

BEACON
RATIO Series
ASBESTOS LIGHTER

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

Example: 100-100-25-30-30-10V-10V-10V-10V-10V-10V

ORDERING GUIDE

Ordering Information	Part Number	Part Description	Part Number	Part Description
100-100-25-30-30-10V-10V-10V-10V-10V-10V	100-100-25-30-30-10V-10V-10V-10V-10V-10V	100-100-25-30-30-10V-10V-10V-10V-10V-10V	100-100-25-30-30-10V-10V-10V-10V-10V-10V	100-100-25-30-30-10V-10V-10V-10V-10V-10V

PERFORMANCE DATA

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CONSTRUCTION

CONTROLS

WARRANTY

Current®

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CONSTRUCTION

CONTROLS

WARRANTY

Current®

CUTSHEET FOR FIXTURES 'A' & 'B'

BEACON
SSS-B Series Poles
SQUARE STRAIGHT STEEL

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

Example: 100-100-25-30-40-A-30-42-00T-10

ORDERING INFORMATION

Ordering Information	Part Number	Part Description	Part Number	Part Description
100-100-25-30-40-A-30-42-00T-10	100-100-25-30-40-A-30-42-00T-10	100-100-25-30-40-A-30-42-00T-10	100-100-25-30-40-A-30-42-00T-10	100-100-25-30-40-A-30-42-00T-10

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CONSTRUCTION

INSTALLATION

NOTES

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SQUARE STRAIGHT STEEL

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Example: 100-100-25-30-40-A-30-42-00T-10

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CONSTRUCTION (CONTINUED)

INSTALLATION (CONTINUED)

NOTES (CONTINUED)

Current®

POLE SPECIFICATION FOR FIXTURE 'A' & 'B'

- POLE WILL NEED TO BE CUT TO 32' IN HEIGHT TO ACCOUNT FOR THE 3' PEDESTAL MOUNT.

BEACON
RATIO Wall
MICROSTRIKE STRIKE

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CONSTRUCTION

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CONSTRUCTION

CONTROLS

WARRANTY

Current®

CUTSHEET FOR WALLPACKS

BEACON
VIPER Bollard
LED BOLLARD

DATE: LOCATION:
TYPE: PROJECT:
CATALOG #:

Example: 100-100-25-30-30-10V-10V-10V-10V-10V-10V

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CONSTRUCTION

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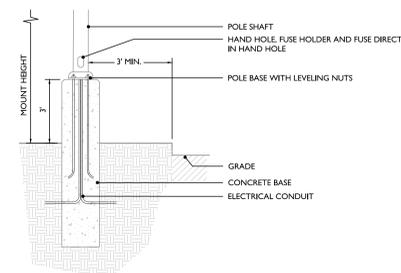
CONSTRUCTION

INSTALLATION

NOTES

Current®

CUTSHEET FOR BOLLARD FIXTURE D



NOTES:

- FOOTING SHOWN IS SCHEMATIC ONLY.
- SHOP DRAWINGS AND CALCULATIONS FOR THE DESIGN AND SIZING OF THE CONCRETE FOOTING SHALL BE PREPARED BY A PROFESSIONAL ENGINEER, AND SHALL BE PROVIDED BY THE CONTRACTOR FOR THE APPROVAL PRIOR TO CONSTRUCTION.
- SEE ELECTRICAL CONTRACTOR TO COORDINATE LOCATED OF EASEMENTS, UNDERGROUND UTILITIES, AND DRAINAGE AREAS BEFORE DRILLING POLE BASES.

3' PEDESTAL CONCRETE FOOTING SCHEMATIC DETAIL

Colliers
Engineering & Design

www.colliersengineering.com

Doing Business as **MASER**

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXISTING UTILITIES PRIOR TO ANY WORK. PREPARE TO DETECT THE EARTH'S SURFACE UTILITIES BEFORE YOU DIG.

20241562350
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION
1		ISSUED FOR PERMIT
2		ISSUED FOR PERMIT

DRAWN BY: MMB
CHECKED BY: CRG

Matthew Kirk Bradley
PENNSYLVANIA REGISTERED LANDSCAPE ARCHITECT
LICENSE NUMBER: LA00341
COLLIERS ENGINEERING & DESIGN, INC.

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

FOR
CITY OF CHESTER

PROJECT TYPE:
PUBLIC WORKS FACILITIES

LOCATION:
2ND ST. & PENNELL ST.
CITY OF CHESTER, PA 19013

PHILADELPHIA
2 Penn Center, Suite 300
1500 PK Boulevard
Philadelphia, PA, 19102
Phone: 215.861.9021
COLLIERS ENGINEERING & DESIGN, INC. DOES BUSINESS AS MASER CONSULTING

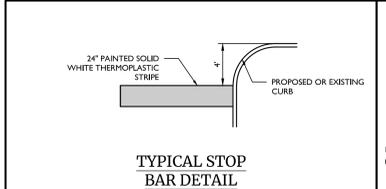
Colliers
Engineering & Design

SCALE: AS SHOWN
DATE: 10/11/2024
PROJECT NUMBER: C000004
DRAWING NAME: CALGHT
DESIGNER: MMB
CHECKED BY: CRG

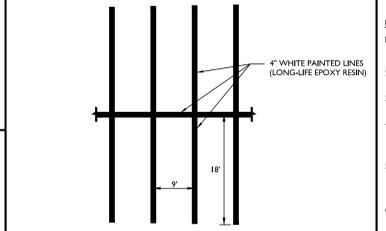
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LIGHTING DETAILS

SHEET NUMBER:
9.1

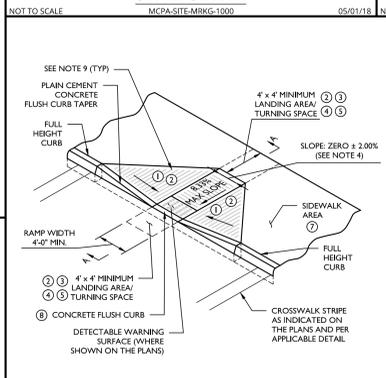
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



TYPICAL STOP BAR DETAIL
MCPA-SITE-MRKG-1100 05/01/18



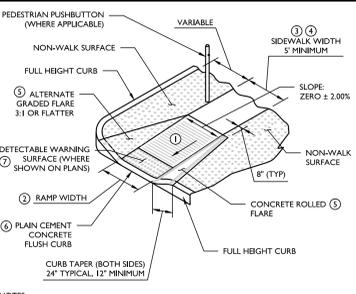
TYPICAL PARKING STALL DETAIL
MCPA-SITE-MRKG-1200 05/01/18



