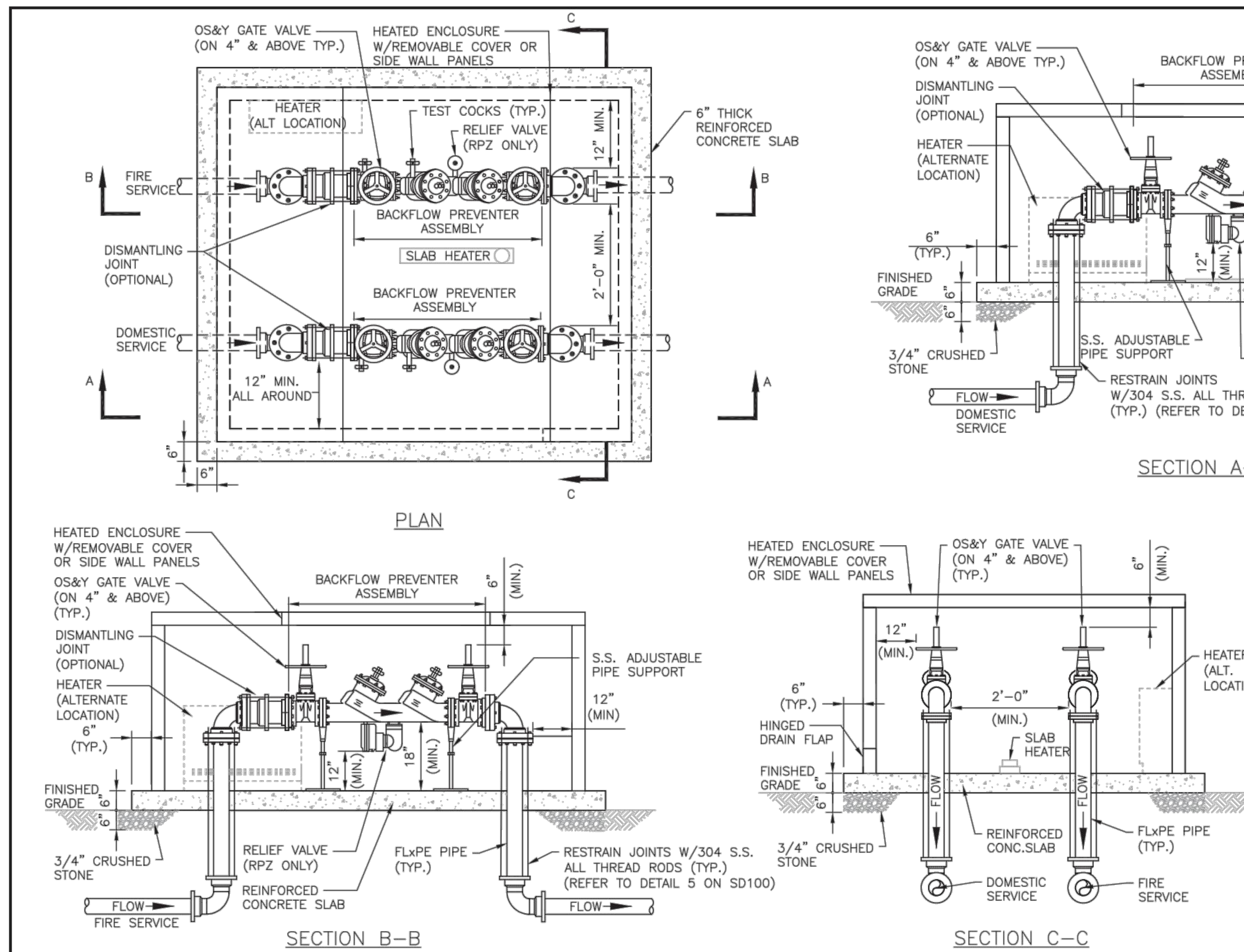
DATE 08-24-18

PROJECT

NEW JERSEY AMERICAN WATER

USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES

0201-0601-SD88



NOTES:

