PRELIMINARY AND FINAL MAJOR SITE PLAN

FOR

MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER

BLOCK 28010, LOT 57 & 58; TAX MAP SHEET #55 - LATEST REV. DATED 2020-2021
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY
SOMERSET COUNTY, NEW JERSEY

200' PROPERTY OWNERS LIST

PROPERTY OWNER	BLOCK	LOT
MALLELA, PURUSHOTHAM R & H A 63 HARTWICK DRIVE SKILLMAN, NJ 08558	28003	56
VILLAGE WALK 1330, LLOC 219 NASSAU STREET PRINCETON, NJ 08542	28007	1
VILLAGE SHOPPES AT MONTGOMERY LLC 219 NASSAU STREET PRINCETON, NJ 08542	28007	4
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	35
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	36
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	37
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	38
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	91
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	108
SHARBELL PLAINSBORO INC 1 WASHINGTON BLVD ROBBINSVILLE, NJ 08691	28008	110
K.T CORPORATION 7 HOUSTEN COURT MARTINSVILLE, NJ 08836	28010	59
TOWNSHIP OF MONTGOMERY 100 COMMUNITY DRIVE SKILLMAN, NJ 08558	28010	60.01
AMERICAN REALTY ASSOC O/O PRC. INNKEEPER 1600 HIGHWAY 34 NEPTUNE, NJ 07753	28010	61
AMERICAN REALTY ASSOC O/O PRC. INNKEEPER 1600 HIGHWAY 34 NEPTUNE, NJ 07753	28010	62
PRINCETON PROMENADE, LLC 1115 HOWELL MILL RD NW ATLANTA, GA 30318	34001	56
PRINCETON PROMENADE, LLC 1115 HOWELL MILL RD NW ATLANTA, GA 30318	34001	80
PRINCETON PROMENADE, LLC 1115 HOWELL MILL RD NW ATLANTA, GA 30318	34001	81

ALSO TO BE NOTIFIED:

TOWNSHIP OF MONTGOMERY
CLERK'S OFFICE
100 COMMUNITY DR
SKILLMAN, NJ 08558

SOMERSET COUNTY PLANNING BOARD
PO BOX 3000
SOMERVILLE, NJ 08876

NJ DEPARTMENT OF TRANSPORTATION
1035 PARKWAY AVE, CN600
TRENTON, NJ 08625

COMCAST CABLE
100 RANDOLPH ROAD
SOMERSET, NJ 08873

NEW JERSEY AMERICAN WATER
ATTN: DONNA SHORT, GIS SUPERVISOR
1025 LAURAL OAK RD
VOORHEES, NJ 08043

CENTURY LINK
ATTN: BOB O'CONNER
256 PAUL ST
BELVIDERE, NJ 07823

PUBLIC SERVICE ELECTRIC & GAS
MANAGER–CORPORATE–PROPERTIES
80 PARK PLAZA– T6B
NEWARK, NJ 07102

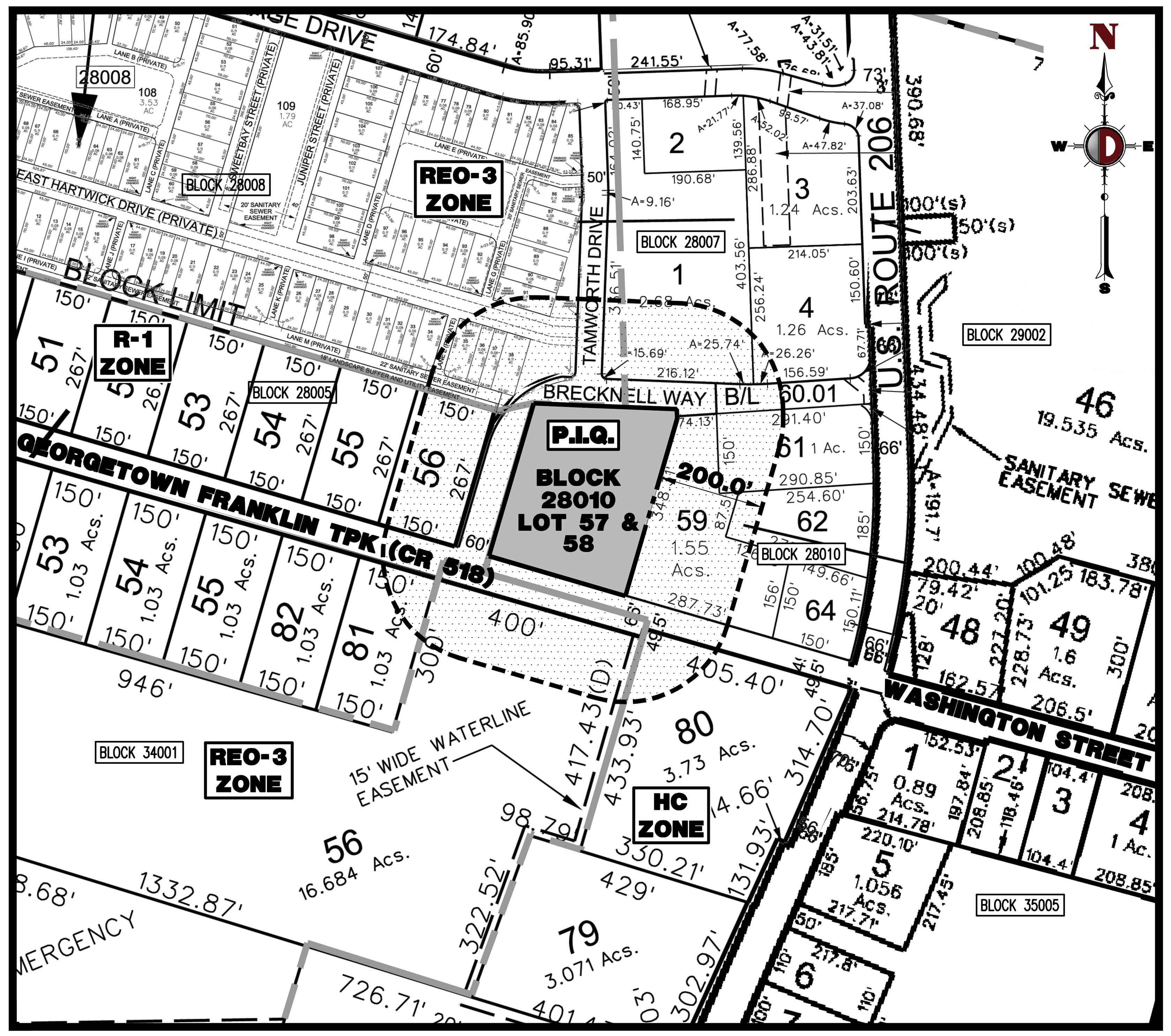
DEPARTMENT OF PUBLIC WORKS
TOWNSHIP OF MONTGOMERY
100 COMMUNITY DRIVE
SKILLMAN, NJ 08558
ATTN: ARTUR VILLANO, SUPERINTENDANT

UTILITY COMPANIES:

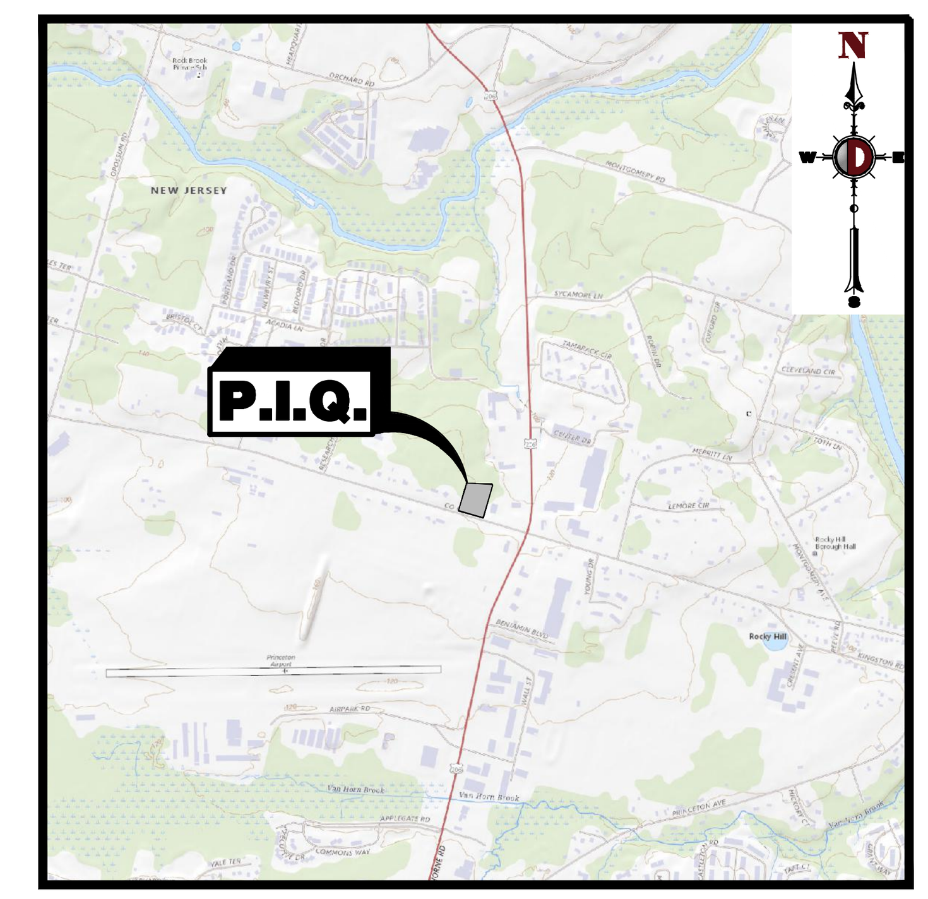
NEW JERSEY AMERICAN WATER
1–800–272–1325

PUBLIC SERVICE ELECTRIC & GAS
800–722–0256

SANITARY SEWER – MONTGOMERY TOWNSHIP ENGINEERING DEPT.
908–359–8211 EXT. 2244



AREA MAP
1" = 200'



KEY MAP
1" = 2000'

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THESE PLANS ARE NOT ACCEPTED FOR CONSTRUCTION UNLESS THIS BLOCK IS STAMPED "ACCEPTED AS SUBMITTED" BY A STAFF MEMBER OF THE SOMERSET COUNTY ENGINEERING DIVISION. BIDS FOR CONSTRUCTION SHOULD NOT BE BASED ON THESE PLANS UNTIL THE PLANS ARE ACCEPTED BY THE COUNTY.

ACCEPTANCE OF THESE PLANS EXPIRES TWO (2) YEARS FROM THE STAMPED DATE.

PREPARED BY
DYNAMIC ENGINEERING CONSULTANTS, P.C.
1904 MAIN STREET
LAKE COMO, NJ 07719
WWW.DYNAMICEC.COM

PLANNING BOARD APPROVAL

APPROVED BY THE PLANNING BOARD OF THE TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

CHAIRMAN ____________ DATE

SECRETARY ____________ DATE

BOARD ENGINEER ____________ DATE

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK
DESIGNED BY: AF
CHECKED BY: JSH

PROJECT: MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN–FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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Houston, Texas • T: 281.789.6400
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www.dynamicec.com

JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: COVER SHEET

SCALE: (H) AS (V) NOTED
DATE: 08/17/2023
PROJECT No: 4447–22–01334

SHEET No: 1 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:30 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SK2.dwg, ---> 01 COVER SHEET

GRAPHIC SCALE

-100 0 50 100 200 400

(IN FEET)
1 INCH = 100 FT.

THE AERIAL IMAGE DEPICTED ON THIS PLAN IS BASED ON IMAGERY PREPARED BY DIGITAL GLOBE, GEO EYE AND USDA FARM SERVICE AGENCY. THIS IMAGERY WAS PROVIDED BY GOOGLE MAPS ON 06/05/22. THE CONDITIONS OF THE SITE AND SURROUNDING AREAS MAY HAVE CHANGED SINCE THE DATE OF AERIAL PHOTOGRAPHY AND THEREFORE THIS PLAN MAY NOT ACCURATELY REFLECT ALL CURRENT EXISTING CONDITIONS.

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY:	DESIGNED BY:	CHECKED BY:	CHECKED BY:
KTK	AF	JSH	-

PROJECT:
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NEW JERSEY LICENSE No. 53560

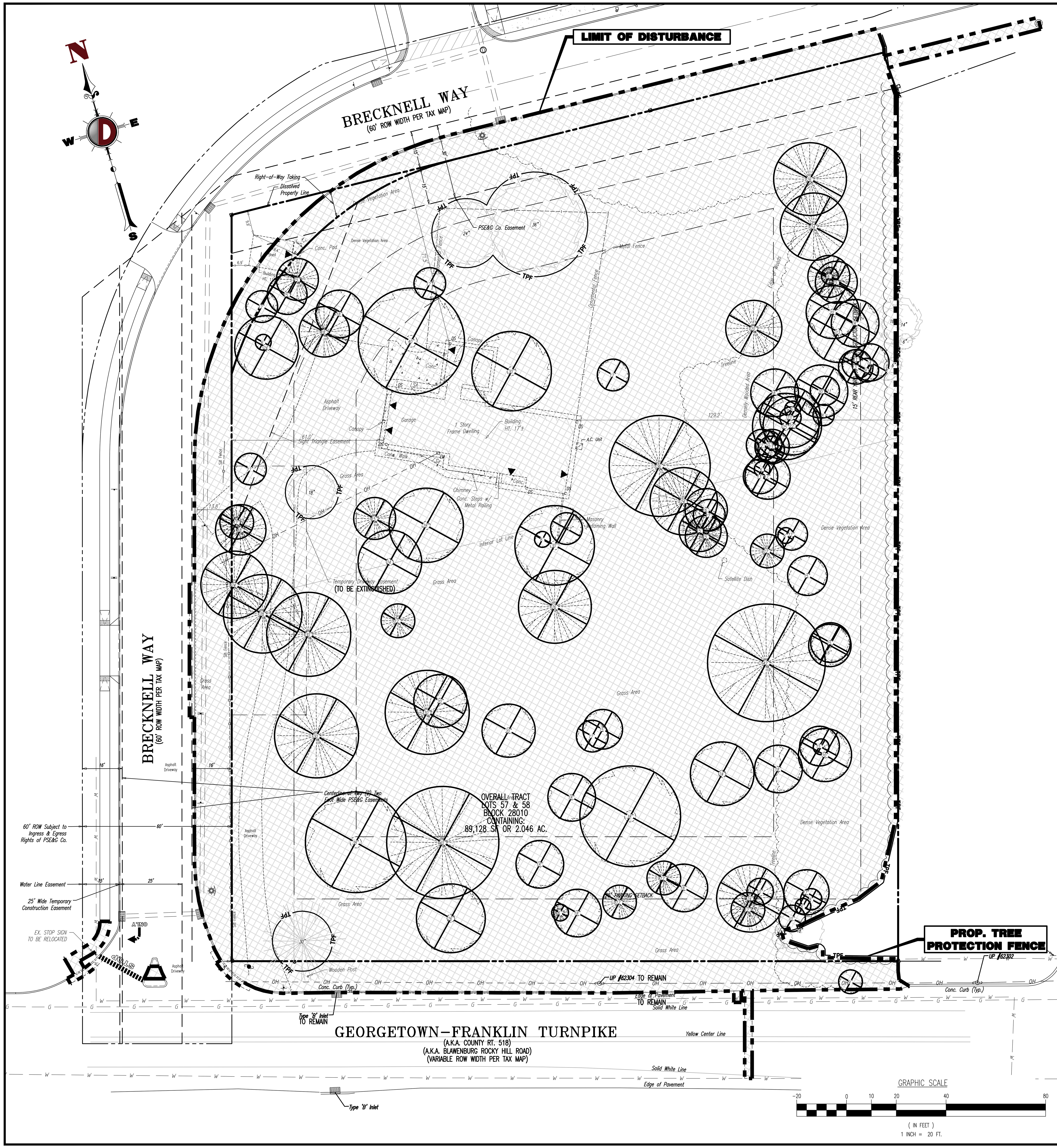
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE:
AERIAL MAP

SCALE: (H) 1"=100' (V)	DATE: 08/17/2023
PROJECT No: 4447-22-01334	

SHEET No: 2 OF 22
Rev. #: 2

Plotted: 11/14/23 - 8:30 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\D444722133 4SA2.dwg, ---> 02 AERIAL MAP



DEMOLITION NOTES

1. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS.
2. PROCEED WITH DEMOLITION IN A SYSTEMATIC MANNER, FROM THE TOP OF THE STRUCTURE(S) TO THE GROUND.
3. COMPLETE DEMOLITION WORK ABOVE EACH FLOOR OR TIER BEFORE DISTURBING ANY OF THE SUPPORTING MEMBERS OF THE LOWER LEVELS.
4. DEMOLISH CONCRETE AND MASONRY IN SMALL SECTIONS.
5. REMOVE STRUCTURAL FRAMING MEMBERS AND LOWER THEM TO THE GROUND.
6. BREAK UP CONCRETE SLABS–ON–GRADE, UNLESS OTHERWISE DIRECTED BY OWNER.
7. LOCATE DEMOLITION EQUIPMENT THROUGHOUT THE STRUCTURE AND REMOVE MATERIALS SO AS TO NOT IMPOSE EXCESSIVE LOADS ON SUPPORTING WALLS, FLOORS, OR FRAMING.
8. PROVIDE INTERIOR AND EXTERIOR SHORING, BRACING AND SUPPORTS TO PREVENT MOVEMENT, SETTLEMENT OR COLLAPSE OF STRUCTURES TO BE DEMOLISHED (AND ADJACENT FACILITIES, IF APPLICABLE).
9. DEMOLISH AND REMOVE ALL FOUNDATION WALLS, FOOTINGS AND OTHER MATERIALS WITHIN THE AREA OF THE DESIGNATED FUTURE BUILDING. ALL OTHER FOUNDATION SYSTEMS, INCLUDING BASEMENTS, SHALL BE DEMOLISHED TO A DEPTH OF NOT LESS THAN ONE FOOT BELOW PROPOSED PAVEMENT OR, BREAK BASEMENT FLOOR SLABS. SEAL ALL OPEN UTILITY LINES WITH CONCRETE. CONTRACTOR TO REVIEW STRUCTURE PRIOR TO DEMOLITION TO DETERMINE IF BASEMENT, CRAWL SPACE OR ANY SUB–STRUCTURE EXISTS. ANY SUB–STRUCTURE, INCLUDING BASEMENTS SHALL BE REMOVED IN ITS ENTIRETY OR AS DIRECTED BY OWNER.
10. ERECT AND MAINTAIN COVERED PASSAGEWAYS IN ORDER TO PROVIDE SAFE PASSAGE FOR PERSONS AROUND THE AREA OF DEMOLITION. CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT DAMAGE AND PERSONAL INJURY TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS. PLACE THE SAFETY AND PROTECTION OF THE SURROUNDING COMMUNITY AND PROPERTY AT THE HIGHEST PRIORITY.
11. REFRAIN FROM USING ANY EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF OWNER AND APPLICABLE GOVERNMENTAL AUTHORITIES.
12. CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF OWNER AND ANY APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS, IF REQUIRED BY APPLICABLE GOVERNMENTAL REGULATIONS.
13. USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.
14. ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
15. COMPLETELY FILL BELOW GRADE AREAS AND VOIDS RESULTING FROM THE DEMOLITION OF STRUCTURES AND FOUNDATIONS WITH SOIL MATERIALS IN ACCORDANCE WITH THE GEOTECHNICAL REPORT, CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. STONES USED WILL NOT BE LARGER THAN 6 INCHES IN DIMENSION. MATERIAL FROM DEMOLITION MAY NOT BE USED AS FILL. PRIOR TO PLACEMENT OF FILL MATERIALS, UNDERTAKE ALL NECESSARY ACTION IN ORDER TO ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH, DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 6 INCHES IN LOOSE DEPTH AND COMPACT EACH LAYER AT PLACEMENT TO 95% OPTIMUM DENSITY. GRADE THE SURFACE TO MEET ADJACENT CONTOURS AND TO PROVIDE SURFACE DRAINAGE.
16. REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS, RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON THE SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND AUTHORITIES.
17. DISCONNECT, SHUT OFF AND SEAL IN CONCRETE ALL UTILITIES SERVING THE STRUCTURE(S) TO BE DEMOLISHED BEFORE THE COMMENCEMENT OF THE DESIGNATED DEMOLITION. MARK FOR POSITION ALL UTILITY DRAINAGE AND SANITARY LINES AND PROTECT ALL ACTIVE LINES. CLEARLY IDENTIFY BEFORE THE COMMENCEMENT OF DEMOLITION SERVICES THE REQUIRED INTERRUPTION OF ACTIVE SYSTEMS THAT MAY AFFECT OTHER PARTIES, AND NOTIFY ALL APPLICABLE UTILITY COMPANIES TO ENSURE THE CONTINUATION OF SERVICE.
18. THIS DEMOLITION PLAN IS INTENDED TO IDENTIFY THOSE EXISTING CONDITIONS WHICH ARE TO BE REMOVED. IT IS NOT INTENDED TO PROVIDE DIRECTION OTHER THAN THAT ALL PROCEDURES ARE TO BE IN ACCORDANCE WITH STATE, FEDERAL, LOCAL, AND JURISDICTIONAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS NECESSARY.
19. VERIFY THAT ALL ENVIRONMENTAL CONCERNS INCLUDING BUT NOT LIMITED TO ASBESTOS, LEAD BASED PAINT, HAZMAT MATERIALS, UNDERGROUND STORAGE TANKS, AND TRANSFORMERS HAVE BEEN REMOVED PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES. THESE ARE NOT SHOWN ON THE PLANS. REFER TO ENVIRONMENTAL REPORTS AND DOCUMENTS FOR LOCATIONS AND DISPOSAL PROCEDURES.

NOTES

1. IN ACCORDANCE WITH STATE LAW, THE CONTRACTOR SHALL BE REQUIRED TO CALL THE BOARD OF PUBLIC UTILITIES ONE CALL DAMAGE PROTECTION SYSTEM OR UTILITY MARK OUT IN ADVANCE OF ANY EXCAVATION.
2. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING SITE IMPROVEMENTS AND UTILITIES. ALL DISCREPANCIES SHALL BE IDENTIFIED TO THE ENGINEER IN WRITING.
3. ALL EXISTING UTILITIES TO BE ABANDONED SHALL BE DISCONNECTED AND CAPPED AT THE MAIN FOR WATER, AT THE CLEAN–OUT FOR SEWER AND THE SHUT–OFF VALVE OR MAIN FOR GAS IN ACCORDANCE WITH MUNICIPAL AND LOCAL UTILITY REQUIREMENTS.
4. ALL EXISTING DEBRIS SHALL BE REMOVED BY CONTRACTOR IN ACCORDANCE WITH MUNICIPAL AND LOCAL UTILITY COMPANY REQUIREMENTS.

DEMOLITION PLAN LEGEND

– PROPOSED LIMIT OF DISTURBANCE LINE
TPF — TPF – PROPOSED TREE PROTECTION FENCE LINE
– EXISTING IMPROVEMENTS TO BE REMOVED UNLESS OTHERWISE NOTED
– TREES TO REMAIN
– TREES TO BE REMOVED
– TREES TO BE TRANSPLANTED/RELOCATED

TREE REMOVAL CHART

TREE SIZE (CALIPER) – TBR	QUANTITY
6"	8
8"	3
9"	2
10"	4
11"	2
12"	15
13"	3
14"	1
15"	11
16"	2
17"	2
18"	10
20"	6
22"	1
23"	2
24"	7
25"	1
26"	3
28"	2
30"	5
36"	1
38"	2
40"	2
42"	1
TOTAL	96

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY: KTK
DESIGNED BY: AF
CHECKED BY: JSH
CHECKED BY: –

PROJECT:
MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
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JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

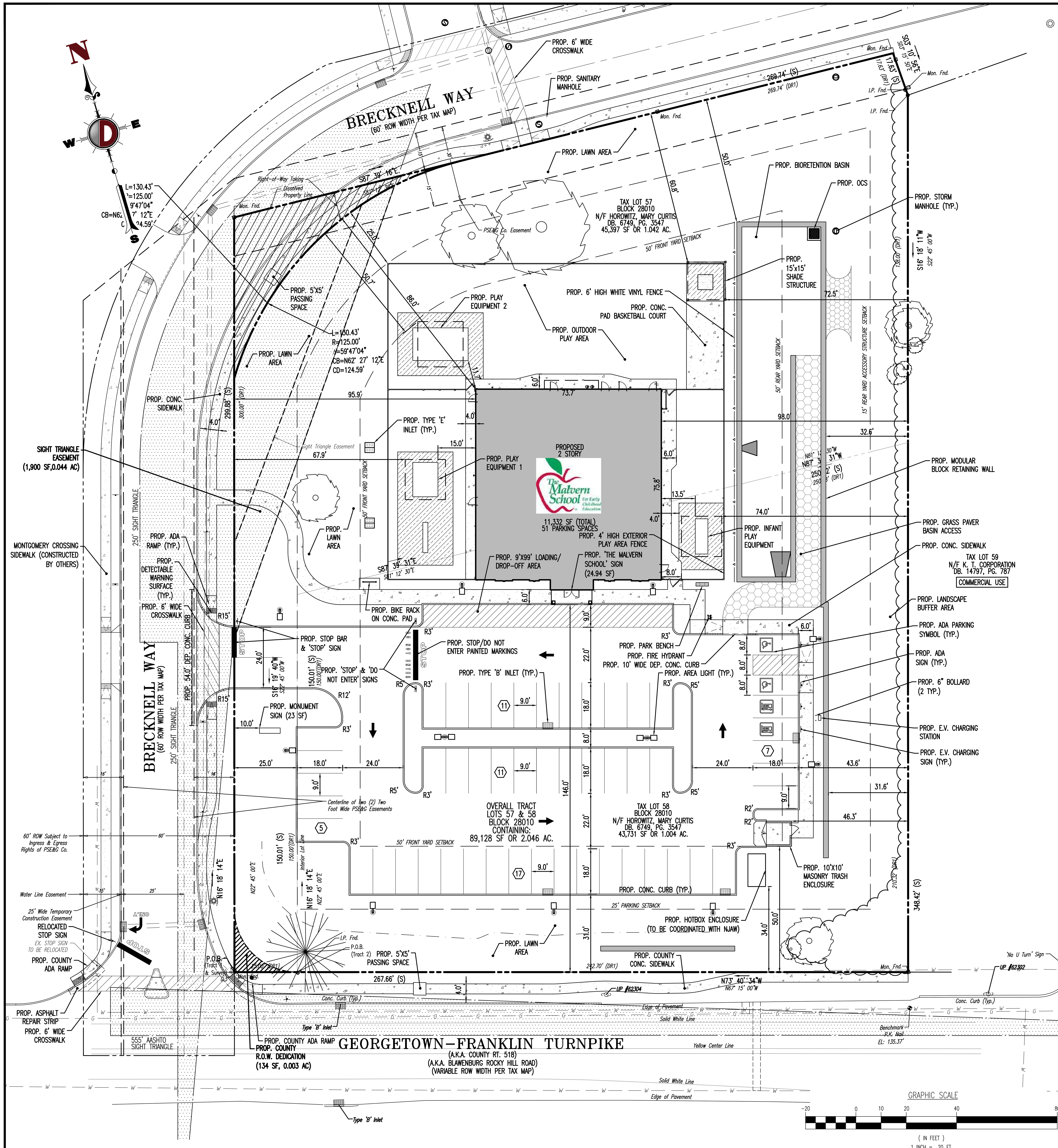
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: DEMOLITION AND TREE REMOVAL PLAN

SCALE: (H) 1"=20' (V)
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 3 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:30 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SR2.dwg, ---> 03 DEMOLITION AND TREE REMOVAL PLAN



GENERAL NOTES

1. THIS PLAN HAS BEEN PREPARED BASED ON REFERENCES INCLUDING:

   ALTA/NSPS LAND TITLE SURVEY
   DYNAMIC SURVEY LLC
   1904 MAIN STREET,
   LAKE COMO, NJ 07719
   DATED 08/26/2022, LAST REVISED 09/07/2022
   SURVEYOR FILE NO: 4447-22-01612

2. APPLICANT: MALVERN SCHOOL PROPERTIES, LP, 20 CREEK ROAD, GLEN MILLS, PA 19342
3. OWNER: MALVERN SCHOOL PROPERTIES, LP, 20 CREEK ROAD, GLEN MILLS, PA 19342
4. PARCEL DATA: BLOCK 28005, LOTS 57 & 58, TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NJ
5. ZONE: ZONE HC (HIGHWAY COMMERCIAL)
6. EXISTING USE: RESIDENTIAL-SINGLE FAMILY **(NON PERMITTED USE)** (§ 16-4.12.A)
7. PROPOSED USE: CHILD CARE CENTER **(PERMITTED USE)** (§ 16-4.12A.7)
8. SCHEDULE OF ZONING REQUIREMENTS (§ 16-4.12D)

ZONE REQUIREMENT	ZONE HC	EXISTING	PROPOSED
MINIMUM LOT AREA	1 Ac [2]	89,128 SF (2.046 Ac)	89,128 SF (2.046 Ac)*
MINIMUM LOT WIDTH	150 FT	304.5 FT	304.5 FT
MINIMUM LOT FRONTAGE	150 FT	242.7 FT	242.7 FT
MINIMUM LOT DEPTH	150 FT	267.7 FT	267.7 FT
PRINCIPAL STRUCTURE			
MINIMUM FRONT YARD SETBACK (CR 518)			
-BUILDING	50 FT	187.8 FT	146.0 FT
-PARKING	25 FT [1]	N/A	31.0 FT
MINIMUM FRONT YARD SETBACK (BRECKNELL WAY NORTH/SOUTH)			
-BUILDING	50 FT	61.0 FT	95.9 FT
-PARKING	25 FT [1]	N/A	25.0 FT
MINIMUM FRONT YARD SETBACK (BRECKNELL WAY EAST/WEST)			
-BUILDING	50 FT	71.5 FT	86.0 FT
-PARKING	25 FT [1]		N/A
MINIMUM REAR YARD SETBACK			
-BUILDING	50 FT	129.2 FT	98.0 FT
-PARKING	15 FT [1]	N/A	43.6 FT
ACCESSORY STRUCTURE			
MINIMUM FRONT YARD SETBACK (CR 518)	50 FT	6.9 FT (E)	50.0 FT
MINIMUM FRONT YARD SETBACK (BRECKNELL WAY NORTH/SOUTH)	50 FT	N/A	N/A
-PLAY EQUIP. 1	50 FT	N/A	67.90 FT
MINIMUM FRONT YARD SETBACK (BRECKNELL WAY EAST/WEST)	50 FT	9.9 FT (E)	N/A
-PLAY EQUIP. 2	50 FT	N/A	50.70 FT
MINIMUM REAR YARD SETBACK			
-SHADE STRUCTURE	20 FT	N/A	72.5 FT
-INFANT PLAY EQUIPMENT	20 FT	N/A	74.0 FT
MAXIMUM BUILDING HEIGHT (MALVERN SCHOOL)	30 FT OR 2.5 STORIES [2]	< 30 FT	34.75 [3]
MAXIMUM ACCESSORY STRUCTURE HEIGHT	25 FT [2]	11 FT	< 25 FT
MAXIMUM IMPERVIOUS COVERAGE	55%	6.6% (5,900 SF)	39.2% (34,912 SF)
MAXIMUM FLOOR AREA RATIO	0.20	0.03	0.13

N/S: NO STANDARD N/A: NOT APPLICABLE (E): EXISTING NON-CONFORMANCE (V): VARIANCE

NOTES:
[1] NO PARKING, LOADING, DRIVEWAY OR OTHER STRUCTURE SHALL BE PERMITTED WITHIN THE FIRST 25 FT ADJACENT TO ANY STREET LINE NOR WITHIN THE FIRST 15 FT ADJACENT TO ANY OTHER PROPERTY LINE (§ 16-4.12.F.5)
[2] BUILDING HEIGHT SHALL MEAN THE VERTICAL DISTANCE MEASURED TO THE HIGHEST POINT OF A BUILDING FROM THE MEAN ELEVATION OF THE FINISHED GRADES ALONG ALL SIDES OF THE BUILDING, PROVIDED THAT IF THE FINISHED GRADE IS HIGHER THAN THE PREDEVELOPMENT GRADE AT ANY POINT BENEATH THE BUILDING, THEN THE BUILDING HEIGHT SHALL BE MEASURED FROM AN ELEVATION NO HIGHER THAN ONE FOOT ABOVE THE HIGHEST POINT OF THE PREDEVELOPMENT GRADE BENEATH THE BUILDING. IN ALL CASES WHERE THIS CHAPTER PROVIDES FOR HEIGHT LIMITATIONS BY REFERENCE TO A SPECIFIED HEIGHT AND A SPECIFIED NUMBER OF STORIES, THE INTENT IS TO LIMIT HEIGHT TO THE SPECIFIED MAXIMUM FOOTAGE AND THE SPECIFIED NUMBER OF STORIES WITHIN SAID FOOTAGE. (§ 16-2.1)
[3] PENTHOUSES OR ROOF STRUCTURES FOR THE HOUSING OF STAIRWAYS, TANKS, VENTILATING FANS, AIR CONDITIONING OR SIMILAR EQUIPMENT REQUIRED FOR THE OPERATION AND MAINTENANCE OF THE BUILDING, SKYLIGHTS, SPIRES, CUPOLAS, FLAGPOLES, CHIMNEYS OR SIMILAR STRUCTURES ASSOCIATED WITH BUILDINGS IN THE HC, NC, REO-1, REO-2, REO-3 AND MFG DISTRICTS MAY BE ERECTED ABOVE THE HEIGHT LIMITS PRESCRIBED BY THIS CHAPTER, BUT IN NO CASE MORE THAN 20% MORE THAN THE MAXIMUM HEIGHT PERMITTED FOR THE USE IN THE DISTRICT. CHIMNEYS ON RESIDENTIAL DWELLINGS AND SILOS AND BARNS ASSOCIATED WITH FARMING SHALL HAVE NO HEIGHT RESTRICTIONS. (§ 16-6.2.b) **(COMPLIES)**
*88,994 SF (2.043 AC) AFTER DEDICATION

9. CHILD CARE CENTERS REQUIREMENTS
   A. TWO BUILDINGS ON THE SINGLE LOT SHALL BE SEPARATED BY A DISTANCE OF AT LEAST 50 FEET WHERE THE SEPARATION DISTANCE IS USED TO ANY EXTENT FOR PARKING AND/OR VEHICULAR CIRCULATION. (§ 16-4.12.K.3(B)) **(N/A)**
   B. NO MERCHANDISE, PRODUCTS, EQUIPMENT OR SIMILAR MATERIAL AND OBJECTS SHALL BE DISPLAYED OR STORED OUTSIDE. (§ 16-4.12.F.2.) **(N/A)**
10. PARKING REQUIREMENTS
   A. PARKING AREAS FOR INDIVIDUAL USES SHALL BE DESIGNED TO BE INTERCONNECTED WITH ADJACENT PROPERTIES AND SHALL UTILIZE COMMON ENTRANCE(S) AND EXIT(S), WHERE FEASIBLE, TO MINIMIZE ACCESS POINTS TO THE STREET. (§ 16-4.12.G.8) **(N/A)**
   B. PARKING AREAS AND ACCESS DRIVES OR AISLES SHALL NOT BE LESS THAN 1% IN GRADE AND SHALL NOT EXCEED 6% IN GRADE. (§ 16-5.8.C.6) **(COMPLIES)**
   C. WHERE PERPENDICULAR OR ANGLED PARKING IS PERMITTED, THE UNENCUMBERED AISLE BEHIND SUCH PERPENDICULAR OR ANGLED PARKING SHALL BE A MINIMUM OF 28 FEET. (§ 16-5.8.E) **(COMPLIES)**
   D. WHERE THERE IS A ROW OF CONTIGUOUS PERPENDICULAR OR ANGLED PARKING STALLS, THERE SHALL BE A GAP OF AT LEAST NINE FEET IN WIDTH DEFINED BY MOUNTABLE CURBING TO ALLOW ACCESS BY EMERGENCY VEHICLES TO THE FACADE OF EACH BUILDING FACING SUCH PARKING. (§ 16-5.8.E) **(N/A)**
   E. TWO-WAY AISLES PROVIDING ACCESS TO 90 DEGREE PARKING SPACES SHALL HAVE A MINIMUM WIDTH OF 24 FT. (§ 16-5.8.F.2) **(COMPLIES)**
   F. ONE-WAY AISLES PROVIDING ACCESS TO 90 DEGREE PARKING SPACES SHALL HAVE A MINIMUM WIDTH OF 22 FT. (§ 16-5.8.F.2) **(COMPLIES)**
   G. ONE-WAY AISLES PROVIDING ACCESS TO 60 DEGREE PARKING SPACES SHALL HAVE A MINIMUM WIDTH OF 18 FT. (§ 16-5.8.F.2) **(COMPLIES)**
   H. PARKING CALCULATION:
   CHILD CARE CENTERS SHALL PROVIDE PARKING AT THE RATIO OF ONE PARKING SPACE PER EMPLOYEE PLUS ONE ADDITIONAL PARKING SPACE FOR EVERY EIGHT CHILDREN. (§ 16-4.12.G.5)
   RETAIL SALES AND SERVICE USES AND OFFICES SHALL PROVIDE PARKING AT THE RATIO OF ONE PARKING SPACE PER 200 SQUARE FEET OF GROSS FLOOR AREA OR PART THEREOF. (§ 16-4.12.G.1)
   CHILD CARE CENTER
   EMPLOYEES 25; 155 CHILDREN = 45 SPACES REQUIRED
   = 51 SPACES PROVIDED **(COMPLIES)**
11. LOADING REQUIREMENTS
   A. EACH PRINCIPAL BUILDING OR GROUP OF BUILDINGS SHALL PROVIDE AT MINIMUM ONE OFF-STREET LOADING SPACE AT THE SIDE OR REAR OF THE BUILDING OR WITHIN THE BUILDING. (§ 16-4.12.H.1) **(VARIANCE - IN FRONT OF BUILDING)**
   B. ANY LOADING DOCK SPACE SHALL BE AT LEAST 15 FEET IN WIDTH BY 40 FEET IN LENGTH WITH ADEQUATE INGRESS AND EGRESS FROM A PUBLIC STREET AND WITH ADEQUATE SPACE FOR MANEUVERING. (§ 16-4.12.H.1) **(COMPLIES)**
   C. THERE SHALL BE NO LOADING OR UNLOADING FROM THE STREET. (§ 16-4.12.H.1) **(N/A)**
12. DRIVEWAY REQUIREMENTS
   A. TWO-WAY DRIVEWAYS SERVING NONRESIDENTIAL USES AND MULTIPLE-FAMILY DEVELOPMENTS SHALL BE AT LEAST 24 FEET WIDE. (§ 16-5.8.D) **(COMPLIES)**
   B. DRIVEWAY GRADES SHALL NOT BE LESS THAN 1% AND SHALL NOT EXCEED 10% (§ 16-5.8.C.6) **(COMPLIES)**
   C. WHERE FEASIBLE, DRIVEWAYS PROVIDING VEHICULAR ACCESS BETWEEN ADJACENT PROPERTIES SHALL BE PERMITTED AND REQUIRED, WITH APPROPRIATE CROSS EASEMENTS, AND THE ON-SITE CIRCULATION SYSTEMS AND PARKING AREAS SHALL BE DESIGNED TO ACCOMMODATE SUCH INTERCONNECTIONS BETWEEN ADJACENT LOTS. (16-4.12.F.1) **(COMPLIES)**
13. FENCE REQUIREMENTS
   A. ON ANY LOT IN ANY DISTRICT, NO WALL OR FENCE SHALL BE ERECTED OR ALTERED SO THAT SAID WALL OR FENCE SHALL BE OVER FOUR FEET IN HEIGHT IN SIDE, REAR AND FRONT YARD AREAS, PROVIDED THAT SAID FENCE MAY BE ERECTED WITH AN ADDITIONAL SIX INCHES OF CLEARANCE FROM GRADE (§16-5.3.B) **(VARIANCE)**
14. REFUSE REQUIREMENTS
   A. THERE SHALL BE AT LEAST ONE TRASH AND GARBAGE PICK-UP LOCATION WITHIN CONVENIENT ACCESS TO THE BUILDING BEING SERVED, INCLUDING PROVISIONS FOR THE SEPARATION AND COLLECTION OF RECYCLABLE MATERIALS IN ACCORDANCE WITH THE RECYCLING REQUIREMENTS OF SOMERSET COUNTY. (§ 16-4.12.H.2) **(COMPLIES)**
   B. THE TRASH AND GARBAGE PICK-UP LOCATION SHALL BE PROVIDED EITHER WITHIN THE BUILDING BEING SERVED OR IN A PICK-UP LOCATION OUTSIDE THE BUILDING. (§ 16-4.12.H.2(A)) **(COMPLIES)**
   C. IF THE TRASH AND GARBAGE PICK-UP LOCATION IS LOCATED OUTSIDE THE BUILDING, THE TRASH AND GARBAGE PICK-UP LOCATION SHALL INCLUDE A STEEL-LIKE, TOTALLY ENCLOSED TRASH AND GARBAGE CONTAINER LOCATED IN A MANNER TO BE OBSCURED FROM VIEW FROM PARKING AREAS, STREETS AND ADJACENT RESIDENTIAL USES OR ZONING DISTRICTS BY A FENCE, WALL, PLANTING OR COMBINATION OF ALL THREE. (§ 16-4.12.H.2(C)) **(COMPLIES)**
15. STEEP SLOPE REQUIREMENTS
   A. NO STEEP SLOPES SHALL BE DISTURBED OR DEVELOPED, EXCEPT AS FOLLOWS IN SPECIFIC SITUATIONS WHERE IT IS DETERMINED BY THE BOARD THAT SOIL EROSION, LAND DISTURBANCE AND OTHER ENVIRONMENTAL CONCERNS HAVE BEEN ADEQUATELY ADDRESSED BY THE DEVELOPER. AN ISOLATED AREA OR A NARROW BAND OF STEEP SLOPES MAY BE DISTURBED ON A LOT FOR GOOD CAUSE SHOWN BY THE DEVELOPER, WHEN APPROVED BY THE BOARD. (§ 16-6.4.E.1.) **(VARIANCE)**
   B. APPROPRIATE REVEGETATION AND LANDSCAPING OF THE DISTURBED STEEP SLOPE AREAS SHALL BE PROVIDED TO ADEQUATELY STABILIZE THE SLOPES AND ENHANCE THE ATTRACTIVENESS OF THE SITE, IF NECESSARY, AND SHALL BE IN ACCORDANCE WITH ACCEPTED SOIL CONSERVATION AND STORMWATER MANAGEMENT TECHNIQUES AS PROMULGATED BY THE SOIL CONSERVATION DISTRICT AND THE TOWNSHIP ENGINEER. (§ 16-6.4.E.3.(C)) **(COMPLIES)**
   C. THE ENVIRONMENTAL IMPACTS SHALL BE SATISFACTORILY CONTROLLED BY THE DEVELOPMENT PROPOSAL IN A MANNER ACCEPTABLE TO THE TOWNSHIP ENGINEER SO THAT SOIL EROSION, EXCESS STORMWATER, RUNOFF, DEGRADATION OF WATER QUALITY, CONCENTRATION OF STORMWATER AND WATER FLOW, AND FLOODING DO NOT OCCUR. (§ 16-6.4.E.3.(F)) **(COMPLIES)**
   D. THE GEOLOGIC DISTURBANCE, INCLUDING BLASTING, CUTTING OR EXCAVATING, RESULTING FROM THE DEVELOPMENT OF ANY CRITICAL STEEP SLOPE AREA SHALL BE SATISFACTORILY MITIGATED. (§ 16-6.4.E.3.(G)(2)) **(COMPLIES)**
16. LANDSCAPING REQUIREMENTS
   A. THE MECHANICAL EQUIPMENT SERVING THE BUILDING(S) SHALL BE SCREENED FROM PUBLIC VIEW BY THE DESIGN OF THE BUILDING AND/OR BY LANDSCAPING FEATURES INTEGRATED WITH THE OVERALL DESIGN OF THE BUILDING(S). (§ 16-4.12.E.8.(B)) **(COMPLIES)**
   B. ALL PORTIONS OF A LOT NOT COVERED BY BUILDINGS OR STRUCTURES (E.G., PARKING LOTS, PARKING SPACES, LOADING AREAS, ACCESS AISLES, DRIVEWAYS, SIDEWALKS, WALKWAYS, CURBS, TRASH ENCLOSURES, ETC.) SHALL BE SUITABLY LANDSCAPED WITH GRASS, SHRUBS, AND TREES AND SHALL BE MAINTAINED IN GOOD CONDITION. IN ANY CASE, NO LESS THAN 45% OF THE AREA OF ANY LOT OR TRACT SHALL BE SO LANDSCAPED, AND THE LANDSCAPED AREA MAY INCLUDE APPROVED DETENTION AND/OR RETENTION BASINS. (§ 16-4.12.F.3.) **(COMPLIES - 60.9% LANDSCAPED)**
17. THE APPLICANT REQUESTS ANY AND ALL SUBMISSION WAIVERS THAT ARE NOT SPECIFICALLY IDENTIFIED HEREIN. TESTIMONY WILL BE SUPPLIED AT THE PUBLIC HEARING TO SUPPORT SAID SUBMISSION WAIVERS.
18. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS BY ALL OF THE PERMITTING AUTHORITIES.
19. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
20. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER CONSTRUCTION MANAGER OF ANY DISCREPANCY BETWEEN SOILS REPORT & PLANS.
21. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL UNDERGROUND TANKS, PIPES, VALVES, ETC.
22. THE PROPERTY SURVEY SHALL BE CONSIDERED A PART OF THESE PLANS.
23. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
24. SOLID WASTE TO BE DISPOSED OF BY CONTRACTOR IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS.
25. ALL EXCAVATED UNSUITABLE MATERIAL MUST BE TRANSPORTED TO AN APPROVED DISPOSAL LOCATION.
26. CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
27. ALL CONTRACTORS MUST CARRY STATUTORY WORKERS COMPENSATION, EMPLOYERS LIABILITY INSURANCE AND APPROPRIATE LIMITS OF COMMERCIAL GENERAL LIABILITY INSURANCE (CGL). ALL CONTRACTORS MUST HAVE THEIR CGL POLICIES ENDORSED TO NAME DYNAMIC ENGINEERING CONSULTANTS, P.C. , ITS SUBCONSULTANTS AS ADDITIONAL INSURED AND TO PROVIDE CONTRACTUAL LIABILITY COVERAGE SUFFICIENT TO INSURE THE HOLD HARMLESS AND INDEMNITY OBLIGATIONS ASSUMED BY THE CONTRACTORS. ALL CONTRACTORS MUST FURNISH DYNAMIC ENGINEERING CONSULTANTS, P.C. WITH CERTIFICATES OF INSURANCE AS EVIDENCE OF THE REQUIRED INSURANCE PRIOR TO COMMENCING WORK AND UPON RENEWAL OF EACH POLICY DURING THE ENTIRE PERIOD OF CONSTRUCTION. IN ADDITION, ALL CONTRACTORS WILL, TO THE FULLEST EXTENT PERMITTED BY LAW, INDEMNIFY AND HOLD HARMLESS DYNAMIC ENGINEERING CONSULTANTS, P.C. AND ITS SUBCONSULTANTS FROM AND AGAINST ANY DAMAGES, LIABILITIES OR COSTS, INCLUDING REASONABLE ATTORNEYS' FEES AND DEFENSE COSTS, ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PROJECT, INCLUDING ALL CLAIMS BY EMPLOYEES OF THE CONTRACTORS.
28. NEITHER THE PROFESSIONAL ACTIVITIES OF DYNAMIC ENGINEERING CONSULTANTS, P.C., NOR THE PRESENCE OF DYNAMIC ENGINEERING CONSULTANTS, P.C. OR ITS EMPLOYEES AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE, SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. DYNAMIC ENGINEERING CONSULTANTS, P.C. AND ITS PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR ITS EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY HEALTH OR SAFETY PROGRAMS OR PROCEDURES. THE GENERAL CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOBSITE SAFETY. DYNAMIC ENGINEERING CONSULTANTS, P.C. SHALL BE INDEMNIFIED BY THE GENERAL CONTRACTOR AND SHALL BE MADE ADDITIONAL INSURED UNDER THE GENERAL CONTRACTOR'S POLICIES OF GENERAL LIABILITY INSURANCE.
29. DYNAMIC ENGINEERING CONSULTANTS, P.C. SHALL REVIEW AND APPROVE OR TAKE OTHER APPROPRIATE ACTION ON THE CONTRACTOR SUBMITTALS, SUCH AS SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND OTHER DATA, WHICH THE CONTRACTOR IS REQUIRED TO SUBMIT, BUT ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN CONCEPT AND THE INFORMATION SHOWN IN THE CONSTRUCTION MEANS OR METHODS, COORDINATION OF THE WORK WITH OTHER TRADES OR CONSTRUCTION SAFETY PRECAUTIONS, ALL OF WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. DYNAMIC ENGINEERING'S REVIEW SHALL BE CONDUCTED WITH REASONABLE PROMPTNESS WHILE ALLOWING SUFFICIENT TIME TO PERMIT ADEQUATE REVIEW. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT DYNAMIC ENGINEERING CONSULTANTS, P.C. HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT. DYNAMIC ENGINEERING CONSULTANTS, P.C. SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO THE ATTENTION OF DYNAMIC ENGINEERING CONSULTANTS, P.C. IN WRITING BY THE CONTRACTOR. DYNAMIC ENGINEERING CONSULTANTS, P.C. SHALL NOT BE REQUIRED TO REVIEW PARTIAL SUBMISSIONS OR THOSE FOR WHICH SUBMISSIONS OF CORRELATED ITEMS HAVE NOT BEEN RECEIVED.
30. IN AN EFFORT TO RESOLVE ANY CONFLICTS THAT ARISE DURING THE DESIGN AND CONSTRUCTION OF THE PROJECT OR FOLLOWING THE COMPLETION OF THE PROJECT, DYNAMIC ENGINEERING CONSULTANTS, P.C. AND THE CONTRACTOR MUST AGREE THAT ALL DISPUTES BETWEEN THEM ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE PROJECT SHALL BE SUBMITTED TO NONBINDING MEDIATION UNLESS THE PARTIES MUTUALLY AGREE OTHERWISE.
31. THE CONTRACTOR MUST INCLUDE A MEDIATION PROVISION IN ALL AGREEMENTS WITH INDEPENDENT SUBCONTRACTORS AND CONSULTANTS RETAINED FOR THE PROJECT AND TO REQUIRE ALL INDEPENDENT CONTRACTORS AND CONSULTANTS ALSO TO INCLUDE A SIMILAR MEDIATION PROVISION IN ALL AGREEMENTS WITH THEIR SUBCONTRACTORS, SUBCONSULTANTS, SUPPLIERS AND FABRICATORS, THEREBY PROVIDING FOR MEDIATION AS THE PRIMARY METHOD FOR DISPUTE RESOLUTION BETWEEN THE PARTIES TO ALL THOSE AGREEMENTS.
32. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, IT SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND IT SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CONNECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
33. ALL TRAFFIC SIGNS AND STRIPING SHALL FOLLOW THE REQUIREMENTS SPECIFIED IN THE MANUAL ON "UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION.
34. THE BUILDING SETBACK DIMENSIONS ILLUSTRATED AND LISTED ON THE SITE PLAN DRAWINGS ARE MEASURED FROM THE OUTSIDE SURFACE OF BUILDING WALLS. THESE SETBACK DIMENSIONS DO NOT ACCOUNT FOR ROOF OVERHANGS, ORNAMENTAL ELEMENTS, SIGNAGE OR OTHER EXTERIOR EXTENSIONS UNLESS SPECIFICALLY NOTED.
35. CONTRACTOR ACKNOWLEDGES HE HAS READ AND UNDERSTOOD THE DESIGN PHASE SOIL PERMEABILITY AND GROUNDWATER TEST RESULTS IN THE STORMWATER MANAGEMENT REPORT AND THAT THE CONTRACTORS RESPONSIBILITIES INCLUDE NECESSARY PROVISIONS TO ACHIEVE THE DESIGN PERMEABILITY IN THE FIELD.
36. CONTRACTOR TO BE ADVISED THAT THE ENGINEER WAS NOT PROVIDED WITH FINAL FLOOR PLAN DRAWINGS FOR THE BUILDING AT THE TIME OF SITE PLAN DESIGN. AS A RESULT, ENTRANCE DOOR LOCATIONS AS DEPICTED HEREON MAY NOT BE FINAL AND MUST BE CONFIRMED WITH THE ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION. THE HANDICAP ACCESSIBLE PARKING SPACES AND THE ASSOCIATED RAMPS AND ACCESSIBLE ROUTE MUST COMPLY WITH NJAC 5:23-7 AND THE HANDICAP PARKING SPACES MUST BE LOCATED AS THE NEAREST SPACES TO THE ENTRANCE. CONTRACTOR TO NOTIFY OWNER AND ENGINEER IMMEDIATELY OF ANY DISCREPANCY PRIOR TO CONSTRUCTION.