TYPICAL TYPE 1 CURB RAMP DETAIL
MCPA-SITE-HADA-1000 12/01/20

ADA GENERAL NOTES

1. PROVIDE MATERIALS AND CONSTRUCTION MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTIONS 350, 409, 630, 676, 694, AND 695.
2. PROVIDE EXPANSION JOINT MATERIAL 1/2" THICK WHERE CURB RAMP ADJOINS ANY ROAD PAVEMENT, SIDEWALK OR STRUCTURE WITH THE TOP OF JOINT FLUSH WITH ADJACENT CONCRETE SURFACE.
3. CONSTRUCT CURB RAMP WITH A MINIMUM 4" X 4" CLEAR SPACE BEYOND THE CURB FACE WITHIN THE WIDTH OF THE CROSSWALK AND WHOLLY OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. SEE SHEET 7 FOR CROSSWALK DETAILS.
4. SEAL JOINTS WITH AN APPROVED SEALING MATERIAL.
5. PROVIDE SLIP RESISTANT TEXTURE ON CURB RAMP BY COARSE BROOMING PERPENDICULAR TO THE SLOPE OF THE RAMP. EXTEND TEXTURE THE FULL WIDTH AND LENGTH OF THE CURB RAMP INCLUDING SIDE FLARES.
6. MODIFY CONSTRUCTION DETAILS TO ADAPT DIMENSIONS TO EXISTING CURB HEIGHTS WHERE THE CURB IS LESS THAN THE STANDARD 6" HEIGHT.
7. CURB RAMP AND SIDE FLARE LENGTHS ARE VARIABLE AND BASED ON CURB HEIGHT AND THE SIDEWALK SLOPE.
8. TO AVOID CHASING GRADE INDEFINITELY WHEN TRaversing THE HEIGHT OF CURB RAMP LENGTH NOT TO EXCEED 15'-0". ADJUST RAMP SLOPE AS NEEDED TO PROVIDE ACCESS TO THE MAXIMUM EXTENT FEASIBLE.
9. NON-WALK AREA IS AN OBSTRUCTED OR GRASS/NOVATED AREA ADJACENT TO THE PEDESTRIAN ACCESS ROUTE THAT IS NOT USED BY THE PEDESTRIAN FOR ACCESS.
10. THE DETAILS DEPICT PEDESTRIAN PUSHBUTTON POLES TO ILLUSTRATE THE RECOMMENDED PLACEMENT OF PEDESTRIAN PUSHBUTTONS. FOR ALTERNATION PROJECTS, PROVIDE ACCESS TO EXISTING PEDESTRIAN PUSHBUTTONS TO THE MAXIMUM EXTENT FEASIBLE. INSTALL PEDESTRIAN PUSHBUTTON STUB POLES WHERE APPLICABLE, SO AS NOT TO CREATE PEDESTRIAN OBSTRUCTIONS.
11. SEE TC-8803 FOR ADDITIONAL PEDESTRIAN PUSHBUTTON DETAILS NOT SHOWN.
12. ALIGN DETECTABLE WARNING SURFACE TRUNCATED DOMES ON A SQUARE GRID IN THE PREDOMINANT DIRECTION OF THE RAMP AND PERPENDICULAR TO CURB. SEE "DETECTABLE WARNING SURFACE (DWS) ON CURVED SURFACE" DETAIL FOR INSTALLATION ALONG CURVED SURFACES IF APPLICABLE.
13. PROVIDE DETECTABLE WARNING SURFACES (DWS) 24" MINIMUM IN THE DIRECTION OF PEDESTRIAN TRAVEL ACROSS FULL WIDTH OF RAMP AT THE GRADE BREAK NEAR STREET EDGE PROVIDES DWS THAT CONTRAST VISUALLY WITH ADJACENT WALKWAY SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT FOR THE FULL WIDTH OF RAMP IN ACCORDANCE WITH LOCAL REQUIREMENTS.
14. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
15. FOR NEW CONSTRUCTION AND ALTERATIONS, CONSTRUCT CURB RAMP AND FLARE SLOPES WITH THE FLATTEST SLOPE POSSIBLE. THE SLOPES INDICATED IN THE DETAILS SHOW THE MAX SLOPE ALLOWED THAT EXCEEDS THOSE SHOWN IN THE DETAILS, OR CONTRACT DOCUMENTS AS APPLICABLE. WILL NOT BE ACCEPTED AND WILL BE RECONSTRUCTED.
16. CONSTRUCT SIDEWALKS AT A LONGITUDINAL SLOPE NOT TO EXCEED 5.00% FOR ROADWAY PROFILE SLOPES THAT EXCEED 5.00%. CONSTRUCT PARALLEL SIDEWALKS ADJACENT TO ROADWAY AT A LONGITUDINAL SLOPE NOT TO EXCEED ROADWAY PROFILE SLOPE.
17. THE CHANGE IN GRADE AT THE BOTTOM OF THE CURB RAMP AND ADJOINING ROADWAY SURFACES IS NOT TO EXCEED AN ALGEBRAIC DIFFERENCE OF 13.2% IN THE DIRECTION OF TRAVEL AND 1.0% IN THE DIRECTION OF TRAVEL. THE DESIRED DESIGN SLOPE IN THE DIRECTION OF TRAVEL AND A 1% TO 2% MAX. CROSS SLOPE.
18. THE CONSTRUCTION STANDARDS DEPICTED ARE MOST APPROPRIATE FOR NEW CONSTRUCTION. ALL CONSTRUCTION MUST MEET THE STANDARDS CONTAINED HEREIN UNLESS OTHERWISE NOTED OR DIRECTED.
19. ALL SLOPES ARE MEASURED WITH RESPECT TO A LEVEL PLANE. THEREFORE, THE LENGTH OF RAMP IS NOT SOLELY DEPENDANT ON THE HEIGHT OF CURB. (FOR EXAMPLE, A 4" CURB DOES NOT NECESSARILY MEAN A RAMP LENGTH OF 4'-0" FOR A 1:1 SLOPE).
20. SIDEWALK WIDTH MAY BE REDUCED TO 4'-0" WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
21. THE TRAVEL LANE IS DEFINED BY THE OUTSIDE EDGES OF THE WHITE PAVEMENT MARKING LINE. IF A WHITE PAVEMENT MARKING LINE DOES NOT EXIST, THE TRAVEL LANE IS DEFINED BY THE CONTRACT DOCUMENTS.
22. CONSTRUCT FLUSH CURB FOR CURB RAMP FLUSH TO ADJACENT ROADWAY. GRADE EDGE OF ROAD ELEVATIONS AT THE FLUSH LINE TO ENSURE POSITIVE DRAINAGE AND PREVENT POONDING. FULL TURNING SPACES BEHIND FLUSH CURB. ADJUST SLOPES TO PROVIDE POSITIVE DRAINAGE. AT THE JOINT BETWEEN FLUSH CURB AND ROADWAY, REMOVE EXCESS JOINT SEALER AND COVER THE SEALED AREA WITH A LIGHT APPLICATION OF DRY SAND.
23. CHEEK WALLS ARE PERMITTED WHEN ADJACENT TO NON-WALK AREAS OR ELEVATION DIFFERENCES CANNOT BE ACCOMMODATED BY FLARES OR GRADING. GRADE GRASS AREAS OR OTHER NON-WALK AREAS AT 1:1 OR FLATTER. DO NOT INSTALL CHEEK WALLS THAT INTERSECT THE PEDESTRIAN PATH.

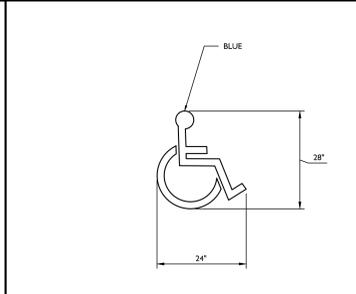


PEDESTRIAN PUSHBUTTON (WHERE APPLICABLE)

ALTERNATE TYPE 4A CURB PARALLEL RAMP DETAIL

ALTERNATE TYPE 4A CURB PARALLEL RAMP DETAIL
EFFECTIVE/NAME 12/01/20

1. SIDE FLARES 10.00% MAX SLOPE.
2. IF THE TURNING SPACE IS INDICATED TO BE LESS THAN 4'-0", CONSTRUCT SIDE FLARES 3.33% MAX SLOPE.
3. CURB RAMP REQUIRE A LANDING AREA TURNING SPACE WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS.
4. LANDING AREA AT THE TOP AND BOTTOM OF THE CURB RAMP (AKA CLEAR OR TURNING SPACE) MUST BE 4'-0" MINIMUM AND 2'-0" MAXIMUM. THE RAMP INCREASE THE DEPTH OF MINIMUM LANDING AREA TO 3 FEET IF CONSTRAINED AT THE BACK OF THE SIDEWALK.
5. THE LANDING AREA MUST HAVE AN ABSOLUTE MINIMUM SLOPE OF 0.5% AND A MAXIMUM SLOPE OF 2% (WHEN 1:1 TO 1.5% IS THE DESIRED DESIGN SLOPE IN THE DIRECTION OF TRAVEL AND FOR THE CROSS SLOPE).
6. FOR NEW CONSTRUCTION, DO NOT EXCEED 2.00% CROSS SLOPE ON THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
7. SIDEWALK CROSS SLOPE MUST BE A MINIMUM OF 1% AND MAXIMUM 2%, WHEREAS 1.5% IS THE DESIRED DESIGN CROSS SLOPE. SIDEWALK BEYOND TURNING SPACELANDING AREA MUST HAVE A MINIMUM 1% TO MAXIMUM 3% OF LONGITUDINAL SLOPE IN THE DIRECTION OF TRAVEL AND A 1% TO 2% MAX. CROSS SLOPE.
8. CONSTRUCT FLUSH CURB SLOPE TO MATCH ROADWAY PROFILE AND HAVE A FLUSH CONNECTION. TRANSITION CURB RAMP CROSS SLOPE TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE, DO NOT EXCEED 3.00% PER 1'-0" CROSS SLOPE RATE OF CHANGE TRANSITION TO ROADWAY PROFILE. MAINTAIN POSITIVE GUTTER DRAINAGE AT RAMP (1% MIN, 2% MAX).
9. DO NOT SCORE OR MAKE GROOVES ON SLOPED SURFACES. LINES SHOWN ON DETAILS ARE FOR ILLUSTRATION ONLY.
24. CONSTRUCT TOP OF PLAIN CEMENT CONCRETE FLUSH CURB TO BE FLUSH WITH ADJACENT SURFACES (RAMPS, SIDEWALKS, FLARES).
25. FOR CURB RAMP THAT LEAD TO A SINGLE CROSSWALK, THE RAMP (EXCLUDING FLARE) IS TO BE FULLY FINISHED WITH THE TOP OF JOINT FLUSH WITH ADJACENT CONCRETE SURFACE.
26. A 4'-0" MAXIMUM DIGITAL DISPLAY LEVEL WILL BE USED TO VERIFY THE SLOPES OF CURB RAMP AND SIDEWALKS.
27. INSTALL DURABLE JOINTS WHERE RAMPS, TURNING SPACES, FLARES, AND SIDEWALKS ADJOIN.
28. CONSTRUCT FLUSH CURB SLOPE TO MATCH ROADWAY PROFILE AND HAVE A FLUSH CONNECTION. TRANSITION CURB RAMP CROSS SLOPE TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE, DO NOT EXCEED 3.00% PER 1'-0" CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
29. DO NOT SCORE OR MAKE GROOVES ON SLOPED SURFACES. LINES SHOWN ON DETAILS ARE FOR ILLUSTRATION ONLY. SEE NOTE 5.
30. CONTRACTOR MUST PREPARE SHOP DRAWINGS OF EACH CURB RAMP FOR SUBMISSION AND APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION. DEVIATIONS FROM THE CURB RAMP DETAILS REQUIRE WRITTEN APPROVAL OF THE UNDERSIGNED PROFESSIONAL AND THE MUNICIPAL, COUNTY, STATE OR OTHER AGENCY'S ENGINEER HAVING JURISDICTION.
31. ACCESSIBLE RAMPS:
 - A. ON-SITE RAMP OR CURB RAMPS MUST BE INSTALLED IN CONFORMANCE WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE AND MUST ALSO MEET OTHER APPLICABLE LOCAL AND STATE REQUIREMENTS IN EFFECT AT THE DATE OF CONSTRUCTION.
 - B. PUBLIC RIGHT OF WAY ACCESSIBLE OR CURB RAMPS MUST BE INSTALLED PERMANENT WITH THE CURRENT UNITED STATES ACCESS BOARD "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" (PROVAG).
32. CURB RAMP SLOPE AS CONSTRUCTED IN THE DIRECTION OF TRAVEL CANNOT EXCEED 12% IN RAMP SLOPE. 14% IS THE PREFERRED SLOPE TO MAINTAIN A LEVEL OF CONSTRUCTION TOLERANCE. MINIMUM CURB RAMP CROSS SLOPE IS TO BE 0.50% MINIMUM CROSS SLOPE THROUGHOUT.
33. CURB RAMP SIDE FLARE SLOPES ARE TO BE 14% IF DESIRABLE. 12% IS MAXIMUM, BUT MAY BE 10% UPON APPROVAL OF THE ENGINEER. WHERE SIDE FLARES ARE NOT REQUIRED, PROVIDE AN 18" CURB TAPER TO THE FLUSH CURB PER THE DETAIL.
34. LANDING AREA AT THE TOP AND BOTTOM OF THE CURB RAMP (AKA CLEAR OR TURNING SPACE) MUST BE 4'-0" MINIMUM AND 2'-0" MAXIMUM. THE RAMP INCREASE THE DEPTH OF MINIMUM LANDING AREA TO 3 FEET IF CONSTRAINED AT THE BACK OF THE SIDEWALK.
35. THE LANDING AREA MUST HAVE AN ABSOLUTE MINIMUM SLOPE OF 0.5% AND A MAXIMUM SLOPE OF 2% (WHEN 1:1 TO 1.5% IS THE DESIRED DESIGN SLOPE IN THE DIRECTION OF TRAVEL AND FOR THE CROSS SLOPE).
36. SIDEWALK CROSS SLOPE MUST BE A MINIMUM OF 1% AND MAXIMUM 2%, WHEREAS 1.5% IS THE DESIRED DESIGN CROSS SLOPE. SIDEWALK BEYOND LANDING AREA MUST HAVE A MINIMUM 1% TO MAXIMUM 3% OF LONGITUDINAL SLOPE IN THE DIRECTION OF TRAVEL AND A 1% TO 2% MAX. CROSS SLOPE.
37. FLUSH CURB AT CURB RAMP MUST BE MINIMUM 4" WIDE AND FLUSH WITH PAVEMENT. THE SEGMENT OF FLUSH CURB MUST BE MADE WITH CONCRETE CURB REGARDLESS OF THE CURB MATERIAL USED THROUGHOUT.
38. GUTTER SLOPE ALONG CURB RAMP MUST MAINTAIN POSITIVE DRAINAGE WITH A 1.0% TO 1.5% GUTTER SLOPE PREFERRED, WHEREAS 0.5% AS THE ABSOLUTE MINIMUM AND 2.0% IS MAXIMUM ALONG THE LENGTH OF THE FLUSH CURB.
39. CROSSWALKS AND PAVEMENT MARKINGS MUST BE INSTALLED AS DENOTED ON SITE PLAN. CURB RAMP MUST BE WHOLLY CONTAINED WITHIN THE CROSSWALK CROSSING.
40. THE RAMP SURFACE MUST HAVE A SLIP RESISTANT, BROOM FINISH PERPENDICULAR TO THE PATH OF TRAVEL.
41. CONCRETE EXPANSION JOINTS MUST HAVE A FINISH SURFACE WITH 1/4" BEVELLED CONCRETE EDGES. THE JOINT SURFACE SHALL NOT BE MORE THAN 1/4" BELOW THE ADJOINING CONCRETE SURFACE.
42. DETECTABLE WARNING SURFACES ARE TO BE PROVIDED AT CURB RAMPS, BLENDED TRANSITION AT PEDESTRIAN STREET CROSSINGS AND PEDESTRIAN REFUGE ISLANDS WHEN THOSE ARE WITHIN THE PUBLIC RIGHT-OF-WAY, AND WHERE AS SHOWN ON THE PLANS.