1. BACKFLOW PREVENTER ASSEMBLY SHALL NOT BE SUBJECT TO FLOODING.
2. BACKFLOW PREVENTER MUST BE INSTALLED ABOVE NATURAL GROUND, ABOVE THE 100 YEAR FLOOD LEVEL, UNLESS OTHERWISE APPROVED BY NJAW.
3. ENCLOSURE MUST MEET OSHA 29 CRF 1910.145 AND ASSE 1060 CLASS 1.
4. INSULATED HEATED ENCLOSURE CHARACTERISTICS.
   A. ENCLOSURE–5052–H32 MARINE GRADE ALUMINUM (0.050/18 GAUGE), MILL FINISH, OR 1/8" POLYESTER RESIN REINFORCED WITH FIBERGLASS STRAND
   B. INSULATION– 1-1/2" (R9) POLYISOCYANURATE FOAM
   C. HEATING SYSTEM– SLAB OR WALL MOUNT THERMOSTATICALLY CONTROLLED ELECTRIC HEATER MEETING SECTION 49 OF UL–2021 FOR DAMP OR WET LOCATIONS, WITH GFI RECEPTACLE, U.L. 943 NEMA 3R MOUNTED 8" (MIN.) ABOVE SLAB.
   D. HEATER(S) SHALL BE PROVIDED AS NECESSARY TO MAINTAIN TEMPERATURE ABOVE 40° F AT ALL TIMES.
5. ENCLOSURE MUST BE A SUFFICIENT SIZE TO HOUSE ALL REQUIRED PIPING. ENCLOSURE SHALL BE LOCKABLE. ACCESS PANELS SHALL BE ABOVE THE CENTERLINE OF THE ASSEMBLY, OR IN SIDE WALLS. ENCLOSURE TO HAVE HINGED ONE-WAY DRAIN FLAP. REFER TO DRAWING SD101.

NEW JERSEY AMERICAN WATER

REVISIONS

STANDARD DETAIL
DOMESTIC & FIRE BACKFLOW PREVENTERS
IN HEATED ENCLOSURE

DATE 08-24-18

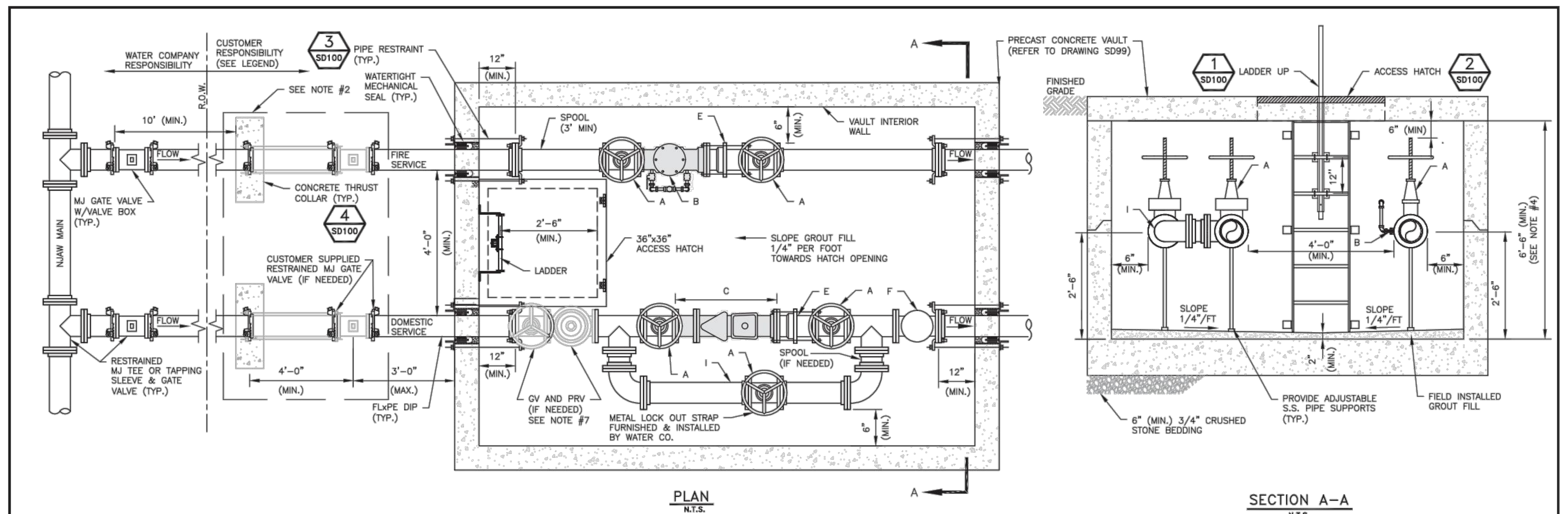
PROJECT

NEW JERSEY AMERICAN WATER | STANDARDS | USE DIMENSIONS ONLY SCALE AS SHOWN

USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES

0201-0601-SD93

02010601SD93



LEGEND:

COMPONENTS SHADED IN GRAY TO BE FURNISHED BY WATER CO.