SIGNAGE TABLE

SIGN	REQUIREMENTS		Proposed Malvern School
FREESTANDING	NUMBER OF SIGNS: [1]	ONE (1)	ONE (1)
	MAXIMUM SIGN AREA: [2]	75 SF	23 SF
	MAXIMUM SIGN HEIGHT: [2]	8 FT	6 FT
	MINIMUM SIGN SETBACK: [2]	10 FT	10 FT
BUILDING MOUNTED	NUMBER OF FACADE SIGNS: [3] [4]	TWO (2)	ONE (1)
	MAXIMUM FACADE SIGN AREA: [3]	37.5 SF	24.94 SF
	MAXIMUM SIGN HEIGHT:	N/S	13.2 FT
	MINIMUM CLEARANCE:	N/S	11.4 FT
	MAXIMUM PROJECTION:	6 IN	3 IN

N/S: NO STANDARD N/A: NOT APPLICABLE (E): EXISTING NON-CONFORMANCE (V): VARIANCE

NOTES:
[1] EACH PRINCIPAL BUILDING NOT PART OF A SHOPPING CENTER MAY HAVE ONE (1) FREESTANDING SIGN PLUS EACH PRINCIPAL PERMITTED USE IN SAID BUILDING(S) MAY HAVE ONE (1) ATTACHED. (§ 16-4.12.i.1.)
[2] ANY FREESTANDING SIGN SHALL NOT EXCEED 75 SQUARE FEET IN AREA OR 5% OF THE FRONT FACADE OF THE PRINCIPAL BUILDING, WHICHEVER IS LESS, AND SHALL NOT EXCEED EIGHT (8) FEET IN HEIGHT. FREESTANDING SIGNS EQUAL TO OR LESS THAN THIRTY-FIVE (35) SQUARE FEET IN AREA SHALL BE SET BACK AT LEAST TEN (10) FEET FROM ANY STREET RIGHT-OF-WAY LINE. FREESTANDING SIGNS GREATER THAN THIRTY-FIVE (35) SQUARE FEET BUT LESS THAN FIFTY-FIVE (55) SQUARE FEET IN AREA SHALL BE SET BACK AT LEAST FIFTEEN (15) FEET FROM ANY STREET RIGHT-OF-WAY LINE, AND FREESTANDING SIGNS GREATER THAN FIFTY-FIVE (55) SQUARE FEET IN AREA SHALL BE SET BACK AT LEAST TWENTY (20) FEET FROM ANY STREET RIGHT-OF-WAY LINE. ALL FREESTANDING SIGNS SHALL BE SET BACK AT LEAST TWENTY-FIVE (25) FEET FROM ANY OTHER PROPERTY LINE. (§ 16-4.12.i.1.(a))
[3] EACH PRINCIPAL FIRST FLOOR USE IN A BUILDING WITH DIRECT ACCESS FROM THE OUTSIDE SHALL BE PERMITTED A SIGN ATTACHED FLAT AGAINST THE BUILDING. THE SIZE OF EACH SUCH ATTACHED SIGN SHALL NOT EXCEED ONE-HALF (1/2) SQUARE FOOT OF SIGN AREA PER ONE LINEAR FOOT OF BUILDING FAÇADE FRONTING ON A STREET AND OCCUPIED BY THE INDIVIDUAL USE, BUT IN NO CASE SHALL THE SIZE OF THE SIGN EXCEED FIFTY (50) SQUARE FEET IN AREA. (§ 16-4.12.i.1.(b))
[4] FOR CORNER LOTS, ONE (1) ADDITIONAL ATTACHED SIGN IS PERMITTED FOR A PRINCIPAL USE WITHIN THE BUILDING WHICH FACES THE ADDITIONAL STREET, PROVIDED THAT THE SIGN SHALL NOT EXCEED ONE-HALF (1/2) SQUARE FOOT OF SIGN AREA PER ONE (1) LINEAR FOOT OF BUILDING FACADE FRONTING ON SAID STREET, BUT IN NO CASE SHALL THE SIZE OF THE SIGN EXCEED TWENTY (20) SQUARE FEET IN AREA. (§ 16-4.12.i.1.(c))
[3] ATTACHED SIGNS SHALL BE FIRMLY ATTACHED TO THE EXTERIOR WALL OF A BUILDING, SHALL PROJECT NOT MORE THAN (6) SIX INCHES FROM THE BUILDING AND SHALL BE POSITIONED IN THE ARCHITECTURAL SIGN BAND ON THE BUILDING FACADE, IF PROVIDED. NO ATTACHED SIGN SHALL BE LOCATED ON A ROOF, DORMER OR SECOND STORY WALL AREA OR WINDOW. (§ 16-5.13.d.1.)
[4] NO MORE THAN TWENTY-FIVE PERCENT (25%) OF THE SIGN AREA OF ANY PERMITTED SIGN SHALL INCLUDE A LOGO, SYMBOL, DESIGN, AND/OR PICTURE; THE REMAINDER OF THE SIGN AREA SHALL CONTAIN WORDS, NUMBERS AND/OR BACKGROUND AREA ONLY. (§ 16-5.13.d.11.)
[5] IF A SIGN IS TO BE INTERNALLY ILLUMINATED, AT LEAST SEVENTY-FIVE PERCENT (75%) OF THE BACKGROUND AROUND THE LETTERS AND ANY LOGO ON THE SIGN SHALL BE OPAQUE AND SHALL NOT BE ILLUMINATED. DARK, OPAQUE BACKGROUNDS WITH LIGHT COLORED LETTERING OR SYMBOLS THAT ARE BACKLIT ARE PREFERRED TO MINIMIZE DETRIMENTAL EFFECTS. (§ 16-5.13 d.6.(a))
[6] LIGHT EMISSION FROM ANY SIGN LIGHTING SHALL NOT EXCEED ONE (1) FOOT CANDLE AT A DISTANCE OF TWO (2) FEET FROM THE SIGN SURFACE. (§ 16-5.13 d.6.(c))
[7] THE AREA OF A SIGN SHALL BE MEASURED AROUND THE EDGES OF A FRAMED OR ENCLOSED SIGN OR, WHERE THE SIGN HAS NO FRAME OR ENCLOSURE, BY THE AREA UTILIZED BY ISOLATED WORDS AND/OR SYMBOLS, INCLUDING THE BACKGROUND WHETHER OPEN OR ENCLOSED, AS FRAMED BY A TIGHT RECTANGLE AROUND ALL OF THE LETTERS AND GRAPHICS; IN EITHER CASE, THE AREA OF THE SIGN SHALL NOT INCLUDE ANY SUPPORTING FRAMEWORK AND BRACING INCIDENTAL TO THE DISPLAY ITSELF. (§ 16-5.13 D.8.)

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK
DESIGNED BY: AF
CHECKED BY: JSH
CHECKED BY: —

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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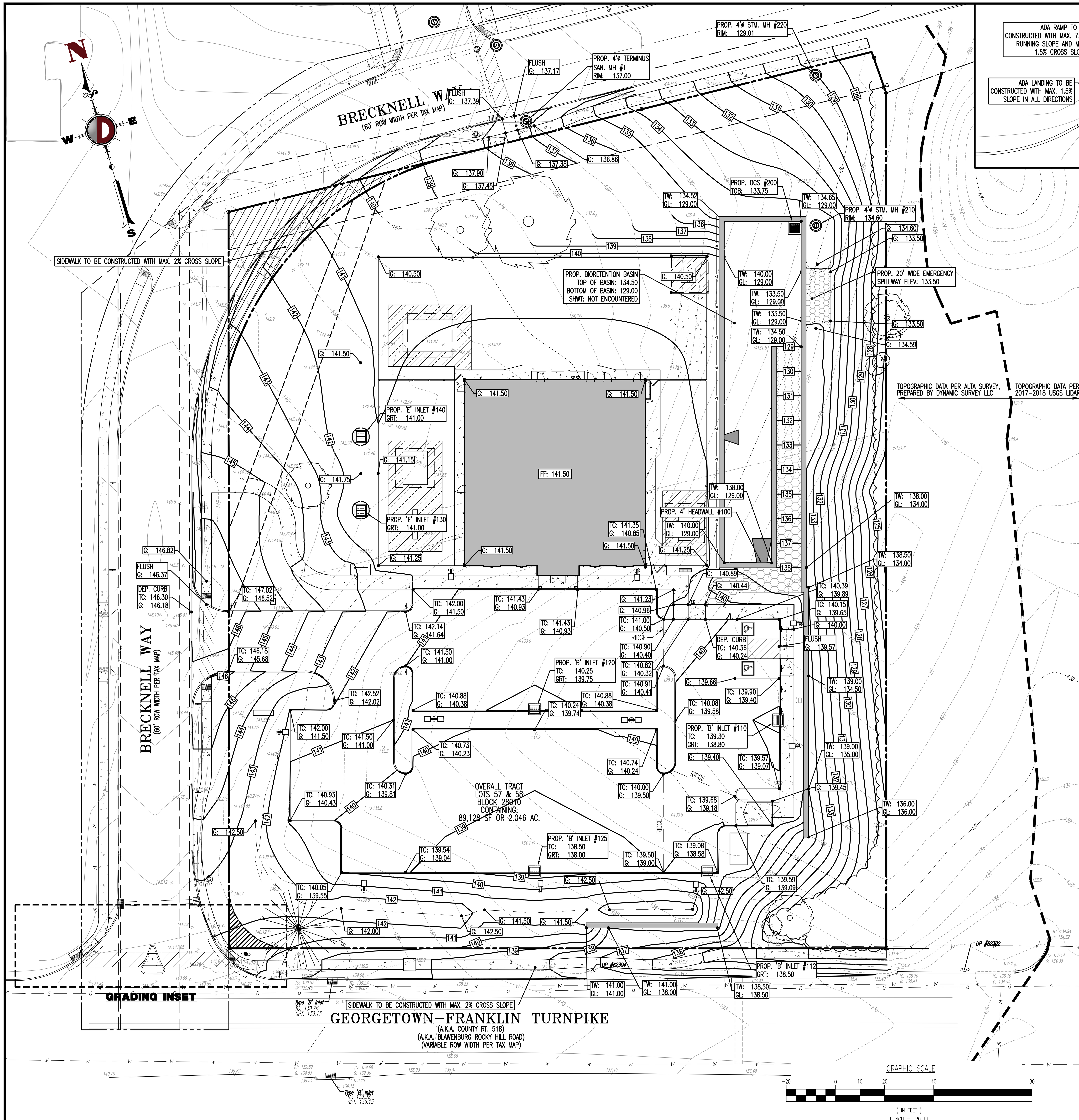
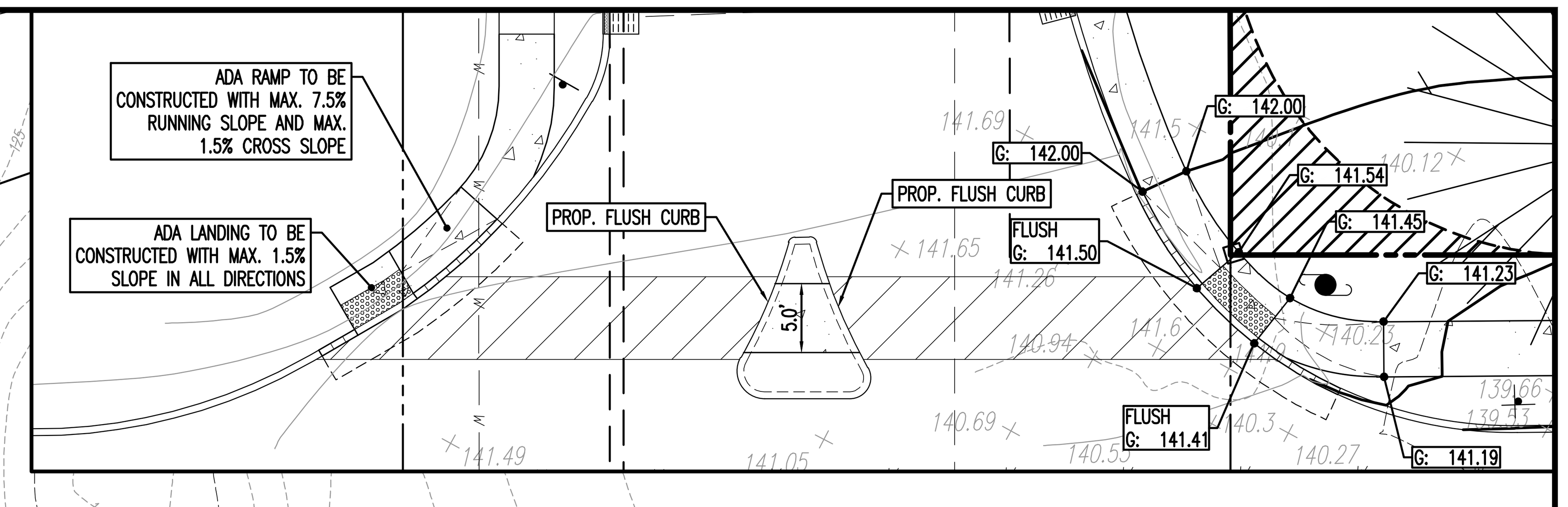
TITLE: SITE PLAN

SCALE: (H) 1"=20' (V)
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 4 OF 22
Rev. #: 2

Plotted: 11/14/23 - 8:31 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\D4447221334SXS.dwg, ---> 04 SITE PLAN





GRADING INSET

1" = 10'

GRADING/UTILITY GRAPHIC LEGEND

PROPERTY LINE (PARCEL IN QUESTION)
OFF-SITE PROPERTY LINES
EXIST. CABLE LINE
PROP. CABLE LINE
EXIST. ELECTRIC LINE
PROP. ELECTRIC LINE
EXIST. FIBER OPTIC LINE
PROP. FIBER OPTIC LINE
EXIST. GAS LINE
PROP. GAS LINE
EXIST. OVERHEAD WIRES
PROP. OVERHEAD WIRES
EXIST. TELEPHONE LINE
PROP. TELEPHONE LINE
EXIST. WATER LINE
PROP. WATER LINE
EXIST. FIRE SERVICE
PROP. FIRE SERVICE
EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)
PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)
EXIST. SANITARY SEWER LINE
PROP. SANITARY SEWER LINE
EXIST. FORCE MAIN
PROP. FORCE MAIN
EXIST. STORM DRAIN LINE
PROP. STORM DRAIN LINE
EXIST. MINOR CONTOUR & ELEVATION
EXIST. MAJOR CONTOUR & ELEVATION
PROP. FINISH GRADE CONTOUR & ELEVATION
PROP. DIRECTION OF DRAINAGE FLOW ARROW
EXIST. SPOT ELEVATIONS
EXIST. GUTTER ELEV.
EXIST. TOP OF CURB ELEV.
EXIST. FINISH FLOOR ELEV.
EXIST. GARAGE FLOOR ELEV.
PROP. GRADE SPOT ELEV.
PROP. TOP OF CURB & FINISHED GRADE ELEV.
PROP. FINISHED FLOOR ELEV.
PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
PROP. TOP OF EXTENDED CURB (GH) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (GL) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
EXIST. GUY WIRE
EXIST. LIGHT POLE
EXIST. BUILDING LIGHT
EXIST. SHOE BOX LIGHT
EXIST. COBRA LIGHT POLE
EXIST. TRAFFIC SIGNAL POLE
EXIST. MANHOLE
EXIST. "A" INLET
EXIST. "B" INLET
EXIST. "E" INLET
EXIST. YARD INLET
EXIST. FLARED END SECTION
EXIST. HEADWALL
EXIST. MONITORING WELL
APPROX. TEST PIT LOCATION
EXIST. FIRE HYDRANT
EXIST. WATER VALVE
EXIST. GAS VALVE
EXIST. GAS METER
EXIST. ELECTRIC METER
EXIST. ELECTRIC BOX
EXIST. CLEAN OUT
EXIST. WELL
EXIST. WATER SHUT OFF VALVE
EXIST. TELEPHONE BOX
EXIST. CABLE TV BOX
EXIST. UTILITY POLE
PROP. WATER VALVE
PROP. GAS VALVE
PROP. STORM CLEANOUT
PROP. SANITARY CLEANOUT
PROP. AREA LIGHT
PROP. OUTLET CONTROL STRUCTURE
PROP. DRAINAGE MANHOLE
PROP. SANITARY SEWER MANHOLE
PROP. 'A' INLET
PROP. 'B' INLET
PROP. 'E' INLET
PROP. YARD INLET
PROP. FLARED END SECTION
PROP. HEADWALL

GRADING NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D–1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITHIN THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.
2. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 0.75% MIN. SLOPE AGAINST ALL ISLAND GUTTERS, CURBS AND 1.0% ON ALL CONCRETE SURFACES, AND 1–1/2% MIN. ON ASPHALT, TO PREVENT PONDING. ANY DISCREPANCIES THAT MAY EFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.
3. PROPOSED TOP OF CURB ELEVATIONS ARE GENERALLY 6" ABOVE EXISTING LOCAL ASPHALT GRADE UNLESS OTHERWISE NOTED. FIELD ADJUST TO CREATE A MIN. OF 0.75% GUTTER GRADE ALONG CURB FACE. ENGINEER TO APPROVE FINAL CURBING CUT SHEETS PRIOR TO INSTALLATION.
4. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD).
5. REFER TO SITE PLAN FOR ADDITIONAL NOTES.
6. IN CASE OF DISCREPANCIES BETWEEN PLANS, THE SITE PLAN WILL SUPERCEDE IN ALL CASES. CONTRACTOR MUST NOTIFY ENGINEER OF RECORD OF ANY CONFLICT IMMEDIATELY.
7. MAXIMUM CROSS SLOPE OF 2% ON ALL SIDEWALKS.
8. CONTRACTOR TO ENSURE A MAXIMUM OF 2% SLOPE IN ALL DIRECTIONS IN ADA PARKING SPACES AND ADA ACCESS AISLES. CONTRACTOR TO ENSURE A MAXIMUM OF 5% RUNNING SLOPE AND 2% CROSS SLOPE ALONG ALL OTHER PORTIONS OF ACCESSIBLE ROUTE, WITH THE EXCEPTION OF RAMPS AND CURB RAMPS. CONTRACTOR SHALL CLARIFY ANY QUESTIONS CONCERNING CONSTRUCTION IN ADA AREAS WITH THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
9. THE OWNER SHALL RETAIN DYNAMIC EARTH, LLC (908–879–7095) OR ALTERNATE QUALIFIED GEOTECHNICAL ENGINEER TO TEST SOIL PERMEABILITY AND PROVIDE CONSTRUCTION PHASE INSPECTIONS OF THE BASIN BOTTOM SOILS AND ANY FILL MATERIALS WITHIN ANY PROPOSED INFILTRATION OR RETENTION BASIN TO COMPARE RESULTS TO DESIGN CRITERIA.
10. CONTRACTOR IS TO REMOVE EXISTING UNSUITABLE OR OVERLY COMPACT SOIL OR ROCK AS NEEDED TO ACHIEVE REQUIRED PERMEABILITY AS DIRECTED BY THE OWNERS GEOTECHNICAL ENGINEER, AND NEW FILL, IF NEEDED, SHALL HAVE AN IN PLACE PERMEABILITY GREATER THAN OR EQUAL TO THE DESIGN CRITERIA.
11. CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE OWNER'S GEOTECHNICAL ENGINEER PRIOR TO ONSET OF CONSTRUCTION TO SUBMIT AND CONFIRM THE CONTRACTOR'S PROPOSED MEANS AND MATERIALS AND TO SCHEDULE INSPECTIONS FOR BOTTOM OF BASIN, REMOVAL OF UNSUITABLE SOIL, FILL PLACEMENT, AND FINAL BASIN PERMEABILITY TESTING.
12. THE CONTRACTOR IS RESPONSIBLE FOR AS–BUILT PLANS AND GRADE CONTROL UNLESS DEFINED OTHERWISE ELSEWHERE IN THE CONTRACT DOCUMENTS.

LIGHTWEIGHT CONSTRUCTION NOTE: ALL LAWN AREAS SHALL BE GRADED UTILIZING LIGHTWEIGHT, LOW–IMPACT EARTH MOVING EQUIPMENT. TO QUALIFY, THE EQUIPMENT MUST EXERT A MAXIMUM OF EIGHT POUNDS PER SQUARE INCH ON THE GROUND SURFACE DURING GRADING OPERATIONS.

IF DURING CONSTRUCTION INSPECTION, IT IS FOUND THAT EQUIPMENT EXCEEDING THE MAXIMUM 8.0 POUNDS PER SQUARE INCH REQUIREMENT HAS BEEN USED FOR BACKFILLING OR FINAL GRADING OF DESIGNATED LAWN AREAS, THE APPLICANT AGREES TO MODIFY THE AFFECTED LAWN AREAS TO A MINIMUM OF 18 INCHES BELOW FINISHED GRADE. PROCEDURES FOR RESTORATION OF THE PERMEABILITY OF THE UPPER 18 INCHES OF COMPACTED SOIL SHALL BE SITE–SPECIFIC, AND SUBJECT TO THE APPROVAL OF THE REVIEWING AUTHORITY.

REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH

PROJECT: MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
952 GEORGETOWN–FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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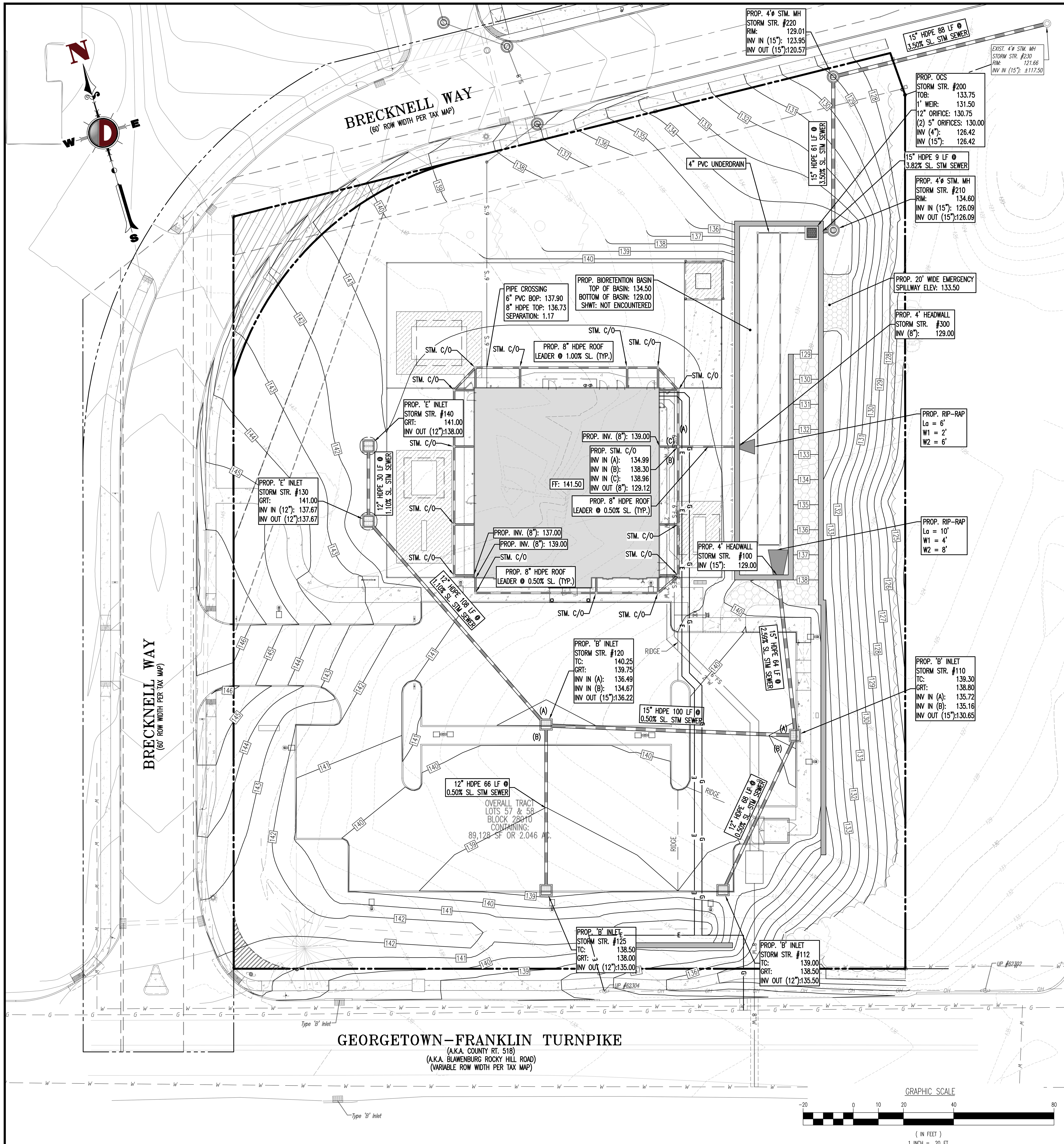
JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: GRADING PLAN

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023
PROJECT No: 4447-22-01334
SHEET No: 5 OF 22 | Rev. #: 2



DRAINAGE NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY "ONE-CALL" NUMBER 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER & SEWER DEPARTMENTS TO MARK-OUT THEIR UTILITIES.
2. ROOF LEADER COLLECTION PIPING ARE CONCEPTUAL IN NATURE AND ARE NOT FOR CONSTRUCTION. ACTUAL ROOF LEADER COLLECTION PIPING IS TO BE COORDINATED W/ ARCHITECTURAL PLANS FOR EACH INDIVIDUAL BUILDING. ALL ROOF LEADER COLLECTION PIPING SHALL BE SCHEDULE 40 PVC UNLESS OTHERWISE DESIGNATED.
3. MANUFACTURED REINFORCED CONCRETE STORM PIPE TO CONFORM TO ASTM C-76, CLASS III, UNLESS OTHERWISE DESIGNATED. MANUFACTURED REINFORCED CONCRETE ELLIPTICAL STORM PIPE TO CONFORM TO ASTM C-507, CLASS HE-III, UNLESS OTHERWISE DESIGNATED. REINFORCED CONCRETE STORMWATER PIPE TO BE INSTALLED IN ACCORDANCE WITH AMERICAN CONCRETE PIPE ASSOCIATION INSTALLATION GUIDELINES AND MORTAR OR PREFORMED FLEXIBLE JOINT SEALANTS IN ACCORDANCE WITH ASTM C 990 TO BE UTILIZED TO PROVIDE A SILT-TIGHT JOINT. WHERE SPECIFICALLY INDICATED, REINFORCED CONCRETE STORM PIPE JOINTS SHALL BE WATERTIGHT AND CONFORM TO ASTM C-443.
4. HDPE DRAINAGE PIPE SHALL HAVE A SMOOTH WALL INTERIOR WITH ANNULAR EXTERIOR CORRUGATIONS AND CONFORM TO ASTM F2306. SOLID PIPE SHALL HAVE GASKETED WATER-TIGHT JOINTS MEETING THE REQUIREMENTS OF ASTM F2306 AND ASTM D3212. PERFORATED PIPE SHALL HAVE GASKETED SILT-TIGHT JOINTS MEETING THE REQUIREMENTS OF ASTM F2306 AND ASTM F477. HDPE PIPE SHALL BE FROM A MANUFACTURER WHO IS AN EASTERN STATES CONSORTIUM (ESC) QUALIFIED MANUFACTURER OF HDPE PIPE AND INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURE RECOMMENDATIONS.
5. HP DRAINAGE PIPE SHALL HAVE A SMOOTH WALL INTERIOR WITH ANNULAR EXTERIOR CORRUGATIONS AND CONFORM TO ASTM F2736 (12"–30" PIPE) AND ASTM F2881 (36"–60" PIPE). PIPE SHALL HAVE GASKETED WATER-TIGHT JOINTS MEETING THE REQUIREMENTS OF ASTM D3212 AND ASTM F477. FIELD WATERTIGHTNESS PERFORMANCE VERIFICATION MAY BE ACCOMPLISHED IN ACCORDANCE WITH ASTM F2487. HP PIPE SHALL BE FROM A MANUFACTURER WHO IS AN EASTERN STATES CONSORTIUM (ESC) QUALIFIED MANUFACTURER OF HP STORM PIPE AND INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER RECOMMENDATIONS.
6. PIPE LENGTHS ON THIS PLAN HAVE BEEN MEASURED AS THE DISTANCE BETWEEN THE CENTER POINT OF THE 2 CONNECTED STRUCTURES. ACTUAL PHYSICAL PIPE LENGTH FOR INSTALLATION IS EXPECTED TO BE LESS AND SHOULD BE ACCOUNTED FOR BY THE CONTRACTOR ACCORDINGLY.
7. EXISTING STORMWATER PIPE BEYOND PROPOSEDCONNECTION SHALL BE TELEVISED PRIOR TO ANY PROPOSED CONNECTION.

GRADING/UTILITY GRAPHIC LEGEND

PROPERTY LINE (PARCEL IN QUESTION)
OFF-SITE PROPERTY LINES

Existing	Proposed
EXIST. CABLE LINE	PROP. CABLE LINE
EXIST. ELECTRIC LINE	PROP. ELECTRIC LINE
EXIST. FIBER OPTIC LINE	PROP. FIBER OPTIC LINE
EXIST. GAS LINE	PROP. GAS LINE
EXIST. OVERHEAD WIRES	PROP. OVERHEAD WIRES
EXIST. TELEPHONE LINE	PROP. TELEPHONE LINE
EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)
EXIST. WATER LINE	PROP. WATER LINE
EXIST. FIRE SERVICE	PROP. FIRE SERVICE
EXIST. SANITARY SEWER LINE	PROP. SANITARY SEWER LINE
EXIST. FORCE MAIN	PROP. FORCE MAIN
EXIST. STORM DRAIN LINE	PROP. STORM DRAIN LINE
EXIST. MINOR CONTOUR & ELEVATION	PROP. FINISH GRADE CONTOUR & ELEVATION
EXIST. MAJOR CONTOUR & ELEVATION	
EXIST. MONITORING WELL	APPROX. TEST PIT LOCATION
EXIST. SPOT ELEVATIONS	PROP. GRADE SPOT ELEV.
EXIST. GUTTER ELEV.	PROP. TOP OF CURB & FINISHED GRADE ELEV.
EXIST. TOP OF CURB ELEV.	PROP. FINISHED FLOOR ELEV.
EXIST. FINISH FLOOR ELEV.	PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
EXIST. GARAGE FLOOR ELEV.	PROP. TOP OF EXTENDED CURB, (GH) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (GL) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
EXIST. FIRE HYDRANT	PROP. DIRECTION OF DRAINAGE FLOW ARROW
EXIST. WATER VALVE	PROP. WATER VALVE
EXIST. GAS VALVE	PROP. GAS VALVE
EXIST. GAS METER	PROP. STORM CLEANOUT
EXIST. ELECTRIC METER	PROP. SANITARY CLEANOUT
EXIST. ELECTRIC BOX	PROP. AREA LIGHT
EXIST. CLEAN OUT	PROP. OUTLET CONTROL STRUCTURE
EXIST. WELL	PROP. DRAINAGE MANHOLE
EXIST. WATER SHUT OFF VALVE	PROP. SANITARY SEWER MANHOLE
EXIST. TELEPHONE BOX	PROP. 'A' INLET
EXIST. CABLE TV BOX	PROP. 'B' INLET
EXIST. UTILITY POLE	PROP. 'E' INLET
EXIST. GUY WIRE	PROP. YARD INLET
EXIST. LIGHT POLE	PROP. FLARED END SECTION
EXIST. BUILDING LIGHT	PROP. HEADWALL
EXIST. SHOE BOX LIGHT	
EXIST. COBRA LIGHT POLE	
EXIST. TRAFFIC SIGNAL POLE	
EXIST. MANHOLE	
EXIST. "A" INLET	
EXIST. "B" INLET	
EXIST. "E" INLET	
EXIST. YARD INLET	
EXIST. FLARED END SECTION	
EXIST. HEADWALL	

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: –

PROJECT:
MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
952 GEORGETOWN–FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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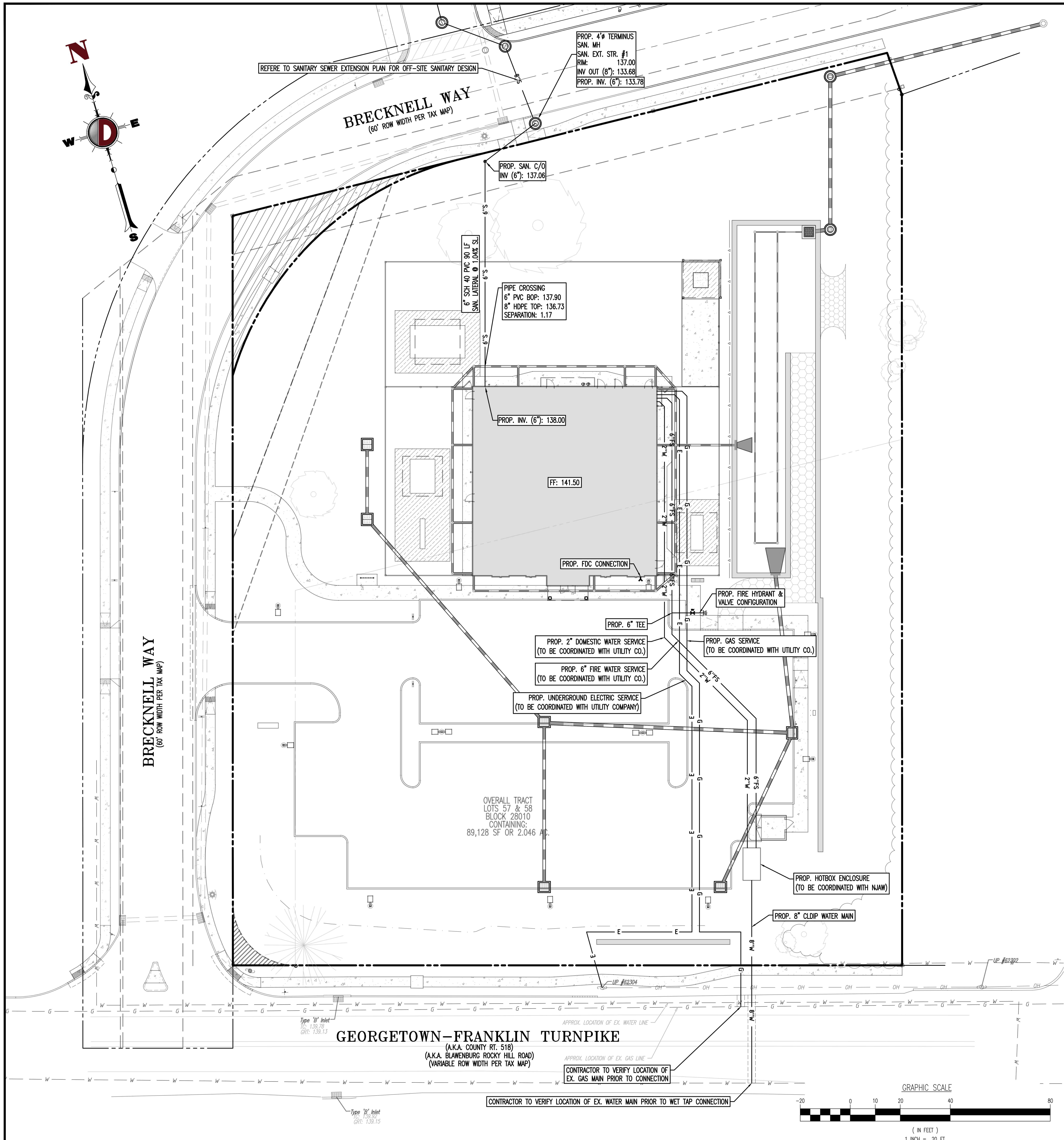
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE:
DRAINAGE PLAN

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 6 OF 22 | Rev. #: 2

Plotted: 11/14/23 – 8:31 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SC2.dwg, ---> 06 DRAINAGE PLAN



EXISTING UTILITY NOTES

EXISTING WATER SERVICE NOTE: CONTRACTOR TO LOCATE AND UTILIZE EXISTING WATER SERVICE CONNECTION IF FEASIBLE. OTHERWISE REMOVE EXISTING WATER SERVICE LINE AND CAP AT MAIN IN R.O.W. IN ACCORDANCE WITH THE LOCAL WATER COMPANY REQUIREMENTS. TERMINATION AT THE MAIN MUST BE APPROVED BY THE LOCAL WATER COMPANY PRIOR TO COMPLETION. IF THE EXISTING WATER SERVICE CAN NOT BE UTILIZED, THE NEW SERVICE IS TO BE COORDINATED AND VERIFIED FOR LOCATION WITH THE LOCAL WATER COMPANY. CONTRACTOR SHALL OBTAIN ALL REQUIRED STREET OPENING PERMITS FOR REMOVAL OF EXISTING SERVICE AND INSTALLATION OF NEW SERVICE.

EXISTING GAS SERVICE NOTE: CONTRACTOR TO LOCATE AND UTILIZE EXISTING GAS SERVICE CONNECTION IF FEASIBLE. OTHERWISE REMOVE EXISTING GAS SERVICE LINE AND CAP AT MAIN IN R.O.W. IN ACCORDANCE WITH THE LOCAL GAS COMPANY REQUIREMENTS. TERMINATION AT THE MAIN MUST BE APPROVED BY THE LOCAL GAS COMPANY PRIOR TO COMPLETION. ANY NEW SERVICE IS TO BE COORDINATED AND VERIFIED FOR LOCATION WITH THE LOCAL GAS COMPANY. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED STREET OPENING PERMITS FOR REMOVAL OF EXISTING SERVICE AND INSTALLATION OF NEW SERVICE.

SANITARY SEWER SERVICE NOTE: CONTRACTOR TO LOCATE AND UTILIZE EXISTING SEWER SERVICE CONNECTION IF OF ADEQUATE SIZE AND INTEGRITY AND ACCEPTABLE TO LOCAL SEWER AUTHORITY. OTHERWISE CONTRACTOR TO REMOVE EXISTING SEWER SERVICE LINE AND CAP AT MAIN IN R.O.W. IN ACCORDANCE WITH THE LOCAL SEWER AUTHORITY REQUIREMENTS. TERMINATION AT THE MAIN MUST BE APPROVED BY THE LOCAL SEWER AUTHORITY PRIOR TO COMPLETION. IF EXISTING SEWER SERVICE CAN NOT BE UTILIZED THEN THE NEW SERVICE IS TO BE COORDINATED AND VERIFIED FOR LOCATION WITH THE LOCAL SEWER AUTHORITY. CONTRACTOR SHALL OBTAIN ALL REQUIRED STREET OPENING PERMITS FOR REMOVAL OF EXISTING SERVICE AND INSTALLATION OF NEW SERVICE.

UTILITY NOTES

1. LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY "ONE-CALL" NUMBER 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO NOTIFY LOCAL WATER & SEWER DEPARTMENTS TO MARK-OUT THEIR UTILITIES.
3. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATIONS. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME. SERVICE SIZES TO BE DETERMINED BY ARCHITECT.
4. WATER SERVICE MATERIALS SHALL BE SPECIFIED BY THE LOCAL UTILITY COMPANY. CONTRACTORS PRICE FOR WATER SERVICE SHALL INCLUDE ALL FEES AND APPURTENANCES REQUIRED BY THE UTILITY TO PROVIDE A COMPLETE WORKING SERVICE.
5. ALL WATER MAIN SHALL BE CEMENT-LINED, CLASS 52 DUCTILE IRON PIPE, UNLESS OTHERWISE DESIGNATED.
6. THE MINIMUM DIAMETER FOR DOMESTIC WATER SERVICES SHALL BE 1 INCH.
7. ALL SANITARY SEWER MAINS SHALL BE SEPARATED FROM WATER MAINS BY A DISTANCE OF AT LEAST 10 FEET HORIZONTALLY. IF SUCH SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWER MAIN AT LEAST 18 INCHES BELOW THE WATER MAIN OR SUCH OTHER SEPARATION AS APPROVED BY THE APPROVING AUTHORITY. WHERE APPROPRIATE CROSSING SEPARATION FROM A WATER MAIN IS NOT POSSIBLE, THE SEWER SHALL BE ENCASED IN CONCRETE, OR CONSTRUCTED OF DUCTILE IRON PIPE USING MECHANICAL OR SLIP-ON JOINTS FOR A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE CROSSING. IN ADDITION, ONE FULL LENGTH OF SEWER PIPE SHOULD BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE WATER MAIN AS POSSIBLE. WHERE A WATER MAIN CROSSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWER SHALL BE PROVIDED. THE APPROVING AUTHORITY MAY REQUIRE ADDITIONAL STRUCTURAL SUPPORT FOR STORM SEWER CROSSING OVER SEWER LINES.
8. ALL SANITARY SEWER MAINS SHALL BE SDR-35 PVC PIPE MATERIAL UNLESS OTHERWISE DESIGNATED. SEWER PIPES INSTALLED WITH LESS THAN 3 FEET OF COVER, GREATER THAN 20 FEET OF COVER OR WITHIN 18 INCHES OF A WATER MAIN SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE. ALL DUCTILE IRON SEWER PIPE SHALL BE CEMENT-LINED, CLASS 52 PIPE, FURNISHED WITH SEWER COAT, OR APPROVED EQUAL.
9. WHERE SANITARY SEWER LATERALS ARE GREATER THAN 10' DEEP AT CONNECTION TO THE SEWER MAIN, CONCRETE DEEP LATERAL CONNECTIONS ARE TO BE UTILIZED.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE STABILIZATION OF THE EXISTING SEWER MAIN, STRUCTURES AND APPURTENANCES DURING CONNECTION.
11. LOCATION & LAYOUT OF GAS, ELECTRIC & TELECOMMUNICATION UTILITY LINES AND SERVICES SHOWN ON THESE PLANS ARE SCHEMATIC IN NATURE. ACTUAL LOCATION & LAYOUT OF THESE UTILITIES & SERVICES ARE TO BE PER THE APPROPRIATE UTILITY PROVIDER.
12. ALL SEWER AND WATER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REGULATORY AUTHORITY'S RULES AND REGULATIONS.
13. ALL PROPOSED UTILITIES TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.

GRADING/UTILITY GRAPHIC LEGEND

PROPERTY LINE (PARCEL IN QUESTION)
OFF-SITE PROPERTY LINES

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EXIST. "A" INLET
EXIST. "B" INLET
EXIST. "E" INLET
EXIST. YARD INLET
EXIST. FLARED END SECTION
EXIST. HEADWALL

PROP. CABLE LINE
PROP. ELECTRIC LINE
PROP. FIBER OPTIC LINE
PROP. GAS LINE
PROP. OVERHEAD WIRES
PROP. TELEPHONE LINE
PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)
PROP. WATER LINE
PROP. FIRE SERVICE
PROP. SANITARY SEWER LINE
PROP. FORCE MAIN
PROP. STORM DRAIN LINE
PROP. FINISH GRADE CONTOUR & ELEVATION
APPROX. TEST PIT LOCATION
PROP. GRADE SPOT ELEV.
PROP. TOP OF CURB & FINISHED GRADE ELEV.
PROP. FINISHED FLOOR ELEV.
PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
PROP. TOP OF EXTENDED CURB, (GH) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (GL) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
PROP. DIRECTION OF DRAINAGE FLOW ARROW
PROP. WATER VALVE
PROP. GAS VALVE
PROP. STORM CLEANOUT
PROP. SANITARY CLEANOUT
PROP. AREA LIGHT
PROP. OUTLET CONTROL STRUCTURE
PROP. DRAINAGE MANHOLE
PROP. SANITARY SEWER MANHOLE
PROP. 'A' INLET
PROP. 'B' INLET
PROP. 'E' INLET
PROP. YARD INLET
PROP. FLARED END SECTION
PROP. HEADWALL

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY:	DESIGNED BY:	CHECKED BY:	CHECKED BY:
KTK	AF	JSH	–

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN–FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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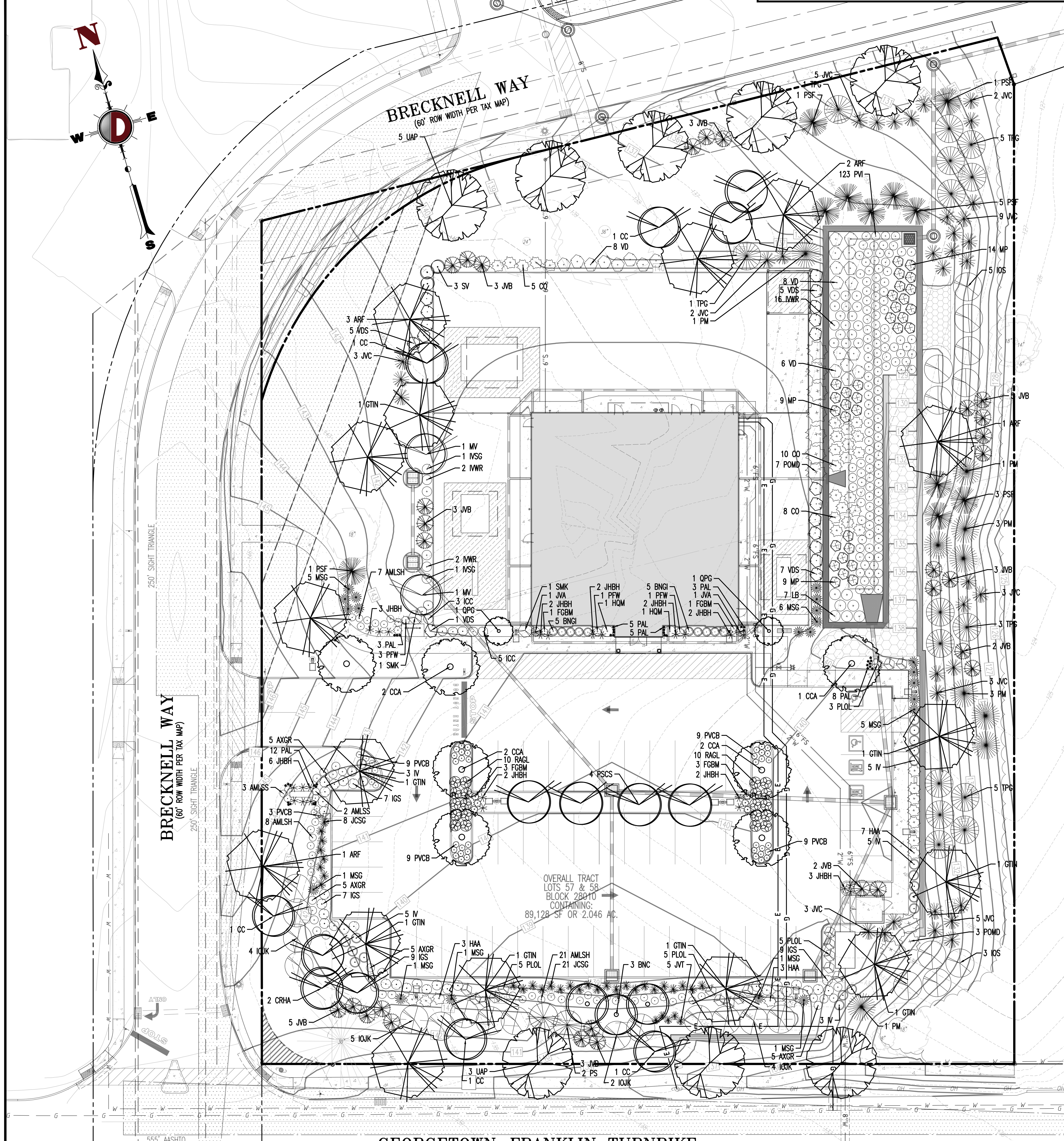
TITLE: UTILITY PLAN

SCALE: (H) 1"=20' (V)
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 7 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:31 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SU2.dwg, ---> 07 UTILITY PLAN