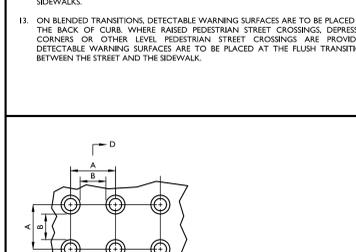


ADA SYMBOL DETAIL
MCPA-SITE-MRKG-1800 05/01/18

DETECTABLE WARNING SURFACE (DWS) NOTES

DETECTABLE WARNING SURFACE (DWS) NOTES
MCPA-SITE-HADA-1002 12/01/20

1. THE DETECTABLE WARNING SURFACE IS TO BE MANUFACTURED MATS THAT ARE EMBEDDED AND CAST-IN-PLACE IN THE CONCRETE.
2. IN USE OF A CAST IN PLACE DETECTABLE WARNING SURFACE, THE CONTRACTOR MAY UTILIZE A SURFACE APPLIED DETECTABLE WARNING SURFACE WITH PRIOR APPROVAL OF THE UNDERSIGNED ENGINEER, AND PRIOR TO POURING OF THE CONCRETE RAMP.
3. THE CONTRACTOR MUST SUBMIT TO THE ENGINEER FOR APPROVAL A SHOP DRAWING OF THE DETECTABLE WARNING SURFACE PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR MUST PROVIDE A MANUFACTURER CERTIFICATION THAT THE DETECTABLE WARNING SURFACE COMPLIES WITH THE CURRENT ADA STANDARDS FOR ACCESSIBLE DESIGN AS PUBLISHED BY THE DEPARTMENT OF JUSTICE AND THE ADA STANDARDS AS SUPPORTED BY THE UNITED STATES ACCESS BOARD, AND THE STATE AND/OR LOCAL ADA STANDARDS.
5. COLOR MUST BE AS APPROVED BY THE LOCAL JURISDICTION PRIOR TO INSTALLATION. DETECTABLE WARNING SURFACES MUST CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. ALTERNATIVE COLOR MAY BE USED PROVIDED SUCH COLOR COMPLIES WITH CURRENT ADA STANDARDS.
6. DETECTABLE WARNING ARE TO CONSIST OF A SURFACE OF TRUNCATED DOMES.
7. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE MUST HAVE A BASE DIAMETER OF 0.75 INCHES (23 mm) MINIMUM AND 1.4 INCHES (36 mm) MAXIMUM. A TOP DIAMETER OF 50 PERCENT OF THE BASE DIAMETER MINIMUM TO 65 PERCENT OF THE BASE DIAMETER MAXIMUM, AND A HEIGHT OF 0.2 INCHES (5.1 mm).
8. TRUNCATED DOMES IN DETECTABLE WARNING SURFACE MUST HAVE A CENTER-TO-CENTER SPACING OF 1.4 INCHES (41 mm) MINIMUM AND 2.4 INCHES (61 mm) MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65 INCH (17 mm) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
9. SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. WHERE REQUIRED BY THE MANUFACTURER, THE CONCRETE BORDER MUST NOT EXCEED 2 INCHES (51 mm).
10. DETECTABLE WARNING SURFACES ARE NOT TO BE PLACED ON PAVING OR EXPANSION JOINTS AT CURB RAMPS. THE ROWS OF TRUNCATED DOMES IN DETECTABLE WARNING SURFACES ARE TO BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP RUN AND THE STREET SO PEDESTRIANS WHO USE WHEELCHAIRS CAN "TRACK" BETWEEN THE DOMES.
11. ON PERPENDICULAR CURB RAMPS, DETECTABLE WARNING SURFACES ARE TO BE PLACED AS FOLLOWS:
 - WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE IN FRONT OF THE BACK OF CURB, DETECTABLE WARNING SURFACES ARE TO BE PLACED AT THE BACK OF CURB.
 - WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS 5.0 FT OR LESS, DETECTABLE WARNING SURFACES ARE TO BE PLACED ON THE RAMP RUN WITHIN ONE DOPE SPACING OF THE BOTTOM GRADE BREAK.
 - WHERE THE ENDS OF THE BOTTOM GRADE BREAK ARE BEHIND THE BACK OF CURB AND THE DISTANCE FROM EITHER END OF THE BOTTOM GRADE BREAK TO THE BACK OF CURB IS MORE THAN 5.0 FT, DETECTABLE WARNING SURFACES ARE TO BE PLACED ON THE LOWER LANDING AT THE BACK OF CURB.
12. ON PARALLEL CURB RAMPS, DETECTABLE WARNING SURFACES ARE TO BE PLACED ON THE TURNING SPACE AT THE FLUSH TRANSITION BETWEEN THE STREET AND SIDEWALKS.
13. ON BLENDED TRANSITIONS, DETECTABLE WARNING SURFACES ARE TO BE PLACED AT THE BACK OF CURB. WHERE RAISED PEDESTRIAN STREET CROSSINGS, DEPRESSED CORNERS OR OTHER LEVEL PEDESTRIAN STREET CROSSINGS ARE PROVIDED, DETECTABLE WARNING SURFACES ARE TO BE PLACED AT THE FLUSH TRANSITION BETWEEN THE STREET AND THE SIDEWALK.