A– OS&Y GATE VALVE WITH FLANGED ENDS (FURNISHED & INSTALLED BY CUSTOMER)

B– DETECTOR CHECK VALVE W/ BYPASS METER (FURNISHED BY WATER CO., INSTALLED BY CUSTOMER)

C– DOMESTIC COMPOUND METER ASSEMBLY– METERS WITH FLANGED ENDS (FURNISHED BY WATER CO., INSTALLED BY CUSTOMER)

E– DISMANTLING JOINT TO HAVE FLANGED ENDS WITH JOINT RESTRAINT (FURNISHED & INSTALLED BY CUSTOMER)

F– SWING CHECK WITH FLANGED ENDS (FURNISHED & INSTALLED BY CUSTOMER)

I– BYPASS SIZE SHALL BE NO GREATER THAN ONE STANDARD PIPE SIZE SMALLER THAN DOMESTIC SERVICE SIZE AND SHALL HAVE METAL STRAP FOR LOCKING OUT BYPASS VALVE (STRAP FURNISHED & INSTALLED BY WATER CO.)

BACKFLOW DEVICE:

A BACKFLOW DEVICE IS REQUIRED BY THE NJDEP. THE BACKFLOW DEVICE IS FURNISHED & INSTALLED BY CUSTOMER. THE BACKFLOW DEVICE CANNOT BE INSTALLED INSIDE THE VAULT OR ANY CONFINED SPACE. IT MAY BE INSTALLED IN AN INSULATED HEATED ABOVEGROUND ENCLOSURE OR INSIDE THE BUILDING. THE BACKFLOW DEVICE MUST BE PLACED BEFORE THE FIRST CONNECTION. IF IN BUILDING, LOCATION MUST BE APPROVED BY NJAW PRIOR TO ANY INSTALLATION. REFER TO DRAWING 0201-0601-SD93.

NOTES:

1. VAULTS ARE REQUIRED BY NJAW FOR LARGE METERS (3" & LARGER) AND ARE TO BE FURNISHED AND INSTALLED BY CUSTOMER. ACCESS TO VAULT VIA ALUMINUM 36"x36" BILCO PCM-4 TYPE, FLUSH, WATERTIGHT SIDEWALK DOOR W/ LADDER UP SAFETY POST OR EQUIVALENT. PLASTIC ENCASED STEEL OR ALUMINUM LADDER RUNGS CENTERED AT ONE FOOT (1') MUST BE PROVIDED. AREA AROUND VAULT MUST BE COMPLETELY WATERPROOFED. USE SOLID FLANGE & RODDING ON VALVES. ALL VAULT AND PIPING CONSTRUCTION IS SUBJECT TO WATER COMPANY APPROVAL PRIOR TO SERVICE.
2. IF VAULT IS >20 FEET FROM NJAW SHUTOFF VALVE, CUSTOMER IS REQUIRED TO FURNISH & INSTALL AN ADDITIONAL RESTRAINED MECHANICAL JOINT GATE VALVE & VALVE BOX WITHIN 3 FEET OF THE VAULT. IF VAULT IS <20 FEET FROM NJAW SHUTOFF VALVE, CUSTOMER SHALL INSTALL A SOLID, GASKETED, MECHANICAL JOINT SLEEVE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS WITHIN 3 FEET OF VAULT.
3. EXTERIOR VALVES & FITTINGS SHALL BE RESTRAINED WITH WEDGE ACTION RESTRAINING GLANDS, THUST COLLARS AND/OR 304 STAINLESS STEEL RODS/NUTS AND CLAMPS.
4. BASED ON THE LARGEST SIZE GATE VALVE REQUIRED, THE MINIMUM VAULT HEIGHT (INTERIOR DIMENSION) SHALL BE AS FOLLOWS:

GV SIZE	VAULT HEIGHT
3" TO 8"	6'-6"
10"	7'-0"
12"	7'-6"

5. VAULT PIPING TO BE DUCTILE IRON MEETING ANSI/AWWA C115/A21.15, OR TYPE K DRAWN (HARD) TEMPER COPPER MEETING ASTM-B88.THE USE OF FLANGED COUPLING ADAPTERS IS STRICTLY PROHIBITED.
6. NO DETECTOR CHECK VALVES WILL BE MADE AVAILABLE TO THE CUSTOMER BY NJAW PRIOR TO THE INSPECTION BY NJAW.
7. THE CUSTOMER MUST INSTALL A WATER PRESSURE REDUCING VALVE WHERE REQUIRED BY STATE OF NEW JERSEY PLUMBING CODE. INSTALLATION RECOMMENDED WHERE AVERAGE PRESSURE IS GREATER THAN 80 PSI. WHERE A PRV IS REQUIRED IT SHALL BE PRECEEDED BY AN ADDITIONAL OS&Y GATE VALVE.

NEW JERSEY AMERICAN WATER

REVISIONS

AMERICAN WATER ENGINEERING
3906 CHURCH RD.
MT. LAUREL, NJ 08054
AMERICAN WATER

DRAWN BY R. BEATTY
PROJECT ENG'R E. SCHWARTZ

DATE 08-24-18

PROJECT

NJ LICENSED PROFESSIONAL ENGINEER NO.