THIS PLAN TO BE UTILIZED FOR LANDSCAPE PURPOSES ONLY



LANDSCAPE SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
SHADE TREE(S)					
ARF	8	ACER RUBRUM 'FRANKSRED'	RED SUNSET MAPLE	2 1/2–3" CAL.	B+B
CCA	7	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2 1/2–3" CAL.	B+B
GTIN	8	GLEDITSIA TRIACANTHOS INERMIS 'SUNCOLE'	SUNBURST THORNLESS HONEYLOCUST	2 1/2–3" CAL.	B+B
QPG	2	QUERCUS PALUSTRIS 'GREEN PILLAR'	GREEN PILLAR PIN OAK	2 1/2–3" CAL.	B+B
UAP	8	ULMUS AMERICANA 'PRINCETON'	PRINCETON AMERICAN ELM	2 1/2–3" CAL.	B+B
	33				
ORNAMENTAL TREE(S)					
BNC	3	BETULA NIGRA 'CULLY'	HERITAGE RIVER BIRCH, MULTI-STEM	8–10'	B+B
CC	6	CERCIS CANADENSIS	EASTERN REDBUD	8–10'	B+B
CRHA	4	CORNUS RUTBAN 'A'	AURORA DOGWOOD HYBRID	8–10'	B+B
MV	2	MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	8–10'	B+B
PSCS	4	PRUNUS SARGENTII 'COLUMNARIS'	COLUMNAR SARGENT CHERRY	8–10'	B+B
	19				
EVERGREEN TREE(S)					
IOJK	17	ILEX OPACA 'JERSEY KNIGHT'	JERSEY KNIGHT AMERICAN HOLLY	6–7'	B+B
IOS	8	ILEX OPACA 'SATYR HILL'	SATYR HILL HOLLY	6–8'	B+B
JVB	29	JUNIPERUS VIRGINIANA 'BURKII'	BURKII RED CEDAR	6–8'	B+B
JVC	35	JUNIPERUS VIRGINIANA 'CORCORCOR'	EMERALD SENTINEL RED CEDAR	6–8'	B+B
JVT	5	JUNIPERUS VIRGINIANA 'TAYLOR'	TAYLOR JUNIPER	5–6'	B+B
PM	9	PSEUDOTSUGA MENZIESII	DOUGLAS FIR	6–7'	B+B
PS	2	PINUS STROBUS	EASTERN WHITE PINE	6–7'	B+B
PSF	11	PINUS STROBUS 'FASTIGIATA'	PYRAMIDAL WHITE PINE	6–8'	B+B
TPG	15	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	7–8'	B+B
	131				
EVERGREEN SHRUB(S)					
AXGR	20	ABELIA X GRANDIFLORA 'RADIANCE'	RADIANCE AELIA	24–30"	#3 CAN
BNGI	10	BUXUS 'NEW GEN INDEPENDENCE'	NEW GEN INDEPENDENCE BOXWOOD	24–30"	B+B
ICC	8	ILEX CRENATA 'COMPACTA'	COMPACT JAPANESE HOLLY	24–30"	#3 CAN
IGS	32	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY HOLLY	24–30"	#3 CAN
JCSG	29	JUNIPERUS CHINENSIS 'SEA GREEN'	SEA GREEN JUNIPER	24–30"	B+B
JVA	2	JUNIPERUS VIRGINIANA 'FARROWJVBF'	AQUAVITA JUNIPER	36–42"	#7 CAN
PLOL	18	PRUNUS LAUROCERASUS 'OTTO LUYKEN'	OTTO LUYKEN CHERRYLAUREL	24–30"	#3 CAN
	119				
DECIDUOUS SHRUB(S)					
AMLSH	36	ARONIA MELANOCARPA 'LOW SCAPE HEDGER'	'LOW SCAPE HEDGER' CHOKEBERRY	18–24"	#3 CAN
AMLSS	5	ARONIA MELANOCARPA 'SMNAMPEM'	'LOW SCAPE SNOWFIRE'CHOKEBERRY	18–24"	#3 CAN
CO	23	CEPHALANTHUS OCCIDENTALIS	BUTTON BUSH	12–15"*	#2 CAN
FGBM	8	FOTHERGILLA GARDENII 'BLUE MIST'	'BLUE MIST' DWARF FOTHERGILLA	2–3'	#3 CAN
HAA	13	HYDRANGEA ABORESCENS 'ANNABELLE'	'ANABELLE' HYDRANGEA	24–30"	#3 CAN
HQM	2	HYDRANGEA QUERCIFOLIA 'MUNCHKIN'	MUNCHKIN OAKLEAF HYDRANGEA	24–30"	#3 CAN
IV	21	ITEA VIRGINICA 'HENRY'S GARNET'	GARNET SWEETSPIRE	24–30"	#5 CAN
IVSG	2	ILEX VERTICILLATA 'SOUTHERN GENTLEMAN'	SOUTHERN GENTLEMAN WINTERBERRY HOLLY	30–36"	#5 CAN
IVWR	20	ILEX VERTICILLATA 'WINTER RED'	WINTER RED WINTERBERRY HOLLY	30–36"	#5 CAN
LB	7	LINDERA BENZOIN	SPICEBUSH	12–15"*	#2 CAN
MP	32	MYRICA PENSYLVANICA	NORTHERN BAYBERRY	12–15"*	#2 CAN
PFW	5	POTENTILLA FRUTICOSA 'HAPPY FACE WHITE'	HAPPY FACE WHITE POTENTILLA	2–3'	#3 CAN
POMD	10	PHYSOCARPUS OPULIFOLIUS	NINE BARK 'DIABOLO'	30–36"	#5 CAN
SMK	2	SYRINGA PATULA 'MISS KIM'	MISS KIM KOREAN LILAC	24–30"	#5 CAN
SV	3	SYRINGA VULGARIS	COMMON PURPLE LILAC	3–4'	B+B
VD	22	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	12–15"*	#2 CAN
VDS	18	VIBURNUM DENTATUM 'SYNNESTVEDT'	CHICAGO LUSTRE ARROWWOOD VIBURNUM	30–36"	#5 CAN
	229				
GROUND COVER					
JHBH	24	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	15–18" SPRD.	#3 CAN
RAGL	20	RHUS AROMATICA "GRO-LOW'	GRO-LOW SUMAC	1 GAL.	CONTAINER
	44				
ORNAMENTAL GRASS(ES)					
MSG	21	MISCANTHUS SINENSIS 'GRACILLIMUS'	MAIDEN GRASS	3 GAL.	CONTAINER
PAL	36	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	2 GAL.	CONTAINER
PVCB	48	PANICUM VIRGATUM 'CAPE BREEZE'	CAPE BREEZE SWITCH GRASS	2 GAL.	CONTAINER
PVI	123	PANICUM VIRGATUM	SWITCH GRASS	1 GAL.*	CONTAINER
	228				

NOTE: * BIO-RETENTION BASIN PLANT
NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

PLANTING NOTES

1. PLANT MATERIAL SHALL BE FURNISHED AND INSTALLED AS INDICATED; INCLUDING ALL LABOR, MATERIALS, PLANTS, EQUIPMENT, INCIDENTALS, AND CLEAN-UP.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLANTING AT CORRECT GRADES AND ALIGNMENT. LAYOUT TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
3. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL DEVELOPED BRANCHES, DENSELY FOLIATED, VIGOROUS ROOT SYSTEMS AND BE FREE FROM DEFECTS AND INJURIES.
4. CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF PLANT MATERIAL.
5. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN VIGOROUS GROWING CONDITION. PROVISION SHALL BE MADE FOR A GROWTH GUARANTEE OF AT LEAST TWO (2) YEARS FROM THE DATE OF ACCEPTANCE FOR TREES AND SHRUBS. REPLACEMENTS SHALL BE MADE AT THE BEGINNING OF THE FIRST SUCCEEDING PLANTING SEASON. ALL REPLACEMENTS SHALL HAVE A GUARANTEE EQUAL TO THAT STATED ABOVE.
6. INSOFAR AS IT IS PRACTICABLE, PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT STOCK NOT PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY. ANY PLANTS NOT INSTALLED DURING THIS PERIOD WILL BE REJECTED.
7. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH ANSI Z60.1 (REV. 2001) "AMERICAN STANDARD FOR NURSERY STOCK" AS PUBLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION.
8. ALL PLANTS SHALL BE PLANTED IN AMENDED TOPSOIL THAT IS THOROUGHLY WATERED AND TAMPED AS BACK FILLING PROGRESSES. PLANTING MIX TO BE AS SHOWN ON PLANTING DETAILS. LARGE PLANTING AREAS TO INCORPORATE FERTILIZER AND SOIL CONDITIONERS AS STATED IN PLANTING SPECIFICATIONS.
9. PLANTS SHALL NOT BE BOUND WITH WIRE OR ROPE AT ANY TIME SO AS TO DAMAGE THE BARK OR BREAK BRANCHES. PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE BALL ONLY.
10. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTED LOCAL PRACTICE. PLANTS SHALL NOT BE INSTALLED IN TOPSOIL THAT IS IN A MUDDY OR FROZEN CONDITION. ALL PLANT MATERIAL SHALL BE SPRAYED WITH 'WILT-PRUF' OR EQUAL AS PER MANUFACTURER'S INSTRUCTIONS.
11. NO PLANT, EXCEPT GROUND COVERS, SHALL BE PLANTED LESS THAN TWO FEET FROM EXISTING STRUCTURES AND SIDEWALKS.
12. SET ALL PLANTS PLUMB AND STRAIGHT. SET AT SUCH LEVEL THAT, A NORMAL OR NATURAL RELATIONSHIP TO THE CROWN OF THE PLANT WITH THE GROUND SURFACE WILL BE ESTABLISHED. LOCATE PLANT IN THE CENTER OF THE PIT.
13. ALL INJURED ROOTS SHALL BE PRUNED TO MAKE CLEAN ENDS BEFORE PLANTING UTILIZING CLEAN, SHARP TOOLS. IT IS ADVISABLE TO PRUNE APPROXIMATELY 1/3 OF THE GROWTH OF LARGE TREES (2" CALIPER AND OVER) BY THE REMOVAL OF SUPERFLUOUS BRANCHES, THOSE WHICH CROSS, THOSE WHICH RUN PARALLEL, ETC. MAIN LEADER OF TREES WILL NOT BE CUT BACK. LONG SIDE BRANCHES, HOWEVER, MUST BE SHORTENED.
14. EACH TREE AND SHRUB SHALL BE PRUNED IN ACCORDANCE WITH STANDARD HORTICULTURAL PRACTICE TO PRESERVE NATURAL CHARACTER OF PLANT. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS.
15. ALL EXISTING TREES TO REMAIN SHALL BE PRUNED TO REMOVE ANY DAMAGED BRANCHES AS A RESULT OF CONSTRUCTION OPERATIONS. ALL EXISTING TREES SHALL BE FERTILIZED WITH A REGULAR GARDEN FERTILIZER (5-10-5) UPON COMPLETION OF WORK. THE ENTIRE LIMB OF ANY DAMAGED BRANCH SHALL BE CUT OFF AT THE TRUNK. CONTRACTOR TO ENSURE THAT CUTS ARE SMOOTH AND STRAIGHT. ANY EXPOSED ROOTS SHALL BE CUT BACK WITH SHARP TOOLS AND FILLED AROUND WITH TOPSOIL. COMPLETELY SATURATE THESE AREAS WITH WATER. ROOTS SHALL NOT BE LEFT EXPOSED FOR MORE THAN ONE (1) DAY. CONTRACTOR IS TO PROTECT ALL EXISTING TREES TO REMAIN BY ERECTING TREE PROTECTION FENCE AT THE DRIP LINE. THIS WILL ENSURE NO COMPACTION OF THE ROOT MASS.
16. ALL PLANTING BEDS SHALL BE MULCHED WITH 4" LAYER OF DOUBLE SHREDDED HARDWOOD BARK MULCH.
17. NEW PLANTING AREAS AND SOD SHALL BE ADEQUATELY IRRIGATED OR WATERED TO ESTABLISH THE PROPOSED PLANTS AND LAWN.
18. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE PROPOSED LANDSCAPE AS SHOWN ON THE APPROVED LANDSCAPE PLAN MUST BE INSTALLED, INSPECTED AND APPROVED BY THE MUNICIPAL LANDSCAPE ARCHITECT. THE MUNICIPAL ENGINEER AND LANDSCAPE ARCHITECT SHALL TAKE INTO ACCOUNT SEASONAL CONSIDERATIONS IN THIS REGARD AS FOLLOWS. THE PLANTING OF TREES, SHRUBS, VINES OR GROUND COVER AS REQUIRED BY OR ASSOCIATED WITH A SUBDIVISION OR SITE PLAN APPROVAL BY THE PLANNING BOARD OR ZONING BOARD OF ADJUSTMENT SHALL BE INSTALLED DURING THE FOLLOWING PLANTING SEASONS:

TYPE	DATES
PLANTS	3/15 TO 12/15
LAWN	3/15 TO 6/15
	9/15 TO 12/1

FURTHERMORE, THE FOLLOWING TREE VARIETIES SHALL NOT BE PLANTED DURING THE FALL PLANTING SEASON DUE TO THE HAZARDS ASSOCIATED WITH DIGGING THESE TREES IN THIS SEASON.

ACER RUBRUM	POPULUS VARIETIES
BETULA VARIETIES	PRUNUS VARIETIES
CARPINUS VARIETIES	PYRUS VARIETIES
CRATAEGUS VARIETIES	QUERCUS VARIETIES
KOELREUTERIA	SALIX WEEPING VARIETIES
LIQUIDAMBAR STYRACIFLUA	TILIA TOMENTOSA
LIRIODENDRON TULIPIFERA	ZELKOVA VARIETIES
PLATANUS ACERFOLIA	

ANY PLANTINGS INSTALLED IN CONFLICT WITH THIS REQUIREMENT MUST RECEIVE THE WRITTEN APPROVAL BY THE MUNICIPAL ENGINEER OR LANDSCAPE ARCHITECT, PRIOR TO PLANTING. FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL REQUIRE THE REMOVAL OF THE PLANTING IN QUESTION. THIS REQUIREMENT DOES NOT APPLY TO SEEDING OR SODDING OR PLANTINGS SPECIFICALLY FOR SOIL STABILIZATION PURPOSES. THE PLANTING ASSOCIATED WITH ANY LOT GIVEN A CERTIFICATE OF OCCUPANCY OUTSIDE THESE PERIODS SHALL BE PROVIDED DURING THE PREVIOUS OR NEXT APPROPRIATE SEASON.

19. ALL DISTURBED AREAS TO BE TREATED WITH TOPSOIL SEED SOD STABILIZATION METHOD.

PLANTING SPECIFICATIONS

1. SCOPE OF WORK
   A. THIS WORK SHALL CONSIST OF PERFORMING, CLEARING AND SOIL PREPARATION, FINISH GRADING, PLANTING AND DRAINAGE, INCLUDING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT.
2. MATERIALS
   A. GENERAL – ALL MATERIALS SHALL MEET OR EXCEED SPECIFICATIONS AS OUTLINED IN THE STATE DEPARTMENT OF TRANSPORTATION (D.O.T.) MANUAL OF ROADWAY AND BRIDGE CONSTRUCTION (LATEST EDITION) OR APPROVED EQUAL.
   B. PLANTS – ALL PLANTS SHALL BE HEALTHY OR NORMAL GROWTH, WELL ROOTED, FREE FROM DISEASE AND INSECTS.
   C. TOPSOIL – LOAMY SILT, HAVING AN ORGANIC CONTENT NOT LESS THAN 5%, pH RANGE BETWEEN 4.5 – 7, BE FREE OF DEBRIS, ROCKS LARGER THAN TWO INCHES (2"), WOOD, ROOTS, VEGETABLE MATTER AND CLAY CLODS.
   D. MULCH – FOUR (4") INCHES DOUBLE SHREDDED HARDWOOD BARK MULCH.
3. FERTILIZER AND SOIL CONDITIONER – PLANTED AREAS
   A. ORGANIC FERTILIZER – SHALL BE PROCESSED SEWER SLUDGE WITH MINIMAL CONTENT OF 1% NITROGEN AND 2% PHOSPHORIC ACID, EQUAL TO 'NITROHUMIS'.
   B. ORGANIC FERTILIZER AND SOIL CONDITIONER – SHALL BE 'GRO- POWER' AND ORGANIC BASE MATERIALS COMPRISED OF DECOMPOSED ANIMAL AND VEGETABLE MATTER AND COMPOSTED TO SUPPORT BACTERIAL CULTURES, CONTAINING NO POULTRY OR HUMAN WASTE. GUARANTEED ANALYSIS (5-3-1): NITROGEN 5%. PHOSPHATE 3%, POTASH 1%. 50% HUMUS AND 15% HUMIC ACIDS.
4. GENERAL WORK PROCEDURES
   A. LANDSCAPE WORK SHALL COMMENCE AS SOON AS THOSE PORTIONS OF THE SITE ARE AVAILABLE. CONTRACTOR TO UTILIZE WORKMANLIKE STANDARDS IN PERFORMING ALL LANDSCAPE CONSTRUCTION. THE SITE IS TO BE LEFT IN A CLEAN STATE AT THE END OF EACH DAY'S WORK. ALL DEBRIS, MATERIALS, AND TOOLS SHALL BE PROPERLY STOCKPILED OR DISPOSED OF. ALL PAVED SURFACES SHALL BE SWEPT CLEAN AT THE END OF EACH DAYS WORK.
5. WEEDING
   A. BEFORE AND DURING PRELIMINARY GRADING AND FINISH GRADING, ALL WEEDS AND GRASSES SHALL BE DUG OUT BY THE ROOTS AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
6. TOPSOILING
   A. CONTRACTOR TO PROVIDE A 4" THICK TOPSOIL LAYER IN ALL PLANTING AREAS. TOPSOIL SHOULD BE SPREAD OVER A PREPARED SURFACE IN A UNIFORM LAYER TO PRODUCE A 4" UNSETTLED THICKNESS. TOPSOIL PRESENT AT THE SITE, IF ANY, MAY BE USED TO SUPPLEMENT TOTAL AMOUNT REQUIRED. CONTRACTOR TO FURNISH AN ANALYSIS OF ON-SITE TOPSOIL UTILIZED IN ALL PLANTING AREAS. ADJUST pH AND NUTRIENT LEVELS AS REQUIRED TO ENSURE AN ACCEPTABLE GROWING MEDIUM.
7. SOIL CONDITIONING:
   A. CULTIVATE ALL AREAS TO BE PLANTED TO A DEPTH OF 6". ALL DEBRIS EXPOSED FROM EXCAVATION AND CULTIVATION SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE. SPREAD EVENLY IN ALL PLANTING AREAS AND TILL (2 DIRECTIONS) INTO TOP 4" WITH THE FOLLOWING PER 1,000 SQ. FT.:
      - 20 POUNDS 'GRO-POWER'
      - 100 POUNDS AGRICULTURAL GYPSUM
      - 20 POUNDS NITROFORM (COURSE) 38-0-0 BLUE CHIP

   SOIL MODIFICATIONS:
   A. THOROUGHLY TILL ORGANIC MATTER INTO THE TOP 6 TO 12 IN. OF MOST PLANTING SOILS TO IMPROVE THE SOIL'S ABILITY TO RETAIN WATER AND NUTRIENTS. USE COMPOSTED BARK, RECYCLED YARD WASTE OR PEAT MOSS. ALL PRODUCTS SHOULD BE COMPOSTED TO A DARK COLOR AND BE FREE OF PIECES WITH IDENTIFIABLE LEAF OR WOOD STRUCTURE. AVOID MATERIAL WITH A pH HIGHER THAN 7.5.
   B. MODIFY HEAVY CLAY OR SILT (MORE THAN 40% CLAY OR SILT) BY ADDING COMPOSTED PINE BARK (UP TO 30% BY VOLUME) AND/OR GYPSUM. COARSE SAND MAY BE USED IF ENOUGH IS ADDED TO BRING THE SAND CONTENT TO MORE THAN 60% OF THE TOTAL MIX. IMPROVE DRAINAGE IN HEAVY SOILS BY PLANTING ON RAISED MOUNDS OR BEDS AND INCLUDING SUBSURFACE DRAINAGE LINES.
   C. MODIFY EXTREMELY SANDY SOILS (MORE THAN 85% SAND) BY ADDING ORGANIC MATTER AND/OR DRY, SHREDDED CLAY LOAM UP TO 30% OF THE TOTAL MIX.
8. PLANTING
   POSITION TREES AND SHRUBS AT THEIR INTENDED LOCATIONS AS PER THE PLANS AND SECURE THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE EXCAVATING PITS, MAKING NECESSARY ADJUSTMENTS AS DIRECTED.
   A. PLANTING PITS SHALL BE DUG WITH LEVEL BOTTOMS, WITH THE WIDTH TWICE THE DIAMETER OF ROOT BALL. THE ROOT BALL SHALL REST ON UNDISTURBED GRADE. EACH PLANT PIT SHALL BE BACK FILLED WITH THE FOLLOWING PREPARED SOIL MIXED THOROUGHLY:
      - 1 PART PEAT MOSS BY VOLUME
      - 1 PART COW MANURE BY VOLUME
      - 3 PARTS TOPSOIL BY VOLUME
      - 21 GRAM 'AGRIFORM' PLANTING TABLETS AS FOLLOWS:
        - 2 TABLETS PER 1 GAL. PLANT
        - 3 TABLETS PER 5 GAL. PLANT
        - 4 TABLETS PER 15 GAL. PLANT
        - LARGER PLANTS (2) TWO TABLETS PER 1/2" DIAM. OF TRUNK CALIPER

   B. PREPARED SOIL SHALL BE TAMPED FIRMLY AT BOTTOM OF PIT. FILL PREPARED SOIL AROUND BALL OF PLANT 1/2 WAY, AND INSERT PLANT TABLETS. COMPLETE BACK FILL AND WATER THOROUGHLY.
   C. ALL PLANTS SHALL BE SET SO THAT, THEY BEAR THE SAME RELATION TO THE REQUIRED GRADE AS THEY BORE TO THE NATURAL GRADE BEFORE BEING TRANSPLANTED.
   D. PREPARE RAISED EARTH BASIN AS WIDE AS PLANTING HOLE OF EACH TREE.
   E. WATER IMMEDIATELY AFTER PLANTING. WATER SHALL BE APPLIED TO EACH TREE AND SHRUB IN SUCH MANNER AS NOT TO DISTURB BACK FILL AND TO THE EXTENT THAT ALL MATERIALS IN THE PLANTING HOLE ARE THOROUGHLY SATURATED.
   F. PRUNE ALL PROPOSED TREES DIRECTLY ADJACENT TO WALKWAYS TO A MIN. OF 7' BRANCHING HEIGHT.
9. GROUND COVER
   A. ALL GROUND COVER AREAS SHALL RECEIVE A 1/4" LAYER OF HUMUS RAKED INTO THE TOP 1" OF PREPARED SOIL PRIOR TO PLANTING GROUND COVER.
   B. SPACING AND VARIETY OF GROUND COVER SHALL BE AS SHOWN ON DRAWINGS.
   C. IMMEDIATELY AFTER PLANTING GROUND COVER, CONTRACTOR SHALL THOROUGHLY WATER GROUND COVER.
   D. ALL GROUND COVER AREAS SHALL BE TREATED WITH A PRE-EMERGENT BEFORE FINAL LANDSCAPE INSPECTION. GROUND COVER AREAS SHALL BE WEEDED PRIOR TO APPLYING PRE-EMERGENT. PRE-EMERGENT TO BE APPLIED AS PER MANUFACTURER'S RECOMMENDATION.
10. FINISH GRADING
   A. ALL AREAS WILL BE RECEIVED BY THE CONTRACTOR AT SUBSTANTIALLY PLUS/MINUS .1 FOOT OF FINISH GRADE.
   B. ALL LAWN AND PLANTING AREAS SHALL BE GRADED TO A SMOOTH, EVEN AND UNIFORM PLANE WITH NO ABRUPT CHANGE OF SURFACE, UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. SOIL AREAS ADJACENT TO THE BUILDINGS SHALL SLOPE AWAY.
   C. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED TO ALLOW FREE FLOW OF SURFACE WATER.
11. GUARANTEE
   A. CONTRACTOR SHALL GUARANTEE ALL PLANTS FOR A PERIOD OF TWO (2) YEARS FROM ACCEPTANCE OF JOB. OWNER TO SECURE A MAINTENANCE BOND FROM THE CONTRACTOR FOR TEN PERCENT (10%) OF THE VALUE OF THE LANDSCAPE INSTALLATION WHICH WILL BE RELEASED AT THE COMMENCEMENT OF THE GUARANTEE PERIOD AND PASSES A FINAL INSPECTION BY THE OWNER OR OWNERS REPRESENTATIVE.
12. CLEANUP
   A. UPON THE COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
   B. MAINTAIN TREES, SHRUBS AND OTHER PLANTS BY PRUNING, CULTIVATING AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY WITH HERBICIDE AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE.
   C. MAINTAIN LAWNS BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND OTHER OPERATIONS SUCH AS ROLLING, REGRADING AND REPLANTING AS REQUIRED TO ESTABLISH A SMOOTH, ACCEPTABLE LAWN, FREE OF ERODED OR BARE AREAS.
13. MAINTENANCE (ALTERNATE BID) COST PER MONTH AFTER INITIAL 90-DAY MAINTENANCE PERIOD.

SEEDING SPECIFICATIONS

1. PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 2" DIAMETER.
2. PRIOR TO SEEDING, CONSULT MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS.
3. SEEDING RATES:

PERENNIAL RYEGRASS	1/2 LB/1,000 SQ FT
KENTUCKY BLUEGRASS	1 LB/1,000 SQ FT
RED FESCUE	1 1/2 LBS/1,000 SQ FT
SPREADING FESCUE	1 1/2 LBS/1,000 SQ FT
FERTILIZER (20:10:10)	14 LBS/1,000 SQ FT
MULCH	90 LBS/1,000 SQ FT

4. GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED BY OWNER.

SEE SHEET 15 OF 22 FOR LANDSCAPE PLAN DETAILS

GRAPHIC SCALE
-20 0 10 20 40 80
(IN FEET)
1 INCH = 20 FT.

Plotted: 11/14/23 – 8:31 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\44472201334SL2.dwg, ---> 08 LANDSCAPE PLAN

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: –

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN–FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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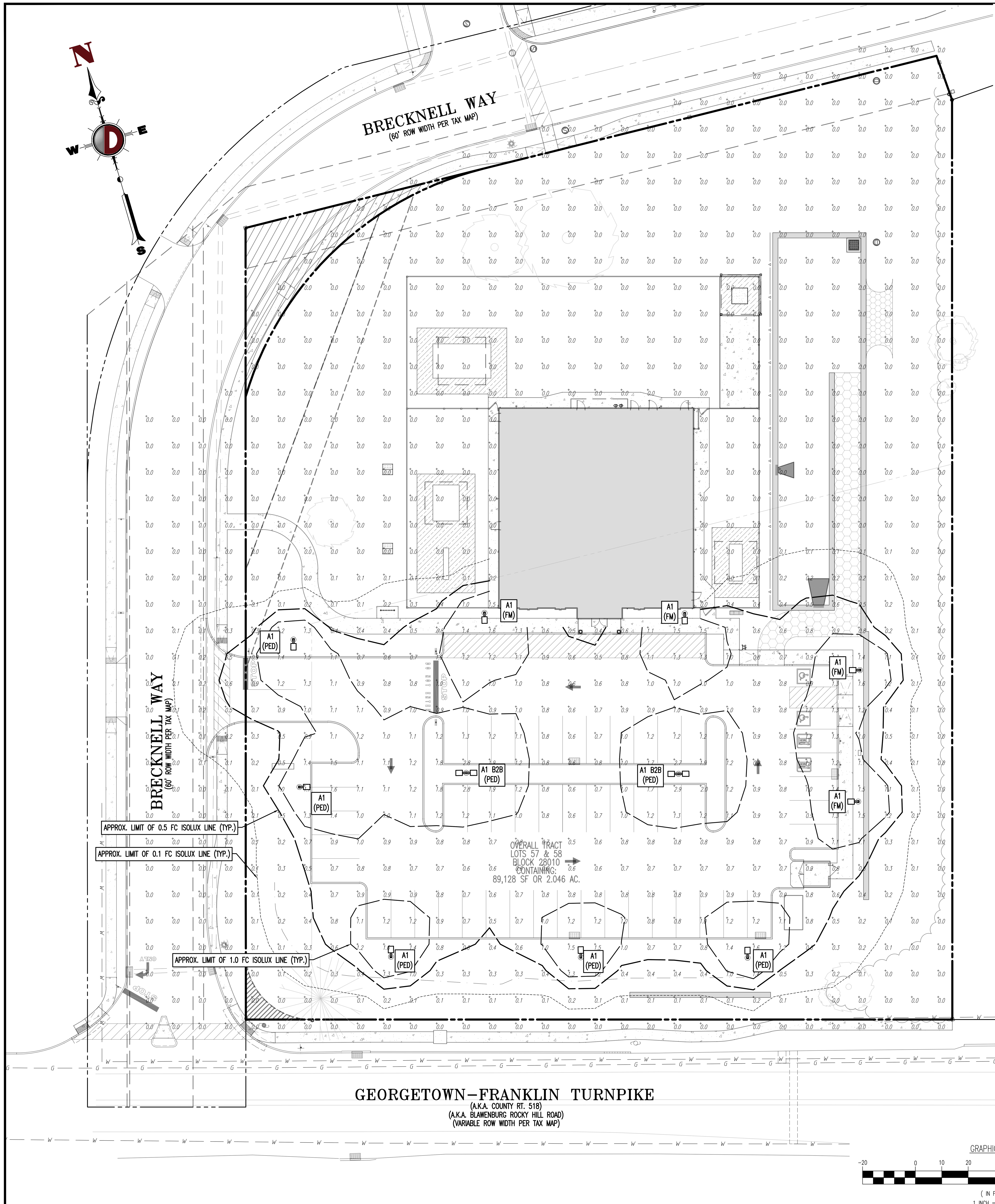
TITLE: LANDSCAPE PLAN

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 8 OF 22 | Rev. #: 2

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY



GENERAL NOTES

1. THIS LIGHTING PLAN ILLUSTRATES ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) APPROVED METHODS. ACTUAL SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINARIES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER RELATED VARIABLE FIELD CONDITIONS.
2. ALL EXISTING CONDITIONS LIGHTING LEVELS ARE REPRESENTATIVE OF AN APPROXIMATION UTILIZING LABORATORY DATA FOR SIMILAR FIXTURES AND/OR ACTUAL FIELD MEASUREMENTS TAKEN WITH A LIGHT METER. DUE TO FACTORS SUCH AS FIXTURE MAINTENANCE, EQUIPMENT TOLERANCES, WEATHER CONDITIONS, ETC., ACTUAL LIGHTING LEVELS MAY DIFFER AND THE LIGHTING LEVELS DEPICTED ON THIS PLAN SHOULD BE CONSIDERED AS APPROXIMATE.
3. CONDUITS SHALL BE INSTALLED A MINIMUM OF 2 FEET BEHIND GUIDERAIL POSTS.
4. ALL WIRING METHODS AND EQUIPMENT CONSTRUCTION SHALL CONFORM TO THE CURRENT NATIONAL ELECTRICAL CODE.
5. REFER TO ARCHITECTURAL PLANS FOR SITE WIRING DIAGRAM.
6. THIS PLAN IS PREPARED SPECIFICALLY TO ANALYZE THE LIGHTING LEVELS GENERATED BY THE PROPOSED ON-SITE LIGHTING ONLY. EXISTING LIGHT FIXTURES BEYOND THE EXTENTS OF THIS DEVELOPMENT/PROPERTY ARE NOT MODELED IN THIS DESIGN, AND MAY ALTER ACTUAL LIGHT LEVELS AT THE PROPERTY LINES.
7. ALL SITE LIGHTING WILL BE TURNED OFF AFTER BUSINESS HOURS.

STATISTICAL AREA SUMMARY

LABEL	AVERAGE	MAXIMUM	MINIMUM	AVG./MIN.	MAX./MIN.	DESCRIPTION
PAVEMENT AREA	1.00	2.90	0.50	2.00	5.80	LIGHT LEVELS WITHIN PAVEMENT AREA
INTERSECTIONS	1.00	1.20	0.80	1.25	1.50	LIGHT LEVELS AT DRIVEWAY INETERSECTIONS

LIGHTING LUMINAIRE SCHEDULE

SYMBOL	QUANTITY	LABEL	MOUNTING HEIGHT	ARRANGEMENT	LIGHT LOSS FACTOR	MANUFACTURER	DESCRIPTION	TEMPERATURE	IES FILE
	9	A1	16 FT	SINGLE	1.000	COOPER LIGHTING SOLUTIONS	MEDIUM TYPE 4 POLE MOUNTED LIGHT	3000K	MEM-E01-LED-E-U-T4-7030
	2	A1 B2B	16 FT	BACK-TO-BACK	1.000	COOPER LIGHTING SOLUTIONS	MEDIUM TYPE 4 POLE MOUNTED LIGHT	3000K	MEM-E01-LED-E-U-T4-7030

ISO CURVES ARE MAINTAINED AND SHOWN AT 0.5 AND 0.1 FC.

(FM) – FLUSH MOUNT FOUNDATION (PED) – PEDESTAL FOUNDATION

THE CALCULATIONS SHOWN WERE MADE UTILIZING ACCEPTED PROCEDURES OF THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA. VARIATIONS IN LAMP OUTPUT, BALLAST OUTPUT, LINE VOLTAGE, DIRT DEPRECIATION, AND OTHER FACTORS MAY AFFECT ACTUAL RESULTS. UNLESS OTHERWISE STATED, ALL RESULTS ARE MAINTAINED VALUES, UTILIZING ACCEPTED LIGHT LOSS FACTORS (LLF).

SEE SHEET 15 OF 22 FOR LIGHTING DETAILS

GRAPHIC SCALE

-20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT.

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2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
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DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: –

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
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JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
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TITLE: LIGHTING PLAN

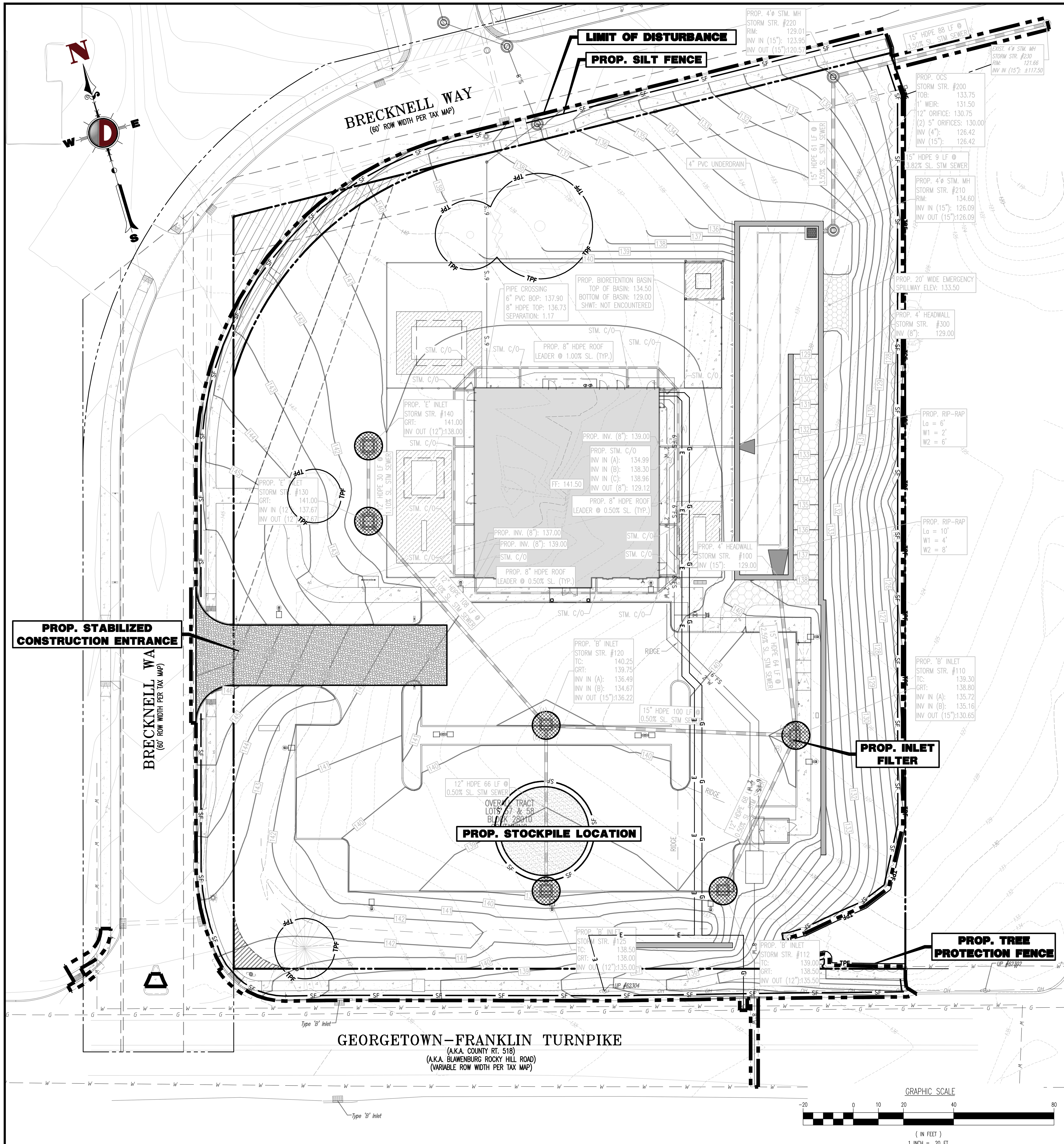
SCALE: (H) 1"=20' (V) | DATE: 08/17/2023

PROJECT No: 4447-22-01334

SHEET No: 9 OF 22 | Rev. #: 2

Plotted: 11/14/23 – 8:31 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SI2.dwg. ---> 09 LIGHTING PLAN

THIS PLAN TO BE UTILIZED FOR SOIL EROSION & SEDIMENT CONTROL PURPOSES ONLY



SEE SHEET 12 OF 22 FOR SOIL EROSION NOTES & DETAILS

LIMIT OF DISTURBANCE = 97,778 SF. (2.24 Ac.)

EROSION CONTROL LEGEND

- PROP. LIMIT OF DISTURBANCE LINE
- PROP. SILT FENCE LINE
- PROP. TREE PROTECTION FENCE LINE
- PROP. INLET FILTER
- PROP. HAYBALE SEDIMENT BARRIER

GRAPHIC SCALE

-20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT.

Plotted: 11/14/23 – 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\044472201334S02.dwg, ---> 10 SOIL EROSION AND SEDIMENT CONTROL PLAN

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY:	DESIGNED BY:	CHECKED BY:	CHECKED BY:
KTK	AF	JSH	–

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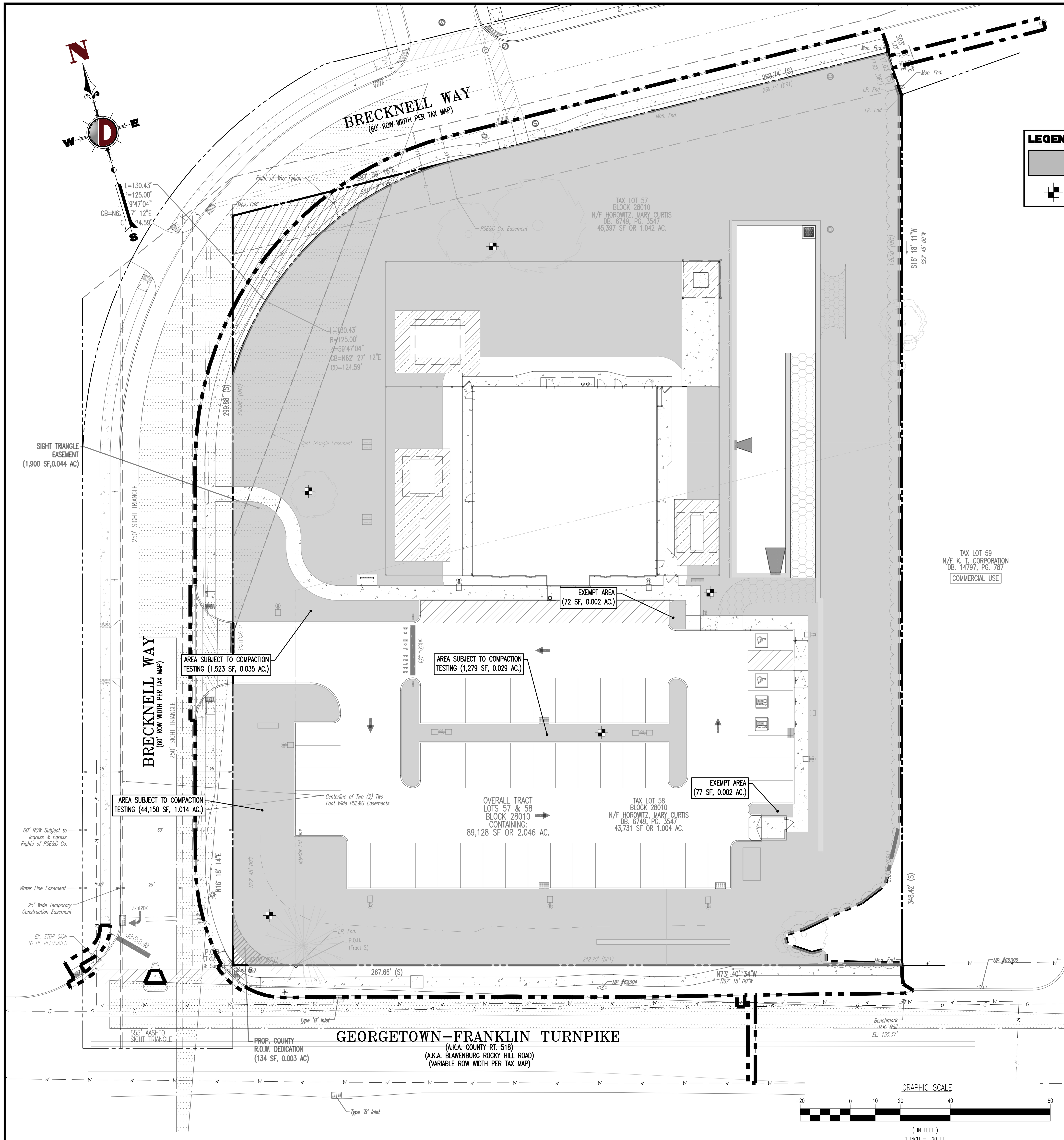
TITLE:
SOIL EROSION AND SEDIMENT CONTROL PLAN

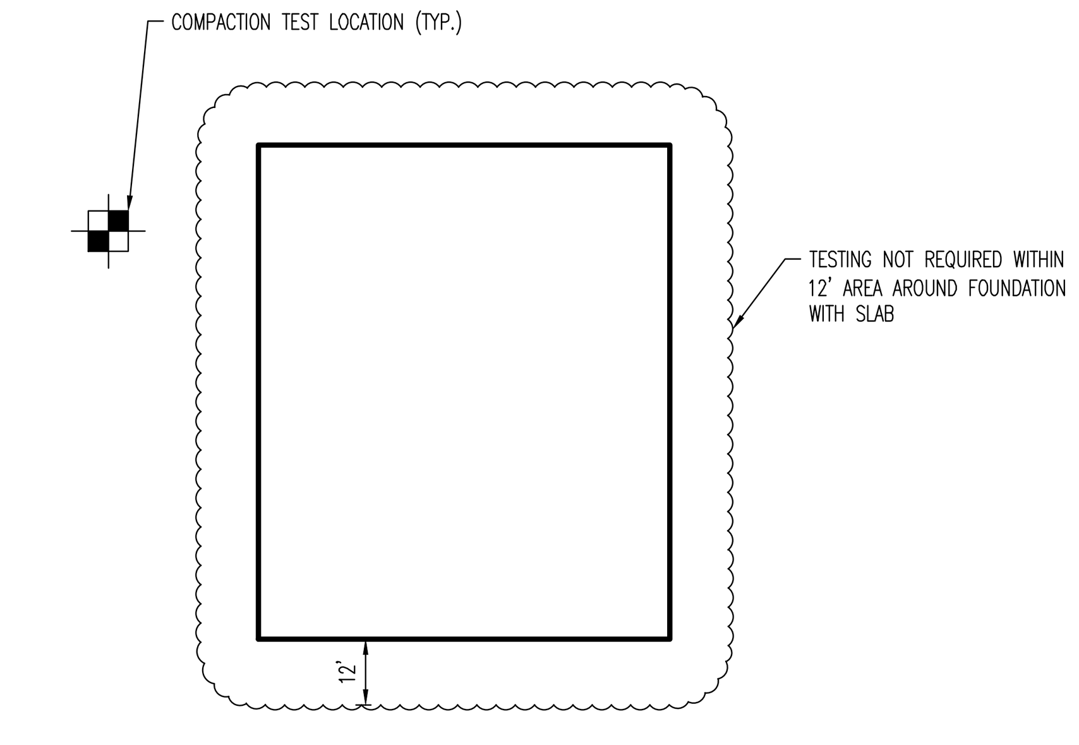
SCALE: (H) 1"=20' (V)
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 10 OF 22
Rev. #: 2



LEGEND

- SOIL COMPACTION TESTING AREAS
- RECOMMENDED SOIL COMPACTION TEST LOCATION (APPROX. 1 / .5 ACRE)



NOTE:
SOIL COMPACTION TESTING LOCATIONS IDENTIFIED ARE RECOMMENDED LOCATIONS FOR GRADING/DISTURBED AREAS WITHIN THE VICINITY OF BUILDINGS OR STRUCTURES OR ON INDIVIDUAL LOTS. FOR GRADED/DISTURBED AREAS WITHIN OPEN OR COMMON SPACES, SOIL COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE FREQUENCY LISTED IN THIS LEGEND (THIS SHEET).

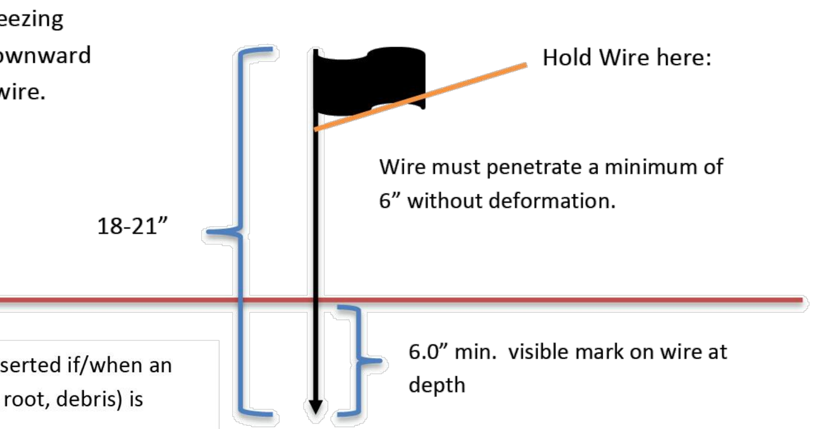
TYPICAL SOIL COMPACTION TESTING LOCATION DETAIL

SOIL COMPACTION MITIGATION NOTES

1. PROCEDURES SHALL BE USED TO MITIGATE EXCESSIVE SOIL COMPACTION PRIOR TO PLACEMENT OF TOPSOIL AND ESTABLISHMENT OF PERMANENT VEGETATIVE COVER.
2. 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 SPECIFICED BY A NEW JERSEY LICENSED PROFESSIONAL ENGINEER MAY BE SUBSTITUTED SUBJECT TO DISTRICT APPROVAL.
3. SOIL COMPACTION TESTING IS NOT REQUIRED IF/WHEN SUBSOIL COMPACTION REMEDIATION (SCARIFICATION/TILLAGE 6" MINIMUM DEPTH) IS PROPOSED AS PART OF THE SEQUENCE OF CONSTRUCTION.

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

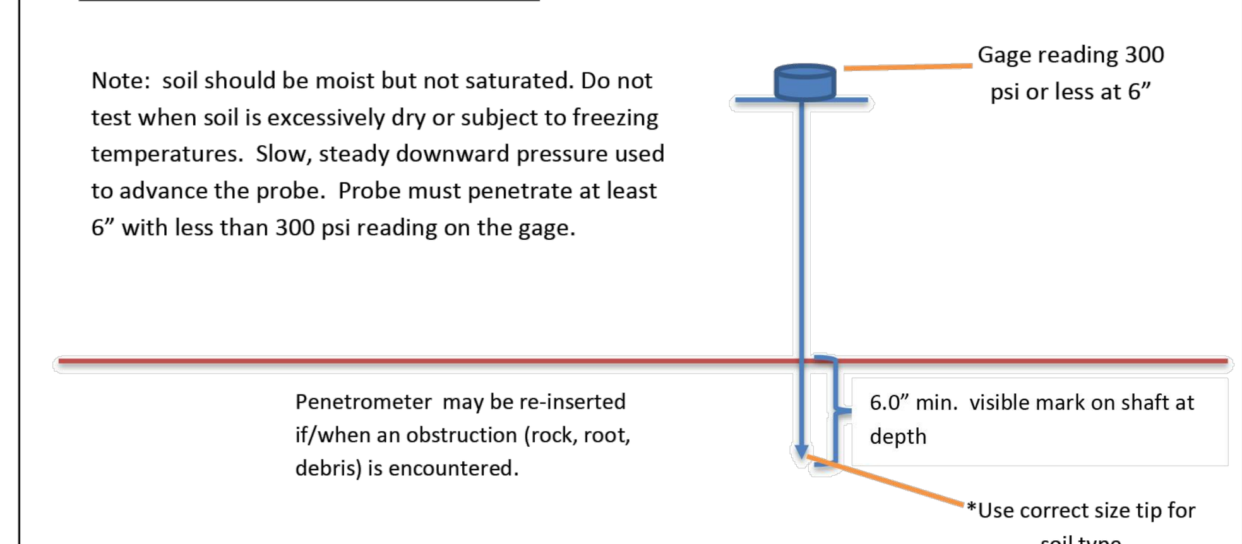
Note: soil should be moist but not saturated. Do not test when soil is excessively dry or subject to freezing temperatures. Slow, steady downward pressure used to advance the wire.



Wire may be re-inserted if/when an obstruction (rock, root, debris) is encountered.

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.



Penetrometer may be re-inserted if/when an obstruction (rock, root, debris) is encountered.

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.

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TITLE: SOIL MANAGEMENT PLAN

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 11 OF 22 | Rev. #: 2

Plotted: 11/14/23 – 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22–01334 montgomery\Dwg\Site Plans\04447221334SM2.dwg, ---> 11 SOIL MANAGEMENT PLAN

SOMERSET-UNION SOIL CONSERVATION DISTRICT SOIL EROSION & SEDIMENT CONTROL NOTES:

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE INSTALLED PRIOR TO ANY MAJOR SOIL DISTURBANCES, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY 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 ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW, OR EQUIVALENT MATERIAL, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO NJ STATE STANDARDS.
3. PERMANENT VEGETATION SHALL BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH WILL BE USED FOR PROTECTION UNTIL SEEDING IS ESTABLISHED.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NJ STATE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, 7TH EDITION LAST REVISED JANUARY 2014
5. A SUB-BASE 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 SUB-BASE SHALL BE INSTALLED WITHIN 15 DAYS OR PRELIMINARY GRADING.
6. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING ALL CRITICAL AREAS SUBJECT TO EROSION (I.E.: STEEP SLOPES, ROADWAY EMBANKMENTS) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF TWO (2) TONS PER ACRE, ACCORDING TO THE NJ STATE STANDARDS.
7. ANY STEEP SLOPES RECEIVING PIPELINE INSTALLATION WILL BE BACKFILLED AND STABILIZED DAILY, AS THE INSTALLATION PROCEEDS (I.E.: SLOPES GREATER THAT 3:1)
8. TRAFFIC CONTROL STANDARDS REQUIRE THE INSTALLATION OF A 50'X30'X6'PAD OF 1 $\frac{1}{2}$" OR 2" STONE, AT ALL CONSTRUCTION DRIVEWAYS, IMMEDIATELY AFTER INITIAL SITE DISTURBANCE.
9. THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED IN WRITING 48 HOURS IN ADVANCE OF ANY LAND DISTURBING ACTIVITY.
10. 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 PROVIDESUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES.
11. IN THAT NJSA 4:24-39 ET SEQ., REQUIRES THAT NO CERTIFICATE OF OCCUPANCY BE ISSUED BEFORE THE PROVISIONS OF THE CERTIFIED PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAVE BEEN COMPLIED WITH FOR 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.
12. CONDUIT OUTLET PROTECTION MUST BE INSTALLED AT ALL REQUIRED OUTFALLS PRIOR TO THE DRAINAGE SYSTEM BECOMING OPERATIONAL.
13. ANY CHANGES TO THE CERTIFIED SOIL EROSION AND SEDIMENT CONTROL PLAN WILL REQUIRE THE SUBMISSION OF REVISED SOIL EROSION AND SEDIMENT CONTROL PLANS TO THE DISTRICT FOR RE-CERTIFICATION. THE REVISED PLANS MUST MEET ALL CURRENT NJ STATE SOIL EROSION & SEDIMENT CONTROL STANDARDS.
14. THE SOMERSET-UNION SOIL CONSERVATION DISTRICT SHALL BE NOTIFIED OF ANY CHANGES IN OWNERSHIP.
15. MULCHING TO THE NJ STANDARDS IS REQUIRED FOR OBTAINING A CONDITIONAL REPORT OF COMPLIANCE. CONDITIONALS ARE ONLY ISSUED WHEN THE SEASON PROHIBITS SEEDING.
16. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL ADJACENT ROADS CLEAN DURING LIFE OF CONSTRUCTION PROJECT.
17. THE DEVELOPER SHALL BE RESPONSIBLE FOR REMEDIATING ANY EROSION OR SEDIMENT PROBLEMS THAT ARISE AS A RESULT OF ONGOING CONSTRUCTION AT THE REQUEST OF THE SOMERSET-UNION SOIL CONSERVATION DISTRICT.
18. HYDRO SEEDING IS A TWO- STEP PROCESS. THE FIRST STEP INCLUDES SEED, FERTILIZER, LIME, ETC., ALONG WITH MINIMAL AMOUNTS OF MULCH TO PROMOTE CONSISTENCY, GOOD SEED TO SOIL CONTACT, AND GIVE A VISUAL INDICATION OF COVERAGE. UPON COMPLETION OF SEEDING OPERATION, HYDRO-MULCH SHOULD BE APPLIED AT A RATE OF 1500 LBS. PER ACRE IN SECOND STEP. THE USE OF HYDRO-MULCH, AS OPPOSED TO STRAW, IS LIMITED TO OPTIMUM SEEDING DATES AS LISTED IN THE NJ STANDARDS.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARD FOR LAND GRADING.
   B. IMMEDIATELY PRIOR TO SEEDING AND TOPSOIL APPLICATION, THE SUBSOIL SHALL BE EVALUATED FOR COMPACTION IN ACCORDANCE WITH THE STANDARD FOR LAND GRADING.
   C. TOPSOIL SHOULD BE HANDLED ONLY WHEN IT IS DRY ENOUGH TO WORK WITHOUT DAMAGING THE SOIL STRUCTURE. A UNIFORM APPLICATION TO A DEPTH OF 5 INCHES (UNSETTLED) IS REQUIRED ON ALL SITES. TOPSOIL SHALL BE AMENDED WITH ORGANIC MATTER, AS NEEDED, IN ACCORDANCE WITH THE STANDARD FOR TOPSOILING.
   D. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE-STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS.