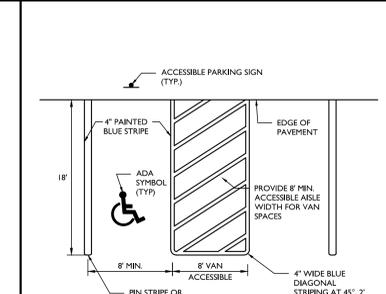
DETECTABLE WARNING SURFACE (DWS) TRUNCATED DOME DETAIL
MCPA-SITE-HADA-1001 05/01/18

CONCRETE FLUSH CURB DETAIL

CONCRETE FLUSH CURB DETAIL
MCPA-SITE-CURB-1500 05/01/18

DEPRESSED CONCRETE CURB AT DRIVEWAY DETAIL

DEPRESSED CONCRETE CURB AT DRIVEWAY DETAIL
MCPA-SITE-CURB-1900 05/01/18

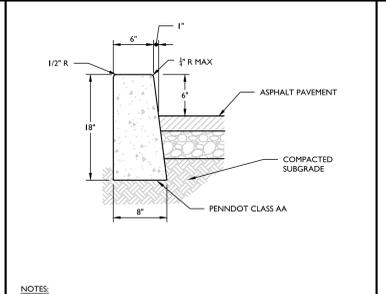


ACCESSIBLE PARKING STALL DETAIL
MCPA-SITE-MRKG-1600 05/01/18

ADA INSTRUCTIONS TO CONTRACTOR

ADA INSTRUCTIONS TO CONTRACTOR
MCPA-SITE-HADA-1800 02/01/24

1. CONTRACTOR MUST EXERCISE APPROPRIATE CARE AND PRECISION IN CONSTRUCTION OF ADA (HANDICAPPED) ACCESSIBLE COMPONENTS FOR THE SITEPROJECT. THESE COMPONENTS AS CONSTRUCTED MUST COMPLY WITH THE LATEST FEDERAL ADA STANDARDS FOR ACCESSIBLE DESIGN, AND CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY MUST COMPLY WITH THE LATEST FEDERAL PROPOSED "ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT-OF-WAY" (PROVAG).
2. FINISHED SURFACES ALONG THE ACCESSIBLE ROUTE OF TRAVEL FROM PARKING SPACE, PUBLIC TRANSPORTATION, PEDESTRIAN ACCESS, INTERBUILDING ACCESS, TO POINTS OF ACCESSIBLE BUILDING ENTRANCES, MUST COMPLY WITH THESE ADA CODE REQUIREMENTS AND ANY SUPPLEMENTAL STATE REQUIREMENTS. THESE INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:
 - LANDINGS AT CURB RAMPS - MUST BE 4 FT. MIN. X 4 FT. MIN. AND ARE TO BE INCREASED TO 3 FEET WHERE THE LANDING SPACE (TURNING SPACE) IS CONSTRAINED AT THE BACK OF THE SIDEWALK.
 - LANDINGS AT RAMPS - MUST BE 5 FT. MIN. IN THE DIRECTION OF TRAVEL AND BE PROVIDED AT EACH END OF THE RAMP. MUST PROVIDE POSITIVE DRAINAGE (1% MIN.) AND MUST NOT EXCEED 1/4" (1/4" PER FOOT OR NORMALLY 2.0%) IN ANY DIRECTION.
 - LANDINGS - MUST NOT EXCEED 1:12 (8.3%).
 - LANDINGS AT DOORWAYS - SEE NOTE F BELOW.
3. IT IS RECOMMENDED THAT THE CONTRACTOR REVIEW THE INTENDED CONSTRUCTION WITH THE LOCAL BUILDING CODE OFFICIAL, INCLUDING WHETHER OR NOT FALL PROTECTION IS REQUIRED.
4. IT IS RECOMMENDED THAT THE CONTRACTOR CHECK THE SLOPE OF FORMWORK FOR COMPLIANCE WITH ADA STANDARDS PRIOR TO POURING CONCRETE.
 - WHERE THE PATH OF TRAVEL WILL BE GREATER THAN 120 (5.0%), AN ADA RAMP, WITH A MAXIMUM SLOPE OF 1:12 (8.3%), FOR A MAXIMUM RISE OF 30 INCHES, MUST BE PROVIDED. THE RAMP MUST HAVE A MINIMUM CLEAR WIDTH OF 36 INCHES, HAVE ADA HAND RAILS AND LANDINGS (MIN. 1 FT. LONG IN THE DIRECTION OF TRAVEL) ON EACH END THAT ARE SLOPED AT A MIN. 1% AND NO MORE THAN 1/4" (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE.
 - EXTERIOR DOORWAYS - MUST HAVE A "LEVEL" LANDING AREA ON THE EXTERIOR SIDE OF THE DOOR THAT IS SLOPED NO MORE THAN 1/4" (1/4" PER FOOT OR NORMALLY 2.0%) FOR POSITIVE DRAINAGE. THE LANDING AREA IS GENERALLY 5 FT X 5 FT, EXCEPT WHERE OTHERWISE PERMITTED BY ADA STANDARDS. (SEE APPLICABLE CODE SECTIONS).



CONCRETE CURB (ASPHALT PAVEMENT) DETAIL
MCPA-SITE-CURB-1000 05/01/18

REINFORCED CONCRETE SIDEWALK (NEXT TO GRASS) DETAIL

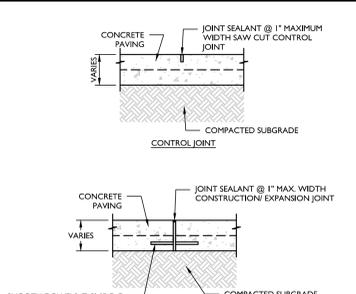
REINFORCED CONCRETE SIDEWALK (NEXT TO GRASS) DETAIL
MCPA-SITE-PMWT-1903 12/01/20

CONCRETE CURB (ASPHALT PAVEMENT) DETAIL

CONCRETE CURB (ASPHALT PAVEMENT) DETAIL
MCPA-SITE-PMWT-1902 12/01/20

TRASH ENCLOSURE CONCRETE PAD DETAIL

TRASH ENCLOSURE CONCRETE PAD DETAIL
MCPA-SITE-PMWT-2000 12/01/20



CONCRETE PAVING JOINTS DETAIL
MCPA-SITE-PMWT-1800 05/01/18

HEAVY-DUTY PAVEMENT DETAIL

HEAVY-DUTY PAVEMENT DETAIL
MCPA-SITE-PMWT-1100 05/01/18

LIGHT-DUTY PAVEMENT DETAIL

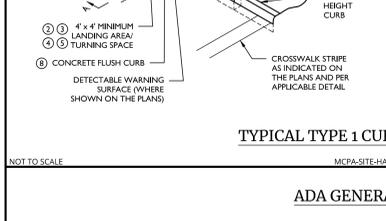
LIGHT-DUTY PAVEMENT DETAIL
MCPA-SITE-PMWT-1000 05/01/18

SOIL CAPPING DETAIL

SOIL CAPPING DETAIL
CAPPING DETAIL 4/3/25

BOLLARD MOUNTED SIGN DETAIL

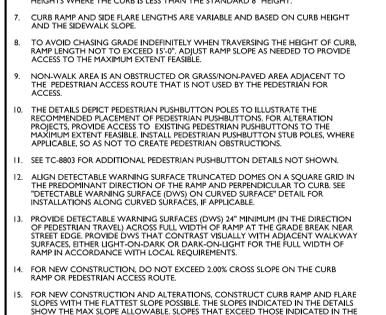
BOLLARD MOUNTED SIGN DETAIL
MCPA-SITE-MRKG-2000 05/01/18



BOLLARD MOUNTED SIGN DETAIL
MCPA-SITE-MRKG-2000 05/01/18

ACCESSIBLE PARKING SIGN DETAIL

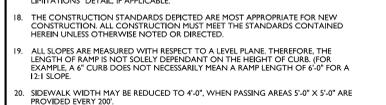
ACCESSIBLE PARKING SIGN DETAIL
MCPA-SITE-MRKG-1300 05/01/18



ACCESSIBLE PARKING SIGN DETAIL
MCPA-SITE-MRKG-1300 05/01/18

PEDESTRIAN CROSSWALK DETAIL

PEDESTRIAN CROSSWALK DETAIL
MODIFIED DTL DATE



PEDESTRIAN CROSSWALK DETAIL
MODIFIED DTL DATE

WHITE "LEFT OR RIGHT" PAVEMENT ARROW DETAIL

WHITE "LEFT OR RIGHT" PAVEMENT ARROW DETAIL
EFFECTIVE/NAME 05/01/18

WHITE STRAIGHT PAVEMENT ARROW DETAIL

WHITE STRAIGHT PAVEMENT ARROW DETAIL
MCPA-SITE-MRKG-1200 05/01/18

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REVISION TABLE

NO.	DATE	DESCRIPTION	BY	CHKD.
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Gabrielle Buchter
PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
LICENSE NUMBER: PED96952
COLLIERS ENGINEERING & DESIGN, INC.