STANDARD DETAIL
DOMESTIC & FIRE SERVICE METER VAULT

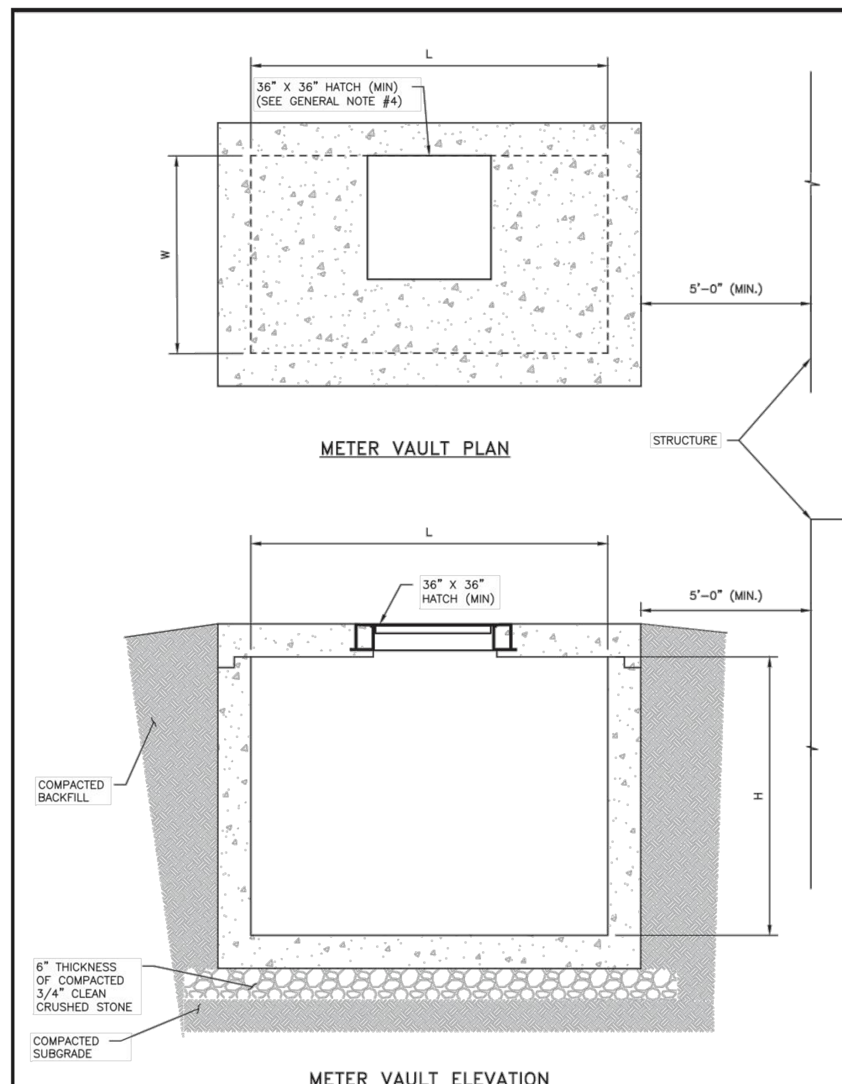
NEW JERSEY AMERICAN WATER

USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES

USE DIMENSIONS ONLY SCALE NOT TO SCALE

0201-0601-SD89

02010601SD89



	INTERIOR DIMENSIONS FOR FIRE & DOMESTIC METER VAULT (DWG SD89)					
	Without PRV Assembly			With PRV Assembly		
Service Size (in)	Length (ft)	Width (ft)	Height (ft)	Length (ft)	Width (ft)	Height (ft)
3	9.00	7.00	6.50	10.00	7.00	6.50
4	10.00	8.00	6.50	12.00	8.00	6.50
6	11.00	8.00	6.50	14.00	8.00	6.50
8	12.00	9.00	6.50	15.00	9.00	6.50
10	15.00	9.00	7.00	18.00	9.00	7.00

	INTERIOR DIMENSIONS FOR DOMESTIC METER VAULT (DWG SD90)					
	Without PRV Assembly			With PRV Assembly		
Service Size (in)	Length (ft)	Width (ft)	Height (ft)	Length (ft)	Width (ft)	Height (ft)
3	9.00	6.00	6.50	10.00	6.00	6.50
4	10.00	6.00	6.50	12.00	6.00	6.50
6	11.00	7.00	6.50	14.00	7.00	6.50
8	12.00	7.00	6.50	15.00	7.00	6.50
10	15.00	7.00	7.00	18.00	7.00	7.00