2. SEEDBED PREPARATION
   A. UNIFORMLY APPLY GROUND LIMESTONE AND FERTILIZER TO TOPSOIL WHICH HAS BEEN SPREAD AND FIRMED, ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES (HTTP://NJAES.RUTGERS.EDU/COUNTY/).
   - FERTILIZER SHALL BE APPLIED AT THE RATE OF 500 POUNDS PER ACRE OR 11 POUNDS PER 1,000 SQUARE FEET OF 10-10-10 OR EQUIVALENT WITH 50% WATER INSOLUBLE NITROGEN UNLESS A SOIL TEST INDICATES OTHERWISE AND INCORPORATED INTO THE SURFACE 4 INCHES. IF FERTILIZER IS NOT INCORPORATED, APPLY ONE-HALF THE RATE DESCRIBED ABOVE DURING SEEDBED PREPARATION AND REPEAT ANOTHER ONE-HALF RATE APPLICATION OF THE SAME FERTILIZER WITHIN 3 TO 5 WEEKS AFTER SEEDING.
   B. WORK LIME AND FERTILIZER INTO THE TOPSOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRING-TOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   C. HIGH ACID PRODUCING SOIL. 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 INITIATING SEEDBED REPARATION. SEE STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS FOR SPECIFIC REQUIREMENTS.

3. SEEDING
   A. PERMANENT VEGETATIVE MIXTURES & PLANTING RATES

GENERAL LAWN AREAS (SCD MIX 13 FROM TABLE 4)

(1) HARD FESCUE AND/OR CHEWING FESCUE AND/OR STRONG CREEPING RED FESCUE –	175 LBS/ACRE	4 LBS/1000 SQ.FT.
(2) PERENNIAL RYEGRASS –	45 LBS/ACRE	1 LBS/1000 SQ.FT.
(3) KENTUCKY BLUEGRASS (BLEND) –	45 LBS/ACRE	1 LBS/1000 SQ.FT.

BASIN AREAS (SCD MIX 9 FROM TABLE 4)

(1) DEER TONGUE –	20 LBS/ACRE	0.45 LBS/1000 SQ.FT.
(2) REDTOP –	2 LBS/ACRE	0.05 LBS/1000 SQ.FT.
(3) WILD RYE (ELYMUS) –	15 LBS/ACRE	0.35 LBS/1000 SQ.FT.
(4) SWITCHGRASS –	25 LBS/ACRE	0.60 LBS/1000 SQ.FT.

   B. CONVENTIONAL SEEDING IS PERFORMED BY APPLYING SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. EXCEPT FOR DRILLED, HYDROSEEDED OR CULTIPACKED SEEDINGS, SEED SHALL BE INCORPORATED INTO THE SOIL WITHIN 24 HOURS OF SEEDBED PREPARATION TO A DEPTH OF 1/4 TO 1/2 INCH, BY RAKING OR DRAGGING. DEPTH OF SEED PLACEMENT MAY BE 1/4 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.
   D. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK, OR TRAILER-MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORTFIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION 4-MULCHING BELOW). HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. WHEN POOR SEED TO SOIL CONTACT OCCURS, THERE IS A REDUCED SEED GERMINATION AND GROWTH.

4. MULCHING

   MULCHING IS REQUIRED ON ALL SEEDING. MULCH WILL PROTECT AGAINST EROSION BEFORE GRASS IS ESTABLISHED AND WILL PROMOTE FASTER AND EARLIER ESTABLISHMENT. THE EXISTENCE OF VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

   A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, APPLIED AT THE RATE OF 1.5 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 IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

   APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 85% 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.

   ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS IN ACCORDANCE WITH THE STATE STANDARDS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COST.
1. PEG AND TWINE
2. MULCH NETTINGS
3. CRIMPER MULCH ANCHORING COULTER TOOL
4. LIQUID MULCH-BINDERS

   B. WOOD-FIBER OR PAPER-FIBER MULCH - SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PRODUCT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

   C. PELLETIZED MULCH - COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS, AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS/1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEEDSEED FREE MULCH IS DESIRED, OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE. APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

STANDARD FOR STABILIZATION WITH MULCH ONLY

1. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING.
   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
2. PROTECTIVE MATERIALS
   A. UNROTTED SMALL-GRAIN STRAW, AT 2.0 TO 2.5 TONS PER ACRE, IS SPREAD UNIFORMLY AT 90 TO 115 POUNDS PER 1,000 SQUARE FEET AND ANCHORED WITH A MULCH ANCHORING TOOL, LIQUID MULCH BINDERS, OR NETTING TIE DOWN. OTHER SUITABLE MATERIALS MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT. THE APPROVED RATES ABOVE HAVE BEEN MET WHEN THE MULCH COVERS THE GROUND COMPLETELY UPON VISUAL INSPECTION, I.E. THE SOIL CANNOT BE SEEN BELOW THE MULCH.
   B. SYNTHETIC OR ORGANIC SOIL STABILIZERS MAY BE USED UNDER SUITABLE CONDITIONS AND IN QUANTITIES AS RECOMMENDED BY THE MANUFACTURER.
   C. WOOD-FIBER OR PAPER-FIBER MULCH AT THE RATE OF 1,500 POUNDS PER ACRE (OR ACCORDING TO THE MANUFACTURER'S REQUIREMENTS) MAY BE APPLIED BY A HYDROSEEDER.
   D. MULCH NETTING, SUCH AS PAPER JUTE, EXCELSIOR, COTTON, OR PLASTIC, MAY BE USED.
   E. WOODCHIPS APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 2 INCHES MAY BE USED. WOODCHIPS WILL NOT BE USED ON AREAS WHERE FLOWING WATER COULD WASH THEM INTO AN INLET AND PLUG IT.
   F. GRAVEL, CRUSHED STONE, OR SLAG AT THE RATE OF 9 CUBIC YARDS PER 1,000 SQ. FT. APPLIED UNIFORMLY TO A MINIMUM DEPTH OF 3 INCHES MAY BE USED. SIZE 2 OR 3 (ASTM C-33) IS RECOMMENDED.
3. MULCH ANCHORING - SHOULD BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF HAY OR STRAW MULCH TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS IN ACCORDANCE WITH THE STATE STANDARDS, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.
   A. PEG AND TWINE
   B. MULCH NETTINGS
   C. CRIMPER MULCH ANCHORING COULTER TOOL
   D. LIQUID MULCH-BINDERS

STANDARD FOR DUST CONTROL

DEFINITION
THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

PURPOSE
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON-AND OFF- SITE DAMAGE AND HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

WHERE APPLICABLE
THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES - SEE STANDARDS FOR STABILIZATION WITH MULCHES ONLY
VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER, PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD.
SPRAY-ON ADHESIVES - ON MINERAL SOILS (NO EFFECTIVE ON MOCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT	7:1	COARSE SPRAY	1,200
EMULSION			
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300

TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING- TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING - SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE - SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.

STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

1. SITE PREPARATION
   A. GRADE AS NEEDED AND FEASIBLE TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. ALL GRADING SHOULD BE DONE IN ACCORDANCE WITH STANDARDS FOR LAND GRADING, PG. 19-1.
   B. INSTALL NEEDED EROSION CONTROL PRACTICES OR FACILITIES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, CHANNEL STABILIZATION MEASURES, SEDIMENT BASINS, AND WATERWAYS. SEE STANDARDS 11 THROUGH 42.
   C. IMMEDIATELY PRIOR TO SEEDING, THE SURFACE SHOULD BE SCARIFIED 6" TO 12" WHERE THERE HAS BEEN SOIL COMPACTION. THIS PRACTICE IS PERMISSIBLE ONLY WHERE THERE IS NO DANGER TO UNDERGROUND UTILITIES (CABLES, IRRIGATION SYSTEMS, ETC.).

2. SEEDBED PREPARATION
   A. APPLY GROUND LIMESTONE AND FERTILIZER ACCORDING TO SOIL TEST RECOMMENDATIONS SUCH AS OFFERED BY RUTGERS CO-OPERATIVE EXTENSION. SOIL SAMPLE MAILERS ARE AVAILABLE FROM THE LOCAL RUTGERS COOPERATIVE EXTENSION OFFICES.
   - FERTILIZER SHALL 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.
   - CALCIUM CARBONATE IS THE EQUIVALENT AND STANDARD FOR MEASURING THE ABILITY OF LIMING MATERIALS TO NEUTRALIZE SOIL ACIDITY AND SUPPLY CALCIUM AND MAGNESIUM TO GRASSES AND LEGUMES.
   B. WORK LIME AND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISKING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLE UNIFORM SEEDBED IS PREPARED.
   C. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACTED, THE AREA MUST BE RETILED IN ACCORDANCE WITH THE ABOVE.
   D. SOILS HIGH IN SULFIDES OR HAVING A PH OF 4 OR LESS REFER TO STANDARD FOR MANAGEMENT OF HIGH ACID PRODUCING SOILS, PG. 1-1.

3. SEEDING
   A. TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTHS
   -COOL SEASON GRASSES:
   (1) PERENNIAL RYEGRASS – 100 LBS / ACRE; PLANT BETWEEN MARCH 1 AND MAY 15 BETWEEN AUGUST 15 AND OCTOBER 1; AT A DEPTH OF 0.5 INCHES.
   (2) SPRING OATS – 86 LBS / ACRE; PLANT BETWEEN MARCH 1 AND MAY 15 BETWEEN AUGUST 15 AND OCTOBER 1; AT A DEPTH OF 1.0 INCHES.
   (3) WINTER BARLEY – 96 LBS / ACRE; PLANT BETWEEN AUGUST 15 AND OCTOBER 1; AT A DEPTH OF 1.0 INCHES.
   (4) ANNUAL RYEGRASS – 100 LBS / ACRE; PLANT BETWEEN MARCH 1 AND JUNE 15 BETWEEN AUGUST 1 AND SEPTEMBER 15; AT A DEPTH OF 0.5 INCHES.
   (5) WINTER CEREAL RYE – 112 LBS / ACRE; PLANT BETWEEN AUGUST 1 AND NOVEMBER 15; AT A DEPTH OF 1.0 INCHES.

   -WARM SEASON GRASSES:
   (1) PEARL MILLET – 20 LBS / ACRE; PLANT BETWEEN MAY 15 AND AUGUST 15; AT A DEPTH OF 1.0 INCHES.
   (2) MILLET (GERMAN OR HUNGARIAN) – 30 LBS / ACRE; PLANT BETWEEN MAY 15 AND AUGUST 15; AT A DEPTH OF 1.0 INCHES.
   B. CONVENTIONAL SEEDING. APPLY SEED UNIFORMLY BY HAND, CYCLONE (CENTRIFUGAL) SEEDER, DROP SEEDER, DRILL OR CULTIPACKER SEEDER. 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 1/4 INCH DEEPER ON COARSE TEXTURED SOIL.
   C. HYDROSEEDING IS A BROADCAST SEEDING METHOD USUALLY INVOLVING A TRUCK OR TRAILER MOUNTED TANK, WITH AN AGITATION SYSTEM AND HYDRAULIC PUMP FOR MIXING SEED, WATER AND FERTILIZER AND SPRAYING THE MIX ONTO THE PREPARED SEEDBED. MULCH SHALL NOT BE INCLUDED IN THE TANK WITH SEED. SHORT FIBERED MULCH MAY BE APPLIED WITH A HYDROSEEDER FOLLOWING SEEDING. (ALSO SEE SECTION IV MULCHING) HYDROSEEDING IS NOT A PREFERRED SEEDING METHOD BECAUSE SEED AND FERTILIZER ARE APPLIED TO THE SURFACE AND NOT INCORPORATED INTO THE SOIL. POOR SEED TO SOIL CONTACT OCCURS REDUCING SEED GERMINATION AND GROWTH. HYDROSEEDING MAY BE USED FOR AREAS TOO STEEP FOR CONVENTIONAL EQUIPMENT TO TRAVERSE OR TOO OBSTRUCTED WITH ROCKS, STUMPS, ETC.
   D. 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.

4. 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 VEGETATION SUFFICIENT TO CONTROL SOIL EROSION SHALL BE DEEMED COMPLIANCE WITH THIS MULCHING REQUIREMENT.

   A. STRAW OR HAY. UNROTTED SMALL GRAIN STRAW, HAY FREE OF SEEDS, 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 IS 3 TONS PER ACRE. MULCH CHOPPER-BLOWERS MUST NOT GRIND THE MULCH. HAY MULCH IS NOT RECOMMENDED FOR ESTABLISHING FINE TURF OR LAWNS DUE TO THE PRESENCE OF WEED SEED.

   APPLICATION. SPREAD MULCH UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 95% 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.

   ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS IN ACCORDANCE WITH THE STATE STANDARDS, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COST.
   1. PEG AND TWINE
   2. MULCH NETTINGS
   3. CRIMPER MULCH ANCHORING COULTER TOOL
   4. LIQUID MULCH-BINDERS

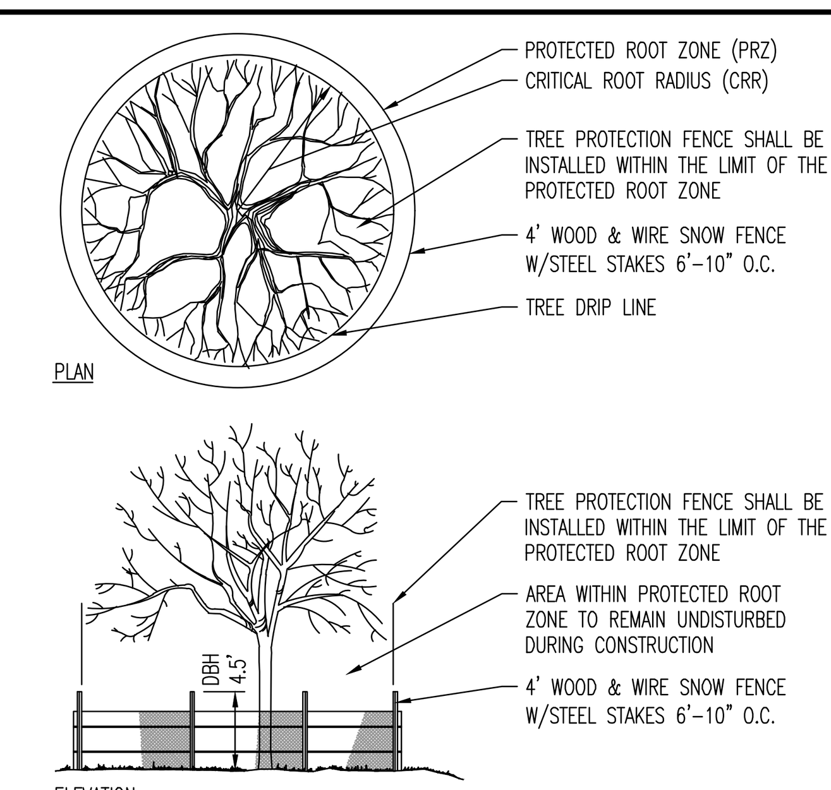
   B. WOOD-FIBER OR PAPER-FIBER MULCH. SHALL BE MADE FROM WOOD, PLANT FIBERS OR PAPER CONTAINING NO GROWTH OR GERMINATION INHIBITING MATERIALS, USED AT THE RATE OF 1,500 POUNDS PER ACRE (OR AS RECOMMENDED BY THE PROJECT MANUFACTURER) AND MAY BE APPLIED BY A HYDROSEEDER. THIS MULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.

   C. PELLETIZED MULCH. COMPRESSED AND EXTRUDED PAPER AND/OR WOOD FIBER PRODUCT, WHICH MAY CONTAIN CO-POLYMERS, TACKIFIERS, FERTILIZERS AND COLORING AGENTS. THE DRY PELLETS, WHEN APPLIED TO A SEEDED AREA AND WATERED, FORM A MULCH MAT. PELLETIZED MULCH SHALL BE APPLIES IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS. MULCH MAY BE APPLIED BY HAND OR MECHANICAL SPREADER AT THE RATE OF 60-75 LBS./1,000 SQUARE FEET AND ACTIVATED WITH 0.2 TO 0.4 INCHES OF WATER. THIS MATERIAL HAS BEEN FOUND TO BE BENEFICIAL FOR USE ON SMALL LAWN OR RENOVATION AREAS, SEEDED AREAS WHERE WEED-SEED FREE MULCH IS DESIRED OR ON SITES WHERE STRAW MULCH AND TACKIFIER AGENT ARE NOT PRACTICAL OR DESIRABLE.

   APPLYING THE FULL 0.2 TO 0.4 INCHES OF WATER AFTER SPREADING PELLETIZED MULCH ON THE SEED BED IS EXTREMELY IMPORTANT FOR SUFFICIENT ACTIVATION AND EXPANSION OF THE MULCH TO PROVIDE SOIL COVERAGE.

SEQUENCE OF CONSTRUCTION:

PHASE 1: INSTALL STONE ANTI-TRACKING PAD AND OTHER SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING DOWN SLOPE PERIMETER HAYBALES, SILT FENCING AND TREE PROTECTION FENCING.
PHASE 2: CLEAR AND ROUGH GRADE FOR NEW BUILDING SITE AND OTHER STRUCTURES REQUIRING EXCAVATION.
PHASE 3: EXCAVATION, CONSTRUCTION, AND STABILIZATION OF DETENTION BASIN(S), EXCAVATE AND INSTALL UNDERGROUND PIPING AND DRAINAGE STRUCTURES.
PHASE 4: EXCAVATE FOR BUILDING FOUNDATION.
PHASE 5: COMPLETE BUILDING CONSTRUCTION.
PHASE 6: EXCAVATE AND INSTALL ON-SITE IMPROVEMENTS INCLUDING CURBING, UNDERGROUND PIPING, AND DRAINAGE STRUCTURES.
PHASE 7: FINAL GRADING ON SITE.
PHASE 8: INSTALL PAVING, CONCRETE, AND FINAL VEGETATION INCLUDING SEEDING AND LANDSCAPING.
PHASE 9: REMOVE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING DOWN SLOPE PERIMETER HAYBALES, SILT FENCING AND TREE PROTECTION FENCING.



ESTIMATE A TREE'S PROTECTED ROOT ZONE (PRZ) BY CALCULATING THE CRITICAL ROOT RADIUS (CRR)
1. MEASURE THE DBH (DIAMETER OF TREE AT BREAST HEIGHT, 4.5' ABOVE GROUND ON THE UPHILL SIDE OF TREE) IN INCHES.
2. MULTIPLY MEASURED DBH BY 1.5 OR 1.0. EXPRESS THE RESULT IN FEET

DBH x 1.5: CRITICAL ROOT RADIUS FOR OLDER, UNHEALTHY, OR SENSITIVE SPECIES.
DBH x 1.0: CRITICAL ROOT RADIUS FOR YOUNGER, HEALTHY OR TOLERANT SPECIES.

TREE PROTECTION DURING SITE CONSTRUCTION DETAIL

NOT TO SCALE

MUNICIPAL, COUNTY, STATE AND MUA DETAILS TO SUPERSEDE DYNAMIC ENGINEERING DETAILS WHERE APPLICABLE

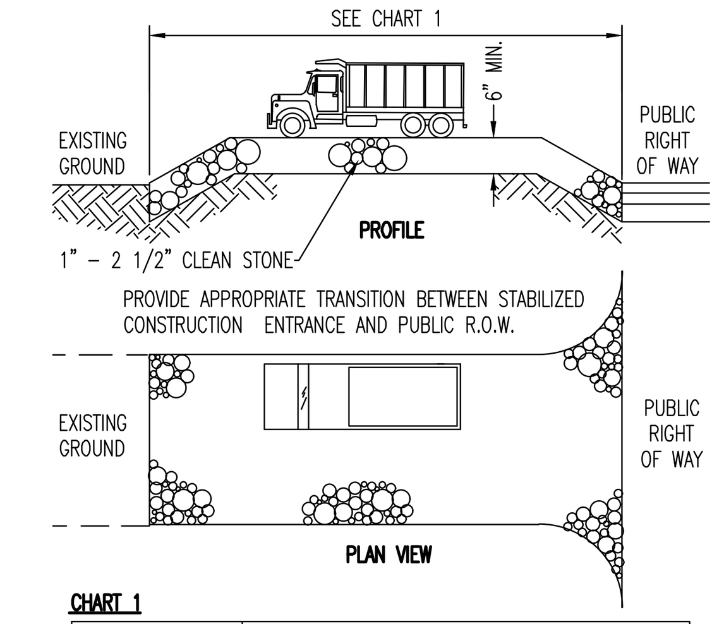


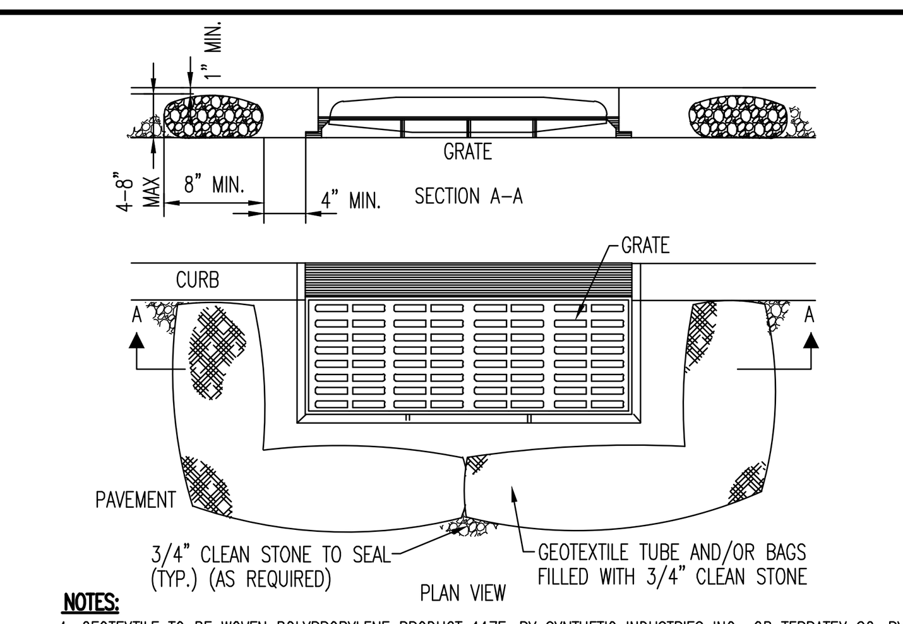
CHART 1

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200 FT
>5%	ENTIRE ENTRANCE STABILIZED WITH FABC BASE COURSE (1)	

(1) AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

STABILIZED CONSTRUCTION ENTRANCE

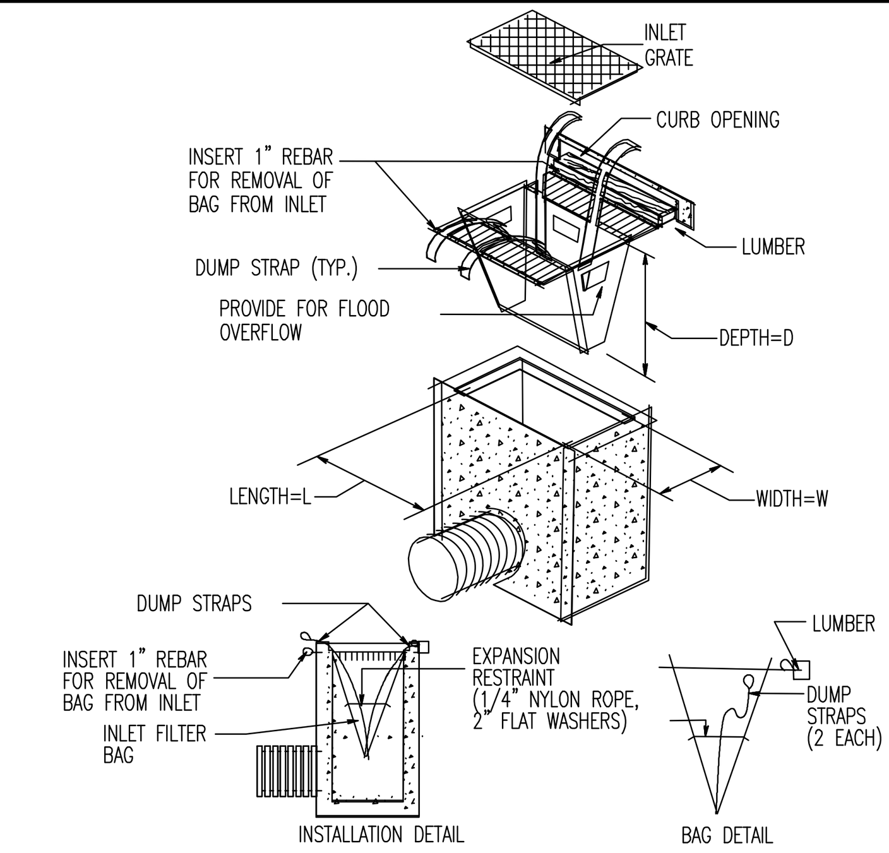
NOT TO SCALE



NOTES:
1. GEOTEXTILE TO BE WOVEN POLYPROPYLENE PRODUCT 117F, BY SYNTHETIC INDUSTRIES INC., OR TERRATEX SC, BY WEBTEC INC., OR APPROVED EQUAL.
2. 3/4" CLEAN STONE CORE SHALL BE COMPLETELY CONTAINED WITHIN GEOTEXTILE. SEAMS SHALL BE SEWN OR CLOSED BY SUITABLE MECHANICAL MEANS TO PREVENT LEAKAGE OF STONE.
3. WHERE NO CURB IS PRESENT, BARRIER SHALL COMPLETELY ENCIRCLE THE DRAIN INLET.
4. INLET GRATE OPENING IS TO BE KEPT CLEAR OF OBSTRUCTIONS AT ALL TIMES.
5. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.
6. OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
7. INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARDS THE INLET HAS BEEN STABILIZED.

INLET FILTER, TYPE 1

NOT FOR USE WITHIN NJDOT RIGHT-OF-WAY

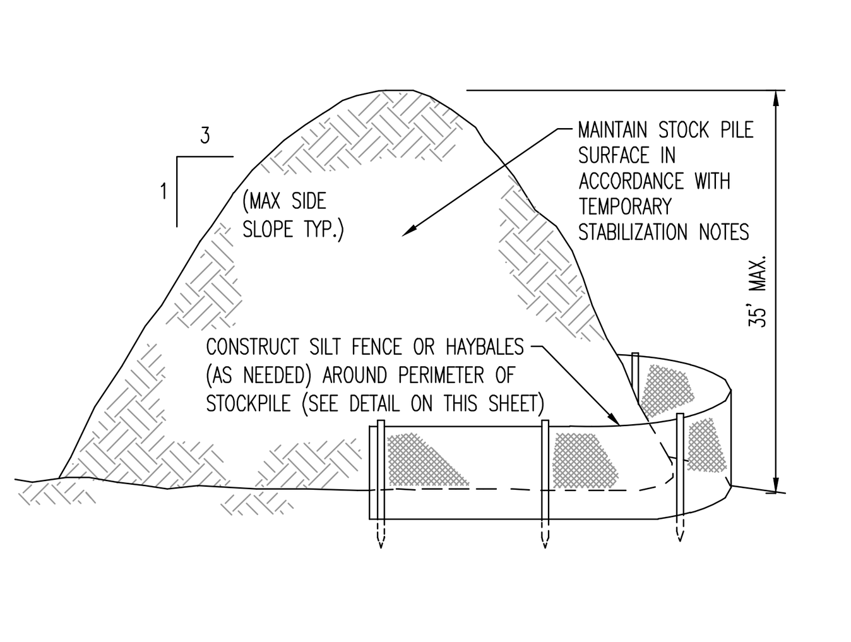


INLET FILTER, TYPE 2

ACCEPTABLE FOR USE WITHIN NJDOT RIGHT-OF-WAY

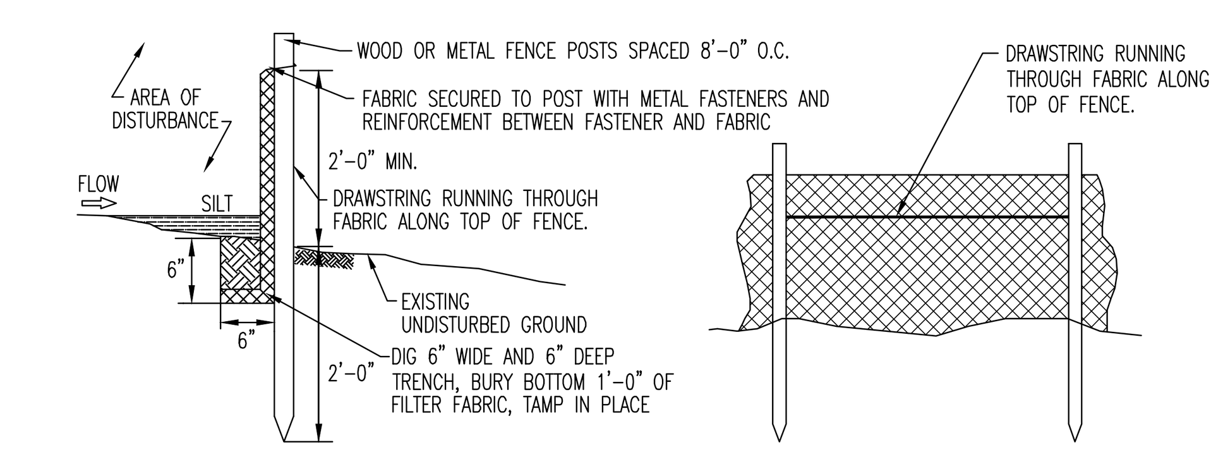
INLET FILTER COMBINED DETAIL

NOT TO SCALE



TEMPORARY STOCKPILE DETAIL

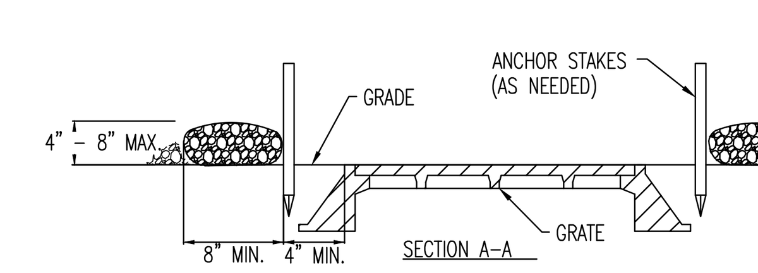
NOT TO SCALE

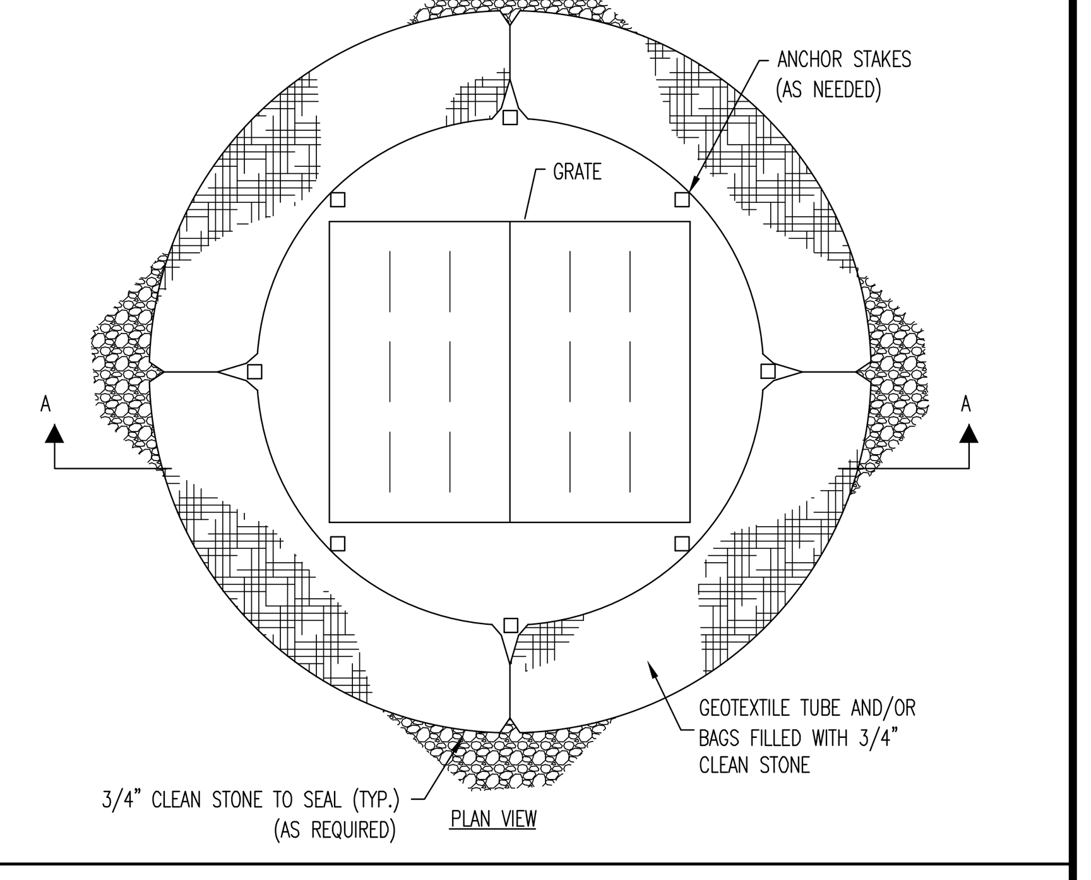


1. PLACE SILT FENCE AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN.
2. THE SLOPE OF THE LAND FOR AT LEAST 30 FEET ADJACENT TO ANY SILT FENCE SHALL NOT EXCEED 5 PERCENT
3. SILT FENCE SHALL BE INSTALLED SO WATER CANNOT BYPASS THE FENCE AROUND THE SIDES.
4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE AS PROMPTLY AS POSSIBLE.
5. SILT FENCE SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT UNLESS OTHERWISE INSTRUCTED BY THE TOWNSHIP ENGINEER OR SOIL CONSERVATION DISTRICT.
6. THE BARRIER SHALL BE REMOVED WHEN THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD A MIN. DIAMETER THICKNESS OF 1 1/2 INCHES.
8. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
9. A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE GROUND. FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

SILT FENCE DETAIL

NOT TO SCALE





NOTES:
1. GEOTEXTILE TO BE WOVEN POLYPROPYLENE PRODUCT 117F, BY SYNTHETIC INDUSTRIES INC., OR TERRATEX SC, BY WEBTEC INC., OR APPROVED EQUAL.
2. 3/4" CLEAN STONE CORE SHALL BE COMPLETELY CONTAINED WITHIN GEOTEXTILE. SEAMS SHALL BE SEWN OR CLOSED BY SUITABLE MECHANICAL MEANS TO PREVENT LEAKAGE OF STONE.
3. ANCHOR STAKES OF WOOD OR METAL SHALL BE INSTALLED WHERE REQUIRED BY FIELD CONDITIONS TO PREVENT MOVEMENT OF BARRIER.
4. BARRIER SHALL COMPLETELY ENCIRCLE THE DRAIN INLET.
5. GRATE OPENING IS TO BE KEPT CLEAR OF OBSTRUCTIONS AT ALL TIMES.
6. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM. WHERE SLOPE REQUIRES, AN EARTHEN BERM SHALL BE INSTALLED TO DIRECT STORM FLOW INTO THE INLET, BUT NOT OVER THE CURB.
7. OTHER METHODS THAT ACCOMPLISH THE PURPOSE OF STORM SEWER INLET PROTECTION MAY BE USED IF APPROVED BY THE SOIL CONSERVATION DISTRICT.
8. INSPECTIONS SHALL BE FREQUENT. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARDS THE INLET HAS BEEN STABILIZED.

TYPE 'E' AND YARD INLET FILTER DETAIL

NOT TO SCALE

DYNAMIC • ENGINEERING • EARTH • SURVEY • TRAFFIC

REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK
DESIGNED BY: AF
CHECKED BY: JSH
CHECKED BY: –

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

811 Know what's below Call before you dig.
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

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JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

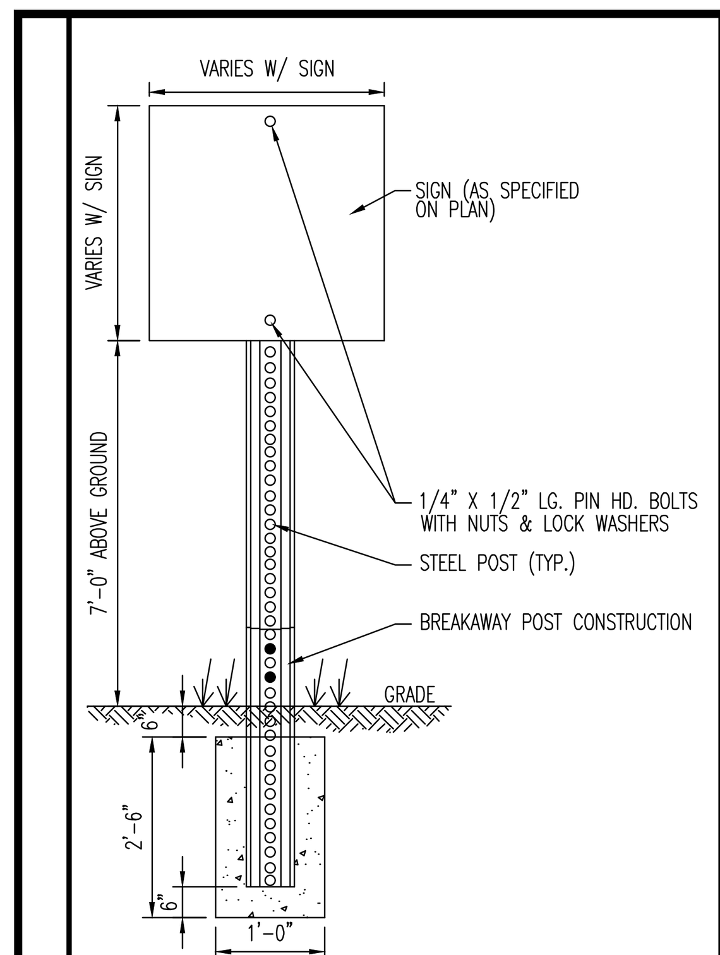
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

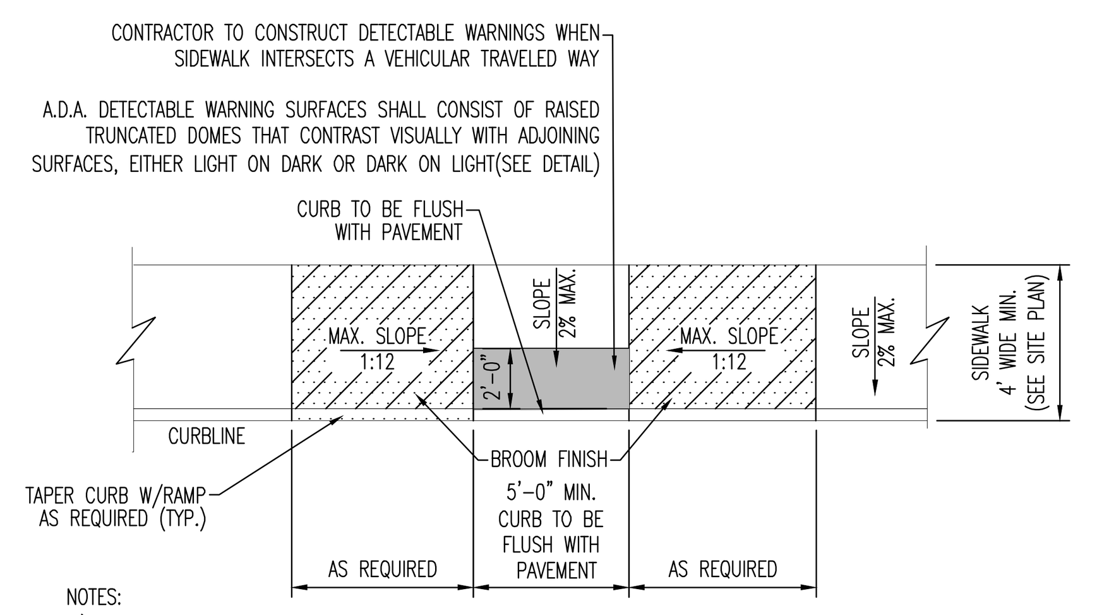
SCALE: (H) NOT TO (V) SCALE
DATE: 08/17/2023
PROJECT No: 4447-22-01334
SHEET No: 12 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\D4447221334SD2.dwg, ---> 12 SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

MUNICIPAL, COUNTY, STATE AND MUA DETAILS TO SUPERSEDE DYNAMIC ENGINEERING DETAILS WHERE APPLICABLE



SIGN POST & FOOTING DETAIL
NOT TO SCALE



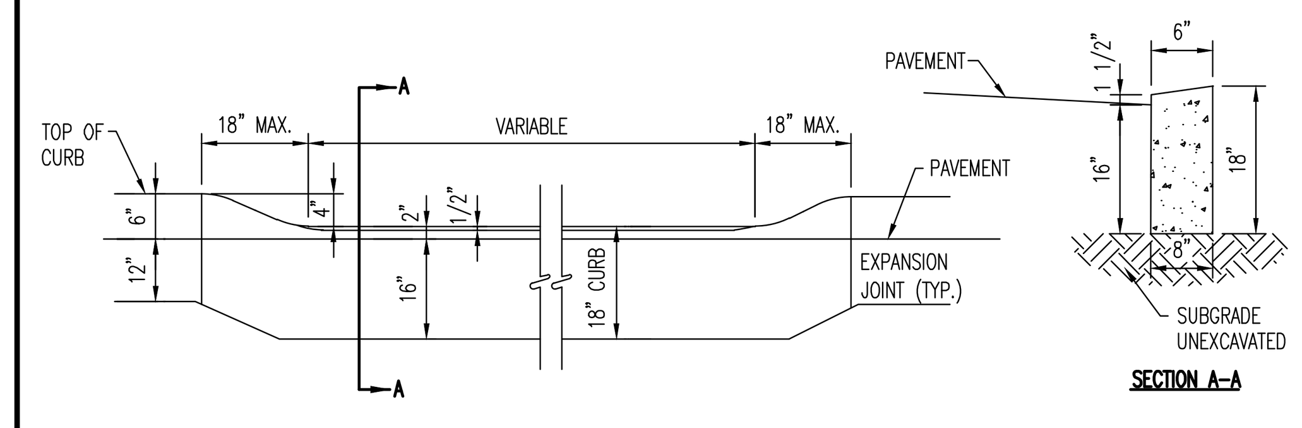
NOTES:
1.) CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.

2.) COUNTER SLOPES OF ADJOINING GUTTERS AND PAVEMENT SHALL NOT BE STEEPER THAN 1:20 WITH A MAX. CROSS SLOPE OF 2%.

3. A LEVEL LANDING AREA(MAX. SLOPE 2% IN ANY DIRECTION) SHALL BE PROVIDED AT THE TOP OF THE RAMP. THE LANDING CLEAR LENGTH SHALL BE 36" MIN AND THE CLEAR WIDTH SHALL BE AS WIDE AS THE RAMP.

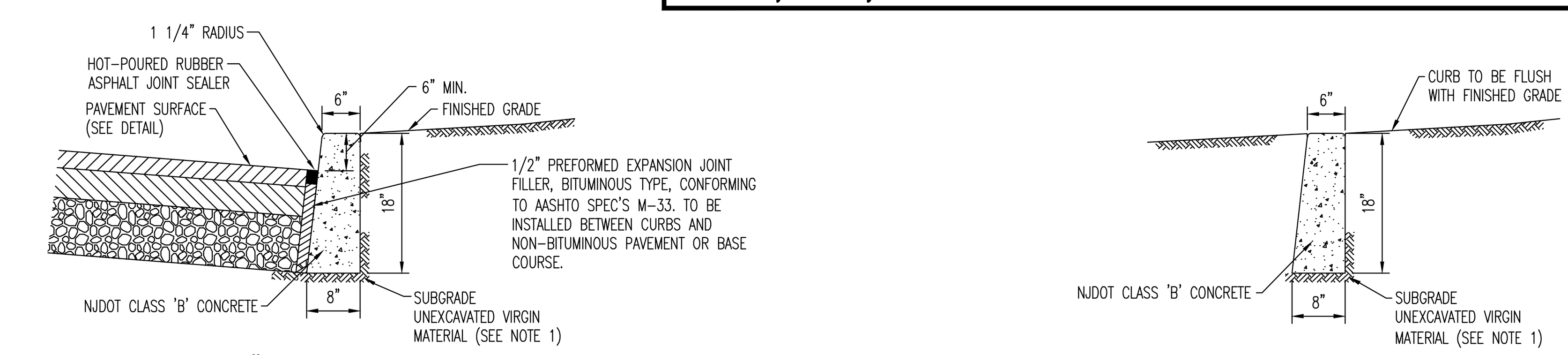
4.) CURB RAMPS, PAVEMENT MARKINGS & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

A.D.A. PARALLEL CURB RAMP DETAIL
NOT TO SCALE



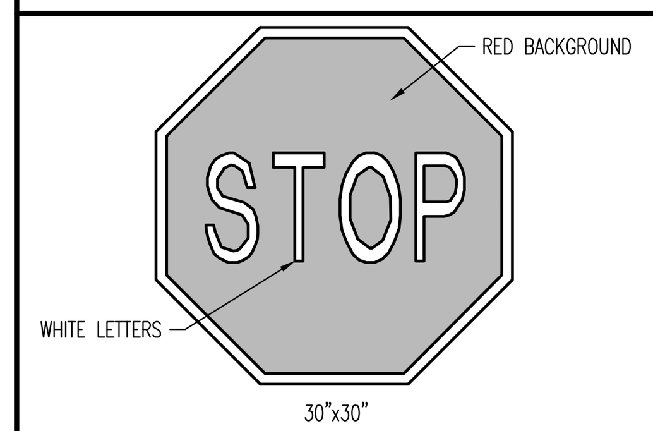
NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO POURING.
2. EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AND AT ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREFORMED EXPANSION JOINT FILLER, 1/2" THICK, CONFORMING TO STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND FRONT OF THE CONCRETE CURB.
3. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTO M-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB.
4. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.
5. WIDTH OF JOINT FILLER STRIP EQUAL TO THE THICKNESS OF THE PAVEMENT LESS 1/2".
6. 1/2" PREFORMED EXPANSION JOINT FILLER, BITUMINOUS TYPE, CONFORMING TO AASHTO SPEC'S M-33. TO BE INSTALLED BETWEEN CURB AND NON-BITUMINOUS PAVEMENT OR BASE COURSE.

DEPRESSED CURB AT DRIVEWAY DETAIL
NOT TO SCALE

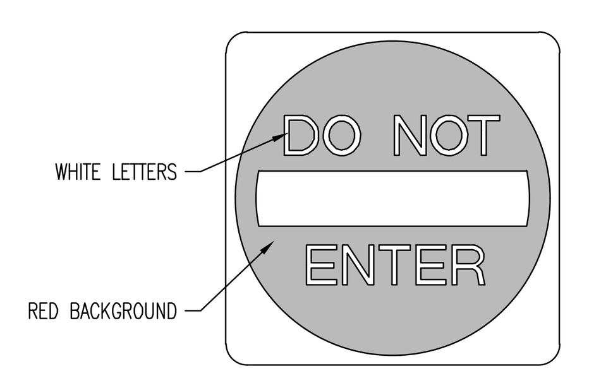


NOTES:
1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO POURING.
2. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER, COMPLYING WITH THE REQUIREMENTS OF AASHTOM-213, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB.
3. DUMMY JOINTS (FORMED) SHALL BE INSTALLED MIDWAY BETWEEN EXPANSION JOINTS.
4. WIDTH OF JOINT FILLER STRIP EQUAL TO THE THICKNESS OF THE PAVEMENT LESS 1/2".
5. THESE SPECIFICATIONS ALSO MEET RSIS DESIGN STANDARDS.

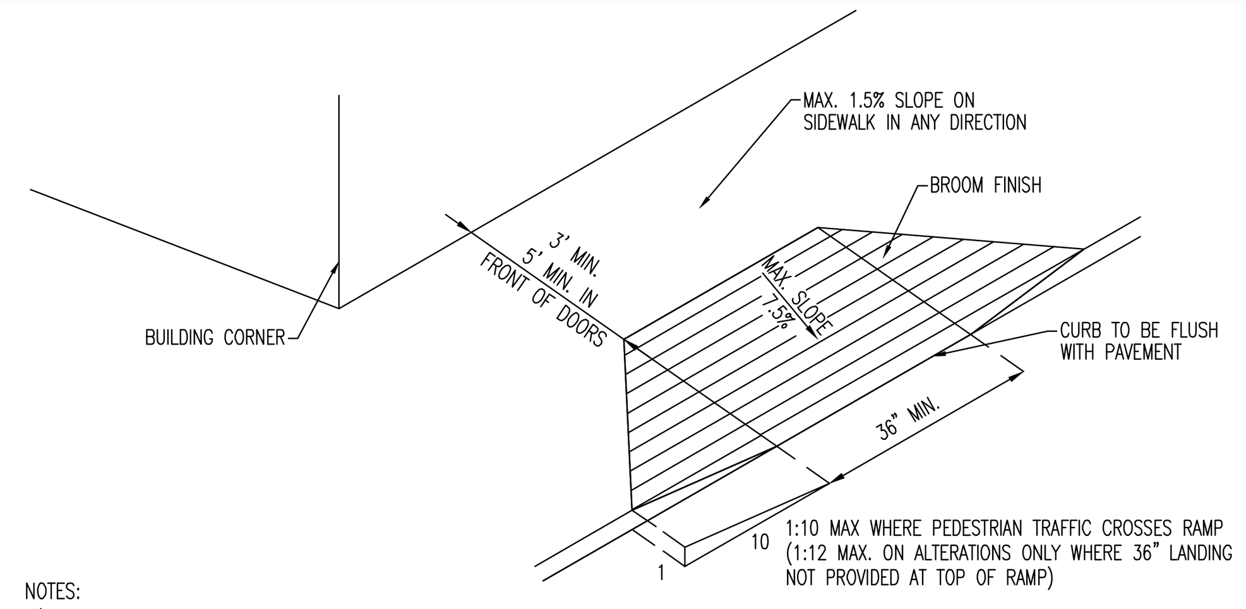
CONCRETE CURB DETAIL
NOT TO SCALE



R1-1 SIGN DETAIL
NOT TO SCALE



R5-1 SIGN DETAIL
NOT TO SCALE



NOTES:
1.) WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARE SIDES SHALL BE PROVIDED AT A SLOPE NO STEEPER THAN 10%.