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

FOR
CITY OF CHESTER

PROJECT TYPE:
PUBLIC WORKS FACILITIES

LOCATION:
2ND ST. & PENNELL ST.
CITY OF CHESTER, PA 19013

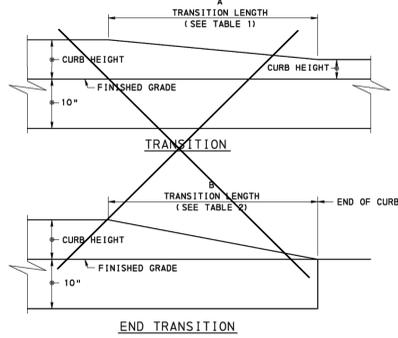
Colliers
Engineering & Design
PHILADELPHIA
2 Penn Center, Suite 700
1500 J.K. Boulevard
Philadelphia, PA 19102
Phone: 215.861.9021
COLLIERS ENGINEERING & DESIGN INC. IS AN EQUAL OPPORTUNITY EMPLOYER

SCALE: AS SHOWN DATE: 10/11/2024 DRAWN BY: LPD CHECKED BY: GEB
PROJECT NUMBER: C0020094 DRAWING NAME: C-0115

SHEET TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: 10.0

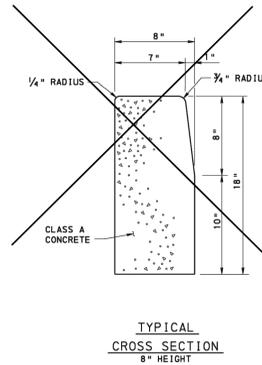
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



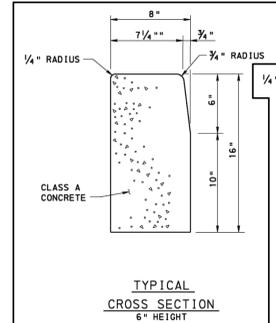
PLAIN CEMENT CONCRETE CURB - TRANSITIONS

CURB HEIGHT	A
8" CURB TO 6" CURB	2'-0"
8" CURB TO 4" CURB	3'-6"
6" CURB TO 4" CURB	2'-0"

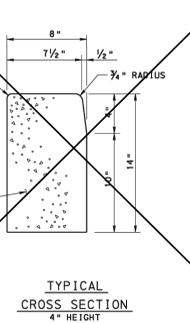
CURB HEIGHT	B
8" CURB TO 0" CURB	7'-0"
6" CURB TO 0" CURB	5'-0"
4" CURB TO 0" CURB	3'-6"



TYPICAL CROSS SECTION 8" HEIGHT



TYPICAL CROSS SECTION 6" HEIGHT



TYPICAL CROSS SECTION 4" HEIGHT

PLAIN CEMENT CONCRETE CURB

NOTE:
THIS DETAIL ONLY TO BE USED ON 2ND STREET IN PENNDOT R.O.W.

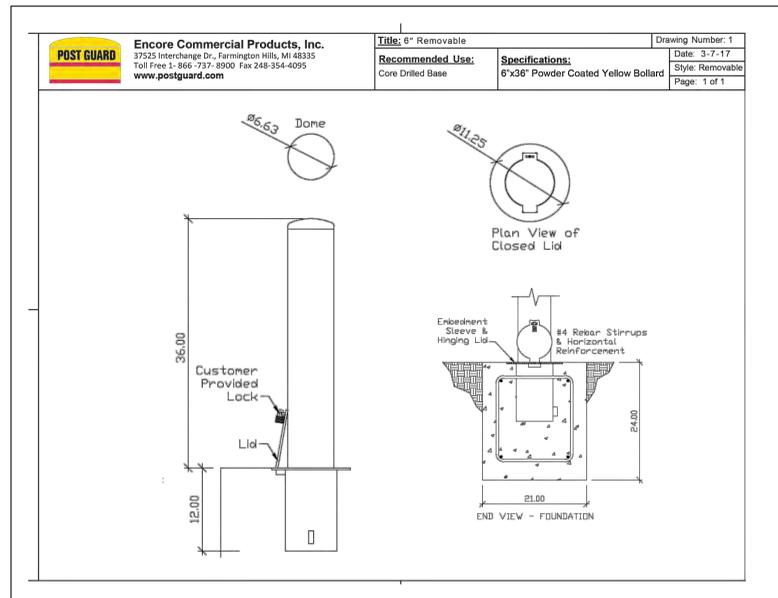
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
BUREAU OF PROJECT DELIVERY

CURBS AND GUTTERS

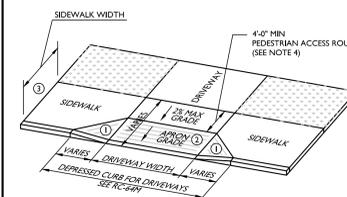
RECOMMENDED FEB. 19, 2021
DATE: 3-7-17
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RECOMMENDED FEB. 19, 2021
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Page: 1 of 1

SHT 2 OF 2
RC-64M



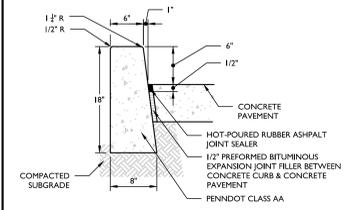
6" DIAMETER REMOVABLE BOLLARD



- NOTES:
- SIDE FLARES 10.00% MAX SLOPE
 - 8.00% MAX CHANGE IN GRADE BETWEEN ROAD SURFACE AND DRIVEWAY.
 - MINIMUM SIDEWALK WIDTH 5'-0". SIDEWALK WIDTH MAY BE REDUCED TO 4'-0" WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.
 - SIDEWALK WIDTH MAY BE REDUCED TO 4'-0" WHEN PASSING AREAS 5'-0" X 5'-0" ARE PROVIDED EVERY 200'.

TYPE 1A DRIVEWAY APRON DETAIL

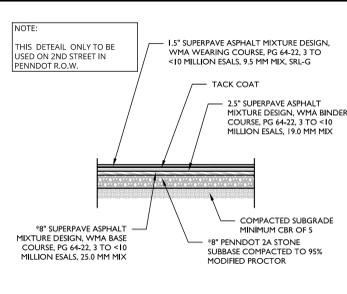
NOT TO SCALE MPCA-SITE-HADA-1003 05/01/18



- NOTES:
- DEPTH OF JOINT FILLER STRIP EQUAL TO THE THICKNESS OF THE PAVEMENT LESS 1/2".
 - PREFORMED BITUMINOUS FIBER TRAVERSE JOINTS, 1/2" THICK AT 20' MAX. INTERVALS ALONG THE CURB.
 - PROVIDE CONTRACTION JOINTS (2" DEEP X 1/2" WIDE) 4'-0" MIN TO 10'-0" MAX INTERVALS.

CONCRETE CURB (CONCRETE PAVEMENT) DETAIL

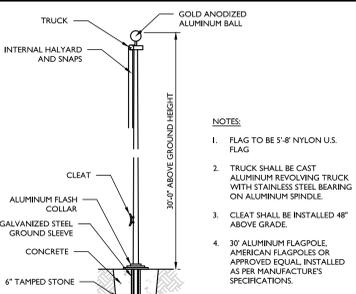
NOT TO SCALE MPCA-SITE-CURB-1001 05/01/18



NOTE:
THIS DETAIL ONLY TO BE USED ON 2ND STREET IN PENNDOT R.O.W.

PENNDOT R.O.W. DETAIL ASPHALT PAVEMENT SECTION

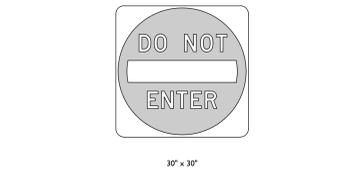
NOT TO SCALE EFFECTIVE NAME 05/01/18



- NOTES:
- FLAG TO BE 5'-8" U.S. FLAG
 - TRUCK SHALL BE CAST ALUMINUM REVOLVING TRUCK WITH STAINLESS STEEL BEARING ON ALUMINUM SPINDLE
 - CLEAT SHALL BE INSTALLED 48" ABOVE GRADE
 - 30" ALUMINUM FLAGPOLE AMERICAN FLAGPOLES OR APPROVED EQUAL, INSTALLED AS PER MANUFACTURER'S SPECIFICATIONS
 - FOOTING TO BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS

FLAGPOLE DETAIL

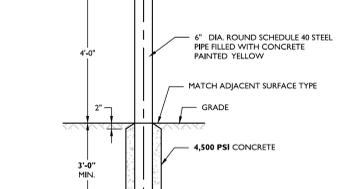
NOT TO SCALE MPCM-SITE-FNCE-3300 07/01/19



LEGEND = WHITE (RETROREFLECTIVE)
CIRCLE BACKGROUND = RED (RETROREFLECTIVE)

R5-1 SIGN DETAIL

NOT TO SCALE MPCM-SIGN-REGU-R5-1 12/01/20



LEGEND = WHITE (RETROREFLECTIVE)
BACKGROUND = RED (RETROREFLECTIVE)

BOLLARD DETAIL

NOT TO SCALE MPCM-SITE-FNCE-2300 07/01/19



LEGEND = BLACK BACKGROUND = BLACK ARROW = WHITE (RETROREFLECTIVE)

R6-1 SIDE SIGN DETAIL

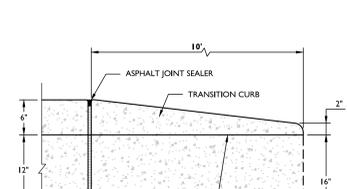
NOT TO SCALE EFFECTIVE NAME 12/01/20



LEGEND = WHITE (RETROREFLECTIVE)
BACKGROUND = RED (RETROREFLECTIVE)

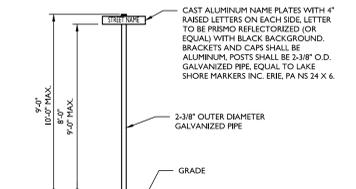
R1-1 SIGN DETAIL

NOT TO SCALE MPCM-SIGN-REGU-R1-1 12/01/20



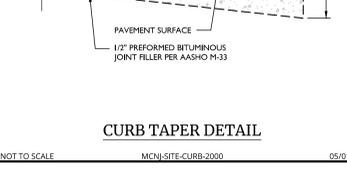
CURB TAPER DETAIL

NOT TO SCALE MCNJ-SITE-CURB-2000 05/01/23



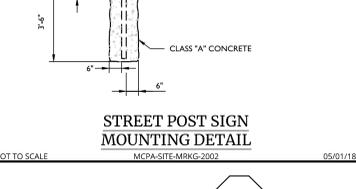
STREET POST SIGN MOUNTING DETAIL

NOT TO SCALE MPCA-SITE-MRKG-2002 05/01/18



SAWCUT AND PAVEMENT RESTORATION DETAIL

NOT TO SCALE MPCA-SITE-PVMT-2600 05/01/18



SINGLE POST SIGN MOUNTING DETAIL

NOT TO SCALE MPCA-SITE-MRKG-2001 05/01/18

- NOTES:
- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR DEFLECTION AS STATED IN THE CURRENT MANUAL ON LANEWAY TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
 - ALL POSTS SHALL BE EMBEDDED 4" MINIMUM.
 - ALL POSTS TO BE BREAKAWAY STEEL. U-POSTS IN CONFORMANCE WITH CURRENT ASTM SPECIFICATION A123 AND PROCT STANDARDS.
 - IN AREAS WITHOUT CURBING, THE OUTER EDGE OF SIGN TO BE 2'-0" MINIMUM TO 12'-0" MAXIMUM FROM EDGE OF CURB, AS DIRECTED.