	INTERIOR DIMENSIONS FOR MULTI-USE METER VAULT (DWG SD92)					
	Without PRV Assembly			With PRV Assembly		
Service Size (in)	Length (ft)	Width (ft)	Height (ft)	Length (ft)	Width (ft)	Height (ft)
4	11.00	6.00	6.50	13.00	6.00	6.50
6	13.00	7.00	6.50	15.00	7.00	6.50
8	14.00	7.00	6.50	17.00	7.00	6.50
10	17.00	7.00	7.00	20.00	7.00	7.00

	INTERIOR DIMENSIONS FOR FIRE METER VAULT (DWG SD91)		
Service Size	Length (ft)	Width (ft)	Height (ft)
3	6.00	6.00	6.50
4	6.00	6.00	6.50
6	7.00	6.00	6.50
8	8.00	6.00	6.50
10	8.00	7.00	7.00

CONCRETE STRUCTURE NOTES:

1. PRECAST CONCRETE METER VAULT SHALL BE DESIGNED FOR THE FOLLOWING CONDITIONS STATED BELOW (1.1 THROUGH 1.5). SUBMIT CALCULATIONS TO NEW JERSEY AMERICAN WATER FOR REVIEW. ALL CALCULATIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE CONSTRUCTION IS TO TAKE PLACE.
   1.1. STRUCTURE FILLED TO TOP WITH NO EXTERNAL SOIL PRESSURE.
   1.2. STRUCTURE EMPTY WITH SOIL BACKFILL TO FINISHED GRADE. ASSUME SOIL DRY DENSITY AT 95 LBS/C.F. ASSUME SOIL SATURATED TO FINISHED GRADE.
   1.3. STRUCTURE SHALL NOT FLOAT WITH SATURATED SOIL TO FINISHED GRADE. ASSUME SOIL LOAD ON CONCRETE LIP AT 32 LBS/C.F. A SAFETY FACTOR OF 1.5 SHALL BE PROVIDED IN THE FLOATATION CALCULATIONS.
   1.4. SOIL BEARING PRESSURE OF 2,500 PSF.
   1.5. EFFECTS OF ALL VERTICAL LOADS ANTICIPATED ON THE FINISHED STRUCTURE SHALL BE INCLUDED IN THE ANALYSIS AND DESIGN. LOADING FROM PIPING AND EQUIPMENT, HOIST, SUPERSTRUCTURES, SNOW, H-20 LIVE LOAD, AND ACTUAL DEPTH OF SOIL COVER SHALL BE INCLUDED.
2. THE EXTERIOR OF ALL PRECAST PRODUCTS SHALL BE COATED WITH TWO COATS OF BITUMASTIC PAINT, 16 TO 20 MIL DFT, TO FINISHED GRADE. USE PROMASTIC 900 COAL TAR WATERPROOFING MANUFACTURED BY PROGUARD COATING, INC., OR APPROVED EQUAL.
3. ALL ALUMINUM IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH 2 COATS OF COAL TAR EPOXY OR ISOLATED FROM THE CONCRETE WITH 1/8" THICK NEOPRENE PADDING. ALL STEEL THRUST RESTRAINT ANGLES SHALL BE WIRE BRUSHED AND PAINTED WITH 2 COATS OF COAL TAR EPOXY.
4. ALL CONCRETE ANCHORS AND HARDWARE SHALL BE STAINLESS STEEL.
5. PROVIDE COMMON KEYED LOCKS FOR ALL HATCHES, PANELS, DOORS AND QUICK DISCONNECT CAPS ASSOCIATED WITH THIS PROJECT.
6. ALL STRUCTURES SHALL BE WATERTIGHT.
7. DUAL SEAL II GASKETS DISTRIBUTED BY DUAL SEAL CORP., OR APPROVED EQUAL, SHALL MEET ASTM C923 REQUIREMENTS.
8. JOINTS IN STRUCTURE SHALL BE SEALED WITH BITUMEN CONSEAL CS-102-B JOINT SEALANT MATERIAL MANUFACTURED BY CONCRETE SEALANTS, INC AND MEET FEDERAL SPECIFICATION SS-S-00210 (210-A).
9. CONCRETE STRUCTURES SHALL MEET THE REQUIREMENTS OF ASTM C478. DESIGN SHALL FOLLOW ACI 318-14 USING LOAD FACTOR DESIGN.
10. CONCRETE: fc = 4,000 PSI AT 28 DAYS. TYPE III CEMENT. AIR ENTRAINMENT 7% ± 2%. ASTM C33 NO. 57 OR NO. 67 COARSE AGGREGATE.
11. REINFORCEMENT: WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. BAR REINFORCEMENT SHALL BE GRADE 60, CONFORMING TO ASTM A615.
12. VERTICAL BAR REINFORCEMENT REQUIRED BETWEEN BASE SLAB AND FIRST VERTICAL SECTION OF STRUCTURE.