2.) CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT PAVEMENT. GRADE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE.

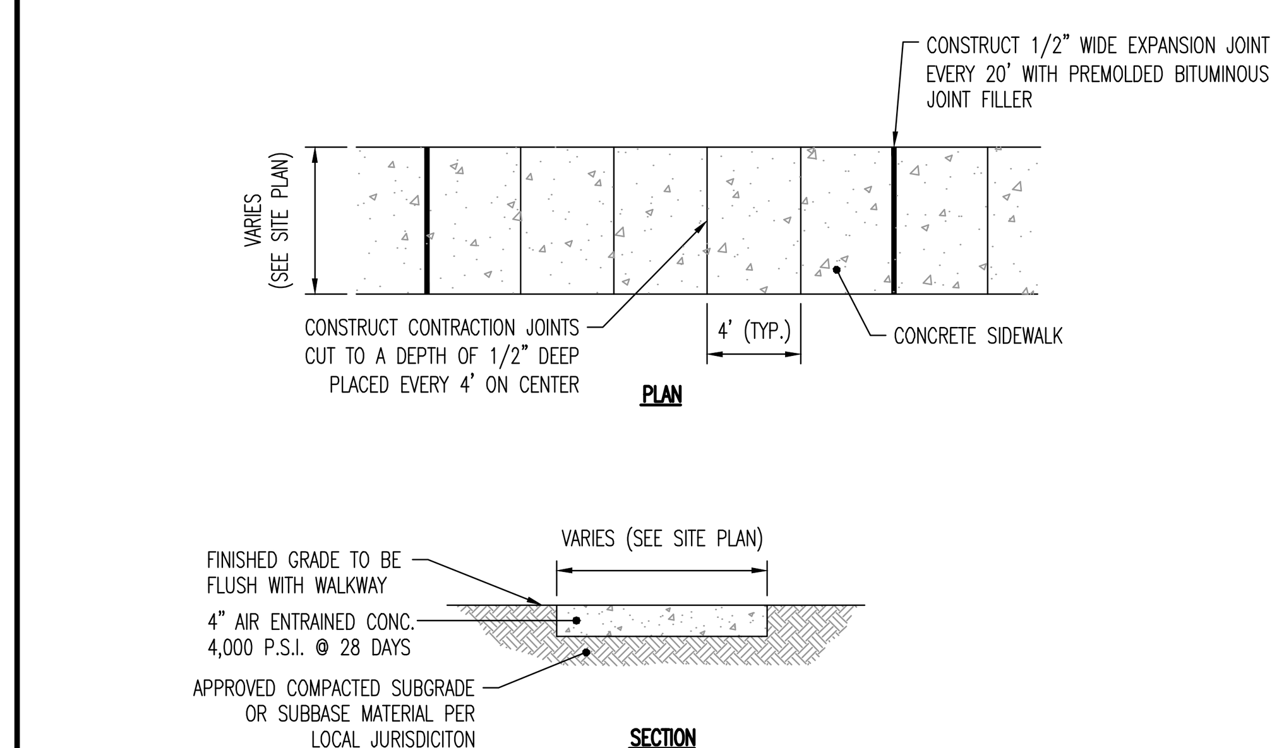
3.) CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.

4.) COUNTER SLOPES OF ADJOINING GUTTERS AND PAVEMENT SHALL NOT BE STEEPER THAN 4.5% WITH A MAX. CROSS SLOPE OF 1.5%.

5.) A LEVEL LANDING AREA (MAX. SLOPE 1.5% IN ANY DIRECTION) SHALL BE PROVIDED AT THE TOP OF THE RAMP. THE LANDING CLEAR LENGTH SHALL BE 36" MIN. AND THE CLEAR WIDTH SHALL BE AS WIDE AS THE RAMP.

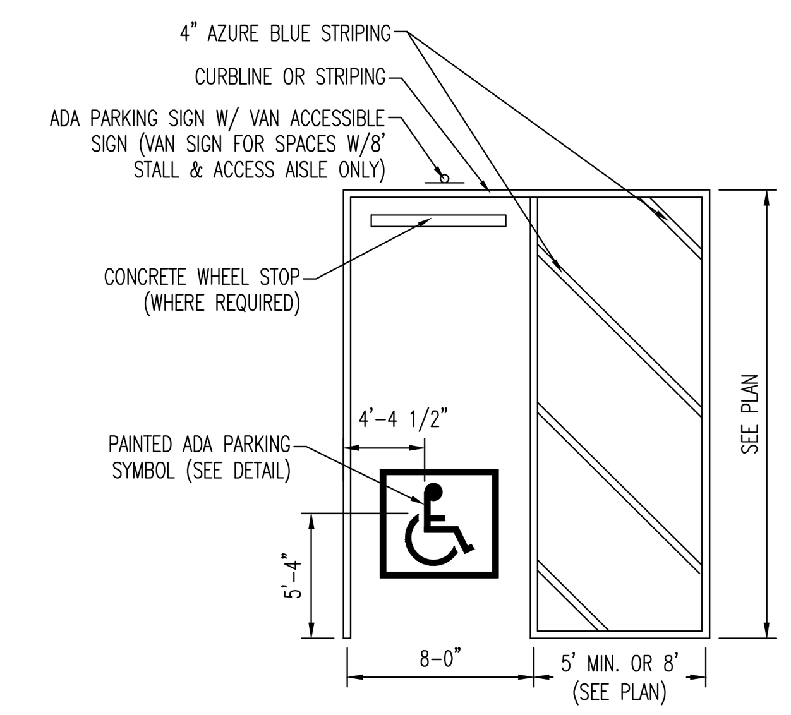
6.) CURB RAMPS, PAVEMENT MARKINGS & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

A.D.A. PERPENDICULAR CURB RAMP AT BUILDING DETAIL
NOT TO SCALE



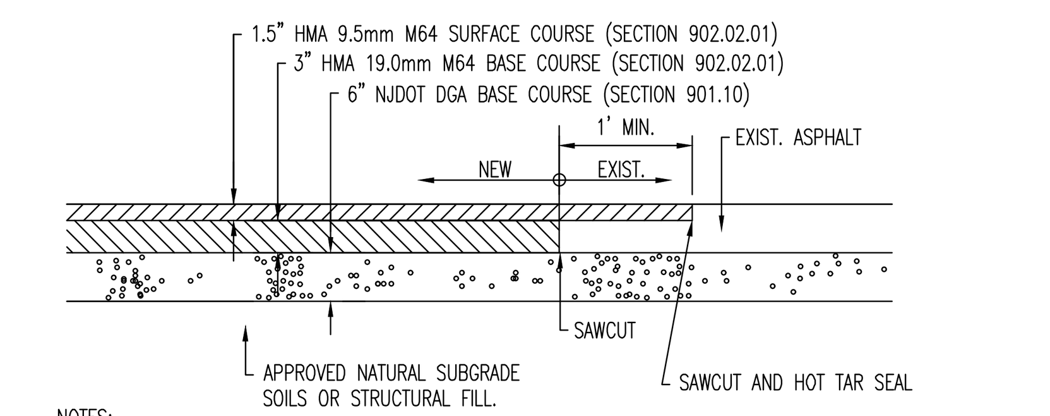
NOTE:
1. MAX. CROSS SLOPE 1/4" PER FOOT PITCHED TOWARDS ROADWAY.
2. PROVIDE 1/2" WIDE PREMOLDED BITUMINOUS EXPANSION JOINT AT 20' INTERVALS.
3. REFER TO SITE PLAN FOR SIDEWALK WIDTH.
4. PROVIDE A BROOM FINISH TO PROVIDE A SLIP RESISTANT WEARING SURFACE IN ACCORDANCE WITH A.D.A. REGULATIONS. FINISH THE EDGES OF THE GROOVES USING AN EDGING TOOL WITH A 1/4" RADIUS.

SIDEWALK DETAIL
NOT TO SCALE



NOTES:
1. PAVEMENT STRIPING FOR ALL ADA PARKING SPACES SHALL BE PAINTED AZURE BLUE.
2. WHERE AN ADA PARKING STALL MEETS A STANDARD PARKING STALL, AN AZURE BLUE AND WHITE PAVEMENT STRIPE SHALL BE PAINTED.
3. ALL PAVEMENT STRIPING, MARKINGS AND SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADA ACCESSIBILITY GUIDELINES.
4. ALL STRIPING SHALL BE THERMOPLASTIC

ADA STALL MARKINGS DETAIL
NOT TO SCALE



NOTES:
1. ALL PAVEMENT SECTION MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2019.

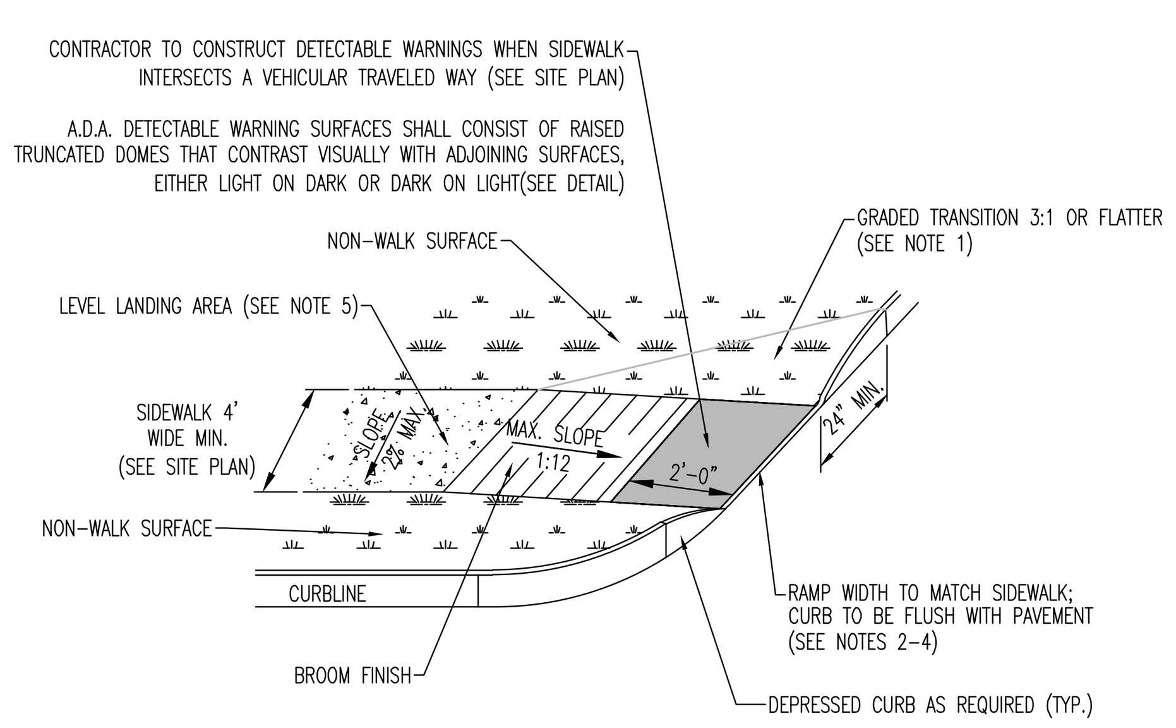
2. OWNER SHALL CONTACT AND ENGAGE DYNAMIC EARTH, LLC. TO INSPECT AND TEST SUBGRADE SOILS. CONTRACTOR SHALL CONTACT DYNAMIC EARTH, LLC. AT (908) 879-7095 (WWW.DYNAMIC-EARTH.COM) AT ONSET OF CONSTRUCTION TO CONFIRM REQUIREMENTS AND COORDINATE INSPECTIONS.

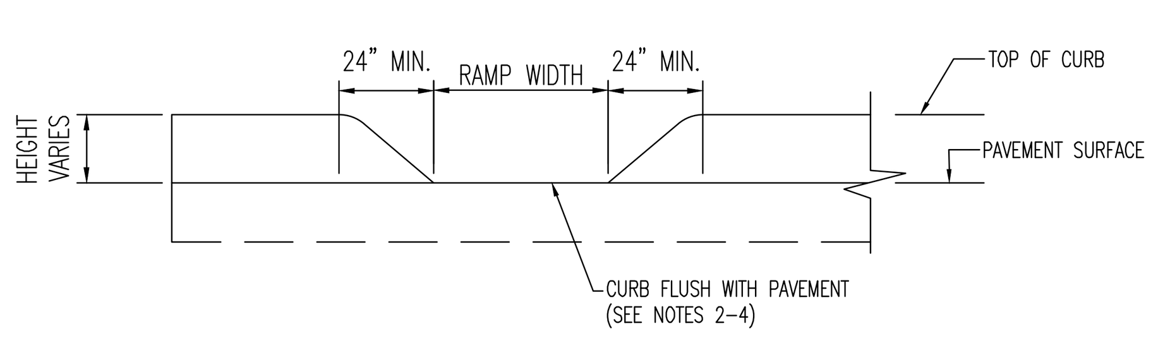
3. SUBGRADE SOILS SHALL BE APPROVED BY DYNAMIC EARTH, LLC. APPROVED NATURAL SOILS SHALL BE COMPACTED AND PROOFROLLED WITH A LOADED TANDEM AXLE TRUCK TO A FIRM AND UNYIELDING CONDITION. UNSUITABLE MATERIALS SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL OR STABILIZED AS DIRECTED BY DYNAMIC EARTH, LLC. ANY STRUCTURAL FILL AT OR BELOW PAVEMENT SUBGRADE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY WITHIN 2% OF THE OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM-D1557.

4. CONTRACTOR TO REFER TO GEOTECHNICAL REPORT FOR FINAL PAVEMENT SECTION DESCRIPTION.

05/2022 - JGJ/AOV

STANDARD DUTY ASPHALT PAVEMENT DETAIL
NOT TO SCALE





TYPICAL ELEVATION FOR DEPRESSED CURB

NOTES:

1.) WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARE SIDES SHALL BE PROVIDED AT A SLOPE NO STEEPER THAN 1:10.

2.) CONSTRUCT DEPRESSED CURB FOR CURB RAMPS FLUSH TO ADJACENT PAVEMENT. GRADE FLOW LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT PONDING. FOR LEVEL TURNING SPACES BEHIND DEPRESSED CURB, ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE.

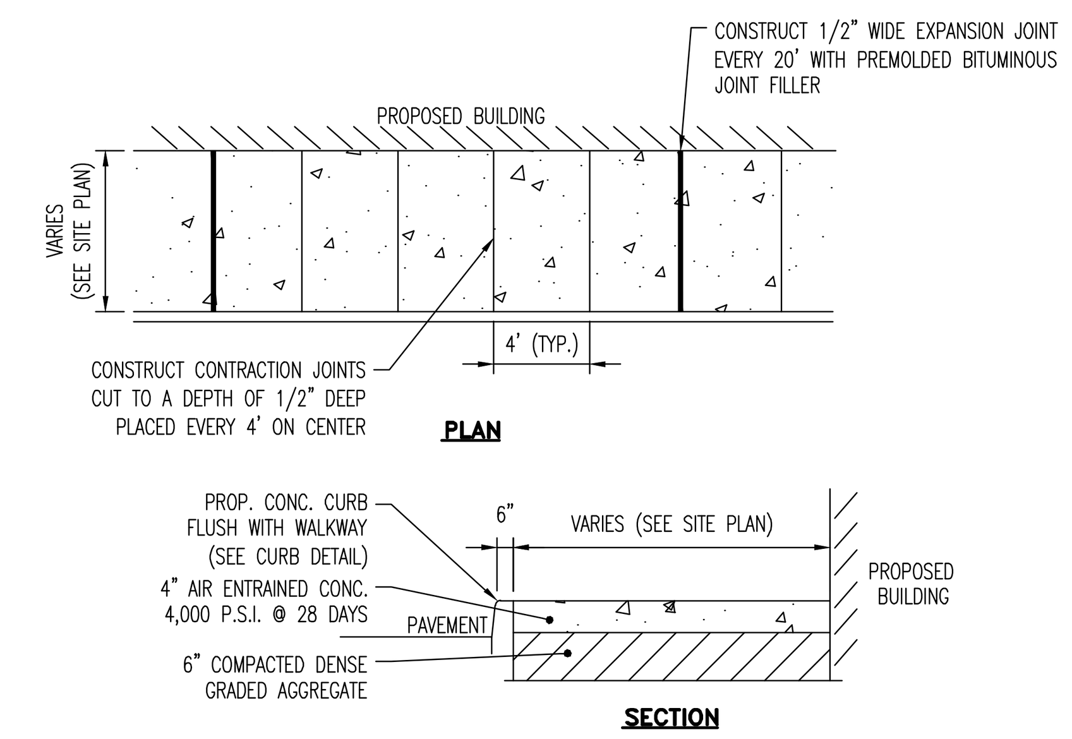
3.) CURB RAMPS MAY NOT EXTEND INTO ANY PORTION OF THE PARKING SPACE OR ASSOCIATED STRIPED ISLAND.

4.) COUNTER SLOPES OF ADJOINING GUTTERS AND PAVEMENT SHALL NOT BE STEEPER THAN 1:20 WITH A MAX. CROSS SLOPE OF 2%.

5.) A LEVEL LANDING AREA (MAX. SLOPE 2% IN ANY DIRECTION) SHALL BE PROVIDED AT THE TOP OF THE RAMP. THE LANDING CLEAR LENGTH SHALL BE 36" MIN. AND THE CLEAR WIDTH SHALL BE AS WIDE AS THE RAMP.

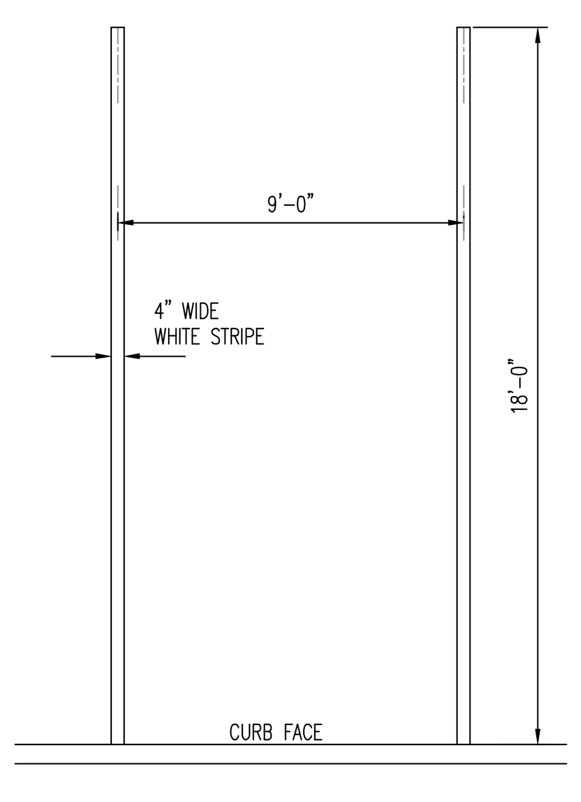
6.) CURB RAMPS, PAVEMENT MARKINGS & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

A.D.A. PERPENDICULAR CURB RAMP DETAIL (W/OUT FLARE SIDES)
NOT TO SCALE



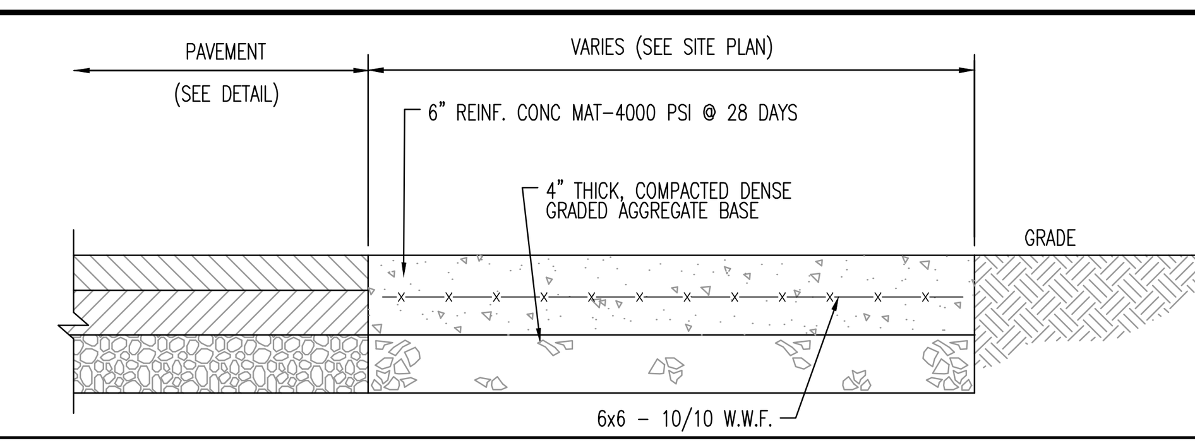
NOTE:
1. MAX. CROSS SLOPE 1/4" PER FOOT PITCHED AWAY FROM BUILDING.
2. PROVIDE 1/2" WIDE PREMOLDED BITUMINOUS EXPANSION JOINT AT 20' INTERVALS.
3. REFER TO SITE PLAN FOR SIDEWALK WIDTH.
4. PROVIDE A BROOM FINISH TO PROVIDE A SLIP RESISTANT WEARING SURFACE IN ACCORDANCE WITH A.D.A. REGULATIONS. FINISH THE EDGES OF THE GROOVES USING AN EDGING TOOL WITH A 1/4" RADIUS.

CURB AND WALK DETAIL AT BUILDING
NOT TO SCALE

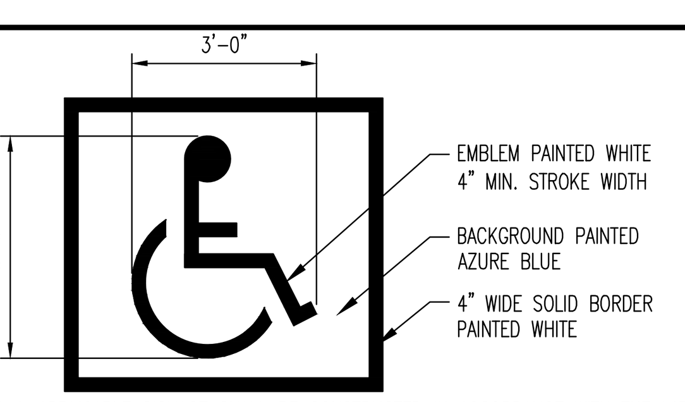


NOTE: ALL STRIPING SHALL BE THERMOPLASTIC

PARKING STALL STRIPING DETAIL
NOT TO SCALE

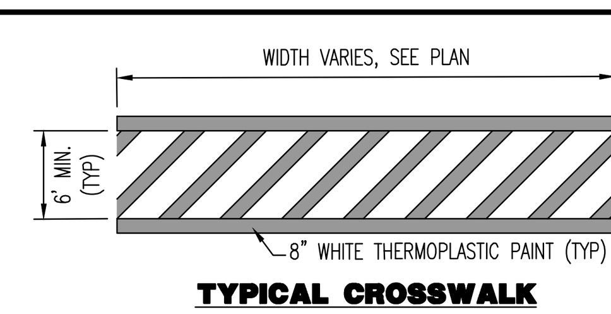


CONCRETE COMPACTOR/DUMPSTER PAD DETAIL
NOT TO SCALE



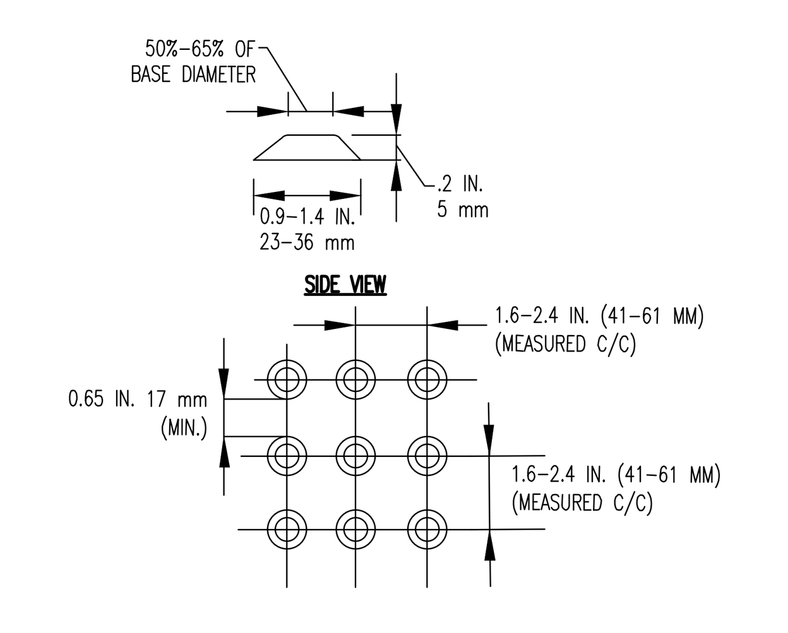
NOTE: ALL PAVEMENT STRIPING, MARKINGS & APPLICABLE SIGNAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST A.D.A. ACCESSIBILITY GUIDELINES.

PAINTED A.D.A. PARKING SYMBOL DETAIL
NOT TO SCALE



NOTES:
1. ALL PAVEMENT MARKINGS SHALL BE IN COMPLETE CONFORMANCE WITH THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
2. SEE PLAN FOR TYPE OF CROSSWALK MARKING PROPOSED.

CROSSWALK STRIPING (THERMOPLASTIC) DETAILS
NOT TO SCALE



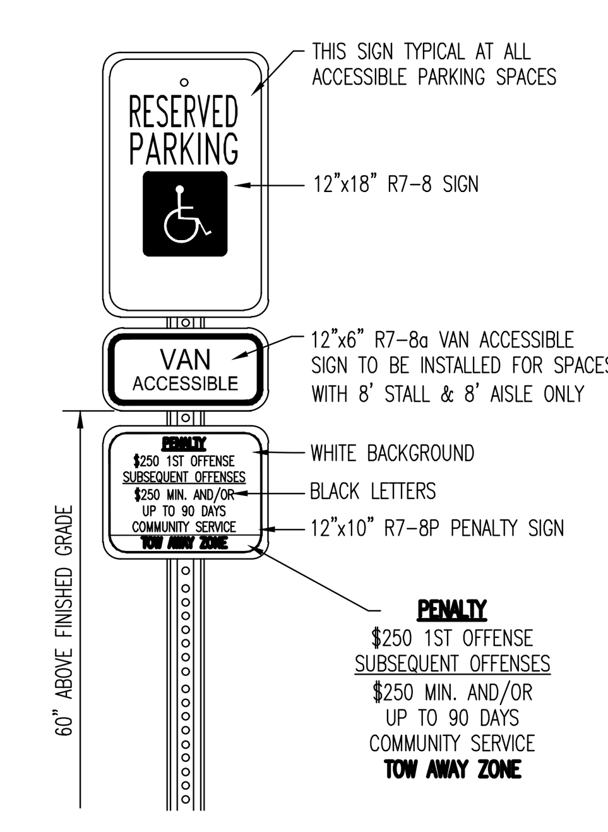
NOTES:
1. DETECTABLE WARNINGS SHALL BE A PRE-MANUFACTURED ARMOUR TILE TACTILE SYSTEM OR APPROVED EQUIVALENT.
2. WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT ON DARK OR DARK ON LIGHT PER LATEST A.D.A. ACCESSIBILITY GUIDELINES.
3. CONTRACTOR TO COORDINATE SPECIFIC SYSTEM AND MATERIALS UTILIZED WITH THE ENGINEER TO ENSURE LOCAL, STATE AND A.D.A. COMPLIANCE PRIOR TO CONSTRUCTION.
4. DETECTABLE WARNING SURFACE SHALL BE IN ACCORDANCE WITH THE LATEST ADA ACCESSIBILITY GUIDELINES.

7/8/16 - EW/JCS

TRUNCATED DOME PATTERN FOR A.D.A. DETECTABLE WARNING SURFACE
NOT TO SCALE

NOTES:
1.) IF AT THE TIME OF CONSTRUCTION THE STATE OF NEW JERSEY HAS APPROVED FINES/PENALTIES DIFFERENT THAN THOSE INDICATED ON THIS DETAIL, CONTRACTOR IS TO PROVIDE SIGNAGE INDICATING THE CURRENT FINES/PENALTIES AS APPROVED BY THE STATE OF NEW JERSEY.

2.) VAN ACCESSIBLE SIGN SHALL BE 60" MINIMUM ABOVE FINISHED GRADE WHERE APPLICABLE. WHEN VAN ACCESSIBLE IS NOT REQUIRED, R7-8 SIGN SHALL BE SET AT 60" MINIMUM ABOVE FINISHED GRADE.



7/8/16 - EW/JCS

ADA PARKING SIGN W/ VAN ACCESSIBLE SIGN
NOT TO SCALE

DYNAMIC • ENGINEERING • EARTH • SURVEY • TRAFFIC

REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: –

PROJECT: MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

811 Know what's below. Call before you dig.
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www.dynamicec.com

JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

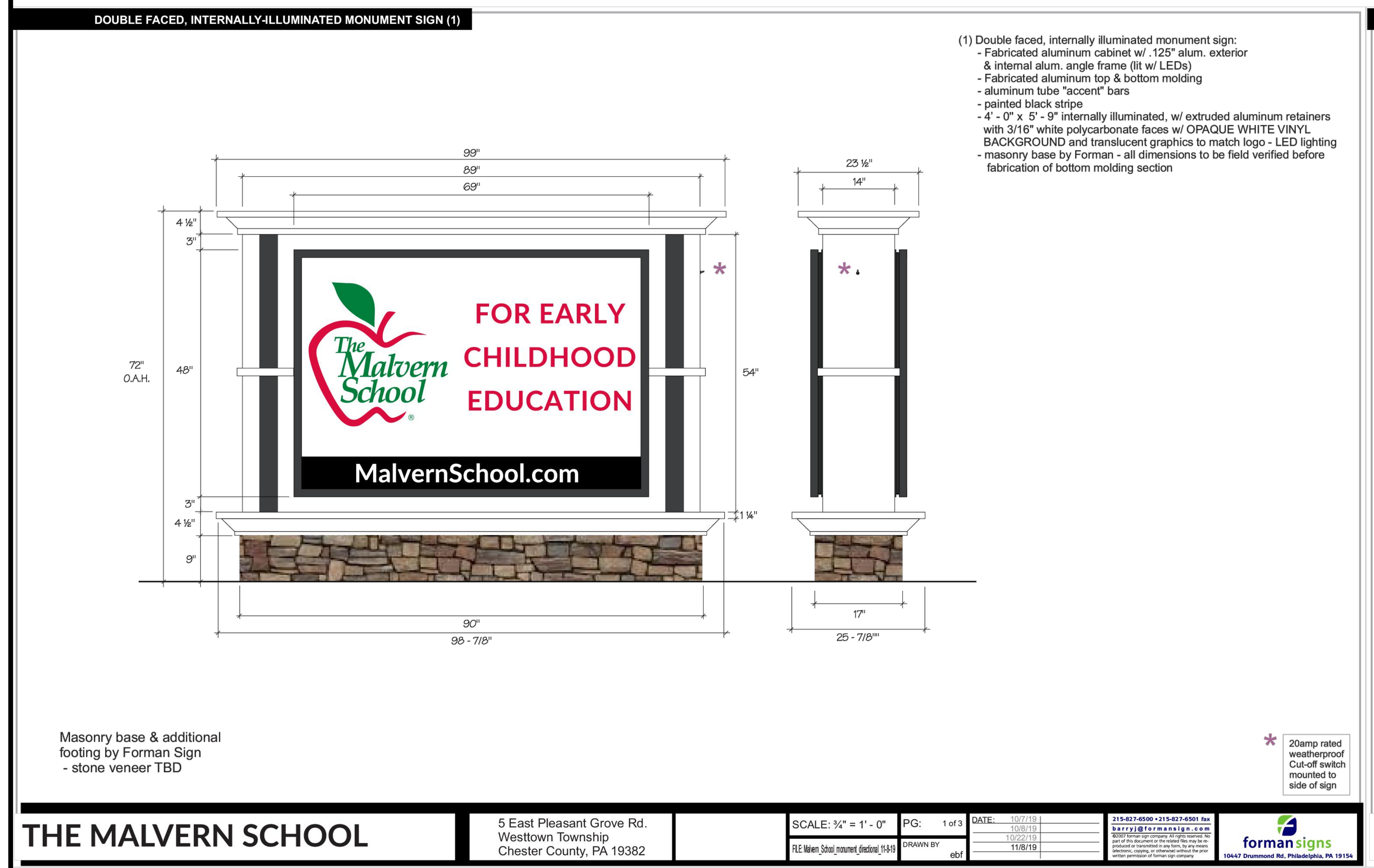
TITLE: CONSTRUCTION DETAILS

SCALE: (H) NOT TO (V) SCALE
DATE: 08/17/2023
PROJECT No: 4447-22-01334

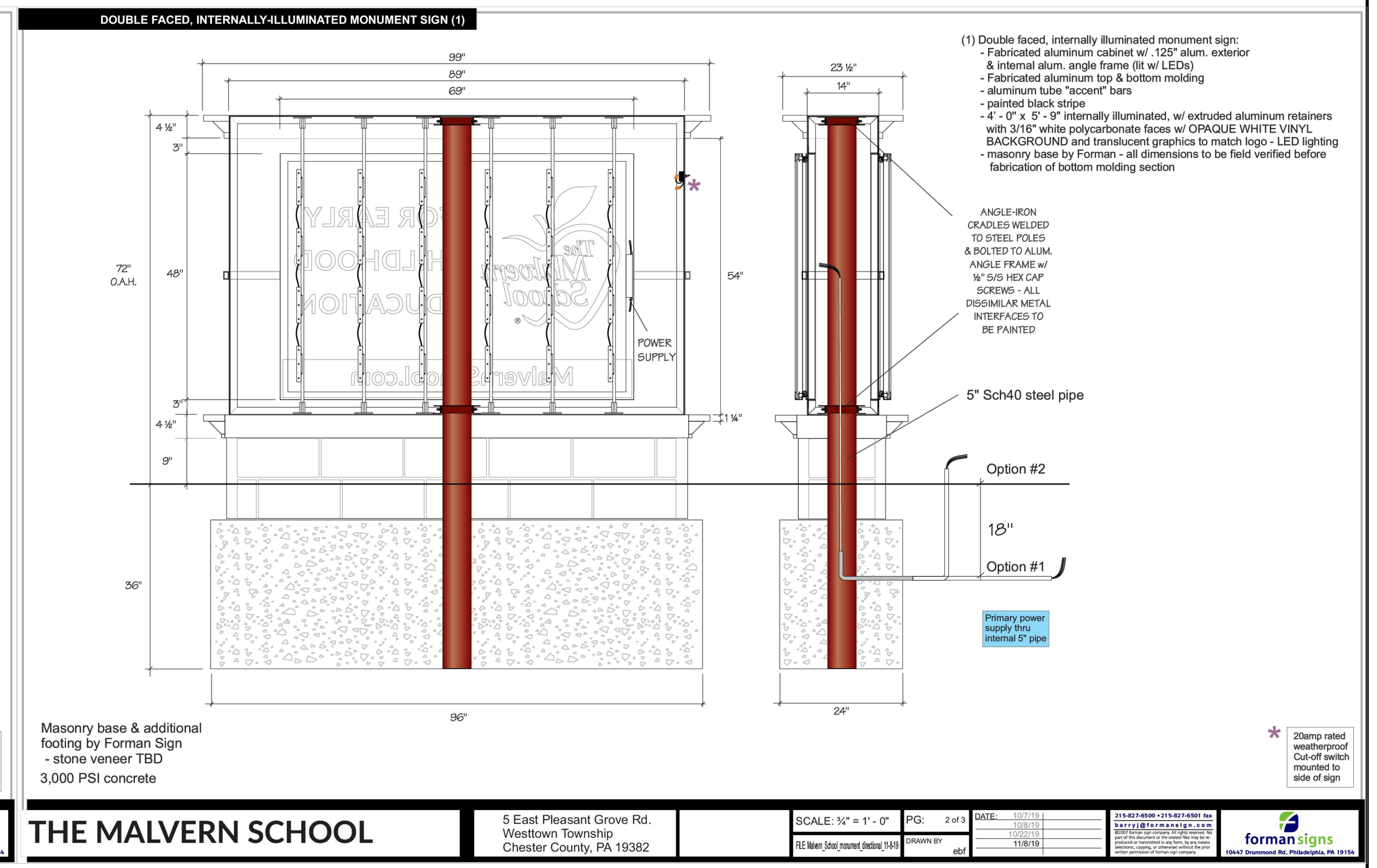
SHEET No: 13 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SD2.dwg, ---> 13 CONSTRUCTION DETAILS

MUNICIPAL, COUNTY, STATE AND MUA DETAILS TO SUPERSEDE DYNAMIC ENGINEERING DETAILS WHERE APPLICABLE



DOUBLE FACED, INTERNALLY-ILLUMINATED MONUMENT SIGN (1)
(1) Double faced, internally illuminated monument sign:
- Fabricated aluminum cabinet w/ .125" alum. exterior & internal alum. angle frame (lit w/ LEDs)
- Fabricated aluminum top & bottom molding
- aluminum tube "accent" bars
- painted black stripe
- 4' - 0" x 5' - 9" internally illuminated, w/ extruded aluminum retainers with 3/16" white polycarbonate faces w/ OPAQUE WHITE VINYL BACKGROUND and translucent graphics to match logo - LED lighting
- masonry base by Forman - all dimensions to be field verified before fabrication of bottom molding section
The Malvern School
FOR EARLY CHILDHOOD EDUCATION
MalvernSchool.com
Masonry base & additional footing by Forman Sign
- stone veneer TBD
THE MALVERN SCHOOL
5 East Pleasant Grove Rd.
Westtown Township
Chester County, PA 19382
forman signs



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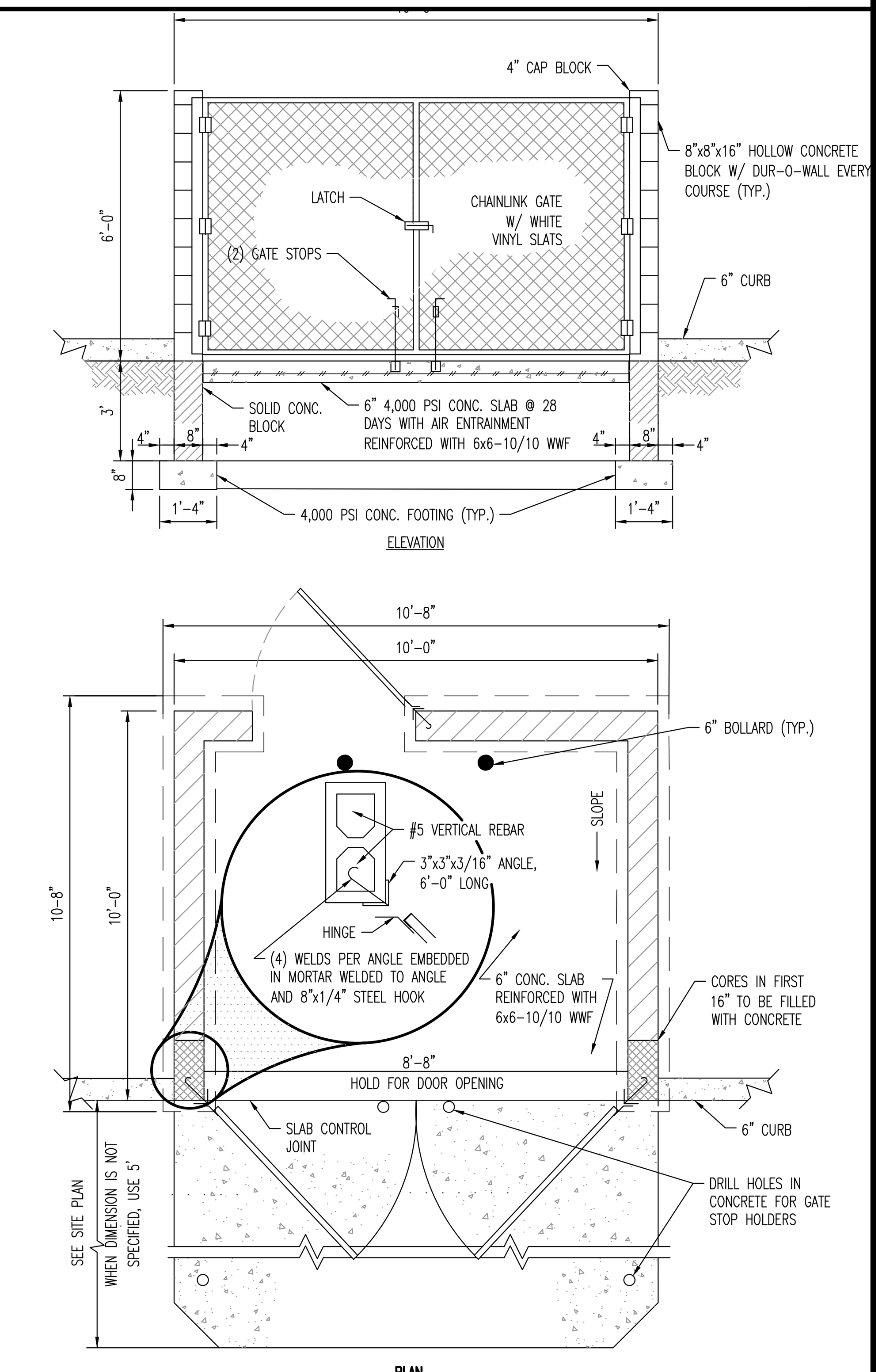
- masonry base by Forman - all dimensions to be field verified before fabrication of bottom molding section
POWER SUPPLY
5" Sch40 steel pipe
Option #2
Option #1
Masonry base & additional footing by Forman Sign
- stone veneer TBD
3,000 PSI concrete
THE MALVERN SCHOOL
5 East Pleasant Grove Rd.
Westtown Township
Chester County, PA 19382
forman signs

MONUMENT SIGN DETAIL

NOT TO SCALE



4" CAP BLOCK
8"x8"x16" HOLLOW CONCRETE BLOCK W/ DUR-O-WALL EVERY COURSE (TYP.)
LATCH
CHAINLINK GATE W/ WHITE VINYL SLATS
(2) GATE STOPS
6" CURB
SOLID CONC. BLOCK
6" 4,000 PSI CONC. SLAB @ 28 DAYS WITH AIR ENTRAINMENT REINFORCED WITH 6x6-10/10 WWF
4,000 PSI CONC. FOOTING (TYP.)
ELEVATION
10'-8"
10'-0"
6" BOLLARD (TYP.)
#5 VERTICAL REBAR
3"x3"x3/16" ANGLE, 6'-0" LONG
HINGE
(4) WELDS PER ANGLE EMBEDDED IN MORTAR WELDED TO ANGLE AND 8"x1/4" STEEL HOOK
6" CONC. SLAB REINFORCED WITH 6x6-10/10 WWF
SLOPE
CORES IN FIRST 16" TO BE FILLED WITH CONCRETE
8'-8"
HOLD FOR DOOR OPENING
SLAB CONTROL JOINT
6" CURB
DRILL HOLES IN CONCRETE FOR GATE STOP HOLDERS
SEE SITE PLAN WHEN DIMENSION IS NOT SPECIFIED, USE 5'
PLAN

03/2023 – KMG/JGJ

10' X 10' MASONRY TRASH ENCLOSURE WITH CHAINLINK GATE DETAIL

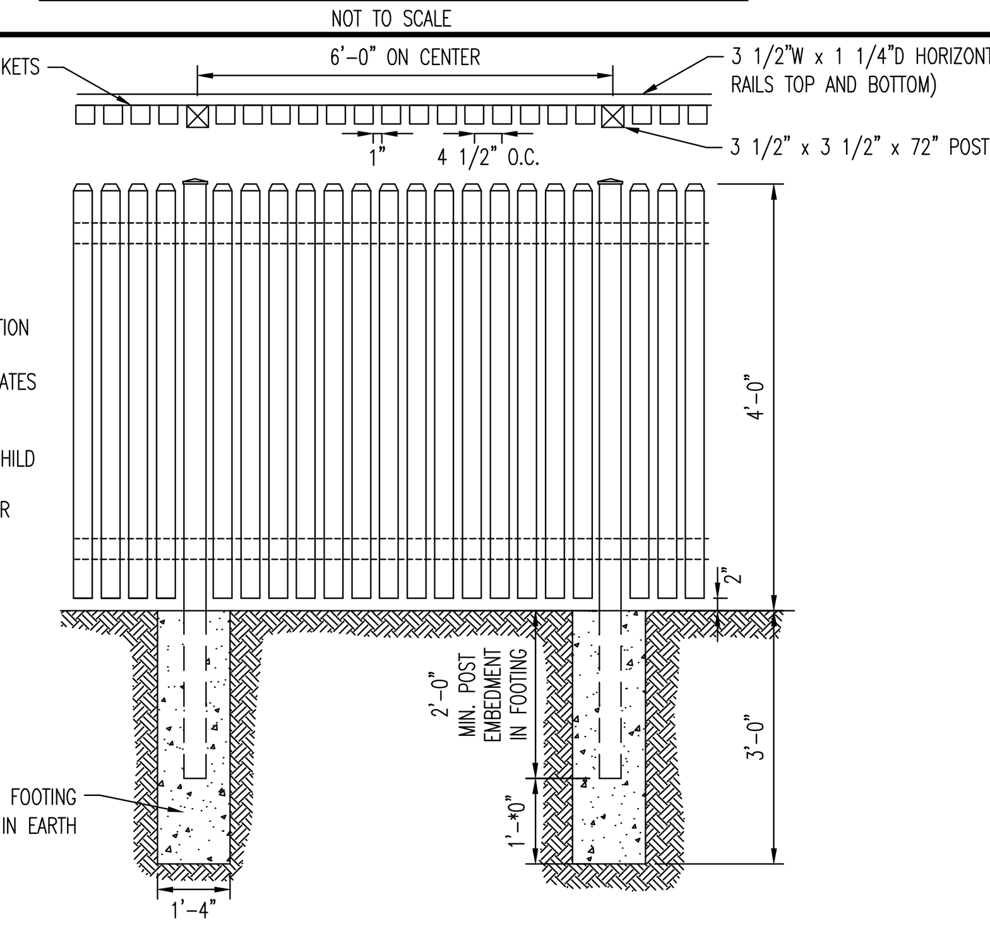
NOT TO SCALE

SIGNAGE SHALL BE PROVIDED BY:

KC SIGNS & AWNINGS
142 CONCHESTER HIGHWAY
ASTON, PA 19014
P: (610) 497-0111
F: (610) 497-0110
www.kcsignco.com

BUILDING MOUNTED SIGN DETAIL

NOT TO SCALE

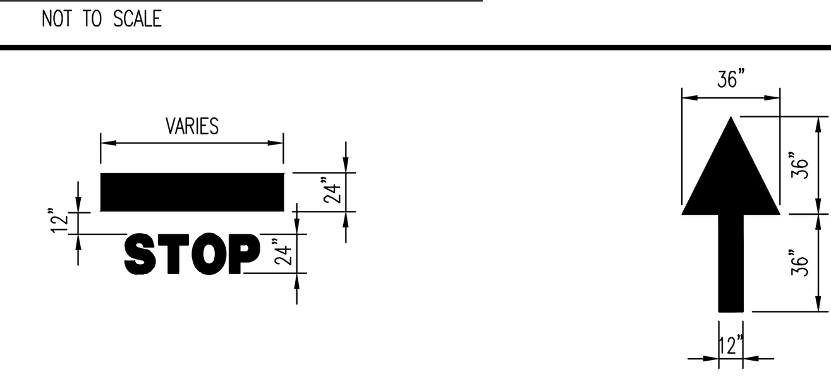


NOTE: REFER TO SITE PLAN DRAWINGS FOR LOCATION OF PLAY AREA(S). PROVIDE MATCHING GATES AS INDICATED. FENCE WILL REQUIRE THREE GATES WITH KEYED CHILD SAFETY LOCKS. SEE MALVERN SCHOOL FOR LOCATION OF GATES.

NOTES:
1. TYPICAL PVC FENCING AS MANUFACTERED BY MONTCO FENCE AND SUPERIOR STRUCTURES, 12 SWAMP PIKE, LIMERICK, PA., 19468, 610-287-7190
2. CONTRACTOR TO ASSUME APPROXIMATELY 470LF OF 4'-0" HIGH FENCE TO BE USED. THIS TOTAL MAY CHANGE BY SITE. VERIFY FINAL TOTAL WITH OWNER.
3. PROVIDE THREE (3) REMOVABLE PANELS (LOCATION TO BE VERIFIED BY OWNER) FOR ACCESS TO PLAY AREA FOR MAINTENANCE EQUIPEMENT.

EXTERIOR PLAY AREA FENCE DETAIL

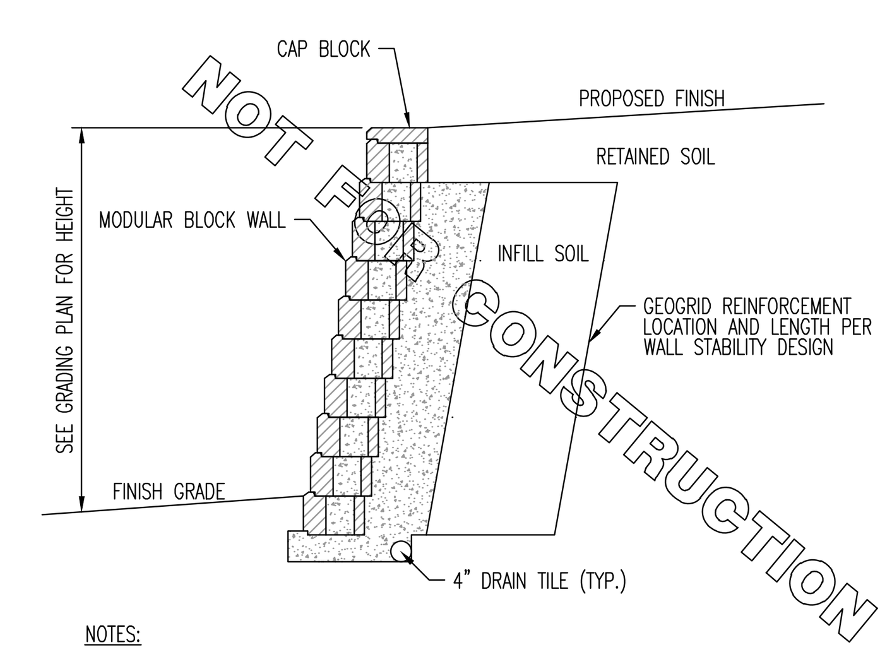
NOT TO SCALE



NOTE: ARROWS AND WORDS CAN BE ARRANGED IN OTHER COMBINATIONS THAN THOSE ILLUSTRATED HERE TO ACHIEVE DESIRED RESULT. ALL PAINT TO BE THERMOPLASTIC.