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PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EDUCATORS, SUPERVISORS, OR ANY PERSON PREPARING TO DETAIL THE EARTH'S SURFACE BY ANY MEANS.
20241562350
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DESCRIPTION
1	12/01/20	ISSUED FOR BIDDING
2	02/01/21	ISSUED FOR BIDDING

REV	DATE	DESCRIPTION
1	12/01/20	ISSUED FOR BIDDING
2	02/01/21	ISSUED FOR BIDDING

Gabrielle Buchter
PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER
LICENSE NUMBER: PE096502
COLLIERS ENGINEERING & DESIGN, INC.

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN
FOR
CITY OF CHESTER

PROJECT TYPE:
PUBLIC WORKS FACILITIES
LOCATION:
2ND ST. & PENNELL ST.
CITY OF CHESTER, PA 19013

Colliers
Engineering & Design
PHILADELPHIA
2 Penn Center, Suite 700
1500 JFK Boulevard
Philadelphia, PA 19102
Phone: 215.861.9021
COLLIERS ENGINEERING & DESIGN, INC. (DOING BUSINESS AS MASER CONSULTING)

SCALE	DATE	DRAWN BY	CHECKED BY
AS SHOWN	10/11/2024	LFD	GEB

CONSTRUCTION DETAILS

SHEET NUMBER
10.1

POST-CONSTRUCTION STORMWATER MANAGEMENT GENERAL NOTES

- 1. FOR THE PURPOSES OF THIS PLAN, "BMP" REFERS TO A PROPOSED PCSM BEST MANAGEMENT PRACTICE.
2. DO NOT STOCKPILE EQUIPMENT, SOIL, OR MACHINERY WITHIN THE AREA OF A DETENTION BMP.
3. DO NOT COMPACT DETENTION BMP SOIL BEDS DURING CONSTRUCTION. PROHIBIT ALL HEAVY EQUIPMENT FROM THE FLOOR AREA AND WHEELS ALL OTHER TRAFFIC, WHERE POSSIBLE, FROM WORK FROM THE PERIMETER OF THE BMP TO AVOID EXCESSIVE SOIL COMPACTION WITHIN THE LEVEL EARTH AREAS OF THE BMP.
4. A COMPLETE AND SITE SPECIFIC CONSTRUCTION SEQUENCE INCLUDING THE CONSTRUCTION OF ALL BMPs CAN BE FOUND ON THE EROSION AND SEDIMENT POLLUTION CONTROL PLANS.
5. THE PERMITTEE MUST PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORMWATER BMPs.
6. BEFORE INITIATING ANY REVISIONS TO THE APPROVED PCSM PLANS OR REVISIONS TO OTHER PLANS WHICH MAY AFFECT THE EFFECTIVENESS OF THE APPROVED PCSM PLAN, THE CONTRACTOR MUST RECEIVE APPROVAL OF THE REVISIONS FROM THE BERKS COUNTY CONSERVATION DISTRICT (AND/OR PADEP).
7. ALL BUILDING MATERIALS AND WASTES SHALL BE REMOVED FROM THE SITE AND RECYCLED OR DEPOSED IN AN ACCORDANCE WITH THE DELAWARE COUNTY SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 2601 ET SEQ. 271.1, AND 281 ET SEQ. NO BUILDING MATERIALS OR WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURNED, BURIED, DUMPED, OR DISCHARGED AT THIS SITE.
8. IN THE EVENT OF SINKHOLE DISCOVERY A PROFESSIONAL GEOLOGIST OR ENGINEER MUST BE CONTACTED CONCERNING MITIGATION. ADDITIONALLY, THE BERKS COUNTY CONSERVATION DISTRICT MUST BE MADE AWARE OF THE SINKHOLE DISCOVERY IMMEDIATELY.
9. THE CONTRACTOR SHALL ASSURE THAT THE APPROVED POST-CONSTRUCTION STORMWATER MANAGEMENT PLAN IS PROPERLY AND COMPLETELY IMPLEMENTED.
10. PCSM PLAN HAS BEEN DESIGNED TO MINIMIZE IMPERVIOUS AREAS.
11. PCSM PLAN HAS BEEN DESIGNED TO MAXIMIZE THE PROTECTION OF EXISTING DRAINAGE FEATURES AND EXISTING VEGETATION.
12. PCSM PLAN HAS BEEN DESIGNED TO MINIMIZE LAND CLEARING AND GRADING.
13. PCSM PLAN UTILIZES STRUCTURAL AND NON-STRUCTURAL BMPs THAT PREVENT OR MINIMIZE CHANGES IN STORMWATER RUNOFF.

PCSM REQUIREMENTS

PCSM REPORTING AND RECORDKEEPING: THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS MUST BE AVAILABLE FOR REVIEW AND INSPECTION BY PADEP OR THE CONSERVATION DISTRICT.

RESPONSIBLE PARTY & OWNER:

THE STORMWATER BMPs WILL BE OWNED, OPERATED, AND MAINTAINED BY:

CITY OF CHESTER
THOMAS MOORE
1 FOURTH STREET
CHESTER, PA 19013
PHONE: 610-447-3700

LICENSED PROFESSIONAL OVERSIGHT OF CRITICAL STAGES: A LICENSED PROFESSIONAL OR A DESIGNER MUST BE PRESENT ONSITE AND BE RESPONSIBLE DURING CRITICAL STAGES OF IMPLEMENTATION OF THE APPROVED PCSM PLAN FOR THE PURPOSES OF THIS PCSM PLAN. THE CRITICAL STAGES ARE CONSIDERED TO BE:

FINAL CERTIFICATION: THE PERMITTEE MUST INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS, OR AS THE CURRENT STANDARD READS:

I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 PA.C.S.A. CHAPTER 404 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF PADEP OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES.

(1) THE PERMITTEE MUST RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.

(2) THE PERMITTEE MUST PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSONS OR ENTITIES IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs.

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPs ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE. PADEP AND/OR THE CONSERVATION DISTRICT WILL CONDUCT A FINAL INSPECTION AND APPROVE OR DENY THE NOTICE OF TERMINATION WITHIN 30 DAYS.

THE PERMITTEE OR CO-PERMITTEE IS RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs UNLESS A DIFFERENT PERSON OR ENTITY IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPs.

FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED DISCLOSURE IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPs AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP IS A COVENANT THAT RUNS WITH THE LAND THAT IS BINDING UPON AND ENFORCEABLE BY SUCCESSOR GRANTEE. THIS COVENANT SHALL BE FILED WITH THE NOTICE OF TERMINATION UNDER § 102.1(b)(5) (RELATING TO PERMIT TERMINATION).

THE PERSON RESPONSIBLE FOR PERFORMING LONG-TERM OPERATION AND MAINTENANCE MAY ENTER INTO AN AGREEMENT WITH ANOTHER PERSON INCLUDING A CONSERVATION DISTRICT, NONPROFIT ORGANIZATION, MUNICIPALITY, AUTHORITY, PRIVATE CORPORATION OR OTHER PERSON, TO TRANSFER THE RESPONSIBILITY FOR PCSM BMPs OR TO PERFORM LONG-TERM OPERATION AND MAINTENANCE AND PROVIDE NOTICE THEREOF TO THE DEPARTMENT.

A PERMITTEE OR CO-PERMITTEE THAT FAILS TO TRANSFER LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMP OR OTHERWISE FAILS TO COMPLY WITH THIS REQUIREMENT SHALL REMAIN JOINTLY AND SEVERALLY RESPONSIBLE WITH THE LANDOWNER FOR LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPs LOCATED ON THE PROPERTY.

OPERATION AND MAINTENANCE FOR PCSM BMPs

OWNERSHIP OF THE PERMANENT BMPs INDICATED ON THE PCSM PLANS RESIDES WITHIN THE PROPERTY BOUNDARY FOR TAX PARCEL NO. 49-07-00042-00. THE OPERATIONS AND MAINTENANCE OF THESE BMPs WILL BECOME THE RESPONSIBILITY OF THE PROPERTY OWNER OR THEIR DESIGNEE. THIS OPERATION AND MAINTENANCE PLAN IS BASED ON CHAPTER 4 OF THE PENNSYLVANIA STORMWATER BEST MANAGEMENT PRACTICES MANUAL AND SECTIONS 7 AND 8 OF THE PENNSYLVANIA HANDBOOK OF BEST MANAGEMENT PRACTICES FOR DEVELOPING AREAS.

FOLLOWING THIS OPERATION AND MAINTENANCE PLAN WILL ALLOW THE BMPs TO FUNCTION PROPERLY. EACH BMP MUST BE INSPECTED FOUR TIMES ANNUALLY (UNLESS OTHERWISE NOTED) AND AFTER ANY MAJOR RUNOFF EVENTS (≥ 1 INCH RAINFALL DEPTH), AS INDICATED.