GENERAL NOTES

1. THE VAULT DIMENSIONS NOTED ABOVE ARE APPROXIMATE MINIMUM REQUIREMENTS BASED ON THE EQUIPMENT AND LAYOUTS SHOWN ON DRAWINGS SD89 THROUGH SD92.
2. THE DESIGN ENGINEER SHALL MAKE HIS OWN DETERMINATION TO ENSURE THAT THE REQUIRED CLEARANCES NOTED ON THE METER VAULT DRAWINGS ARE ACHIEVED BASED ON THE ACTUAL SERVICE SIZE(S), EQUIPMENT AND FITTINGS PROPOSED.
3. THE TABLES PROVIDED ABOVE ARE BASED ON THE LARGEST SERVICE SIZE ENTERING THE METER VAULT.
4. THE MINIMUM ACCEPTABLE ACCESS HATCH SIZE IS 36' X 36". FOR MULTI-USE SERVICE SIZES 8" AND LARGER, A SECOND 48" X 72" HATCH SHALL BE PROVIDED AND CENTERED ABOVE THE MULTI-USE METER ASSEMBLY. THE HATCH TYPE(S) & INSTALLATION LOCATION(S) SHALL BE AS SHOWN ON DRAWINGS SD89 THROUGH SD92, UNLESS OTHERWISE APPROVED BY NJAW.
5. ACCESS INTO THE VAULT SHALL BE VIA AN OSHA COMPLIANT ALUMINUM LADDER EQUIPPED WITH AN APPROVED LADDER UP DEVICE.
6. THE FLOOR OF THE VAULT SHALL BE SLOPED TOWARDS THE HATCH TO ALLOW FOR PUMP OUT SHOULD THE NEED ARISE. GROUT FILL SHALL BE PLACED ON TOP OF THE PRECAST BASE AND SLOPED AT 1/4" PER FOOT TOWARDS THE HATCH OPENING. MINIMUM GROUT THICKNESS SHALL BE 2".

NEW JERSEY AMERICAN WATER

REVISIONS

AMERICAN WATER ENGINEERING
AMERICAN WATER

DATE 08-24-18

PROJECT

STANDARD DETAIL

METER VAULT

NEW JERSEY AMERICAN WATER | STANDARDS | USE DIMENSIONS ONLY SCALE AS SHOWN

USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES

0201-0601-SD99

REVISIONS	AUTH.	DATE		
			DATE:	MARCH 8, 2021
			SCALE:	AS SHOWN
			DESIGNED BY:	K.H.
			DRAWN BY:	K.H.
			CHECKED BY:	M.K.F.
			JOB NO.	03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC

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Water / Wastewater
Municipal Engineering
Land Surveying
Professional Planning
Landscape Architecture
NJ LLC CERT. No. 24GA28132300