PAINTED MARKING DETAILS

NOT TO SCALE



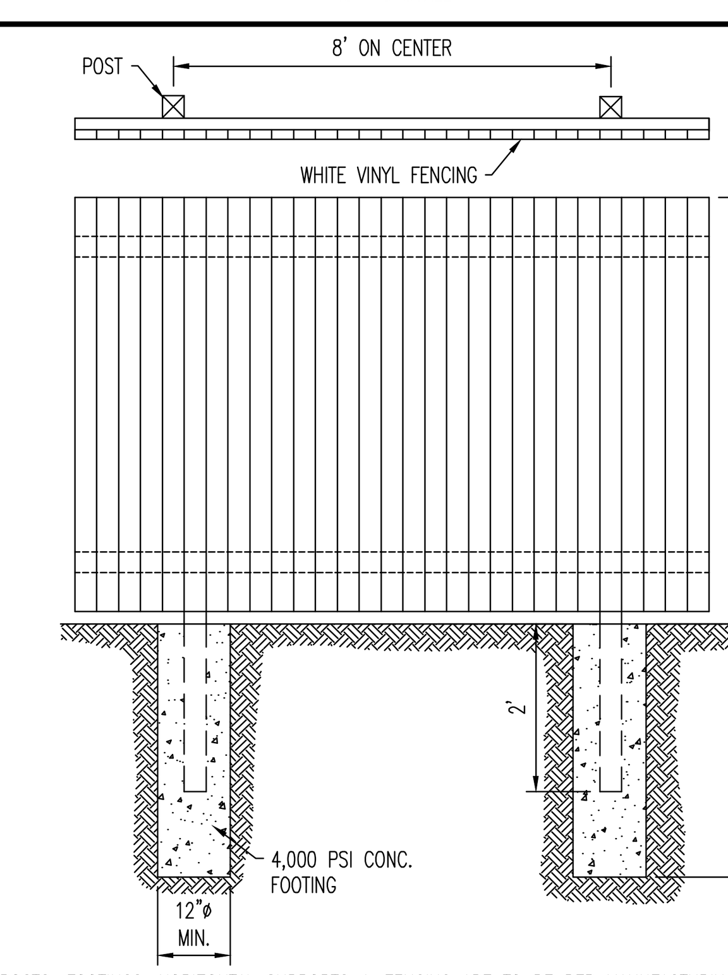
NOTES:

1. DETAIL IS FOR SITE PLAN REVIEW ONLY AND SHALL NOTE BE USED FOR BIDDING OR CONSTRUCTION.
2. A DESIGN SIGNED AND SEALED BY A PROFESSIONAL ENGINEER FOR ALL RETAINING WALLS SHALL BE FOR REVIEW TO THE MUNICIPAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.
3. WALL SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

03/2023 – KMG/JGJ

SCHEMATIC MODULAR BLOCK RETAINING WALL DETAIL

NOT TO SCALE



NOTE: POSTS, FOOTINGS, HORIZONTAL SUPPORTS & FENCING ARE TO BE PER MANUFACTURING SPECIFICATIONS.

03/2023 – KMG/JGJ

VINYL FENCE DETAIL

NOT TO SCALE

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY: KTK
DESIGNED BY: AF
CHECKED BY: JSH
CHECKED BY: –

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
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Newark, New Jersey • T: 973.755.7200
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Newtown, Pennsylvania • T: 267.685.0276
Philadelphia, Pennsylvania • T: 215.253.4888
Bethlehem, Pennsylvania • T: 610.598.4400
Allen, Texas • T: 972.534.2100
Houston, Texas • T: 281.789.6400
Austin, Texas • T: 512.646.2646
Delray Beach, Florida • T: 561.921.8570
www.dynamicec.com

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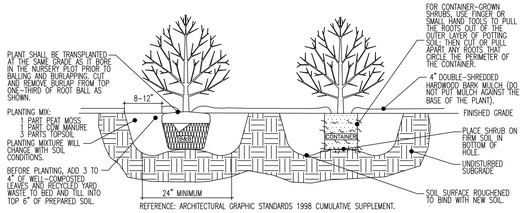
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: CONSTRUCTION DETAILS

SCALE: (H) NOT TO (V) SCALE
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 14 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SD2.dwg, ---> 14 CONSTRUCTION DETAILS

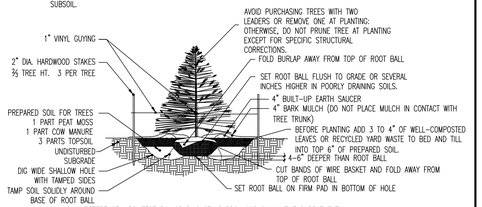


REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT.

DECIDUOUS AND EVERGREEN SHRUB PLANTING DETAIL

NOT TO SCALE

NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
2. REMOVE ALL ROPE FROM TRUNK & TOP OF ROOT BALL. FOLD BURLAP BACK ½ FROM TOP ROOT BALL
3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
4. THOROUGHLY SOAK THE ROOT BALL AND ADJACENT PREPARED SOIL SEVERAL TIMES DURING THE FIRST MONTH AFTER PLANTING AND REGULARLY THROUGHOUT THE FOLLOWING TWO SUMMERS.
5. THE BOTTOM OF PLANTING PIT EXCAVATIONS SHOULD BE ROUGH TO AVOID MATTING OF SOIL LAYERS AS NEW SOIL IS ADDED. IT IS PREFERABLE TO TILL THE FIRST LIFT (2 TO 3 IN.) OF PLANTING SOIL INTO THE SUBSOIL.



REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT.

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

NOTES:
1. NO SOIL OR MULCH SHALL BE PLACED AGAINST ROOT COLLAR OF PLANT.
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3. PLANTING DEPTH SHALL BE THE SAME AS GROWN IN NURSERY.
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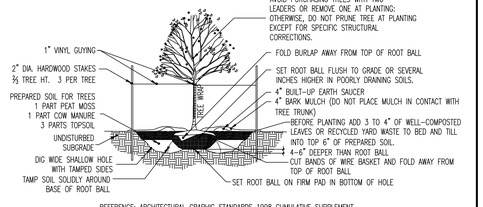
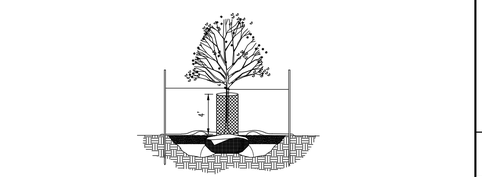


REFERENCE: ARCHITECTURAL GRAPHIC STANDARDS 1998 CUMULATIVE SUPPLEMENT.

DECIDUOUS TREE PLANTING DETAIL

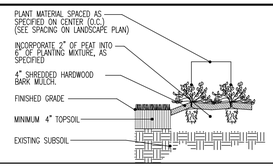
NOT TO SCALE



TREE TRUNK BARRIERS. TO PROTECT PLANTS FROM BUCKS RUBBING THEIR ANTLERS, WHICH BREAKS BRANCHES AND STRIPS BARK OFF TRUNKS. A DEER TRUNK BARRIER FENCE SHOULD BE AT LEAST 4 FEET HIGH, PLACED FAR ENOUGH OUT FROM THE PLANT TO PREVENT DEER FROM ACCESSING THE PLANT AND CAUSING DAMAGE, AND BE FIRMLY STAKED TO THE GROUND. PRIOR TO INSTALLATION, REMOVE ALL GRASS AND WEEDS WITHIN THE BARRIER BY SPRAYING WITH HERBICIDE. A 2-FOOT HIGH BAND OF CHICKEN W CAN BE ADDED TO THE BOTTOM TO EXCLUDE RABBITS. USE WOODEN OR METAL STAKES TO HOLD THE CAGE UPRIGHT AND USE TENT STAKES TO FIRMLY FASTEN THE CAGE TO THE GROUND.

DEER PROTECTION FENCING DETAIL

NOT TO SCALE



PERENNIAL/GROUND COVER PLANTING DETAIL

NOT TO SCALE

Streetworks

Catalog #	Type
Project	
Comments	Date
Prepared by	

DESCRIPTION

The EPIC Collection delivers custom luminaire flexibility with high quality, yet availability expectations of standard specification grade product. The EPIC Collection can be dressed to suit any application. Recognizing evolving environmental and legislative trends, the EPIC Collection delivers world class LED optical and performance solutions to the decorative luminaire marketplace.

SPECIFICATION FEATURES

Construction
TOP: Cast aluminum top housing attaches to cast aluminum mounting arm hub with four stainless steel fasteners. One-piece silicone gasket between mounting hub and top casting seals out moisture and contaminants. (See the mounting accessories section for a full selection of mounting arms. (Only these arms are compatible with the Epic luminaire). MIDSECTION: Continuous silicone gaskets seal lens to top casting and shade. The mid section features cast aluminum construction and stainless steel assembly. SHADES: Heavy gauge precision spun aluminum shades offer superior surface finish and consistency in form. DOORFRAME: Die-cast aluminum 1/8" thick door and doorframe seal to underside of shade with a thick wall continuous silicone gasket. Mounting hub ships attached to mounting arm.

Optics
Choice of twelve patented, high-efficiency AccuLED Optic™ technology manufactured from injection-molded acrylic. Optics are precisely designed to shape the optics, maximizing efficiency and application spacing. AccuLED Optic technology, creates consistent distributions with the scalability to meet customized application requirements. Offered Standard in 4000K (+/- 275K) CCT and nominal 70 CRI. Optional 3000K CCT and 5000K CC. For the ultimate level of spill light control, an optional house-side shield accessory can be field or factory installed. The house-side shield is designed to seamlessly integrate with the SL2, SL3 or SL4 optics.

Electrical
LED drivers mount to die-cast aluminum back housing for optimal heat sinking, operation efficacy, and prolonged life. Standard drivers feature electronic universal voltage (120-277V 50/60Hz), 347V 60Hz or 480V 60Hz operation, greater than 0.9 power factor, less that 20% harmonic distortion, and is suitable for operation in -40°C to 40°C ambient environments. All fixtures are shipped standard with 10kV/10kA common – and differential – mode surge protection. LightBARs feature and IP66 enclosure rating and maintain greater than 95% lumen maintenance at 60,000 hours per IESNA TM-21. Occupancy sensor and dimming options available.

Finish
Housing is finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. LightBAR™ cover plates are standard white and may be specified to match finish of luminaire housing. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available. Consult Outdoor Architectural Colors brochure for a complete selection. Options to meet Buy American and other domestic preference requirements.

Warranty
Five-year warranty.

CEM/MEM
EPIC MEDIUM LED

1 - 4 LightBARs
Solid State LED

DECORATIVE AREA LUMINAIRE

CERTIFICATION DATA
UL/cUL Listed
IP66 LightBARs
LM79 / LM80 Compliant
2G Vibration Tested
ISO 9001

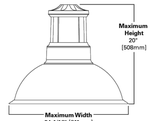
ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120-277V 50/60Hz, 347V/60Hz, 480V/60Hz
-40°C Minimum Temperature
40°C Ambient Temperature Rating

EPA
Effective Projected Area: (Sq. Ft.) 0.94

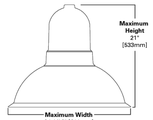
SHIPPING DATA
Approximate Net Weight:
45 lbs. (20 kgs.)

DIMENSIONS

CEM Classical



MEM Classical



See configurations for more detailed information.

COOPER Lighting Solutions

TD500027EN
November 19, 2021 2:19 PM

ORDERING INFORMATION

Sample Number: CEM-E04-LED-E1-T2-FL-GM

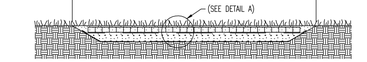
Product Family [1]	Number of LightBARs [2, 3]	Lamp Type	Voltage	Distribution	Mid Section Type	Shade Type	Color [7]
CEM=Epic Classical Medium **MEM**=Epic Modern Medium **BAA-CEM**= Epic Classical Medium, Buy American Act Compliant [4] **TAA-CEM**= Epic Classical Medium,Trade Agreements Act Compliant [4] **BAA-MEM**= Epic Modern Medium, Buy American Act Compliant [4] **TAA-MEM**= Epic Modern Medium,Trade Agreements Act Compliant [4]	**E01**=(1) 21 LED LightBAR **E02**=(2) 21 LED LightBARs **E03**=(3) 21 LED LightBARs **E04**=(4) 21 LED LightBARs **F01**=(1) 7 LED LightBAR **F02**=(2) 7 LED LightBARs **F03**=(3) 7 LED LightBARs **F04**=(4) 7 LED LightBARs	**LED**=Solid State Light Emitting Diodes	**E1**=Electronic (120-277V) **347**=347V **480**=480V [4]	**T2**=Type II **T3**=Type III **T4**=Type IV **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SWQ**=Type V Square Medium **SWQ**=Type V Square Wide **SXQ**=Type V Square Extra Wide **RW**=Rectangular Wide **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right	**SO**=Solid **SR**=Solid Rings	**SN**=Straight Narrow **SW**=Straight Wide **BL**=Bell **FL**=Flute	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **GN**=Hartford Green **WH**=White

Options (Add as Suffix)	Accessories (Order Separately) [11, 25]	
2L=Two Circuits [4] **7030**=70 CRI / 3000K CCT [7] **7050**=70 CRI / 5000K CCT [7] **8030**=80 CRI / 3000K CCT [7] **LCF**=LightBAR Cover Plate Matches Housing Finish **MS-LXX**=Motion Sensor for ON/OFF Operation [8] **MS/X-LXX**=Motion Sensor for Bi-Level Switching [8] **PMXX**=Pendant Mount (XX=Pendant Length in Inches, 9.5" min - 48.0" max) [9] **HSS**=Factory Installed House Side Shield [10] **DIM**=0-10V Dimming Driver [12] **10MSP**=Parallel 10kV MOV Surge Protective Device **20MSP**=Parallel 20kV MOV Surge Protective Device **20K**=Series 20kV UL 1449 Surge Protective Device	**OA/RA1016**=NEMA Twistlock Photocontrol - Multi-Tap **OA/RA1027**=NEMA Twistlock Photocontrol - 480V **OA/RA1201**=NEMA Twistlock Photocontrol - 347V **OA/SA1013**=Photocontrol Shorting Cap **LB/HSS-21**=Field Installed House Side Shield for "S" LightBARs [10, 13] **LB/HSS-07**=Field Installed House Side Shield for "F" LightBARs [10, 13] **Mounting Accessories** (Order Separately) **Classical** **SA8150-XX**=Bishop Wall Mount Arm **SA8151-XX**=Bishop Wall Mount Arm with Cross Rod **SA8152-XX**=Traditional Wall Mount Arm **SA8153-XX**=Traditional Wall Mount Arm with 45° Strap **SA8154-XX**=Bishop Single Pole Mount Arm **SA8155-XX**=Bishop Single Pole Mount Arm with Cross Rod **SA8156-XX**=Bishop Twin Pole Mount Arm **SA8157-XX**=Bishop Twin Pole Mount Arm with Cross Rods **SA8158-XX**=Traditional Single Pole Mount Arm **SA8159-XX**=Traditional Single Pole Mount Arm with Rounded Upper Bar **SA8160-XX**=Traditional Single Pole Mount Arm with Rounded Lower Bar [14] **SA8161-XX**=Traditional Single Pole Mount Arm with 45° Upper Bar **SA8162-XX**=Traditional Single Pole Mount Arm with 45° Lower Bar [14] **SA8163-XX**=Traditional Single Pole Mount Arm with 45° Upper Strap **SA8165-XX**=Traditional Twin Pole Mount Arm **SA8166-XX**=Traditional Twin Pole Mount Arm with Rounded Upper Bars **SA8167-XX**=Traditional Twin Pole Mount Arm with Rounded Lower Bars [14] **SA8168-XX**=Traditional Twin Pole Mount Arm with 45° Upper Bars **SA8169-XX**=Traditional Twin Pole Mount Arm with 45° Lower Bars [14] **SA8170-XX**=Traditional Twin Pole Mount Arm with 45° Upper Straps **SA8171-XX**=Mast Arm Adapter **Modern** **SA8101-XX**=Bishop Wall Mount Arm **SA8102-XX**=Bishop Wall Mount Arm with Cross Rod **SA8103-XX**=Traditional Wall Mount Arm **SA8104-XX**=Traditional Wall Mount Arm with 45° Strap **SA8105-XX**=Bishop Single Pole Mount Arm **SA8106-XX**=Bishop Single Pole Mount Arm with Cross Rod **SA8107-XX**=Bishop Twin Pole Mount Arm **SA8108-XX**=Bishop Twin Pole Mount Arm with Cross Rods **SA8109-XX**=Traditional Single Pole Mount Arm **SA8110-XX**=Traditional Single Pole Mount Arm with Rounded Upper Bar **SA8111-XX**=Traditional Single Pole Mount Arm with Rounded Lower Bar [14] **SA8112-XX**=Traditional Single Pole Mount Arm with 45° Upper Bar **SA8113-XX**=Traditional Single Pole Mount Arm with 45° Lower Bar [14] **SA8114-XX**=Traditional Single Pole Mount Arm with 45° Upper Strap **SA8116-XX**=Traditional Twin Pole Mount Arm **SA8117-XX**=Traditional Twin Pole Mount Arm with Rounded Upper Bars **SA8118-XX**=Traditional Twin Pole Mount Arm with Rounded Lower Bars [14] **SA8119-XX**=Traditional Twin Pole Mount Arm with 45° Upper Bars **SA8120-XX**=Traditional Twin Pole Mount Arm with 45° Lower Bars [14] **SA8121-XX**=Traditional Twin Pole Mount Arm with 45° Upper Straps **SA8122-XX**=Mast Arm Adapter	**Accessory Options** [14] **V**=Victorian Finial [15] **M**=Modern Finial [15] **A**=Architectural Finial [15] **N**=Nostalgic Finial [15] **R**=NEMA Twistlock Photocontrol Receptacle [16] **PER7**=NEMA 7-PIN Twistlock Photocontrol Receptacle [16]

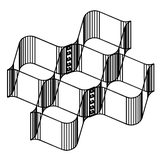
NOTES:
1. Arm not included. Order separately. See accessories.
2. Standard 4000K CCT and greater than 70 R.
3. 21 LED LightBAR powered by 350mA and 7 LED LightBAR powered by 1A.
4. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta or Three Phase Corner Grounded Delta) systems.
5. Custom and RAL color matches available upon request. Consult your lighting representative at Cooper Lighting Solutions for more information.
6. Low-line output varies be tver count. Consult factory. Requires quantity of two or more LightBARs.
7. Consult customer service for lead times and multiplier.
8. Sensor mounted to the luminaire. Available in E01-E04 and F01-F04 configurations. Replace "XX" with mounting height in feet for proper lens selection, (e.g., MS-L25). Consult factory for additional information.
9. Sensor mounted to the luminaire. Available in E02-E04 and F02-F04 configurations. Replace "X" with number of LightBARs operating in low output mode and replace XX with mounting height in feet for proper lens selection, (e.g., MS/X-L25). Maximum four bars in low output mode. Consult factory for additional information.
10. Pendant mount option "PMXX" must be used with Invue Pendant mount kit only. Includes pendant pipe, swivel hanger and canopy cover. Other pendant lengths can be specified in inches (XX). Minimum pendant length is 9-1/2". For lengths above 48", consult your lighting representative at Cooper Lighting Solutions for more information.
11. Only for use with SL2, SL3 and SL4 distributions.
12. Dimming leads provide for external 0-10V control system (by others).
13. Replace XX with color suffix.
14. Only available with traditional arms.
15. One required for each LightBAR.
16. Must be ordered as a separate accessory. Example: VA6106-BK-R.
17. Not available with finials, pendant mount "PMAX" or bishop wall mounts.
18. Requires use of 4" O.D. round straight pole.
19. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
20. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.

COOPER Lighting Solutions

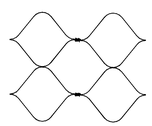
TD500027EN
November 19, 2021 2:19 PM



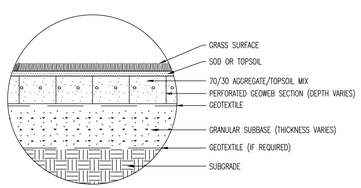
SECTION A – A



ISOMETRIC VIEW



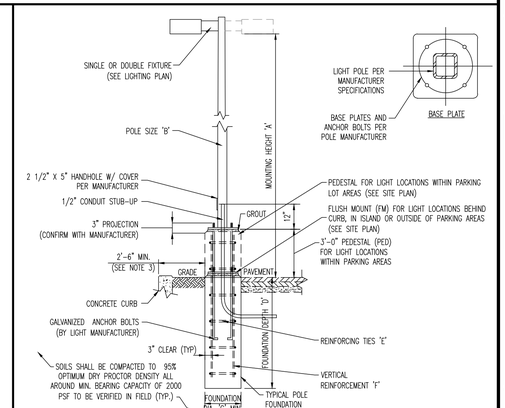
PLAN VIEW



DETAIL A

TYPICAL GRASS PAVER DETAILS

NOT TO SCALE



NOTE: 1. CONTRACTOR TO CONFIRM ALL LIGHT POLE & FIXTURE DIMENSIONS PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO PROVIDE ADJUSTED POLE HEIGHT RESULTING IN MOUNTING HEIGHT 'A', TAKING INTO CONSIDERATION PEDESTAL (PED) OR FLUSH MOUNT (FM) FOUNDATION DESIGNATION AT EACH POLE LOCATION.
3. PROPOSED CONCRETE FOUNDATION AND POLE TO BE CONSTRUCTED WITHIN SUBJECT PROPERTY UNLESS OTHERWISE NOTED. SETBACK FROM CURB IS PREFERRED BUT TO BE ADJUSTED AS NEEDED TO PREVENT ENCROACHMENT OVER PROPERTY LINE.
4. BASE PLATE & ANCHOR BOLTS PER POLE MANUFACTURER. LARGER FOOTING DIAMETER AND/OR ALTERNATE ARRANGEMENT OF REINFORCING STEEL MAY BE REQUIRED TO ACCOMMODATE ANCHOR BOLT CONFIGURATION. CONTRACTOR RESPONSIBLE TO COORDINATE DIMENSIONAL REQUIREMENTS FOR BASE PLATE, ANCHOR BOLTS & REINFORCING STEEL PRIOR TO CONSTRUCTION.

LIGHT POLE FOUNDATION SCHEDULE	
MOUNTING HEIGHT ABOVE GRADE 'A'	15'-17'
POLE DIA. 'B'	6" SQUARE (OR PER MANUFACTURER)
# OF FIXTURES	SINGLE OR DOUBLE
FOUNDATION DIAMETER 'C'	18" DIA. ROUND
FOUNDATION DEPTH 'D'	5.0'
REINFORCING TIES 'E'	#4 @ 16" O.C.
VERTICAL REINFORCEMENT 'F'	(6) #5 BARS EQUALLY SPACED

SOIL NOTES
1. FOOTING DESIGN BASED ON ASSUMED MAXIMUM ALLOWABLE SOILS BEARING CAPACITY OF 2,000 PSF. CONTRACTOR RESPONSIBLE TO VERIFY ADEQUACY OF ASSUMED BEARING CAPACITY PRIOR TO CONSTRUCTION. ENGINEER TO BE NOTIFIED IF INCONSISTENCIES EXIST.
2. SUBGRADE TO BE FREE OF ORGANICS AND BE SUITABLE, COMPACTED MATERIAL.

CONCRETE NOTES
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS WITH A MINIMUM CEMENT CONTENT OF 600 POUNDS PER CUBIC YARD FOR ALL FOOTINGS.
2. ALL CONCRETE SHALL HAVE A SLUMP OF NO GREATER THAN 4" TO WITHIN A TOLERANCE OF 1".
3. ALL EXPOSED CONCRETE SHALL BE AIR-ENTRAINED (WITHIN 1% TOLERANCE), CONFORMING TO ASTM C260.
4. REINFORCING FRAMEWORK AND PLACEMENT OF CONCRETE SHALL COMPLY WITH GOOD CONSTRUCTION PRACTICES AND BE IN ACCORDANCE WITH ALL LOCAL GOVERNING CODES AND REGULATIONS AS WELL AS THE ACI AND UNIFORM BUILDING CODE.

AREA LIGHT FOUNDATION DETAIL

NOT TO SCALE

Plotted: 11/14/23 – 8:32 AM, By: kkirk
File: P:\design projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04472213345D2.dwg, ----> 15 CONSTRUCTION DETAILS

DYNAMIC ENGINEERING CONSULTANTS, PC

BY	COMMENTS	DATE	REV.
KTK	COMPLETENESS COMMENTS	09/19/23	1
KTK	REV. PER TWP.	11/07/23	2

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: –

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JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

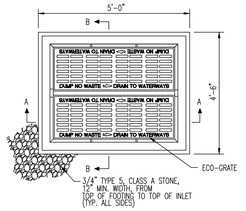
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE:
CONSTRUCTION DETAILS

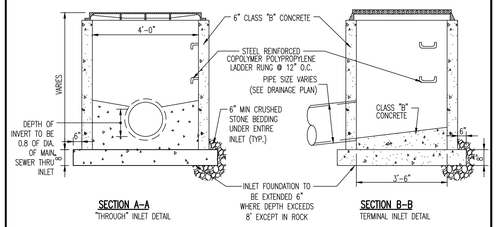
SCALE: (H) NOT TO (V) SCALE | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 15 OF 22 | Rev. #: 2

MUNICIPAL, COUNTY, STATE AND MUA DETAILS TO SUPERSEDE DYNAMIC ENGINEERING DETAILS WHERE APPLICABLE



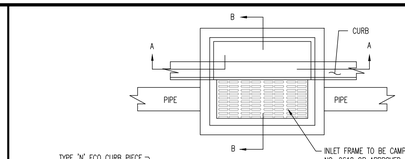
NOTES
1. CONSTRUCTION PER ASTM C-913, LATEST REVISION & HS-20 LOADING.
2. ALL CONCRETE TO BE N.J.D.O.T. CLASS "B" CONCRETE.
3. WALLS SHALL BE PRECAST CONCRETE ONLY.
4. FRAME AND GRATE TO BE CAMPBELL FOUNDRY CO., NO. 3425 BICYCLE SAFE ECO-GRATE SET IN CONC.
5. STEEL REINFORCED COPOLYMER POLYPROPYLENE LADDER RUNG @ 12" O.C.
6. WHEN ADDITIONAL DEPTH IS SCHEDULED, WALLS BELOW 8'-0" MEASURED FROM GRATE TO INVERT SHALL BE 12" THICK AND EXTEND 12" BEYOND OUTSIDE OF WALL.

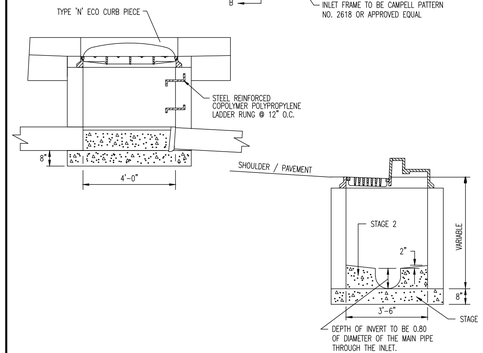


SECTION A-A
"THROUGH" INLET DETAIL

SECTION B-B
TERMINAL INLET DETAIL

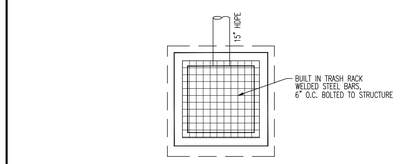
TYPE 'E' INLET
NOT TO SCALE



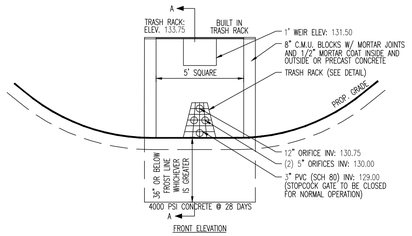


NOTES: 1. MATERIAL: GRAY CAST IRON ASTM A 48-83, CLASS 30B;
2. IN RETROFIT SITUATIONS, THIS CURB PIECE (HEAD) WILL FIT EXISTING CAMPBELL FOUNDRY CO. MANUFACTURED CURB INLETS FOR NJDOT TYPES B, B-1, B-2, D, D-1 AND D-2;
3. NAMEPLATE MESSAGE CAN BE MODIFIED TO YOUR SPECIFIC NEEDS WITHIN AREA SHOWN;
4. CASTING SUPPLIED WITHOUT SURFACE COATING

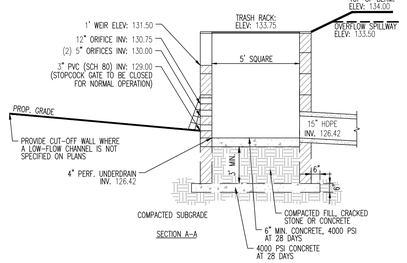
TYPE 'B' INLET w/ TYPE N ECO GRATE DETAIL
NOT TO SCALE



PLAN VIEW

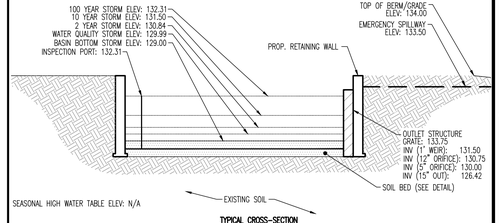


FRONT ELEVATION



SECTION A-A

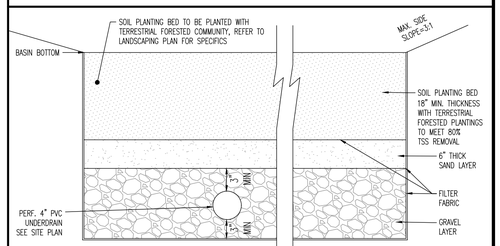
OUTLET CONTROL STRUCTURE DETAIL
NOT TO SCALE



TYPICAL CROSS-SECTION

NOTES:
1. REFER TO BIORETENTION SOIL BED DETAIL FOR PLANTING BED SPECIFICATIONS.
2. CONTRACTOR OR OWNER TO ENGAGE QUALIFIED GEOTECHNICAL ENGINEER TO TEST SOIL PERMEABILITY AND PROVIDE CONSTRUCTION PHASE INSPECTIONS OF THE BASIN BOTTOM SOILS AND FILL MATERIALS WITHIN ANY PROPOSED INFILTRATION OR RETENTION BASIN TO COMPARE RESULTS TO DESIGN CRITERIA.
3. CONTRACTOR SHALL PROVIDE A RECORD OF THE REPLACEMENT MATERIAL USED AND ITS CORRESPONDING PERMEABILITY RATE. REFER TO THE TEST PIT AND/OR SOIL BORING RECORDS AND STORMWATER MANAGEMENT REPORT TO CONFIRM THE DEPTH OF THE ZONE OF INFILTRATION.
4. BASIN CONSTRUCTION MUST NOT COMPACT SOILS BELOW BASIN BOTTOM.
5. PROPOSED INSPECTION PORTS ARE TO BE LOCATED AT UPSTREAM AND DOWNSTREAM END OF PERFORATED UNDERDRAIN PIPES AND EXTEND ABOVE THE SURFACE OF THE SOIL BED. THE DEPTH OF RUNOFF OF THE 100-YEAR DESIGN STORM MUST BE PERMANENTLY MARKED WITH PAINT ON ALL INSPECTION PORTS.

BIORETENTION BASIN DETAIL
NOT TO SCALE

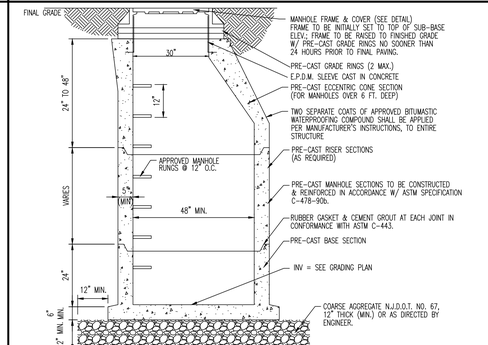


NOTES:
1. SAND LAYER MUST HAVE A MINIMUM THICKNESS OF 6 INCHES AND CONSIST OF CLEAN MEDIUM AGGREGATE CONCRETE SAND (AASHTO M-6/ASTM C-33). TO ENSURE PROPER SYSTEM OPERATION, THE SAND LAYER MUST HAVE A PERMEABILITY RATE AT LEAST TWICE AS FAST AS THE DESIGN PERMEABILITY RATE OF THE PLANTING SOIL BED.
2. SOIL BED MUST CONTAIN THE FOLLOWING MIX BY VOLUME: 85 TO 95% SAND, WITH NO MORE THAN 25% OF THE SAND AS FINE OR VERY FINE SANDS; NO MORE THAN 15% SILT AND CLAY WITH 2% TO 5% CLAY CONTENT. THE ENTIRE MIX MUST THEN BE AMENDED WITH 3 TO 7% ORGANICS, BY WEIGHT.
3. CONTENT OF ANY SOIL MIXED ON-SITE MUST BE CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF NEW JERSEY.
4. GRAVEL LAYER MUST CONSIST OF 0.5 TO 1.5 INCH CLEAN BROKEN STONE OR PEA GRAVEL (AASHTO M-43).
5. SOIL BED MATERIAL MUST BE FREE OF CONTAMINANTS.
6. PH OF SOIL BED MATERIAL IS RECOMMENDED TO RANGE FROM 5.5 TO 6.5.
7. SOIL BED MATERIAL MUST BE PLACED IN LIFTS NOT TO EXCEED 6 INCHES.

BIORETENTION SOIL BED DETAIL
NOT TO SCALE

1. ALL STORM SEWER PIPE IS TO BE SCH-40 PVC UNLESS OTHERWISE NOTED.
2. ALL CLEANOUT CAPS ARE TO BE PVC FOR STORM SEWER.
3. X" - SEE PLAN FOR PIPE DIAMETER
4. FRAME COVER SHALL SPECIFY "STORM"

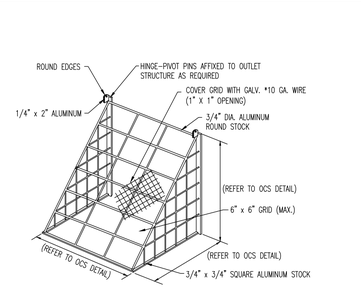
STORM CLEANOUT DETAIL
NOT TO SCALE



1. ALL SANITARY SEWER PIPE IS BE SDR-35 PVC UNLESS OTHERWISE NOTED.
2. ALL CLEANOUT CAPS ARE TO BE BRASS FOR SANITARY.
3. X" - SEE PLAN FOR PIPE DIAMETER
4. FRAME COVER SHALL SPECIFY "SEWER"

SANITARY CLEANOUT DETAIL
NOT TO SCALE

TYPICAL PRECAST STORM MANHOLE
NOT TO SCALE

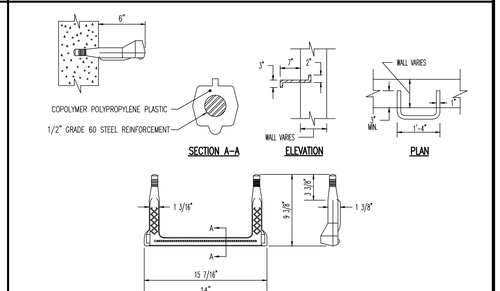


NOTE: FOR 3" TO 15" PRIMARY ORIFICES RACK TO BE DESIGNED TO WITHSTAND A PERPENDICULAR LIVE LOAD OF 300 LBS/SF

TRASH RACK DETAIL
NOT TO SCALE

NOTE:
1. FILTER FABRIC SHALL MEET THE MINIMUM REQUIREMENTS SET FORTH IN THE STANDARDS FOR SOIL EROSION AND SEDIMENTATION CONTROL IN NJ.

RIP-RAP DETAIL
NOT TO SCALE



STEEL REINFORCED COPOLYMER POLYPROPYLENE LADDER RUNG

NOTE: LADDER RUNGS FACING TRAFFIC 12" C TO C

LADDER RUNG DETAIL
NOT TO SCALE

NOTES:
1. PAVEMENT SECTION SHALL BE PER PAVEMENT DETAIL OR TO MATCH ADJOINING EXISTING PAVEMENT SECTION.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.
3. ALL TRENCHES IN EXISTING PAVEMENT SHALL BE SAWCUT.
4. ALL DISTURBED TRAFFIC STRIPING AND PAVEMENT MARKING SHALL BE REPLACED WITH KIND MATERIAL.

STORM SEWER TRENCH DETAIL
NOT TO SCALE

REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: –

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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www.dynamicec.com

JEFFREY HABERMAN
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NEW JERSEY LICENSE No. 53560

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PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

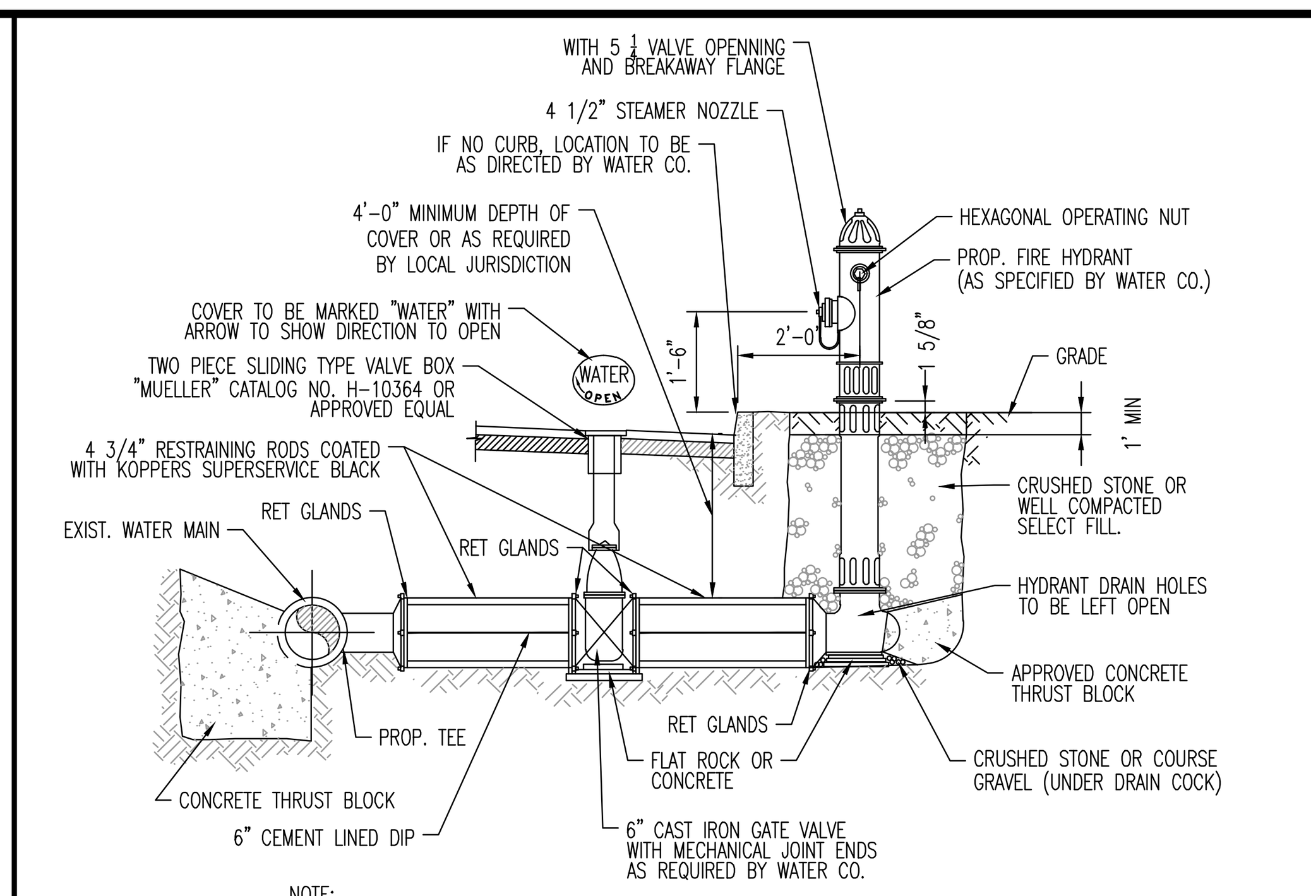
TITLE:
CONSTRUCTION DETAILS

SCALE: (H) NOT TO (V) SCALE | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 16 OF 22 | Rev. #: 2

Plotted: 11/14/23 - 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SD2.dwg, ----> 16 CONSTRUCTION DETAILS

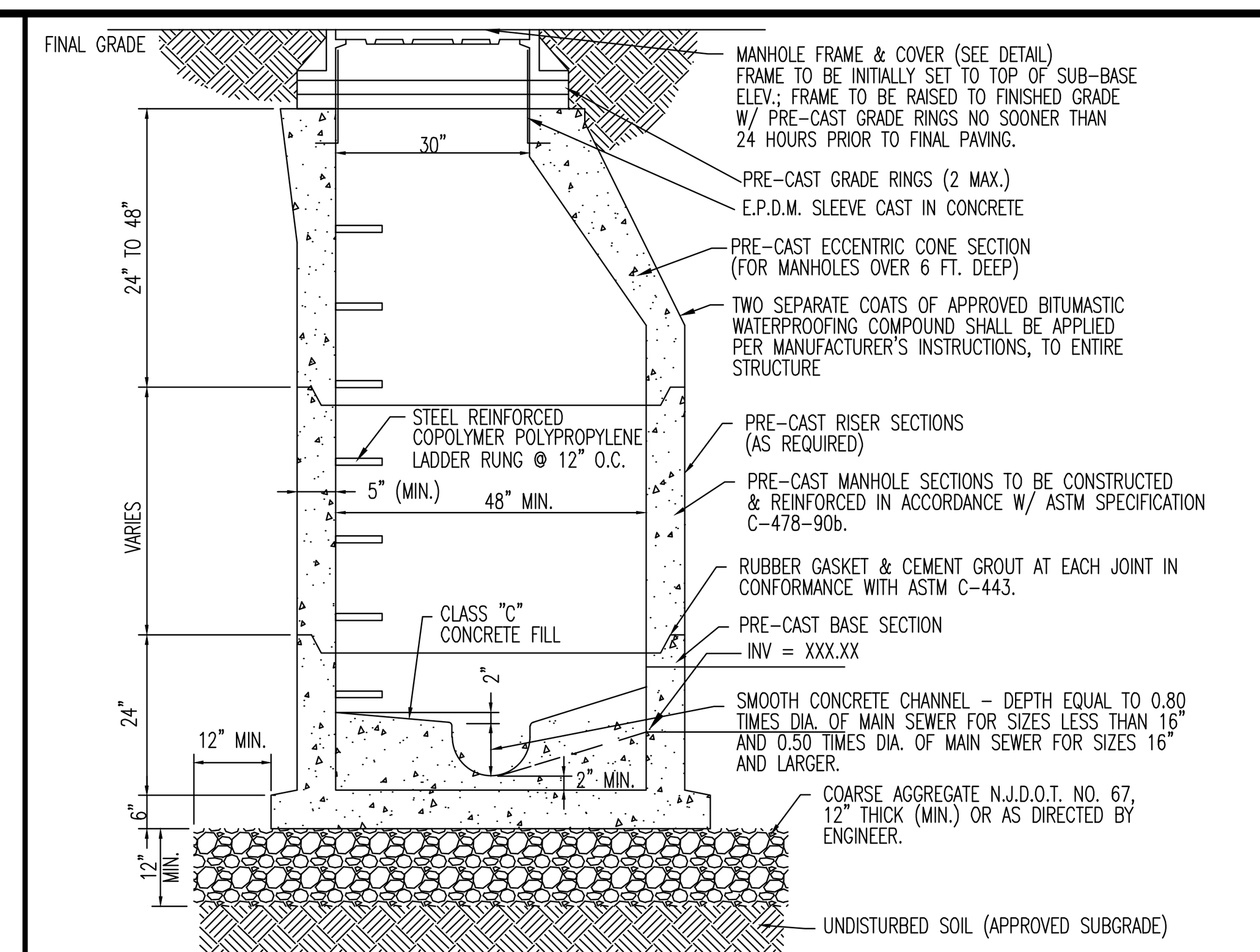
MUNICIPAL, COUNTY, STATE AND MUA DETAILS TO SUPERSEDE DYNAMIC ENGINEERING DETAILS WHERE APPLICABLE



NOTE:
1. REFER TO WATER COMPANY SPECIFICATIONS FOR VALVE/HYDRANT SPECIFICATIONS.
2. PRIVATE FIRE HYDRANTS AND PRIVATE FIRE WATER MAIN SHALL BE BURIED IN ACCORDANCE WITH LATEST NFPA REGULATIONS.

TYPICAL FIRE HYDRANT & VALVE INSTALLATION

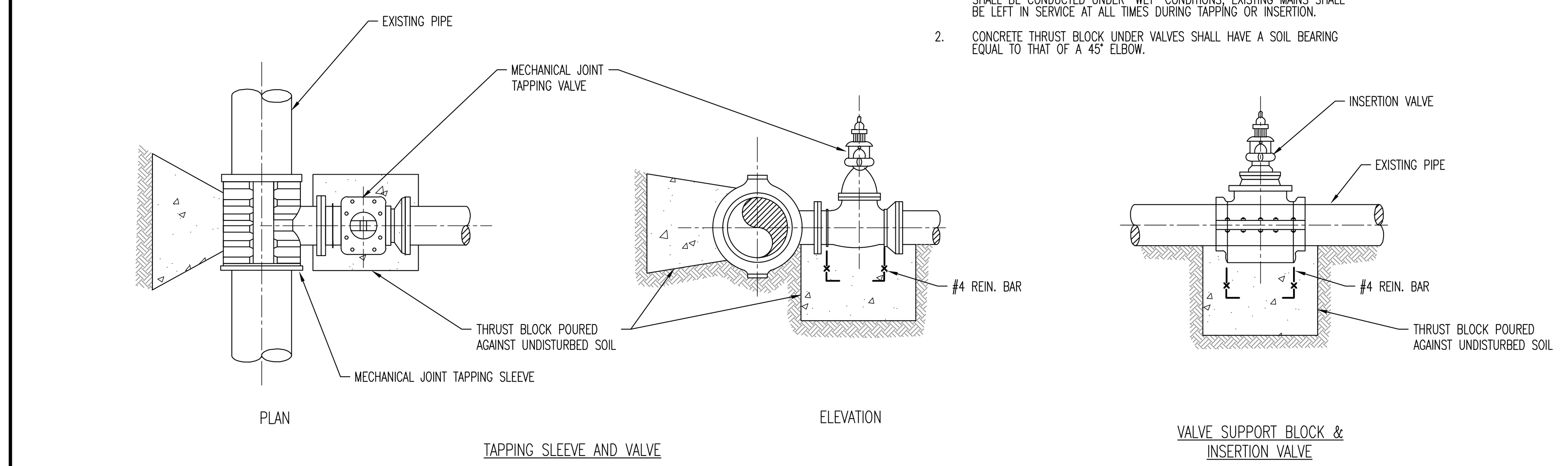
NOT TO SCALE



PRECAST SANITARY MANHOLE

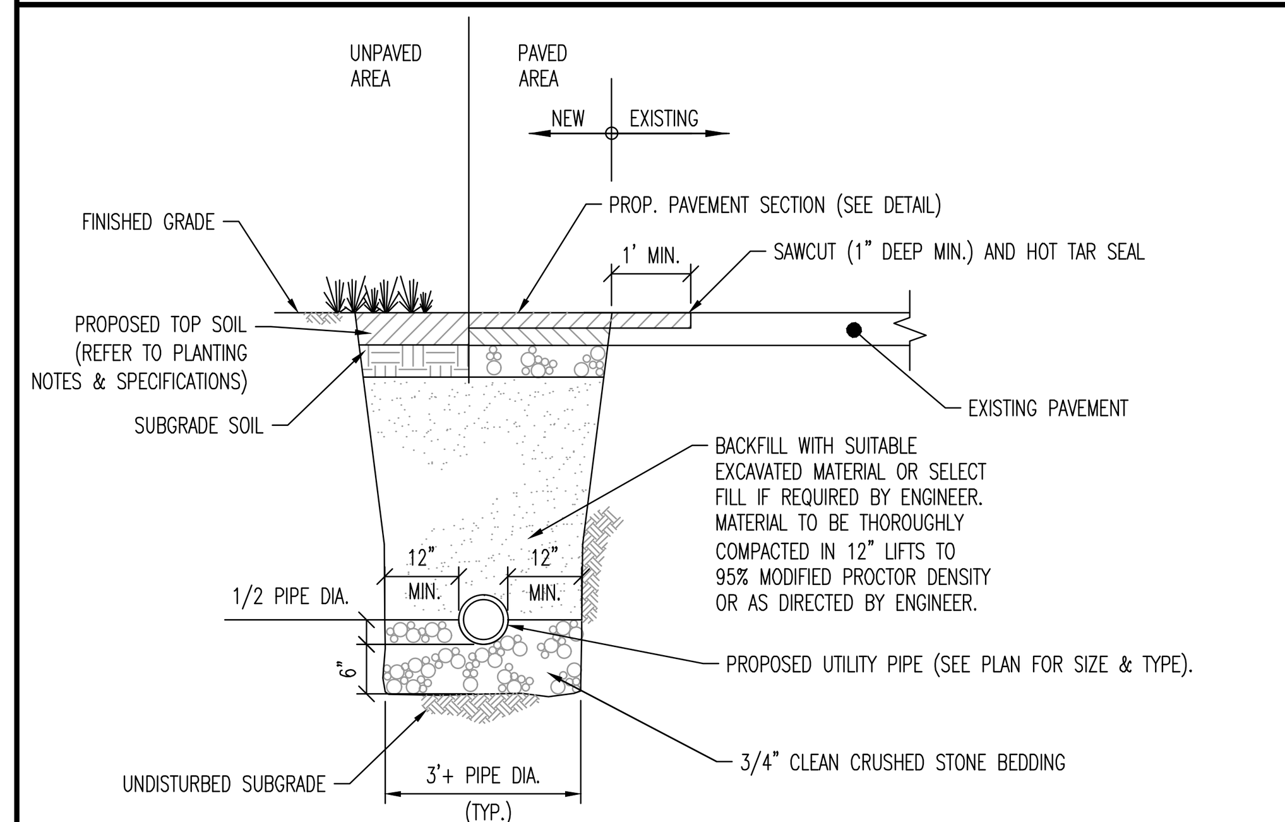
NOT TO SCALE

TAPPING NOTES:
1. INSTALLATION OF TAPPING SLEEVE AND VALVE AND INSERTION VALVE SHALL BE CONDUCTED UNDER "WET" CONDITIONS, EXISTING MAINS SHALL BE LEFT IN SERVICE AT ALL TIMES DURING TAPPING OR INSERTION.
2. CONCRETE THRUST BLOCK UNDER VALVES SHALL HAVE A SOIL BEARING EQUAL TO THAT OF A 45° ELBOW.