LIMIT VEHICULAR OPERATION OVER THE BMPs TO AVOID COMPACTION OF THE SOILS OR AGGREGATE MATERIAL. TAKE CARE TO AVOID EXCESSIVE COMPACTION WHEN ACCESS IS REQUIRED. WHEN PERFORMING MAINTENANCE ACTIVITIES IN BMPs, OPERATE EQUIPMENT WITHOUT ENTERING THE FLOOR AREA, OR USE LIGHTWEIGHT, LOW GROUND PRESSURE, TRACK MOUNTED EQUIPMENT.

BMP MINIMUM INSPECTION CHECKLIST

- EXCESSIVE EROSION OR SEDIMENTATION
• UNSTABLE SLOPE SLOPES AND SPBANKMENT
• SEEPAGE THROUGH OUTSIDE FACE OF EMBANKMENTS
• CRACKING OR SETTLING
• SINKHOLES
• ANIMAL BURROWING
• DETRIORATION OF VEGETATION
• INVASIVE PLANT GROWTH
• SLUGGISH DRAINING
• ALGAE, STAGNANT POOLS, OR NOXIOUS ODORS
• RUTS, WASHOUTS, BULGES, SLIDES, SLOUGHS, SCARPS, OR SLUMPS
• RIP-RAP DISPLACEMENT OR FAILURE
• CRACKS OR RUST ON PIPING
• OBSTRUCTIONS BY TRASH AND DEBRIS
• SIGNS OF VANDALISM

IF DURING OPERATION, A SIGN OF FAILURE IS NOTED DURING INSPECTION, CORRECTIVE ACTION MUST BE COMPLETED BASED ON THE TYPE OF PROBLEM OBSERVED. SEE EACH BMP SECTION FOR CORRESPONDING CORRECTIVE ACTION DETAILS.

SEDIMENT REMOVAL

SEDIMENT MAY ACCUMULATE OVER TIME WITHIN BMPs AND STORM SEWER INLETS. THE DISTURBED AREAS OF THE BMPs MUST BE STABILIZED IMMEDIATELY. SEDIMENT ACCUMULATION IN STORM SEWER INLETS AND MANHOLES MUST BE REMOVED AND PROPERLY DISPOSED OF IN ACCORDANCE WITH PADEP REGULATIONS. SEDIMENT REMOVED FROM BMPs SHALL BE DISPOSED OF IN LANDSCAPED AREAS OUTSIDE OF STEEP SLOPES, WETLANDS, FLOODPLAINS OR DRAINAGE SWALES. THE SEDIMENT DISPOSAL AREA MUST BE STABILIZED IMMEDIATELY. ANY POTENTIALLY HAZARDOUS ACCUMULATIONS REMOVED FROM SUCH STRUCTURES MUST BE PROPERLY DISPOSED OF IN ACCORDANCE WITH PADEP REGULATIONS.

TERRESTRIAL VEGETATION MAINTENANCE

VEGETATIVE COVER MUST BE MOVED AT LEAST TWICE ANNUALLY, ALLOWING THE DEVELOPMENT OF THICK STANDS OF TALL GRASS AND OTHER PLANT VEGETATION.

INSPECT THE SEEDED AREAS AFTER ONE (1) YEAR. IF AN AREA HAS LESS THAN A UNIFORM 70 PERCENT VEGETATIVE PERENNIAL COVER, REEVALUATE THE CHOICE OF PLANT MATERIALS AND THE QUANTITIES OF SOIL SUPPLEMENTS USED. PREPARE THE SEEDS AND REESTABLISH SEEDING. IF THE SEASON PREVENTS RE-SEEDING, APPLY MULCH OR EROSION CONTROL MATTING FOR TEMPORARY STABILIZATION AND SEED THE AREA AS SOON AS PRACTICAL.

SPILLS

IN THE EVENT OF A SPILL, IMMEDIATELY INSPECT THE DOWNGRADIENT (BMPs) FOR CONTAMINATION. REMOVE AND PROPERLY DISPOSE OF SPILLED SUBSTANCES AND CONTAMINATED SOIL MATERIALS. RESTORE THE AFFECTED (BMPs).

ALL RESTORATION AND REMEDIATION PROCEDURES FOR A SPILL FROM MATERIALS STORED ONSITE MUST COMPLY WITH THE MEASURES LISTED IN PENNSYLVANIA'S CLEAN STREAMS LAW.

SEEDING AND SOIL SUPPLEMENTS

THE FOLLOWING SPECIFICATIONS ARE IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION B04.

Table with 4 columns: SEED TYPE, % BY WEIGHT, PURITY, MAX. WEED SEED. Includes rows for Temporary Seed Mixtures (Annual Ryegrass) and Permanent Seed Mixtures (Perennial Ryegrass Mixture, Creeping Red Fescue, Kentucky Bluegrass Mixture).

APPLY SEED AT A RATE OF 42 LBS. PER 1,000 SQ. YD.
APPLY STRAW OR HAY MULCH (SEE MULCH APPLICATION RATES TABLE)
SEEDING SEASON DATES: MARCH 15 TO OCTOBER 15

* A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL RYEGRASS COMPONENT.
** A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL BLUEGRASS COMPONENT.

Table with 4 columns: SEED TYPE, % BY WEIGHT, PURITY, MAX. WEED SEED. Includes rows for Permanent Seed Mixtures on Steep Slopes (Hard Fescue, Creeping Red Fescue, Annual Ryegrass).

APPLY SEED AT A RATE OF 48 LBS. / 1,000 SQ. YD.
MULCH WITH MULCH CONTROL NETTING OR EROSION CONTROL BLANKETS MUST BE INSTALLED. APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE UNLESS TESTING HAS BEEN PERFORMED.

APPLY 10-20-20 ANALYSIS COMMERCIAL FERTILIZER AT A RATE OF 478 LBS./ACRE UNLESS TESTING HAS BEEN PERFORMED.
SEEDING SEASON DATES: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 15
APPLY FLEXTERA FCM (OR EQUIV) ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

** A COMBINATION OF IMPROVED CERTIFIED VARIETIES WITH NO ONE VARIETY EXCEEDING 50% OF THE TOTAL HARD FESCUE COMPONENT.

MULCH APPLICATION RATE table with columns for Mulch Type, Application Rate (lb/acre, lb/1000sf, lb/1000sy), and Notes.

RECYCLING OR DISPOSAL OF MATERIALS

THE CONTRACTOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA CODE 2601 ET SEQ. 271.1 ET SEQ., AND 281.1 ET SEQ. THE CONTRACTOR SHALL NOT LEGALLY BURY, DUMP OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.

PROCEDURE FOR MANAGING SOIL, GROUNDWATER, AND OTHER POTENTIALLY CONTAMINATED MATERIALS GENERATED OR EXPOSED DURING CONSTRUCTION AND FOR THE REUSE AND/OR OFF-SITE DISPOSAL OF GENERATED MATERIALS

- 1. ANY EXCAVATED SOIL WHICH IS CONFIRMED TO BE CONTAMINATED AT CONCENTRATIONS WHICH EXCEED THE PADEP CLEAN FILL STANDARDS FOR RESIDUES SHOULD BE DEPOSITED OFF-SITE AT A PERMITTED FACILITY. DISPOSAL MANIFESTS SHOULD BE MAINTAINED. EXCAVATED SOILS SHOULD BE PLACED IMMEDIATELY INTO TRUCKS FOR OFF-SITE DISPOSAL. SOIL AWAITING OFF-SITE DISPOSAL SHALL BE PLACED ON AND COVERED BY POLYETHYLENE SHEETING.
2. IF THE SITE WILL NEED TO IMPORT OR EXPORT MATERIAL FROM THE SITE, THE RESPONSIBILITY FOR PERFORMING ENVIRONMENTAL DUE DILIGENCE AND DETERMINATION OF CLEAN FILL WILL REST WITH THE CONTRACTOR.
3. IF THE FILL MAY HAVE BEEN AFFECTED BY A SPILL OR RELEASE OF A REGULATED SUBSTANCE, IT MUST BE TESTED TO DETERMINE IF IT QUALIFIES AS CLEAN FILL. TESTING SHOULD BE PERFORMED IN ACCORDANCE WITH APPENDIX A OF THE DEPARTMENT'S POLICY "MANAGEMENT OF FILL".
4. FILL MATERIAL THAT DOES NOT QUALIFY AS CLEAN FILL IS REGULATED FILL. REGULATED FILL IS WASTE AND MUST BE MANAGED IN ACCORDANCE WITH THE DEPARTMENT'S MUNICIPAL OR RESIDUAL WASTE REGULATIONS BASED ON 25 PA CODE CHAPTERS 287 RESIDUAL WASTE MANAGEMENT OR 371 MUNICIPAL WASTE MANAGEMENT, WHICHEVER IS APPLICABLE. THE REGULATIONS ARE AVAILABLE ONLINE AT WWW.PACODE.COM.
STORMSEWER PIPE TRENCH EXCAVATION NOTES
1. LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
2. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF-CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
3. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
4. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUS INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
5. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND /OR BACKFILLING BEGINS. WATER REMOVED FROM THE TRENCH SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
6. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

PREPARATION OF AREAS TO BE TOPSOILED
GRADE THE AREAS TO BE COVERED BY TOPSOIL USING ACCEPTABLE METHODS. LOOSEN SOIL TO A DEPTH OF 2 INCHES BEFORE PLACING THE TOPSOIL. REMOVE STONES AND OTHER FOREIGN MATERIAL 1/2 INCHES OR LARGER IN DIMENSION. REMOVE AND SATISFACTORILY DISPOSE OF UNSUITABLE AND SURPLUS MATERIAL.