BY: Michael K. Ford
Michael K. Ford
New Jersey Professional Engineer No. 34722

N.J.A.W. WATER SERVICE DETAILS
FOR
LOT 45 IN BLOCK 29002
MONTGOMERY TOWNSHIP,
SOMERSET COUNTY, NEW JERSEY

17

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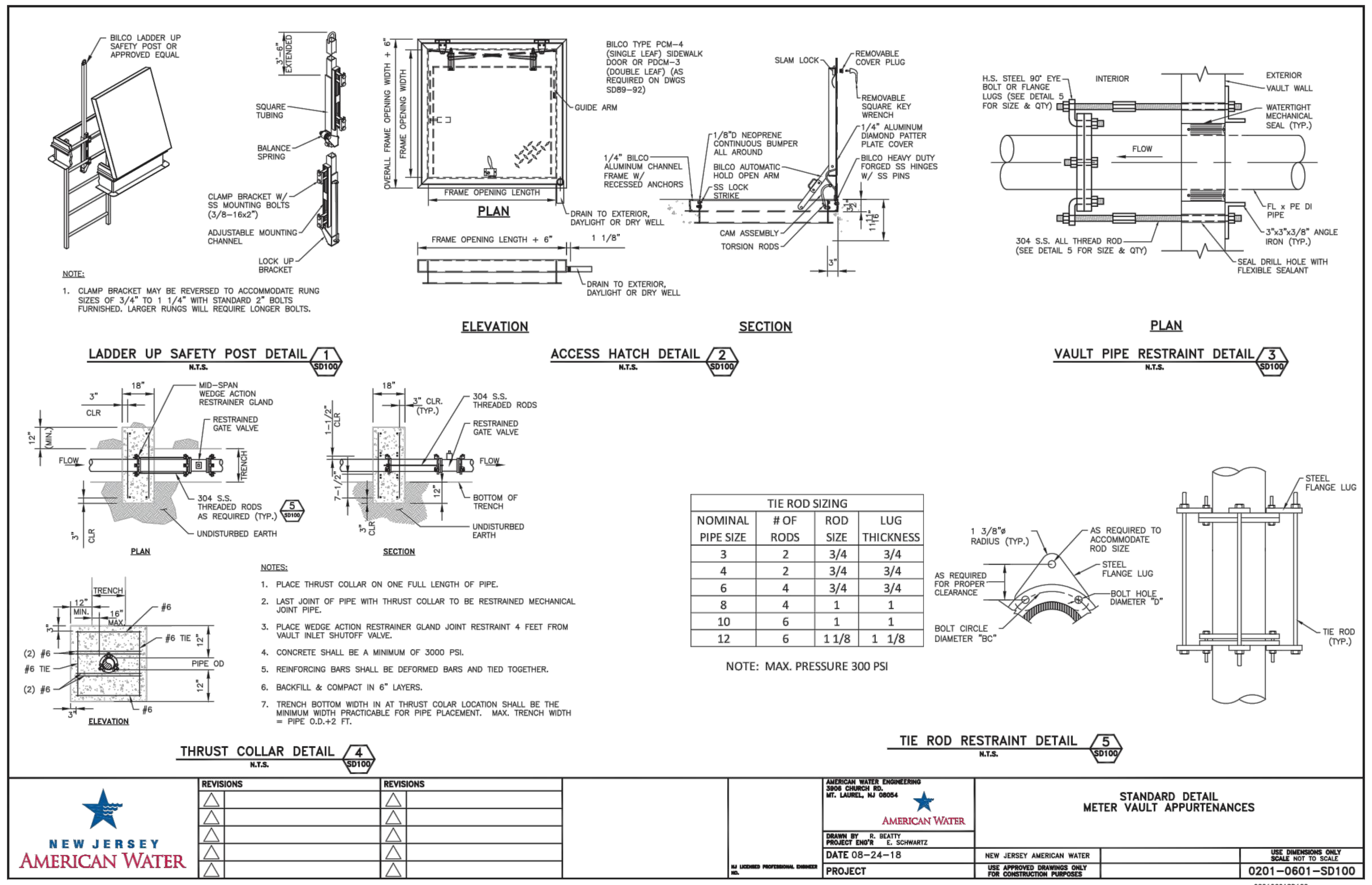
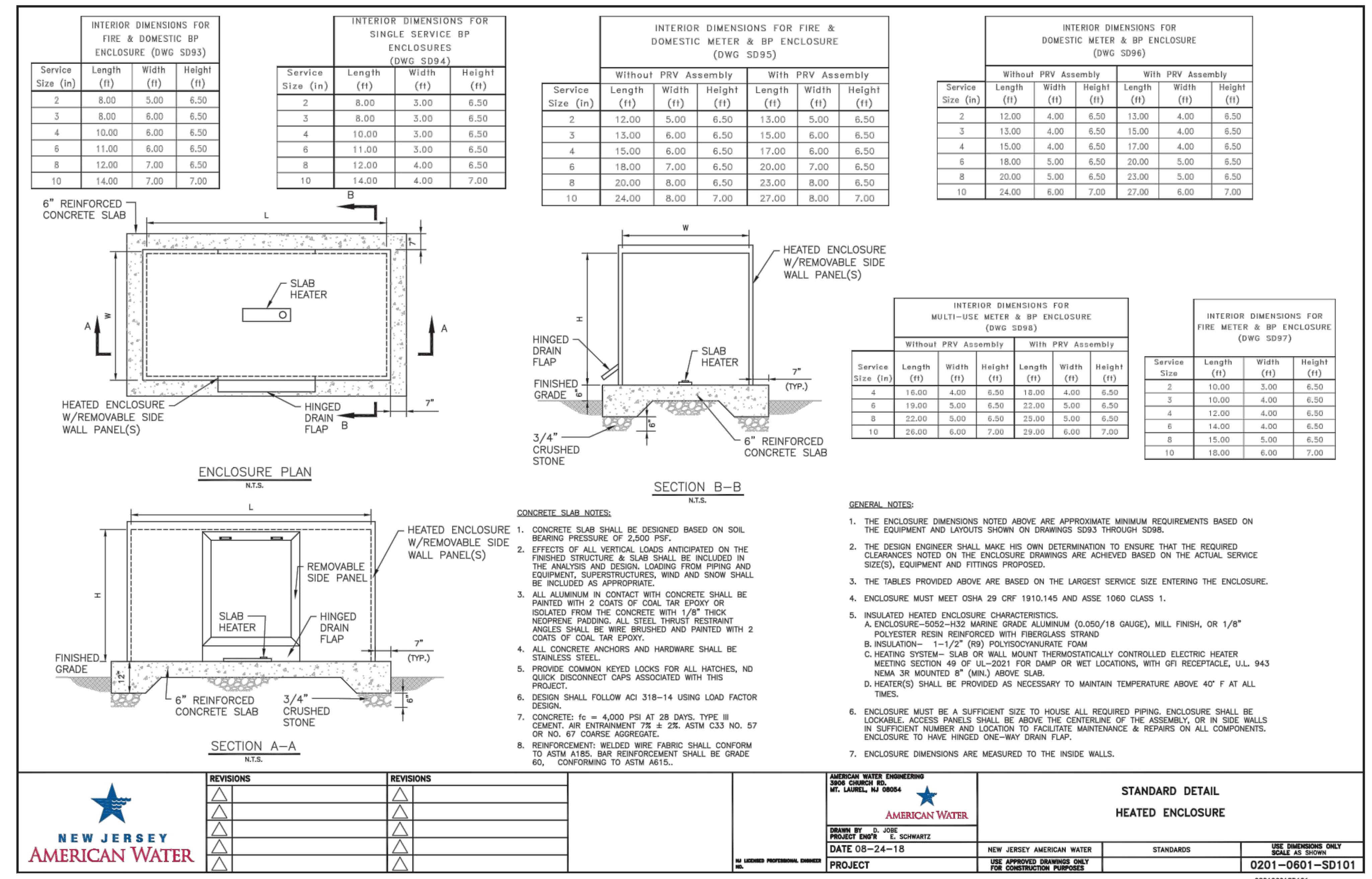
FILE No. 3476-X