WET TAP DETAIL

NOT TO SCALE

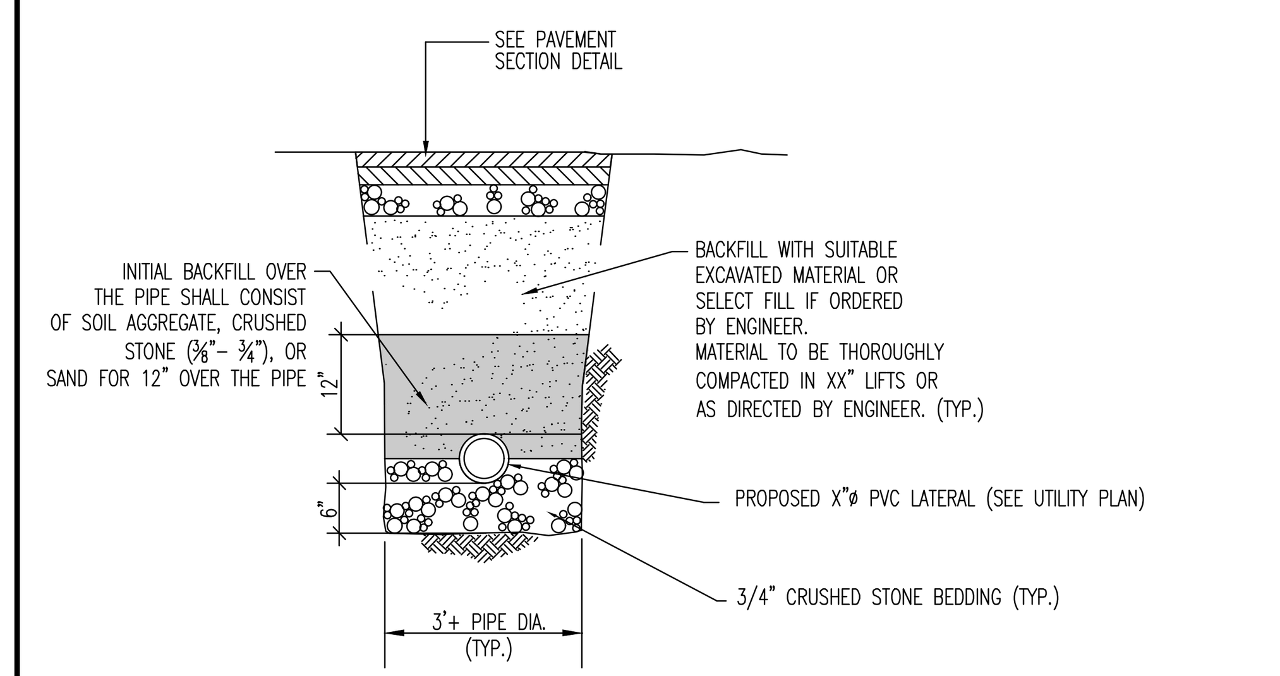


NOTES:
1. PAVEMENT SECTION SHALL BE PER PAVEMENT DETAIL, OR TO MATCH ADJOINING EXISTING PAVEMENT SECTION.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST OSHA STANDARDS.
3. ALL TRENCHES IN EXISTING PAYMENT SHALL BE SAWCUT
4. ALL DISTURBED TRAFFIC STRIPING AND PAVEMENT MARKING SHALL BE REPLACED WITHIN KIND MATERIALS.

7/8/16 - RJC/PH

UTILITY SERVICE TRENCH DETAIL

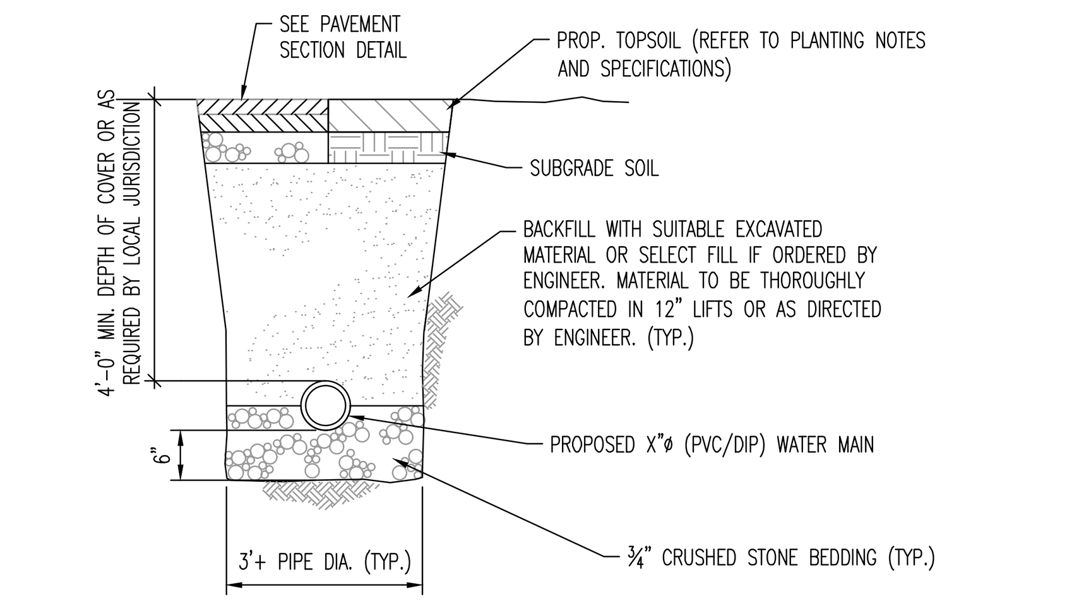
NOT TO SCALE



NOTE:
1. PAVEMENT SECTION TO MATCH, AT MINIMUM, ADJOINING PAVEMENT.
2. X" - SEE PLAN FOR PIPE DIAMETER.

SANITARY SEWER TRENCH DETAIL

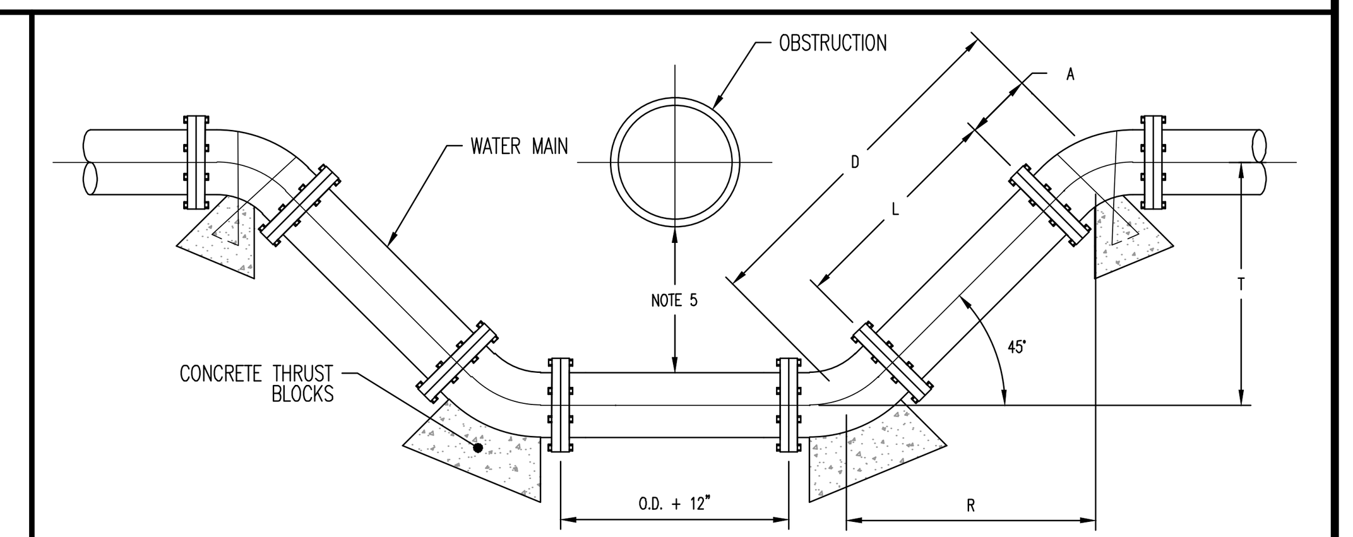
NOT TO SCALE



NOTE:
1. PAVEMENT SECTION AS PER ASPHALT PAVING DETAIL OR TO MATCH ADJOINING EXISTING PAVEMENT SECTION.
2. X" - SEE PLAN FOR PIPE DIAMETER.
3. PRIVATE FIRE WATER MAINS SHALL BE BURIED IN ACCORDANCE WITH LATEST NFPA REGULATIONS.

WATER MAIN TRENCH DETAIL

NOT TO SCALE



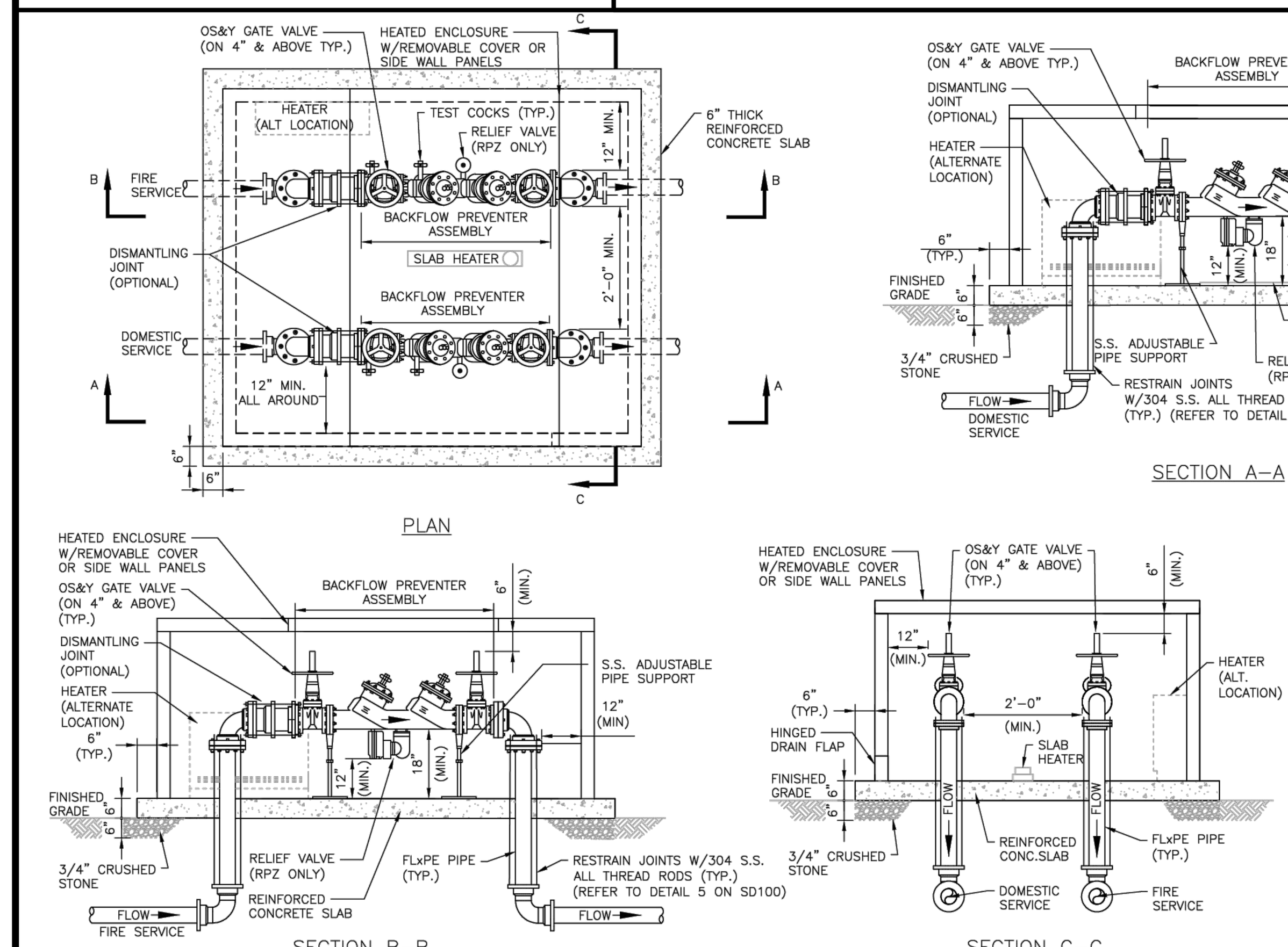
NOTES:
1. WATER MAIN MAY BE LOOPED ABOVE OBSTRUCTION, IF 3.5' MINIMUM COVER IS MAINTAINED ABOVE WATER MAIN.
2. WATER MAIN SHALL BE DUCTILE IRON CEMENT LINED PIPE, ALL JOINTS SHALL BE MECHANICALLY JOINED OR PUSH-ON AND ALL FITTINGS BE MECHANICALLY JOINED CAST IRON.
3. OFFSETS MAY BE SUBSTITUTED FOR A TEE OF UP TO 24" IF APPROVED BY THE ENGINEER.
4. CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS OR OTHER POINTS OF PIPE DIRECTION CHANGE.
5. MINIMUM VERTICAL CLEARANCE BETWEEN SANITARY SEWER AND WATER MAIN SHALL BE 18". CLEARANCE BETWEEN WATER MAIN AND OTHER OBSTRUCTIONS SHALL BE 6".
6. TIE RODS SHALL BE UTILIZED TO RESTRAIN PIPE JOINTS. DETAILS OF TIE ROD ASSEMBLY SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. TIE RODS SHALL BE SUFFICIENT TO RESTRAIN THE THRUST DEVELOPED AT 100 PSI WORKING PRESSURE. MEGALUG RESTRAINT ALSO ACCEPTABLE IN PLACE OF TIE RODS.

MECHANICAL JOINTS

ANGLE	D =	R =	L =
45°	T x 1.414	T x 1.000	D-2A
22.5°	T x 2.613	T x 2.414	D-2A
11.25°	T x 5.126	T x 5.027	D-2A

WATER MAIN - UTILITY CROSSING DETAIL

NOT TO SCALE



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

AMERICAN WATER ENGINEERING, 3906 CHURCH RD., MT. LAUREL, NJ 08054 — AMERICAN WATER
DRAWN BY D. JOBE — PROJECT ENG'R E. SCHWARTZ
DATE 08-24-18
STANDARD DETAIL — DOMESTIC & FIRE BACKFLOW PREVENTERS IN HEATED ENCLOSURE
NEW JERSEY AMERICAN WATER | STANDARDS | USE DIMENSIONS ONLY, SCALE AS SHOWN
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES | 0201-0601-SD93

Service Size (in)	INTERIOR DIMENSIONS FOR FIRE & DOMESTIC BP ENCLOSURE (DWG SD93) Length (ft)	Width (ft)	Height (ft)
2	8.00	5.00	6.50
3	8.00	6.00	6.50
4	10.00	6.00	6.50
6	11.00	6.00	6.50
8	12.00	7.00	6.50
10	14.00	7.00	7.00

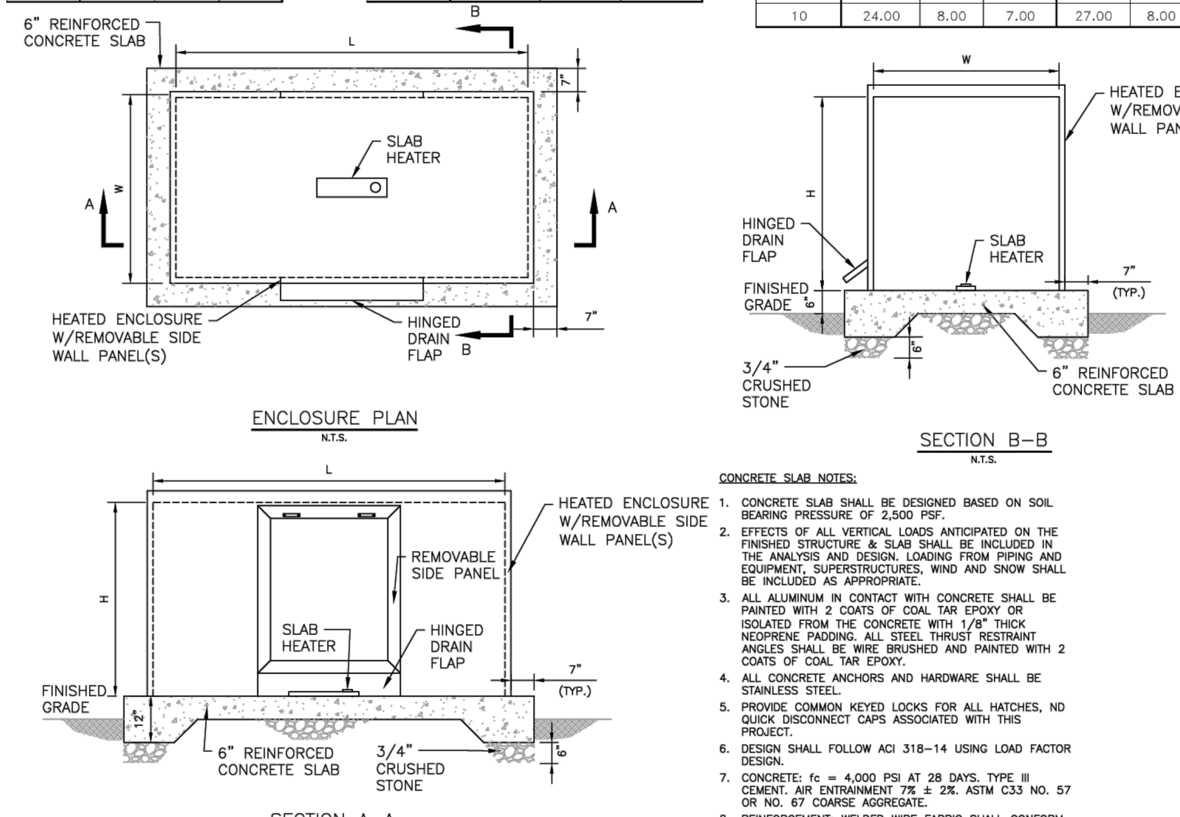
Service Size (in)	INTERIOR DIMENSIONS FOR SINGLE SERVICE BP ENCLOSURES (DWG SD94) Length (ft)	Width (ft)	Height (ft)
2	8.00	3.00	6.50
3	8.00	3.00	6.50
4	10.00	3.00	6.50
6	11.00	3.00	6.50
8	12.00	4.00	6.50
10	14.00	4.00	7.00

INTERIOR DIMENSIONS FOR FIRE & DOMESTIC METER & BP ENCLOSURE (DWG SD95)

	Without PRV Assembly			With PRV Assembly		
Service Size (in)	Length (ft)	Width (ft)	Height (ft)	Length (ft)	Width (ft)	Height (ft)
2	12.00	5.00	6.50	13.00	5.00	6.50
3	13.00	6.00	6.50	15.00	6.00	6.50
4	15.00	6.00	6.50	17.00	6.00	6.50
6	18.00	7.00	6.50	20.00	7.00	6.50
8	20.00	8.00	6.50	23.00	8.00	6.50
10	24.00	8.00	7.00	27.00	8.00	7.00

INTERIOR DIMENSIONS FOR DOMESTIC METER & BP ENCLOSURE (DWG SD96)

	Without PRV Assembly			With PRV Assembly		
Service Size (in)	Length (ft)	Width (ft)	Height (ft)	Length (ft)	Width (ft)	Height (ft)
2	12.00	4.00	6.50	13.00	4.00	6.50
3	13.00	4.00	6.50	15.00	4.00	6.50
4	15.00	4.00	6.50	17.00	4.00	6.50
6	18.00	5.00	6.50	20.00	5.00	6.50
8	20.00	5.00	6.50	23.00	5.00	6.50
10	24.00	6.00	7.00	27.00	6.00	7.00



INTERIOR DIMENSIONS FOR MULTI-USE METER & BP ENCLOSURE (DWG SD98)

	Without PRV Assembly			With PRV Assembly		
Service Size (in)	Length (ft)	Width (ft)	Height (ft)	Length (ft)	Width (ft)	Height (ft)
4	16.00	4.00	6.50	18.00	4.00	6.50
6	19.00	5.00	6.50	22.00	5.00	6.50
8	22.00	5.00	6.50	25.00	5.00	6.50
10	26.00	6.00	7.00	29.00	6.00	7.00

Service Size	INTERIOR DIMENSIONS FOR FIRE METER & BP ENCLOSURE (DWG SD97) Length (ft)	Width (ft)	Height (ft)
2	10.00	3.00	6.50
3	10.00	4.00	6.50
4	12.00	4.00	6.50
6	14.00	4.00	6.50
8	15.00	5.00	6.50
10	18.00	6.00	7.00

CONCRETE SLAB NOTES:
1. CONCRETE SLAB SHALL BE DESIGNED BASED ON SOIL BEARING PRESSURE OF 2,500 PSF.
2. EFFECTS OF ALL VERTICAL LOADS ANTICIPATED ON THE FINISHED STRUCTURE & SLAB SHALL BE INCLUDED IN THE ANALYSIS AND DESIGN. LOADING FROM PIPING AND EQUIPMENT, SUPERSTRUCTURES, WIND AND SNOW SHALL BE INCLUDED AS APPROPRIATE.
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, ND QUICK DISCONNECT CAPS ASSOCIATED WITH THIS PROJECT.
6. DESIGN SHALL FOLLOW ACI 318-14 USING LOAD FACTOR DESIGN.
7. CONCRETE: fc = 4,000 PSI AT 28 DAYS. TYPE III CEMENT. AIR ENTRAINMENT 7% ± 2%. ASTM C33 NO. 57 OR NO. 67 COARSE AGGREGATE.
8. REINFORCEMENT: WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. BAR REINFORCEMENT SHALL BE GRADE 60, CONFORMING TO ASTM A615..

GENERAL NOTES:
1. THE ENCLOSURE DIMENSIONS NOTED ABOVE ARE APPROXIMATE MINIMUM REQUIREMENTS BASED ON THE EQUIPMENT AND LAYOUTS SHOWN ON DRAWINGS SD93 THROUGH SD98.
2. THE DESIGN ENGINEER SHALL MAKE HIS OWN DETERMINATION TO ENSURE THAT THE REQUIRED CLEARANCES NOTED ON THE ENCLOSURE 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 ENCLOSURE.
4. ENCLOSURE MUST MEET OSHA 29 CRF 1910.145 AND ASSE 1060 CLASS 1.
5. 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.
6. 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 IN SUFFICIENT NUMBER AND LOCATION TO FACILITATE MAINTENANCE & REPAIRS ON ALL COMPONENTS. ENCLOSURE TO HAVE HINGED ONE-WAY DRAIN FLAP.
7. ENCLOSURE DIMENSIONS ARE MEASURED TO THE INSIDE WALLS.

NEW JERSEY AMERICAN WATER

AMERICAN WATER ENGINEERING, 3906 CHURCH RD., MT. LAUREL, NJ 08054 — AMERICAN WATER
DRAWN BY D. JOBE — PROJECT ENG'R E. SCHWARTZ
DATE 08-24-18
STANDARD DETAIL — HEATED ENCLOSURE
NEW JERSEY AMERICAN WATER | STANDARDS | USE DIMENSIONS ONLY, SCALE AS SHOWN
USE APPROVED DRAWINGS ONLY FOR CONSTRUCTION PURPOSES | 0201-0601-SD101

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 | 0201-0601-SD102

DYNAMIC ENGINEERING • EARTH • SURVEY • TRAFFIC

REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH

PROJECT: MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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TITLE: CONSTRUCTION DETAILS

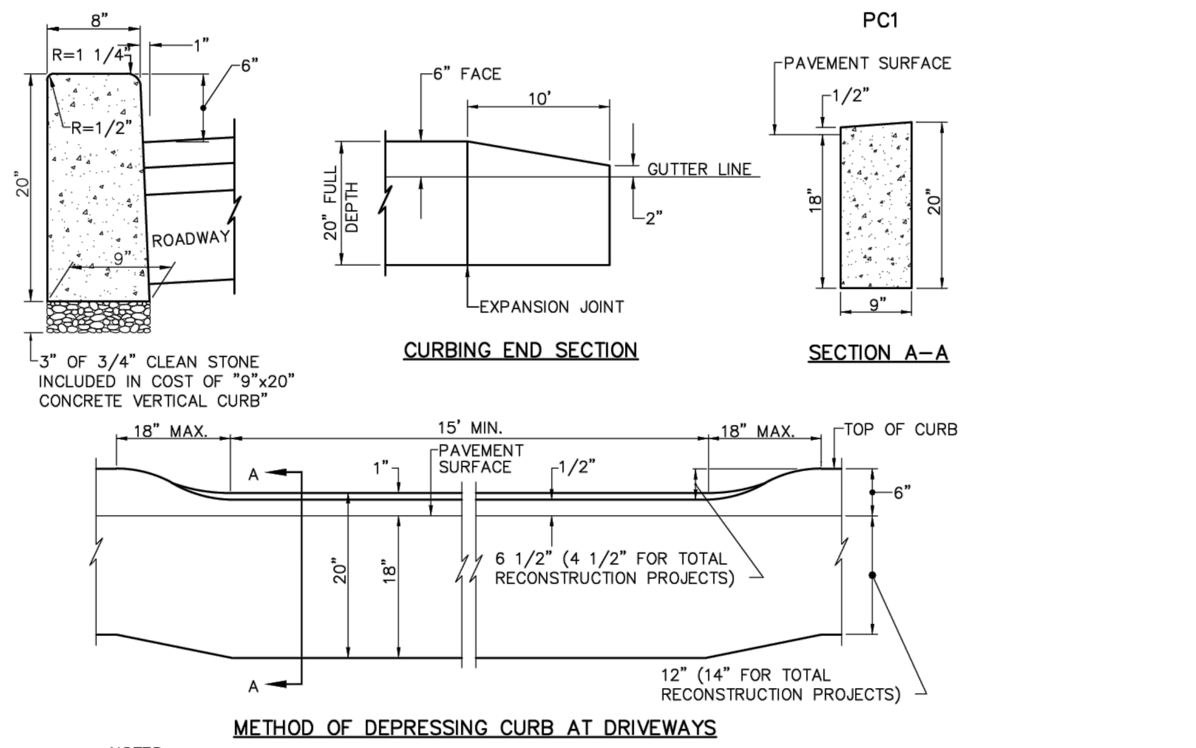
SCALE: (H) NOT TO (V) SCALE | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 17 OF 22 | Rev. #: 2

Plotted: 11/14/23 - 8:32 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SD2.dwg, ---> 17 CONSTRUCTION DETAILS

MUNICIPAL, COUNTY, STATE AND MUA DETAILS TO SUPERSEDE DYNAMIC ENGINEERING DETAILS WHERE APPLICABLE

PC1



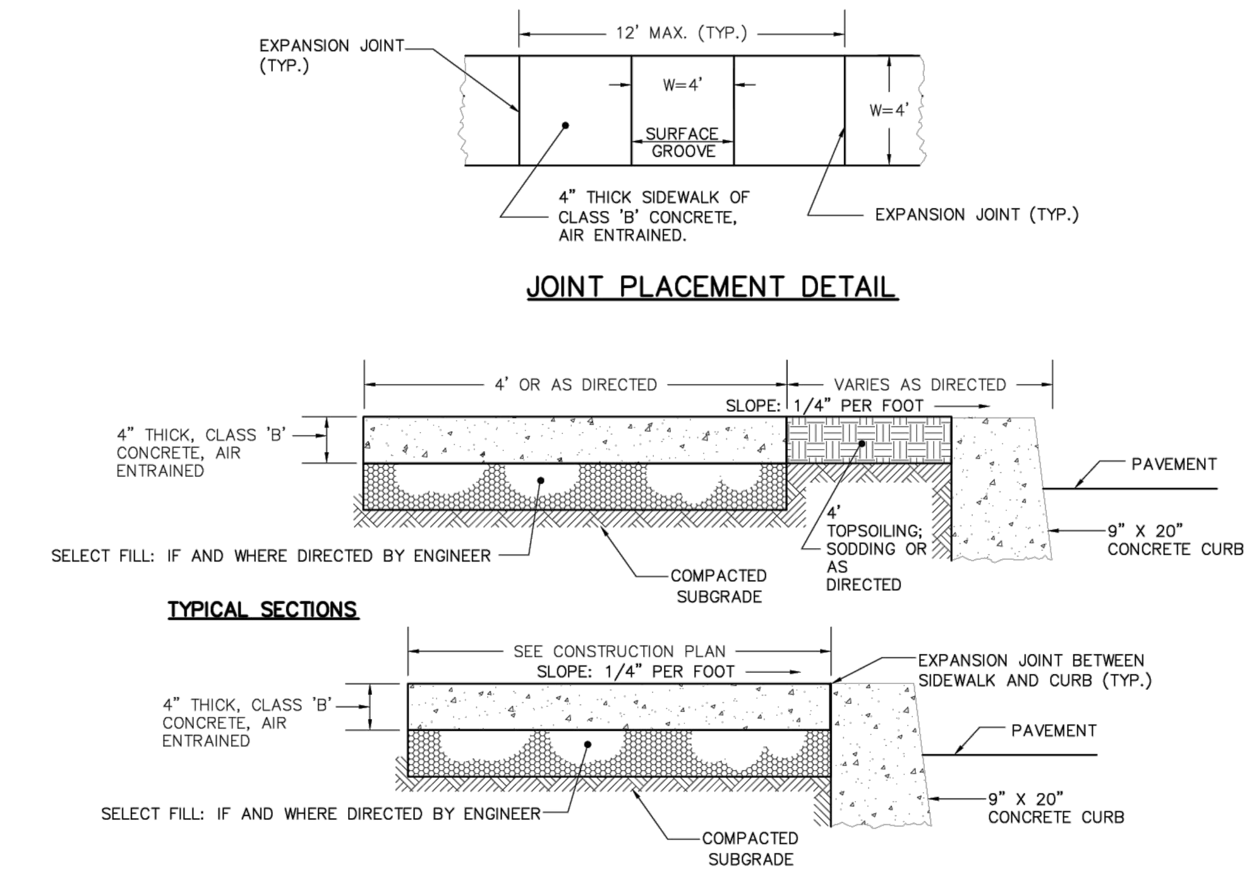
METHOD OF DEPRESSING CURB AT DRIVEWAYS

NOTES

1. EXPANSION JOINTS ALTERNATE EVERY 10 FEET WITH CONSTRUCTION JOINTS. EXPANSION JOINTS SHALL BE FILLED WITH PREFORMED, BITUMINOUS-IMPREGNATED FIBER JOINT FILLER RECESSED 1/4" FROM THE FACE AND TOP OF THE CURB. SUCH JOINTS SHALL BE INSTALLED BETWEEN CURB AND INLET HEADS.
2. ALL JOINTS SHALL EXTEND THE FULL 20" DEPTH OF THE CURB.
3. THE CURB SHALL BE COMPOSED OF CLASS "B" CONCRETE.

9" x 20" CONCRETE CURB

N.T.S.



JOINT PLACEMENT DETAIL

TYPICAL SECTIONS

CONCRETE SIDEWALK DETAILS

N.T.S.

STANDARD CONSTRUCTION NOTES FOR ROAD IMPROVEMENTS

1. Prior to the initiation of any excavation or construction within any street, road, or right of way under the jurisdiction of the Somerset County Board of County Commissioners, a Somerset County Road Opening Permit shall be obtained from the Office of the County Engineer.
2. The Office of the County Engineer is to be notified seventy-two (72) hours in advance of commencement of construction of any improvements under the jurisdiction of the County of Somerset. Grade construction sheets will be submitted at this time. These grade construction sheets are to be signed and sealed by a professional land surveyor.
3. As indicated in the "Manual on Uniform Traffic Control Devices," proper and sufficient construction warning signs are to be provided and maintained by contractors performing construction work along County roads. Said signs are to be maintained until construction is completed and approved by the appropriate County inspection personnel.
4. All improvements under the jurisdiction of the County of Somerset are to be constructed in accordance with Somerset County Specifications.
5. All mailboxes, located within the construction improvements in the County R.O.W. will be reset in accordance with the owner of the mailbox and the postmaster.
6. Information monuments, markers, disks, rivets of the National Geodetic Control Survey may be obtained from the New Jersey Department of Transportation, Geodetic Division, 1035 Parkway Avenue, Trenton, NJ, telephone #(609) 530-5641; or the Somerset County Engineering Division, telephone #(908) 231-7024, ext. 7512.
7. The New Jersey Geodetic Control Survey, at the above address, is to be notified two (2) weeks in advance of commencement of construction of any improvements in order to preserve the resetting of existing monuments, or installation of new monuments if required by the County.

Prepared by: Somerset County Department of Public Works

CR-1A

CONSTRUCTION NOTES

1. PROVIDE EXPANSION JOINT MATERIAL ½" THICK WHERE CURB RAMP ADJOINS ANY RIGID PAVEMENT, SIDEWALK, OR STRUCTURE WITH THE TOP OF JOINT FILLER FLUSH WITH ADJACENT CONCRETE SURFACE.
2. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING FLARED SIDE RAMPS.
3. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MIN. IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS THE FULL WIDTH OF THE CURB RAMP; ROADWAY EDGE OF DWS TO BE 8" MINIMUM TO 5' MAXIMUM FROM THE GUTTER LINE OF THE ROADWAY.

   PROVIDE DWS COLOR THAT CONTRASTS WITH THE PAVED SURFACE COLOR, LIGHT ON DARK OR DARK ON LIGHT. ALIGN DWS TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB.
4. CURB AT CURB RAMP TO BE CONSTRUCTED AS CONCRETE ACROSS THE RAMP OPENING AND A CONCRETE CRADLE, 4" WIDE AND 4" DOWN POURED MONOLITHICALLY WITH THE CURB TO SUPPORT THE CONCRETE SIDEWALK CURB RAMP, SEE NJDOT DETAIL SHEET CD-606-1. CONSTRUCT TOP OF DEPRESSED CURB TO BE FLUSH WITH ADJACENT SURFACES (ROADWAY AND RAMPS). GRADE ROADWAY GUTTER TO INSURE POSITIVE DRAINAGE AND PREVENT PONDING.
5. TRAVERSIBLE FLARES ON RAMPS, WITH SLOPES LESS THAN 10%, WILL BE CONSTRUCTED WITH A DEFINED CONSTRUCTION JOINT BETWEEN THE FLARE GRADE AND THE ACTUAL CURB RAMP. DWS WILL EXEND FROM CONSTRUCTION JOINT TO CONSTRUCTION JOINT.
6. FLARES FOR RAMPS THAT ARE ADJACENT TO GRASS BERM AREAS (CURB FLARE OF 18") WILL HAVE GRASS FLARES. THE EDGE OF THE CURB RAMP WILL BE THE EDGE OF THE CONCRETE. DWS WILL EXTEND THE FULL WIDTH OF THE CURB RAMP.

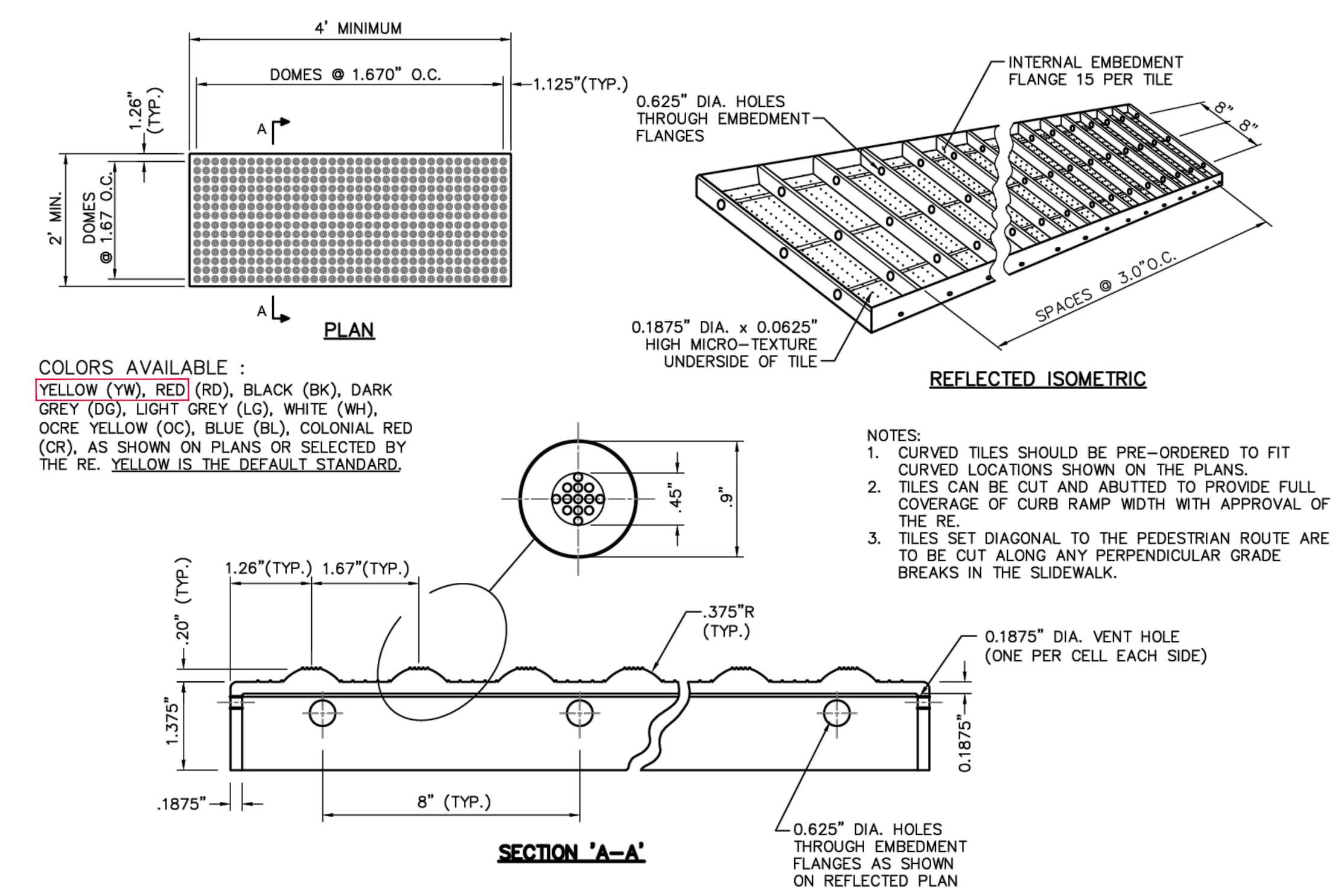
CR-1

CURB RAMP NOTES - SOMERSET COUNTY

LAYOUT NOTES

1. IN THE LAYOUT OF CURB RAMP ALTERATIONS, IT IS THE INTENSION THAT:
   A. THE NOTES AND DETAILS HEREIN ARE TO SUPPLEMENT THE NJDOT STANDARD DETAILS AND NOTES.
   B. HORIZONTAL LOCATION OF CURB RETURN TO REMAIN AS CLOSE TO EXISTING LOCATION AS FEASIBLE.
   C. THE MAXIMUM CURB HEIGHT AROUND THE CURB RETURN IS 4" HIGH UNLESS OTHERWISE PROVIDED.
   D. CURB REPLACEMENT TO EXTEND TO NEAREST JOINT.
   E. SIDEWALK IMPROVEMENTS TO EXTEND TO NEAREST JOINT. IF IT IS A CONSTRUCTION JOINT, THEN THE SIDEWALK SHOULD BE SAWCUT ALONG THE JOINT LINE.
2. FOR NEW CONSTRUCTION AND ALTERATIONS, DO NOT EXCEED 1:50 (2%) CROSS SLOPE ON THE CURB RAMP, LANDING, OR PEDESTRIAN ACCESSIBLE ROUTE. RUNNING SLOPE IS NOT TO EXCEED 1:12 (8.3%) ANY WHERE ALONG THE ACCESSIBLE ROUTE, EXCEPT AS APPROVED BY THE RE.
3. 4'x4' LEVEL LANDINGS (AKA TURNING SPACE) ARE TO BE PROVIDED WHEREEVER TURNING MOVEMENTS WOULD BE MADE BY WHEELCHAIR USERS; LANDINGS CANNOT EXCEED 1:50 (2%) IN BOTH DIRECTIONS. IF THE LANDING IS CONSTRAINED BY CURB OR WALLS ON MORE THAN 2 SIDES, THEN THE WIDTH OF THE LANDING IN THE DIRECTION OF THE CROSSWALK WILL BE 5 FEET.
4. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED ON THE PLANS SHOW THE MAXIMUM SLOPE ALLOWABLE. SLOPES THAT EXCEED THOSE INDICATED ON THE PLANS WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED. TO AVOID CHASING GRADE INDEFINITELY ON ALTERATION WORK, A MAXIMUM REPLACEMENT LENGTH OF 15' FROM THE CURB FACE MAY BE AN OPTION PERMITTED BY THE RE. THE RE TO ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE AND MUST DOCUMENT THE RAMP BEING TECHNICALLY INFEASIBLE ON THE PROPER FORMS.
5. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROAD SURFACE IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 11%. THE COUNTER SLOPE OF THE GUTTER OF THE ROAD IS NOT TO EXCEED 5%.
6. FOR CURB RAMPS THAT LEAD TO A SINGLE CROSS WALK, THE RAMP (EXCLUDING THE FLARES) IS TO ALIGN FULLY INSIDE OF THE CROSSWALK MARKINGS. CURB RAMPS SHALL HAVE A MINIMUM 4' X 4' CLEAR SPACE AT THE BOTTOM OF THE RAMP THAT IS WITHIN THE CROSS WALK AREA AND WHOLLY OUTSIDE OF THE TRAVEL LANES OF THE ROADWAYS.
7. THE RE WILL BE MADE AWARE OF ANY CASES WHERE THESE REQUIREMENTS CANNOT BE MET PRIOR TO PAVING OF THE CURB RAMPS. IF THE WORK PROCEEDS WITHOUT NOTICE TO THE RE, THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF RECONSTRUCTING THE RAMP.
8. RAMPS AT THE MIDDLE OF CURB RETURNS ARE NOT PREFERED AS THEY DIRECT PEDESTRIANS INTO THE INTERSECTION. THIS TYPE TO ONLY BE REPLACED IN-KIND IF FIRST APPROVED BY THE RE.

CR-2A



DETECTABLE/TACTILE WARNING SURFACE

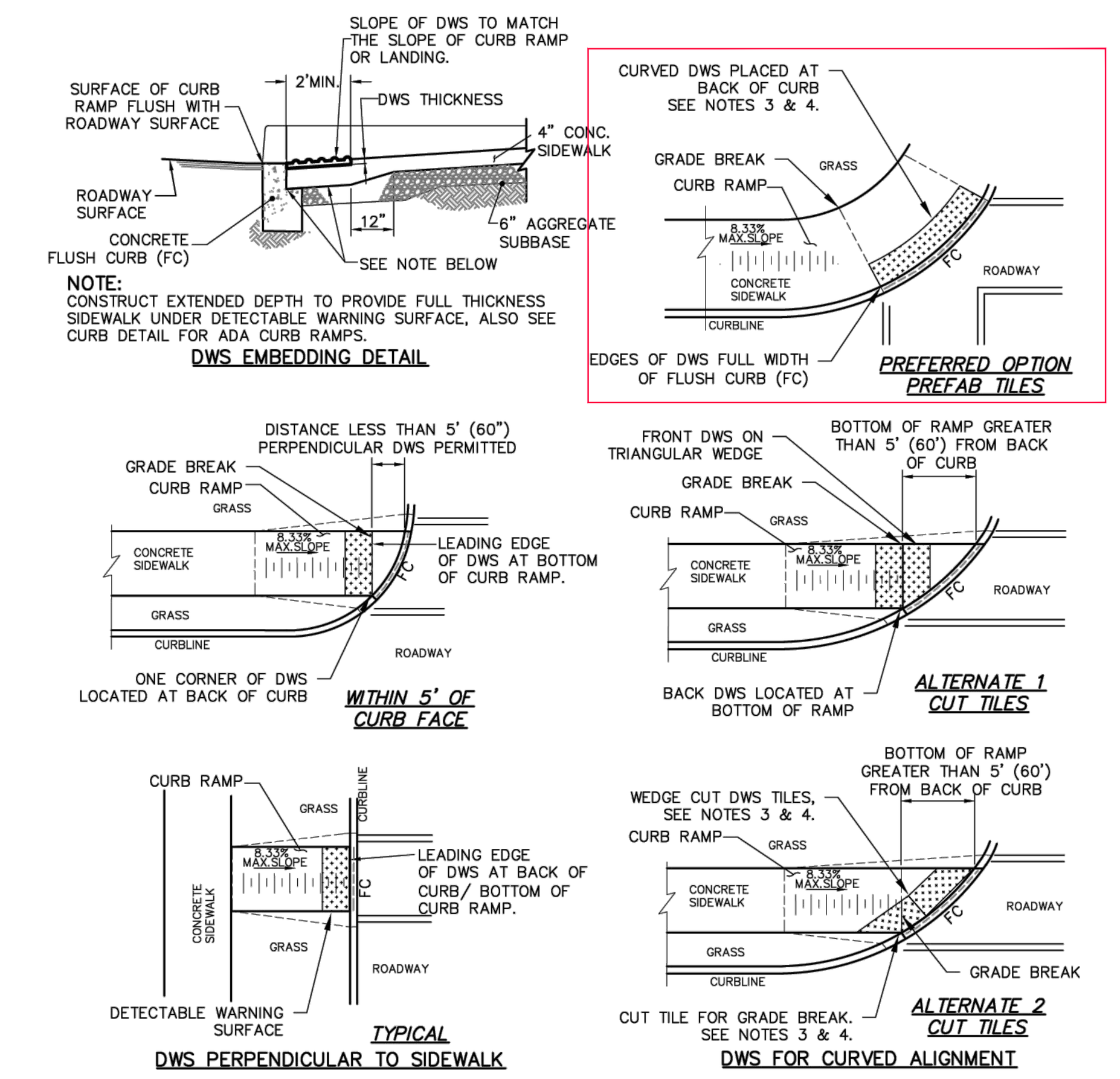
CAST IN PLACE INLINE DOME TACTILE TILE

N.T.S.

CR-2

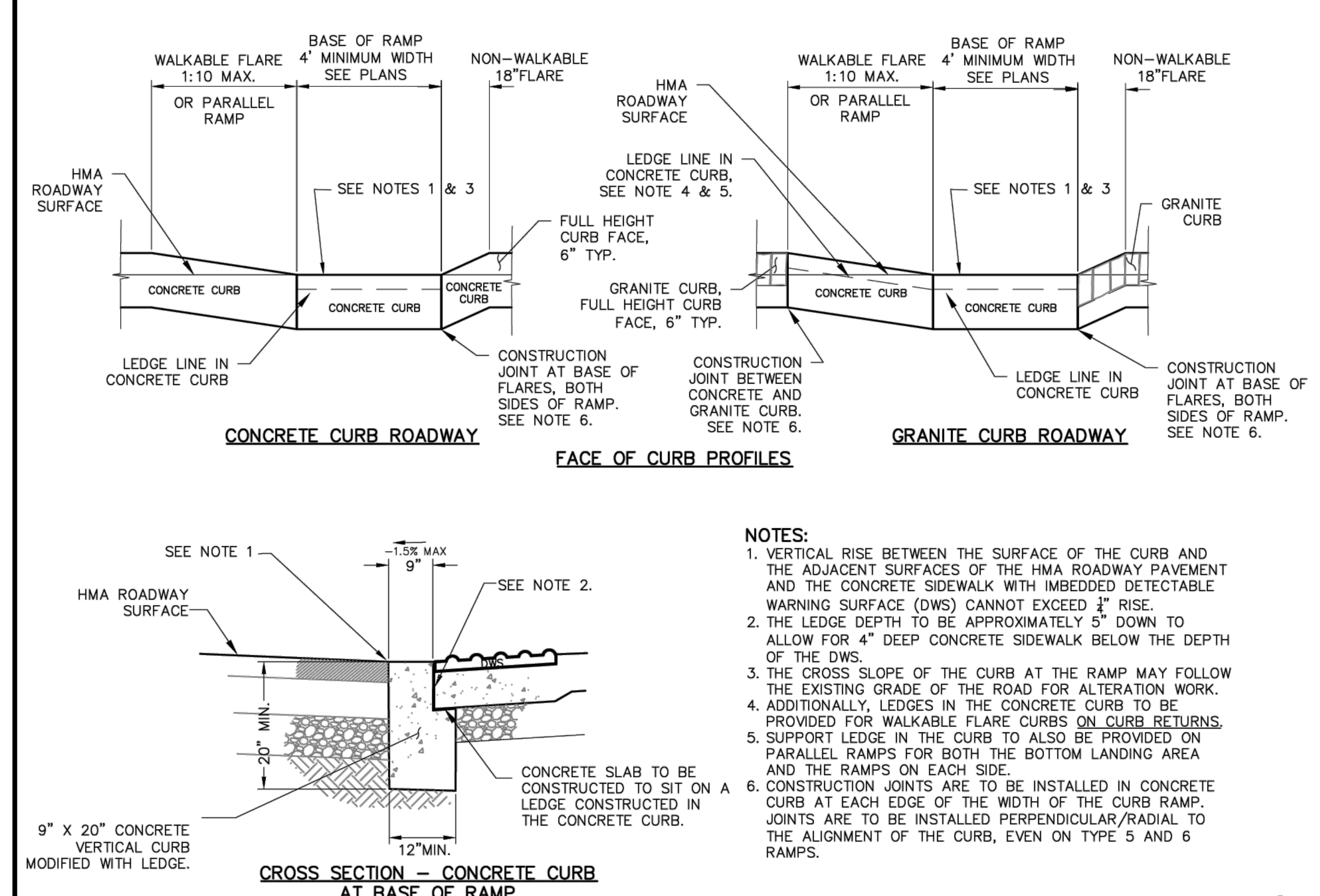
DWS NOTES:

1. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MIN. IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS THE FULL WIDTH OF THE CURB RAMP; ROADWAY EDGE OF DWS TO BE AT THE BACK OF CURB OR UPTO 5' MAXIMUM FROM THE GUTTER LINE OF THE ROADWAY.
2. PROVIDE DWS COLOR AS INDICATED ON PLANS, THAT CONTRASTS WITH THE PAVED SURFACE COLOR, LIGHT ON DARK OR DARK ON LIGHT.
3. DWS ON CURVED ALIGNMENT CAN USE PREFABRICATED CURVED TILES OR TILES CAN BE CUT. WEDGES TO BE CUT FROM SIDES OF TILES SO THAT THEY CAN SMOOTHLY BE JOINED TO FORM A CURVE WHERE THE FACE OF TILE DOES NOT EXCEED 2" FROM THE BACK OF CURB.
4. SURFACE APPLIED TILES CANNOT BE CUT AND MUST BE ORDERED FOR FULL WIDTH COVERAGE OF RAMPS AND RADIUS OF CURVE.



DETECTABLE WARNING SURFACE (DWS)

N.T.S.