FITTINGS & EQUIPMENT LAYING LENGTHS

	Laying Length (inches)				
Nominal Service Size	**3"**	**4"**	**6"**	**8"**	**10"**
A- Gate Valve (OS&Y)	8	9	10.5	11.5	13
B- Detector Check Valve (DCV)	15	15	21	25	28.75
C- Domestic Compund Meter Assembly (includes spool, strainer, meter & test port)	23.375	27.875	33.375	30.125	41.125
D- Multi-Use Meter Assembly (includes strainer, meter & test port)	------	33	45	53	68
E- Dismantling Joint	9	9	9	9	10
F- Swing Check Valve	9.5	11.5	14	19.5	24.5
G- RPZ Backflow Preventer Assembly (inludes gate valves)	42.25	55.125	65.5	78.5	93.625
G- Double Check Backflow Preventer Assembly (inludes gate valves)	40.375	52.375	62.875	75	90
H- Pressure Reducing Valve (PRV) (excludes shutoffs)	12	15	20	25.375	29.75
Y-Strainer DI Class 125	10.125	12.125	18.5	21.625	26
Tee (Run)	11	13	16	18	22
Tee (Branch)	5.5	6.5	8	9	11
90° Bend	5.5	6.5	8	9	11
Spool (FLGxFLG) (minimum length available)	------	4.25	4.5	5	5.5

NOTES:

1. LAYING LENGTHS SHOWN ABOVE ARE APPROXIMATE AND BASED ON SPECIFIC MANUFACUTRER AND MODEL COMPONENTS. DESIGN ENGINEER TO VERIFY ALL DIMENSIONS, BASED ON ACTUAL EQUIPMENT AND FITTINGS PROPOSED.
2. LAYING LENGTHS NOTED ABOVE DO NOT INCLUDE GASKET THICKNESS.
3. THE USE OF FLANGED COUPLING ADAPTERS IS STRICTLY PROHIBITED.

NEW JERSEY AMERICAN WATER

STANDARD DETAIL
DOMESTIC & FIRE SERVICE
TYPICAL LAYING LENGTHS OF EQUIPMENT & FITTINGS

DATE 08-24-18

STANDARDS | USE DIMENSIONS ONLY SCALE AS SHOWN

0201-0601-SD102

02010601SD102

			DATE: MARCH 8, 2021
			SCALE: AS SHOWN
			DESIGNED BY: K.H.
			DRAWN BY: K.H.
			CHECKED BY: M.K.F.
REVISIONS	AUTH.	DATE	JOB NO. 03-03-M

Van Cleef ENGINEERING ASSOCIATES, LLC
With Offices In New Jersey, Pennsylvania & Delaware
32 BROWER LANE, PO BOX 5877, HILLSBOROUGH, NJ 08844
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N.J.A.W. WATER SERVICE DETAILS
FOR
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MONTGOMERY TOWNSHIP,
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