NOTES:

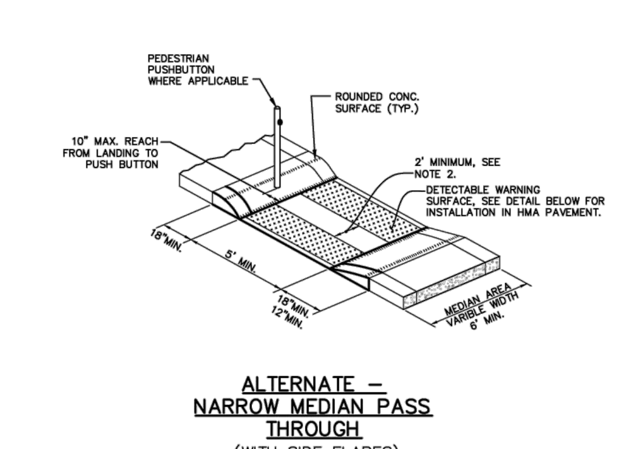
1. VERTICAL RISE BETWEEN THE SURFACE OF THE CURB AND THE ADJACENT SURFACES OF THE HMA ROADWAY PAVEMENT AND THE CONCRETE SIDEWALK WITH IMBEDDED DETECTABLE WARNING SURFACE (DWS) CANNOT EXCEED ¼" RISE.
2. THE LEDGE DEPTH TO BE APPROXIMATELY 5" DOWN TO ALLOW FOR 4" DEEP CONCRETE SIDEWALK BELOW THE DEPTH OF THE DWS.
3. THE CROSS SLOPE OF THE CURB AT THE RAMP MAY FOLLOW THE EXISTING GRADE OF THE ROAD FOR ALTERATION WORK.
4. ADDITIONALLY, LEDGES IN THE CONCRETE CURB TO BE PROVIDED FOR WALKABLE FLARE CURBS ON CURB RETURNS.
5. SUPPORT LEDGE IN THE CURB TO ALSO BE PROVIDED ON PARALLEL RAMPS FOR BOTH THE BOTTOM LANDING AREA AND THE RAMPS ON EACH SIDE.
6. CONSTRUCTION JOINTS ARE TO BE INSTALLED IN CONCRETE CURB AT EACH EDGE OF THE WIDTH OF THE CURB RAMP. JOINTS ARE TO BE INSTALLED PERPENDICULAR/RADIAL TO THE ALIGNMENT OF THE CURB, EVEN ON TYPE 5 AND 6 RAMPS.

CR-3

CURB DETAILS FOR ADA CURB RAMPS

N.T.S.

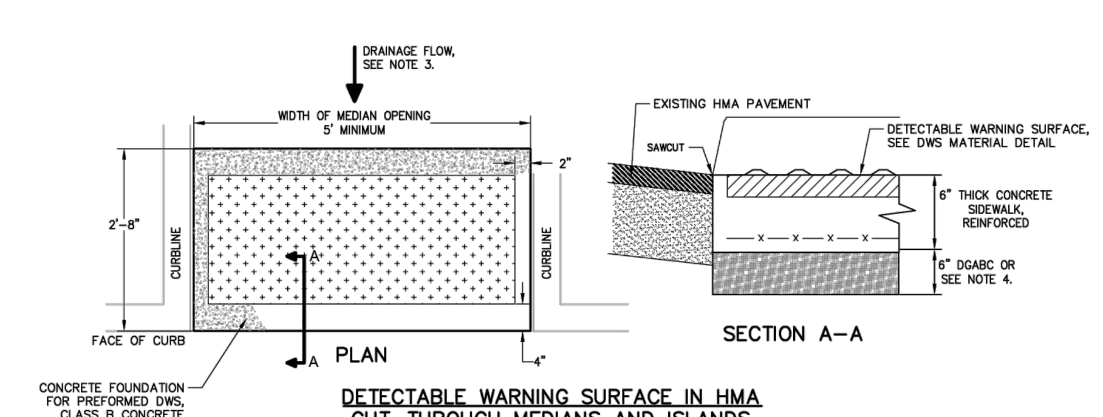
CR-8



ALTERNATE – NARROW MEDIAN PASS THROUGH (WITH SIDE FLARES)

MEDIAN NOTES:

1. FOR NARROW MEDIANS, AVOID RAMPING AND PROVIDE PASS THROUGH AT ROAD GRADE, SURFACE OF EITHER HMA OR CONCRETE PAVEMENT.
2. PROVIDE DETECTABLE WARNING SURFACE (DWS) ON PASS THROUGH MEDIANS IF THE WIDTH OF MEDIAN IS GREATER THAN 6'-8" AND CAN ACCOMODATE 2' GAP BETWEEN THE DWS. IF GAP IS LESS THAN 2' THEN OMIT THE DWS.
3. TYPICALLY PASS THROUGH MEDIAN GRADING WILL PROVIDE POSITIVE DRAINAGE FLOW FROM THE CROWN OF THE ROAD TOWARD THE GUTTERS. NOTIFY THE RE IF SITE CONDITIONS FOR THE GRADING WILL CAPTURE WATER WITHIN THE MEDIAN. DWS AND FOUNDATION SHALL NOT BE INSTALLED HIGHER THAN THE ROAD GRADES THEREBY OBSTRUCTING POSITIVE DRAINAGE FLOW.
4. FOR INSTALLATION OF DWS, SAWCUT HMA PAVEMENT TO INSTALL THE CONCRETE FOUNDATION FOR THE PREFORMED DWS. REMOVE 6" OF EXISTING PAVEMENT. ADD DGABC BASE AS SHOWN OR UTILIZE THE EXISTING ROADWAY STONE OR STABILIZED BASE.



PLAN

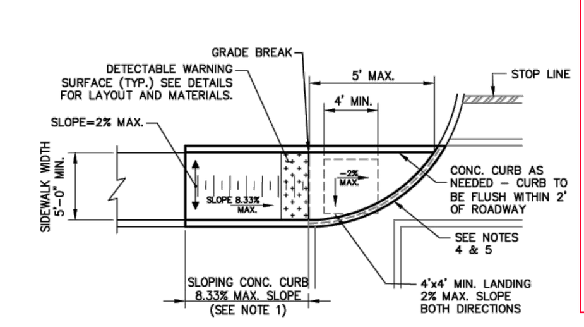
SECTION A-A

DETECTABLE WARNING SURFACE IN HMA CUT-THROUGH MEDIANS AND ISLANDS

ADA COMPLIANCE IN MEDIANS

N.T.S.

CR-4



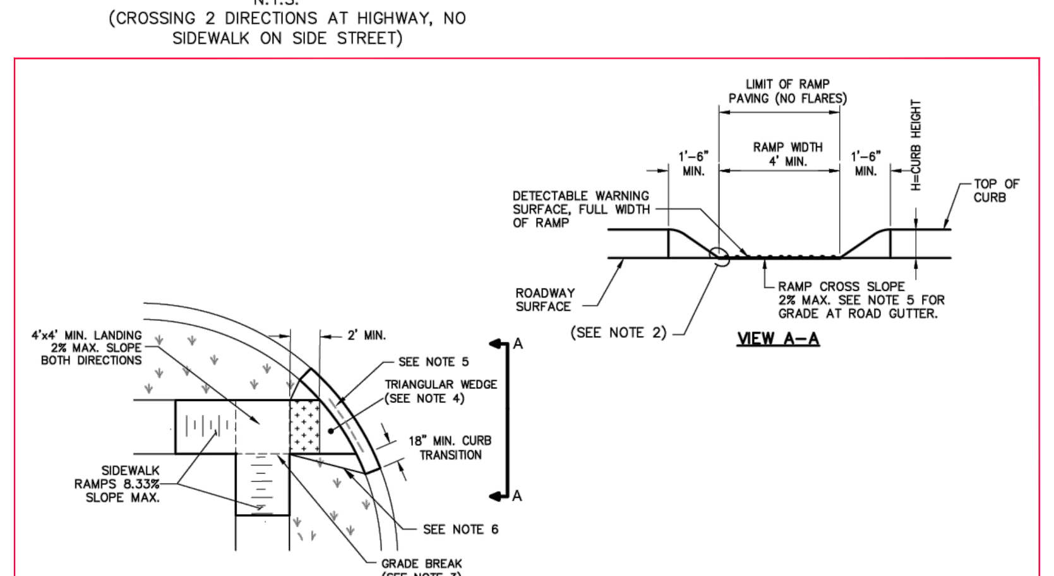
CURB RAMP TYPE 5A

N.T.S.

(CROSSING 2 DIRECTIONS AT HIGHWAY, NO SIDEWALK ON SIDE STREET)

TYPE 5A AND 6A NOTES

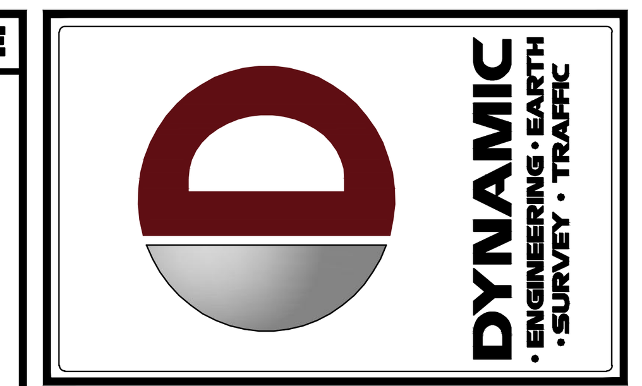
1. IF A GRASS BUFFER DOES NOT EXIST, THEN THE CURB SHOULD SLOPE ALONG WITH THE GRADE OF THE APPROACH SIDEWALK – NOT TO EXCEED 12:1.
2. CURB RAMP OPENING TO BE FLUSH WITH ROADWAY PAVEMENT.
3. GRADE BREAKS MUST BE PERPENDICULAR TO THE DIRECTON OF TRAVEL.
4. TRIANGULAR WEDGE FORMED ON CURB RETURNS: RUNNING SLOPE AND CROSS SLOPE NOT TO EXCEED 2% IN BOTH DIRECTIONS.
5. DASHED LINE AT CURB DENOTES LOCATION OF FLUSH CURB WHICH SHALL EXTEND THE WIDTH OF THE CURB RAMP. FLUSH CURB TO BE CONSTRUCTED WITH CONCRETE CRADLE TO SUPPORT RAMP SLAB AS SHOWN ON THE NJDOT STANDARD DETAILS.
6. WHEN GRASS BERMS ARE ADJACENT TO FLARE AREAS (AND CURB IS DEPRESSED IN 18"), GRASS FLARES TO BE GRADED, NOT CONCRETE.



CURB RAMP TYPE 6A

N.T.S.

(CROSSING PARALLEL TO HIGHWAY WITH SIDEWALK ON THE SIDE STREET)



REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY:	DESIGNED BY:	CHECKED BY:	CHECKED BY:
KTK	AF	JSH	–

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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JEFFREY HABERMAN
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JACQUELYN GIORDANO
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NEW JERSEY LICENSE No. 53558

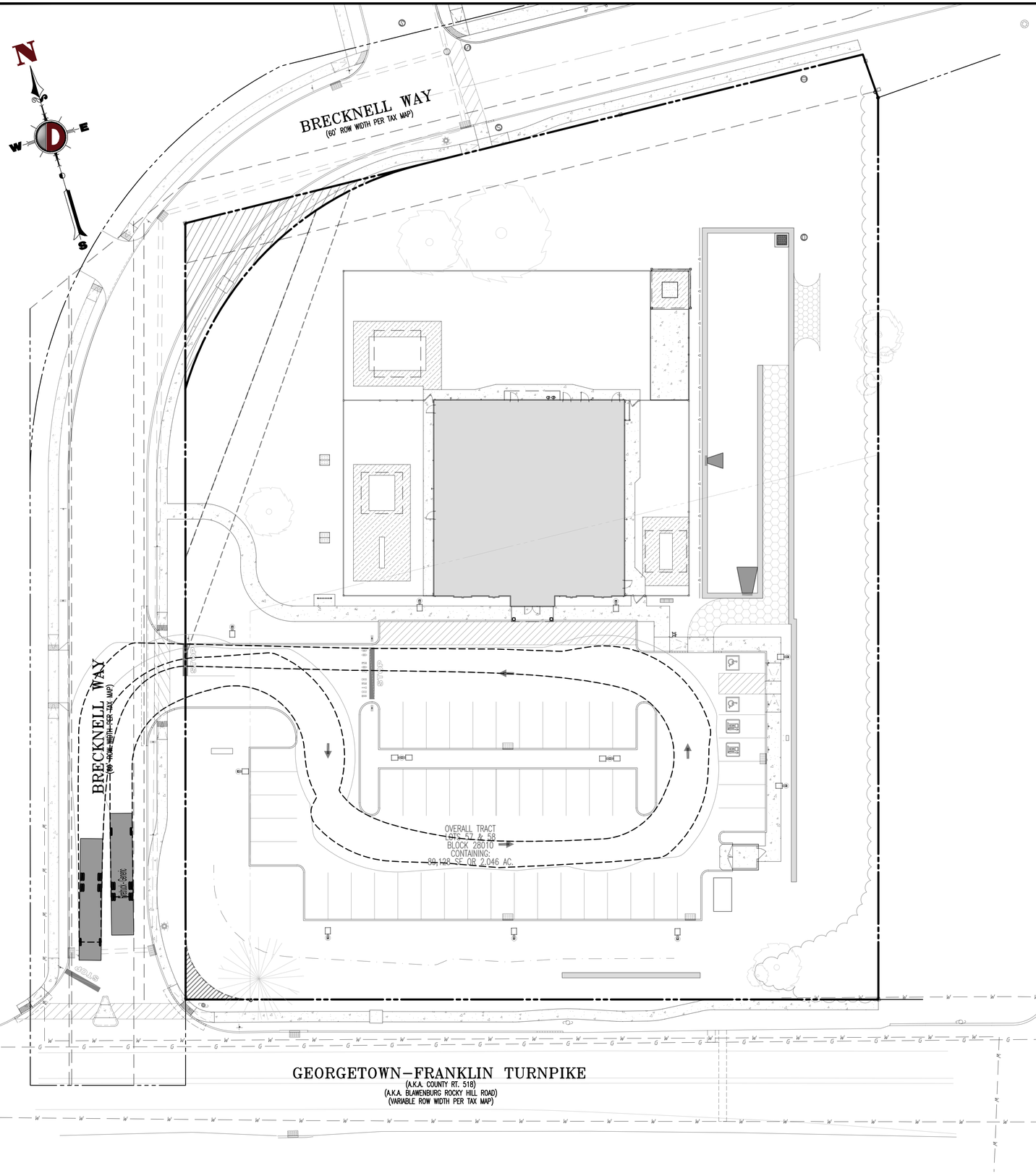
TITLE: **SOMERSET COUNTY CONSTRUCTION DETAILS**

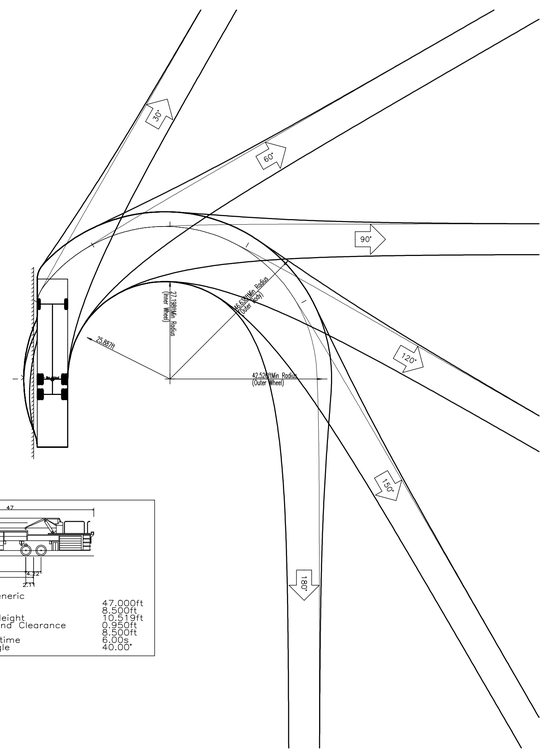
SCALE: (H) NOT TO (V) SCALE	DATE: 08/17/2023
PROJECT No: 4447-22-01334	

SHEET No: 18 OF 22 | Rev. #: 2

Plotted: 11/14/23 – 8:33 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SD2.dwg, ---> 18 SOMERSET COUNTY CONSTRUCTION DETAILS

THIS PLAN TO BE UTILIZED FOR VEHICLE CIRCULATION PURPOSES ONLY





Firetruck – Generic	
Overall Length	47.000ft
Overall Width	8.500ft
Overall Body Height	10.519ft
Min Body Ground Clearance	0.950ft
Track Width	8.500ft
Lock-to-lock time	6.00s
Max Wheel Angle	40.00°

GRAPHIC SCALE

-20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT.

Plotted: 11/14/23 - 8:33 AM, By: kkirk
File: P:\design projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SV2.dwg, ----> 19 VEHICLE CIRCULATION PLAN - FIRE TRUCK

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REV.	DATE	COMMENTS	BY
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK

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DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: _

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
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JEFFREY HABERMAN
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JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE:
VEHICLE CIRCULATION PLAN - FIRE TRUCK

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 19 OF 22 | Rev. #: 2

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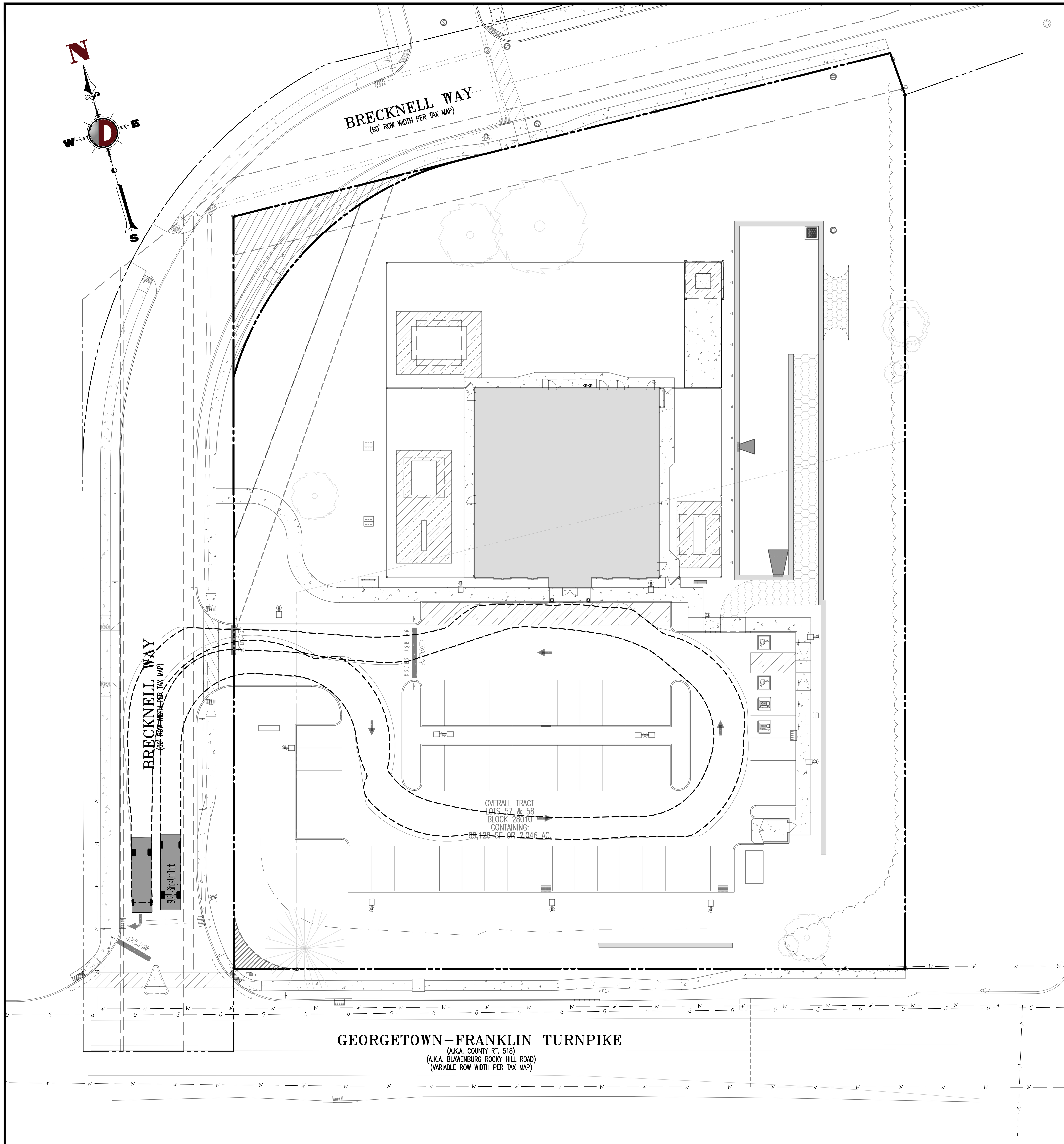

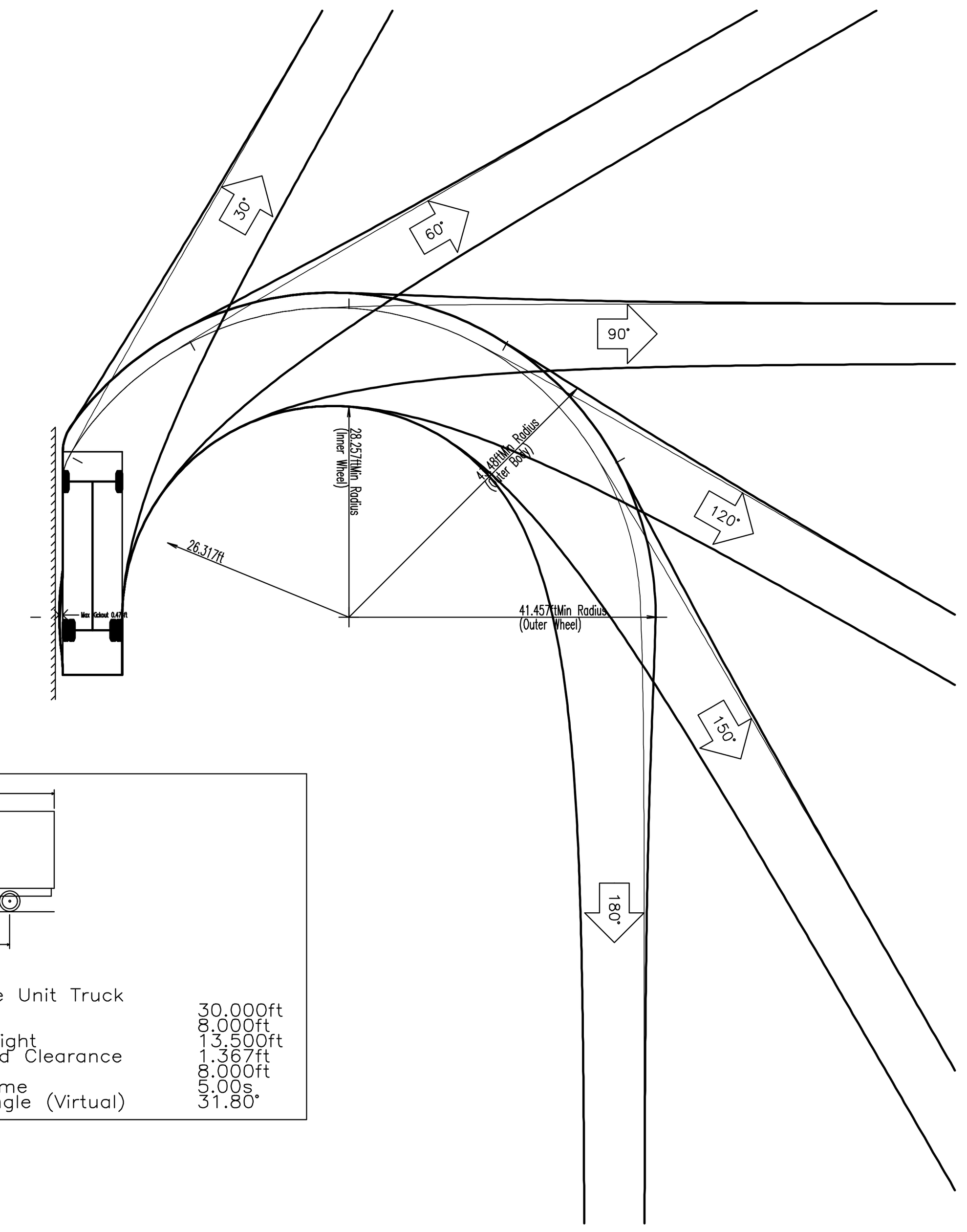

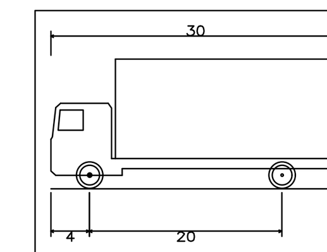

SU-30 – Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.367ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°

GRAPHIC SCALE

-20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT.

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1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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KTK	AF	JSH	–

PROJECT:
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JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE:
VEHICLE CIRCULATION PLAN – SU-30

SCALE: (H) 1"=20' (V)
DATE: 08/17/2023
PROJECT No: 4447-22-01334
SHEET No: 20 OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:33 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SV2.dwg, ---> 20 VEHICLE CIRCULATION PLAN – SU-30

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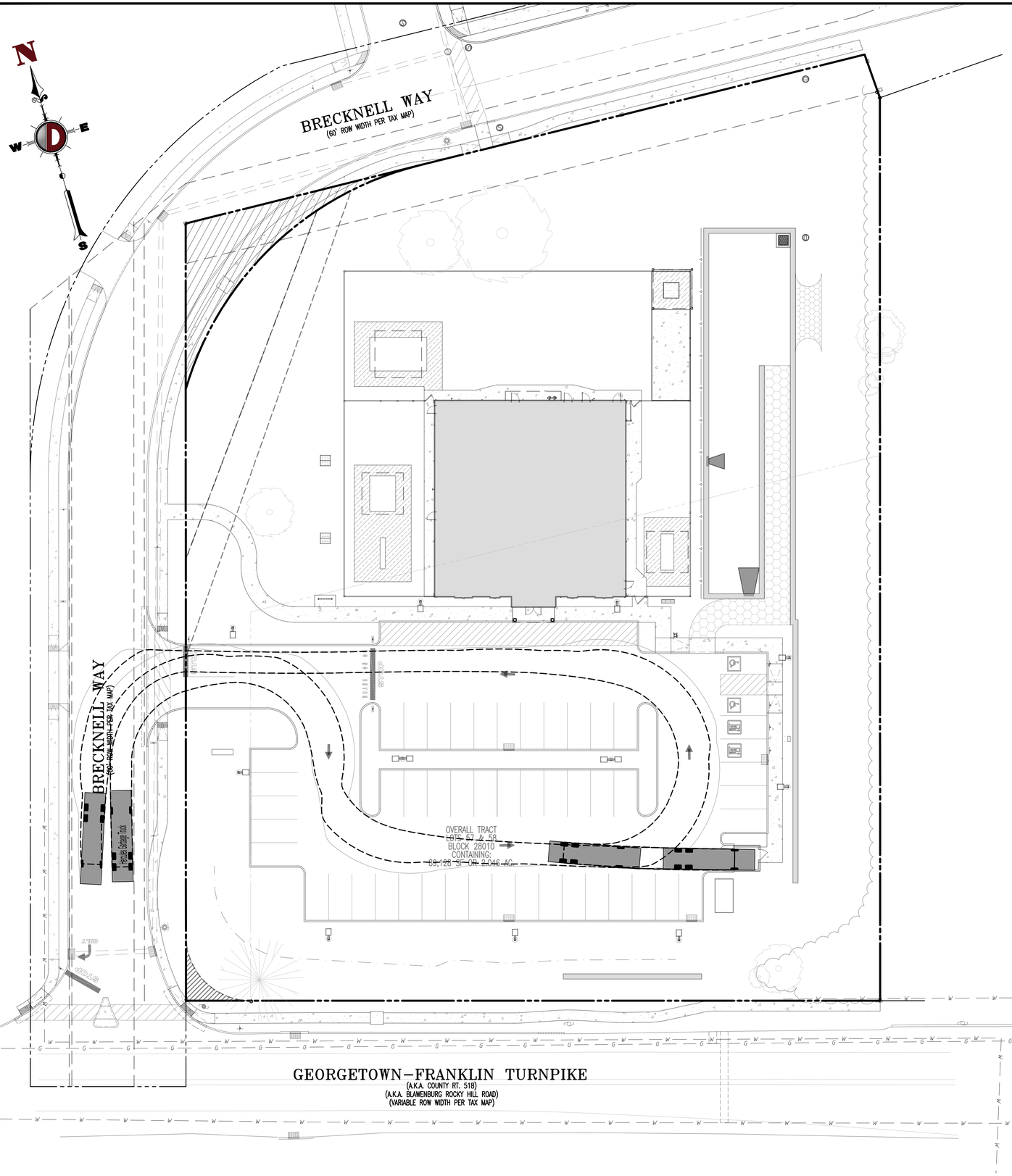

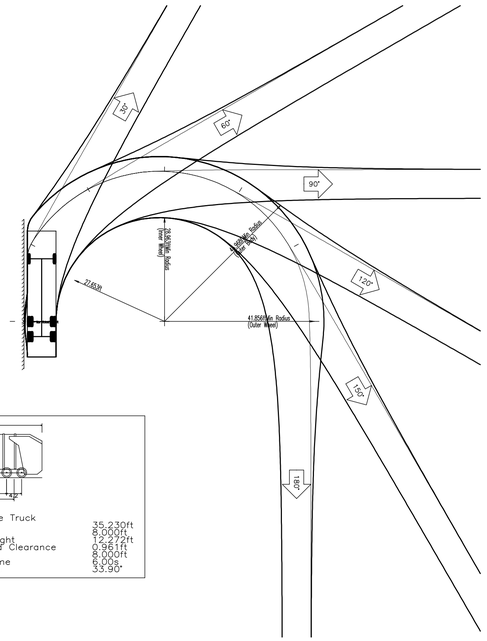

Hercules Garbage Truck	
Overall Length	35.230ft
Overall Width	8.000ft
Overall Body Height	12.272ft
Min Body Ground Clearance	0.961ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Wheel Angle	33.90°

GRAPHIC SCALE

-20 0 10 20 40 80

(IN FEET)

1 INCH = 20 FT.

REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

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DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: _

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
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JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: **VEHICLE CIRCULATION PLAN - REFUSE TRUCK**

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023

PROJECT No: 4447-22-01334

SHEET No: 21 OF 22 | Rev. #: 2

Plotted: 11/14/23 - 8:33 AM, By: kkirk
File: P:\desgn projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SV2.dwg, ----> 21 VEHICLE CIRCULATION PLAN - REFUSE TRUCK

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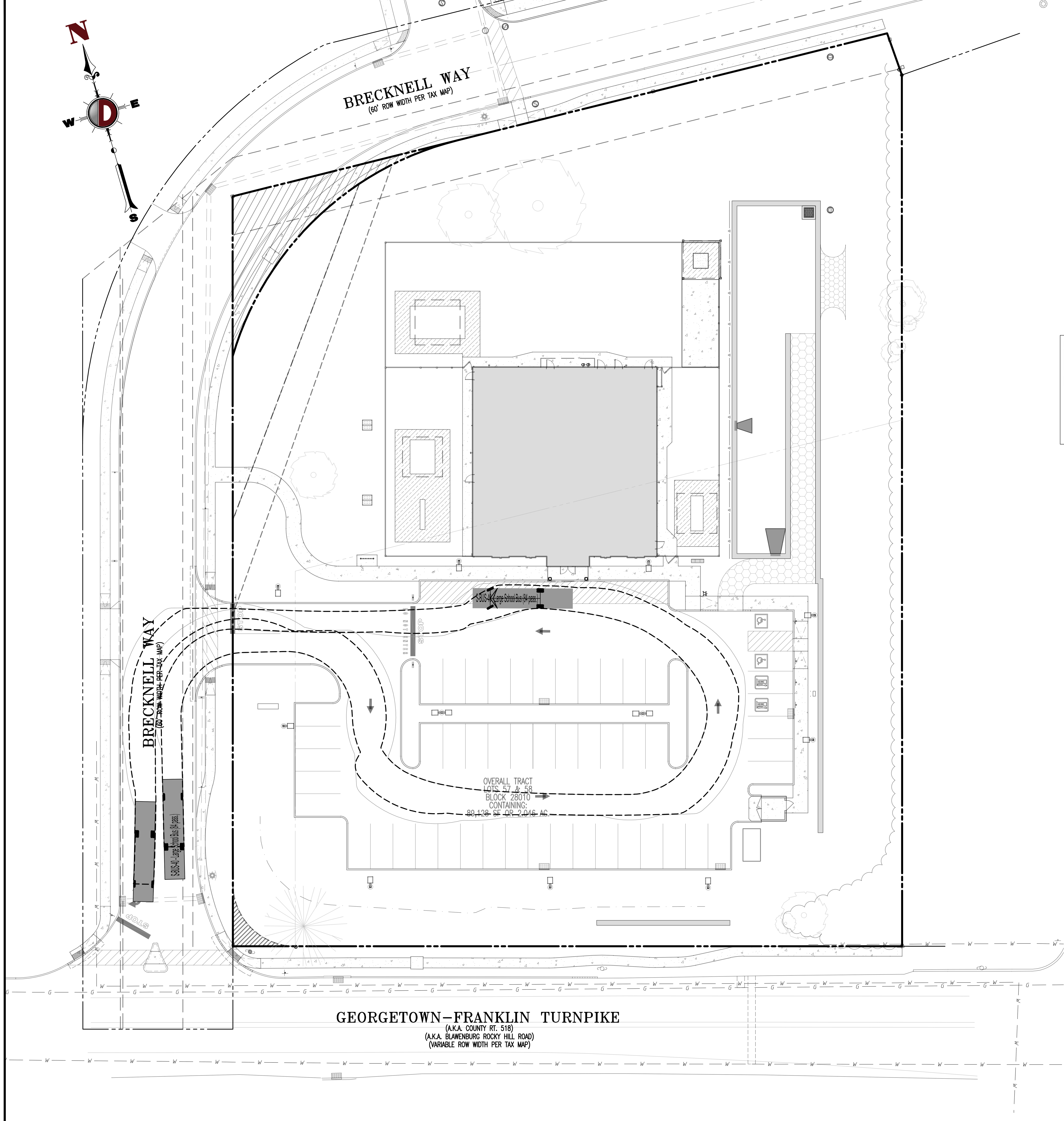

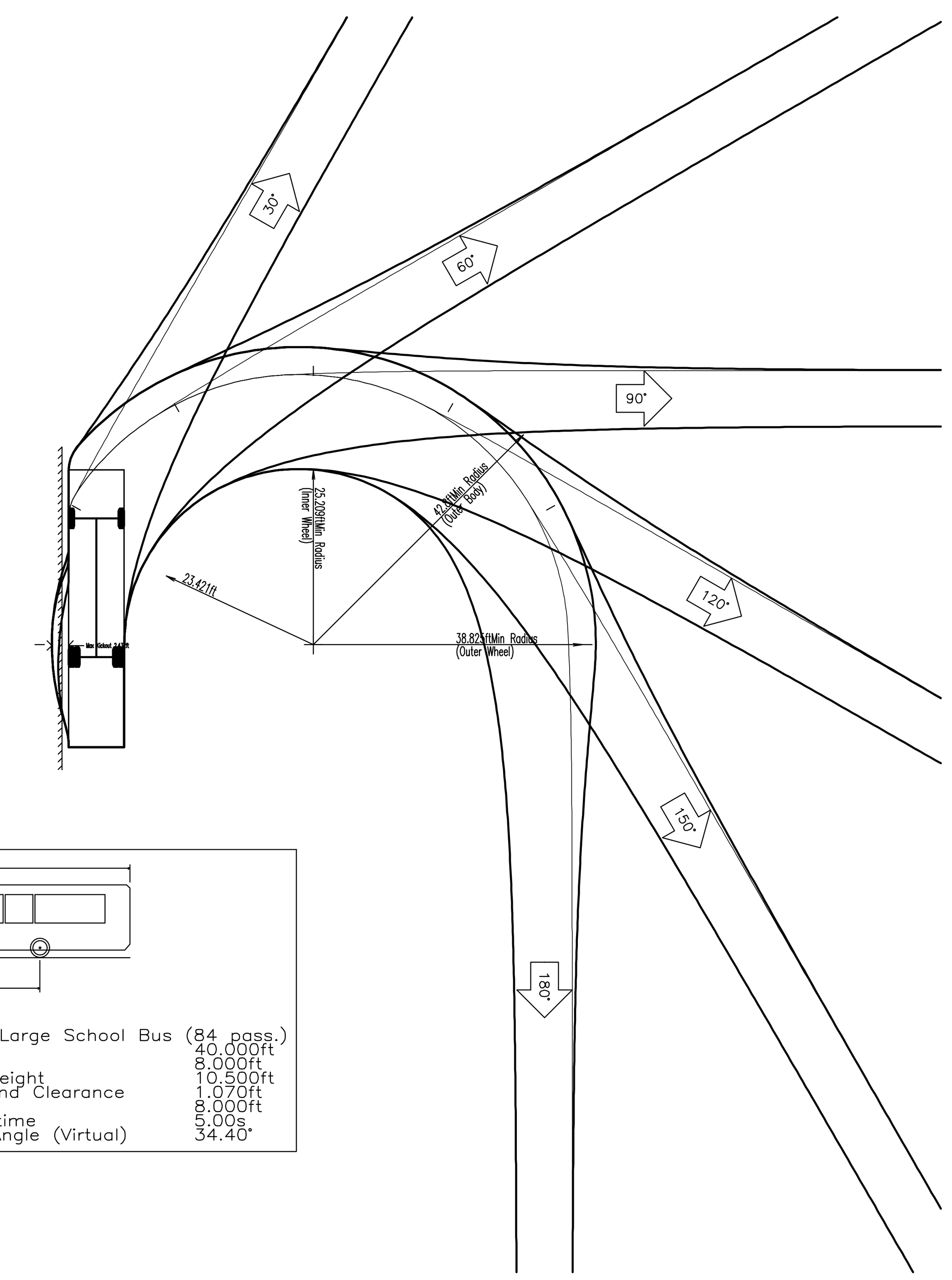

S-BUS-40 – Large School Bus (84 pass.)

Overall Length	40.000ft
Overall Width	8.000ft
Overall Body Height	10.500ft
Min Body Ground Clearance	1.070ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	34.40°

GRAPHIC SCALE

-20 0 10 20 40 80

(IN FEET)
1 INCH = 20 FT.

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CHECKED BY: –

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
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JEFFREY HABERMAN
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53560

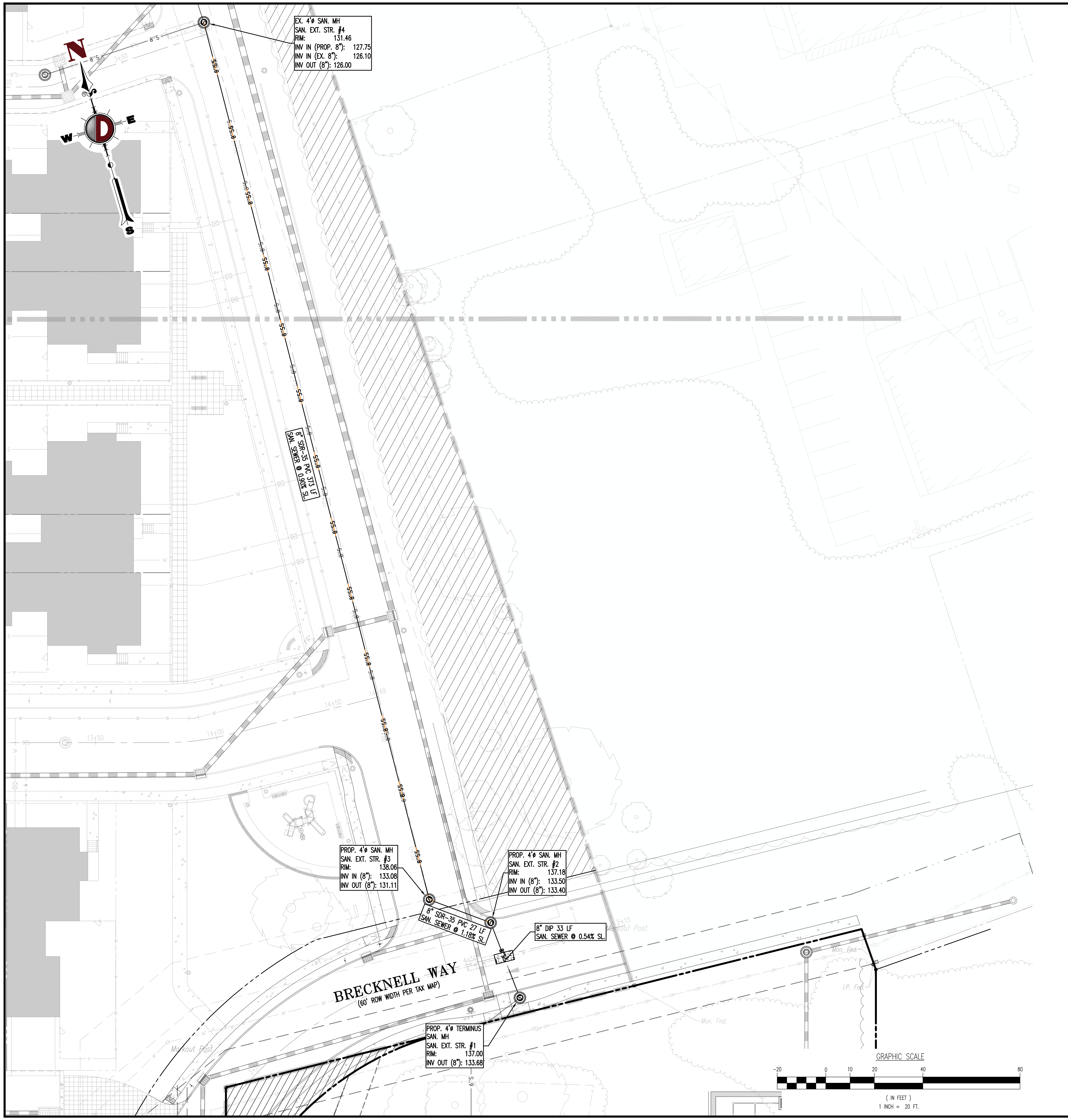
JACQUELYN GIORDANO
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 53558

TITLE: **VEHICLE CIRCULATION PLAN – SCHOOL BUS**

SCALE: (H) 1"=20' (V)
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: **22** OF 22
Rev. #: 2

Plotted: 11/14/23 – 8:33 AM, By: kkirk
File: P:\deepc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SV2.dwg, ---> 22 VEHICLE CIRCULATION PLAN – SCHOOL BUS



GRADING/UTILITY GRAPHIC LEGEND

PROPERTY LINE (PARCEL IN QUESTION)
OFF-SITE PROPERTY LINES

Existing	Proposed
EXIST. CABLE LINE	PROP. CABLE LINE
EXIST. ELECTRIC LINE	PROP. ELECTRIC LINE
EXIST. FIBER OPTIC LINE	PROP. FIBER OPTIC LINE
EXIST. GAS LINE	PROP. GAS LINE
EXIST. OVERHEAD WIRES	PROP. OVERHEAD WIRES
EXIST. TELEPHONE LINE	PROP. TELEPHONE LINE
EXIST. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)	PROP. UNDERGROUND ELEC./TELE. SERVICE (NO. & SIZE OF CONDUITS NOT DEFINED)
EXIST. WATER LINE	PROP. WATER LINE
EXIST. FIRE SERVICE	PROP. FIRE SERVICE
EXIST. SANITARY SEWER LINE	PROP. SANITARY SEWER LINE
EXIST. FORCE MAIN	PROP. FORCE MAIN
EXIST. STORM DRAIN LINE	PROP. STORM DRAIN LINE
EXIST. MINOR CONTOUR & ELEVATION	PROP. FINISH GRADE CONTOUR & ELEVATION
EXIST. MAJOR CONTOUR & ELEVATION	
EXIST. MONITORING WELL	APPROX. TEST PIT LOCATION
EXIST. SPOT ELEVATIONS	PROP. GRADE SPOT ELEV.
EXIST. GUTTER ELEV.	PROP. TOP OF CURB & FINISHED GRADE ELEV.
EXIST. TOP OF CURB ELEV.	PROP. FINISHED FLOOR ELEV.
EXIST. FINISH FLOOR ELEV.	PROP. TOP OF WALL & FINISHED GRADE @ LOW SIDE OF WALL (ACTUAL BOTTOM OF WALL FOOTING TO BE ESTABLISHED BY WALL DESIGNER)
EXIST. GARAGE FLOOR ELEV.	PROP. TOP OF EXTENDED CURB, (GH) FINISHED GRADE @ HIGH SIDE OF EXTENDED CURB & (GL) FINISHED GRADE @ LOW SIDE OF EXTENDED CURB
EXIST. FIRE HYDRANT	PROP. DIRECTION OF DRAINAGE FLOW ARROW
EXIST. WATER VALVE	PROP. WATER VALVE
EXIST. GAS VALVE	PROP. GAS VALVE
EXIST. GAS METER	PROP. STORM CLEANOUT
EXIST. ELECTRIC METER	PROP. SANITARY CLEANOUT
EXIST. ELECTRIC BOX	PROP. AREA LIGHT
EXIST. CLEAN OUT	PROP. OUTLET CONTROL STRUCTURE
EXIST. WELL	PROP. DRAINAGE MANHOLE
EXIST. WATER SHUT OFF VALVE	PROP. SANITARY SEWER MANHOLE
EXIST. TELEPHONE BOX	PROP. 'A' INLET
EXIST. CABLE TV BOX	PROP. 'B' INLET
EXIST. UTILITY POLE	PROP. 'E' INLET
EXIST. GUY WIRE	PROP. YARD INLET
EXIST. LIGHT POLE	PROP. FLARED END SECTION
EXIST. BUILDING LIGHT	PROP. HEADWALL
EXIST. SHOE BOX LIGHT	
EXIST. COBRA LIGHT POLE	
EXIST. TRAFFIC SIGNAL POLE	
EXIST. MANHOLE	
EXIST. "A" INLET	
EXIST. "B" INLET	
EXIST. "E" INLET	
EXIST. YARD INLET	
EXIST. FLARED END SECTION	
EXIST. HEADWALL	

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REV.	DATE	COMMENTS	BY
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK

THIS PLAN SET IS FOR PERMITTING PURPOSES ONLY AND MAY NOT BE USED FOR CONSTRUCTION

DRAWN BY:	DESIGNED BY:	CHECKED BY:	CHECKED BY:
KTK	AF	JSH	-

PROJECT:
MALVERN SCHOOL PROPERTIES, LP
PROPOSED CHILD CARE CENTER
BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
TOWNSHIP OF MONTGOMERY, SOMERSET COUNTY, NEW JERSEY

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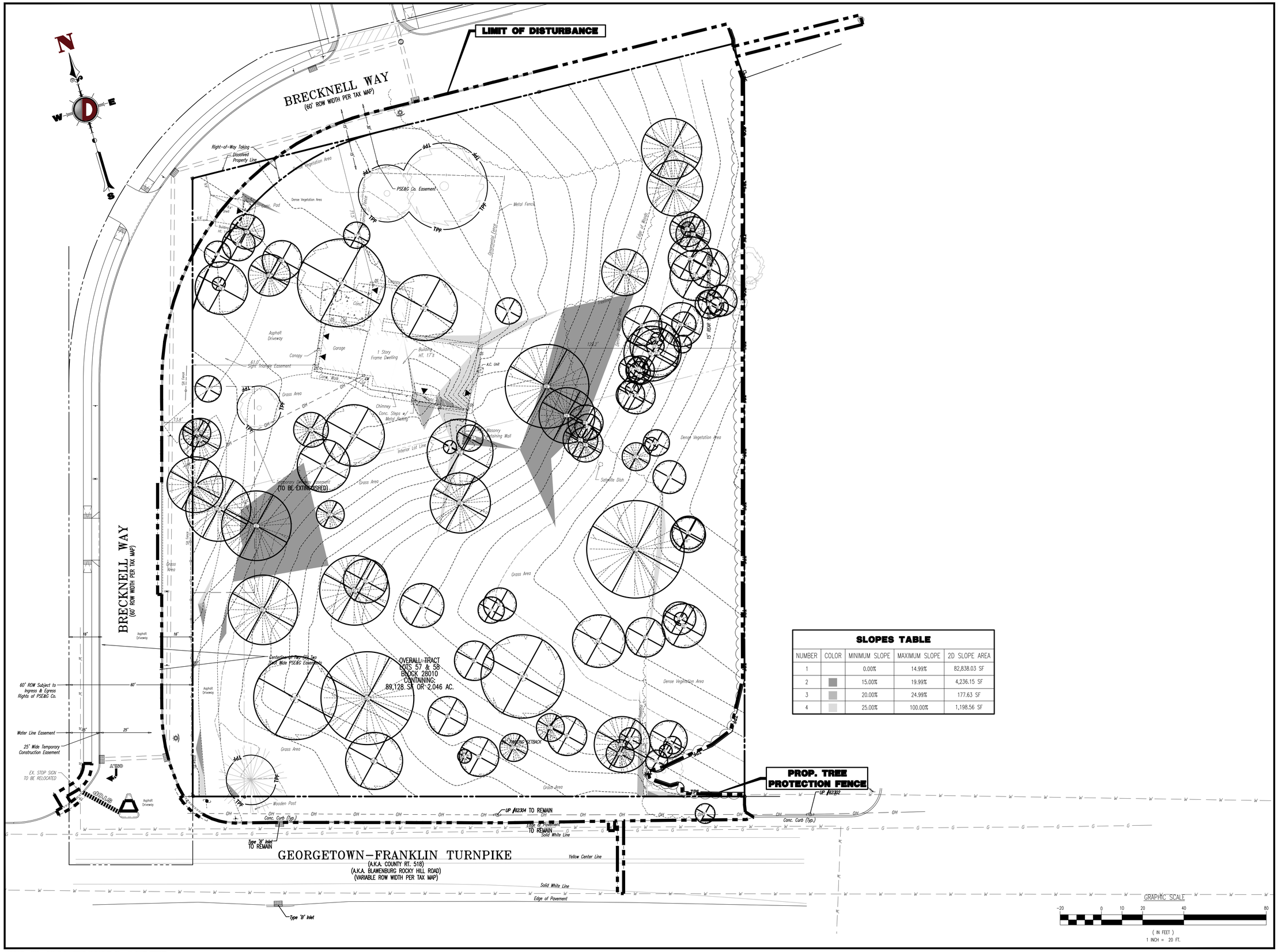
TITLE:
SANITARY SEWER EXTENSION PLAN

SCALE: (H) 1"=20' (V).
DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 1 OF 1
Rev. #: 2

Plotted: 11/14/23 – 8:33 AM, By: kkirk
File: P:\decpc projects\4447 the malvern school\22-01334 montgomery\Dwg\Site Plans\04447221334SSE2.dwg, ---> 23 SANITARY SEWER EXTENSION PLAN



SLOPES TABLE

NUMBER	COLOR	MINIMUM SLOPE	MAXIMUM SLOPE	2D SLOPE AREA
1		0.00%	14.99%	82,838.03 SF
2		15.00%	19.99%	4,236.15 SF
3		20.00%	24.99%	177.63 SF
4		25.00%	100.00%	1,198.56 SF

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REV.	DATE	COMMENTS	BY
1	09/19/23	REV. PER TWP. COMPLETENESS COMMENTS	KTK
2	11/07/23	REV. PER TOWNSHIP COMMENTS	KTK

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DRAWN BY: KTK | DESIGNED BY: AF | CHECKED BY: JSH | CHECKED BY: _

PROJECT: **MALVERN SCHOOL PROPERTIES, LP**
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BLOCK 28010, LOTS 57 & 58
982 GEORGETOWN-FRANKLIN TURNPIKE
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TITLE: **STEEP SLOPE ANALYSIS EXHIBIT**

SCALE: (H) 1"=20' (V) | DATE: 08/17/2023
PROJECT No: 4447-22-01334

SHEET No: 1 OF 1 | Rev. #: 2

Plotted: 11/14/23 – 8:54 AM, By: kkirk
File: P:\design projects\4447 the malvern school\22-01334 montgomery\Dwg\Exhibits (Mike)\Steep Slope Exhibit\04447220133ASSE2.dwg, ----> 24 STEEP SLOPE ANALYSIS EXHIBIT