PLACING AND SPREADING TOPSOIL
PLACE TOPSOIL ON THE PREPARED AREAS AND, UNLESS OTHERWISE INDICATED, SPREAD AND COMPACT TO A 4-INCH UNIFORM DEPTH ± 1/2 INCHES. COMPACT WITH A ROLLER WEIGHING NOT OVER 120 POUNDS PER FOOT WIDTH OF ROLLER OR BY OTHER ACCEPTABLE METHODS AS DIRECTED. REMOVE OVERDEPTH TOPSOIL, UNLESS OTHERWISE AGREED UPON IN WRITING. DO NOT PLACE TOPSOIL IN A WET OR FROZEN CONDITION.

MEASURES PROVIDED TO MINIMIZE THERMAL IMPACTS
POST-CONSTRUCTION STORMWATER MANAGEMENT BMPs HAVE BEEN SELECTED IN ORDER TO MINIMIZE THERMAL IMPACTS TO SURFACE WATERS TO THE GREATEST EXTENT PRACTICAL. RUNOFF WILL BE CAPTURED AND DIRECTED TO SUBSURFACE PIPING, RUNOFF FROM PAVED AREAS OF THE PROJECT DISCHARGE THROUGH VEGETATED SWALES OR BURIED PIPE, THEREBY CREATING AMPLE OPPORTUNITY FOR COOLING PRIOR TO REACHING THE SURFACE WATERS. THE MAJORITY OF THE SITE RUNOFF WILL DISCHARGE INTO A DETENTION BASIN AND DETENTION BASIN. ADDITIONALLY, THE USE OF SPRAY IRRIGATION PROMOTES INFILTRATION AND REDUCTIONS IN THERMAL IMPACTS. AS SUCH, THE PROJECT WILL NOT HAVE AN ADVERSE IMPACT ON THE NATURAL TEMPERATURES OF THE RECEIVING SURFACE WATERS.

CONSTRUCTION SEQUENCE NOTES:

- 1. ALL WORK IS TO OCCUR WITHIN THE LIMIT OF DISTURBANCE LINES AS INDICATED ON THE PLAN. AT NO TIME SHALL CONSTRUCTION VEHICLES BE ALLOWED TO ENTER AREAS OUTSIDE THE LIMIT OF DISTURBANCE BOUNDARIES SHOWN ON THE PLAN MAPS. THESE AREAS MUST BE CLEARLY MARKED AND FENCED OFF BEFORE CLEARING AND GRUBBING OPERATIONS BEGIN.
2. CONSTRUCT ALL CHANNELS AND OTHER DRAINAGE APPURTENANCES FROM DOWNSTREAM TO UPSTREAM UNLESS OTHERWISE NOTED.
3. LIMIT TREE REMOVAL TO ONLY WHAT IS REQUIRED FOR CONSTRUCTION.
4. UPON REACHING FINAL GRADE, AREAS TO BE STABILIZED BY VEGETATION MUST NOT EXCEED 15,000 SQUARE FEET WITHOUT BEING STABILIZED.
5. THE SITE MUST BE IMMEDIATELY SEEDED, MULCHED, OR OTHERWISE PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION WHEN A TEMPORARY CESSATION OF EARTH DISTURBANCE ACTIVITIES OCCURS. DURING NON-GERMINATING MONTHS, MULCH OR PROTECTIVE BLANKETING SHALL BE APPLIED AS DESCRIBED IN THE PLAN. AREAS NOT AT FINISHED GRADE WHICH WILL BE REACTIVATED WITHIN ONE YEAR, MAY BE STABILIZED IN ACCORDANCE WITH THE TEMPORARY STABILIZATION SPECIFICATIONS. THOSE AREAS WHICH WILL NOT BE REACTIVATED WITHIN ONE YEAR SHALL BE STABILIZED IN ACCORDANCE WITH THE PERMANENT STABILIZATION SPECIFICATIONS.
6. STABILIZE SLOPES, CHANNELS, DITCHES, AND OTHER DISTURBED AREAS AS THEY REACH FINAL GRADE. ROUND CUT AND FILL SLOPES SUCH THAT RUNOFF IS DIRECTED AWAY FROM THE INTERSECTION OF THE CONSTRUCTED SLOPE AND THE EXISTING GRADE. STABILIZE FILL SLOPES IN 15 TO 25-FOOT VERTICAL INCREMENTS AND INSTALL SLOPE PIPES AS NECESSARY TO PREVENT RUNOFF FROM UPSTREAM AREAS FROM SHEET FLOWING DOWN NEWLY CONSTRUCTED SLOPES.
7. CLEARING, GRUBBING, AND TOPSOIL STRIPPING SHALL BE LIMITED TO THE AREAS DESCRIBED IN EACH STAGE OF THE CONSTRUCTION SEQUENCE. GENERAL SITE CLEARING, GRUBBING, AND TOPSOIL STRIPPING MAY NOT COMMENCE IN ANY STAGE OR PHASE OF THE PROJECT UNTIL THE E&S BMPs SPECIFIED BY THE CONSTRUCTION SEQUENCE FOR THAT STAGE OR PHASE HAVE BEEN INSTALLED AND ARE FUNCTIONING AS DESCRIBED IN THIS E&S PLAN.
8. UPON THE INSTALLATION OR STABILIZATION OF ALL PERIMETER SEDIMENT CONTROL BMPs AND AT LEAST 3 DAYS PRIOR TO PROCEEDING WITH THE BULK EARTH DISTURBANCE ACTIVITIES, THE PERMITTEE OR CO-PERMITTEE SHALL PROVIDE NOTIFICATION TO THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT.
9. WITHIN 30 DAYS AFTER THE COMPLETION OF EARTH DISTURBANCE ACTIVITIES AUTHORIZED BY THE DEPARTMENT, THE PERMITTEE SHALL FILE WITH THE DEPARTMENT OR AUTHORIZED CONSERVATION DISTRICT A STATEMENT SIGNED BY A LICENSED PROFESSIONAL AND BY THE PERMITTEE CERTIFYING THAT WORK HAS BEEN PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THIS PERMIT AND THE APPROVED E&S AND PCSM PLANS. COMPLETION CERTIFICATES ARE NEEDED TO ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE PERMIT AND THE APPROVED E&S AND PCSM PLANS.
10. UPON TEMPORARY CESSATION OF AN EARTH DISTURBANCE OR ANY STAGE OR PHASE OF AN ACTIVITY WHERE A CESSATION OF EARTH DISTURBANCE ACTIVITY OCCURS, THE SITE SHALL BE IMMEDIATELY SEEDED, MULCHED, OR AS OTHERWISE NOTED PROTECTED FROM ACCELERATED EROSION AND SEDIMENTATION PENDING FUTURE EARTH DISTURBANCE ACTIVITIES TO COMPLY WITH THE ABACT REQUIREMENT.

CONSTRUCTION SEQUENCE

- ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. DEVIATION FROM THIS SEQUENCE MUST BE APPROVED IN WRITING FROM THE LOCAL CONSERVATION DISTRICT OR BY THE DEPARTMENT PRIOR TO IMPLEMENTATION.
1. *AT LEAST 7 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES, INCLUDING CLEARING AND GRUBBING, THE OWNER AND/OR OPERATOR SHALL INVITE ALL CONTRACTORS, THE LANDOWNER, APPROPRIATE MUNICIPAL OFFICIALS, THE E&S PLAN PREPARER, THE PCSM PLAN PREPARER, THE LICENSED PROFESSIONAL RESPONSIBLE FOR OVERSIGHT OF CRITICAL STAGES OF IMPLEMENTATION OF THE PCSM PLAN, AND A REPRESENTATIVE FROM THE LOCAL COUNTY CONSERVATION DISTRICT TO AN ONSITE PRE-CONSTRUCTION MEETING.
2. ALL EXISTING UTILITIES SHOWN ON THE PLAN ARE SHOWN AT APPROXIMATE LOCATIONS. THE ENGINEER DOES NOT GUARANTEE ALL EXISTING UTILITIES ON SITE ARE SHOWN ON THE PLAN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UTILITIES AND TO CALL THE PENNSYLVANIA ONE CALL SYSTEM (1-800-242-1776) AT LEAST 3 DAYS PRIOR TO STARTING ANY EARTH DISTURBANCE ACTIVITIES OR EXPANDING INTO A PREVIOUSLY UNMARKED AREA.
3. MARK LIMIT OF DISTURBANCE.
4. INSTALL THE CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT STATION ALONG FRONT STREET AS SHOWN ON THE PLANS. CLEAR AND GRUB AS NEEDED FOR THE INSTALLATION OF THE ROCK CONSTRUCTION ENTRANCES.
5. INSTALL COMPOST FILTER SOCKS AND INLET PROTECTION ON EXISTING INLETS AS INDICATED IN STAGE 1 OF CONSTRUCTION. COMPOST FILTER SOCKS SHALL BE INSTALLED PARALLEL TO EXISTING CONTOURS OR CONSTRUCTED LEVEL ALIGNMENTS, CLEAR AND GRUB AS NEEDED FOR THE INSTALLATION OF THE COMPOST FILTER SOCKS. NOTE: IF ADDITIONAL COMPOST FILTER SOCKS ARE REQUIRED, THEY SHALL BE INSTALLED DOWNGRADE OF ANY DISTURBANCE AREAS AS NEEDED. CONTACT THE DELAWARE COUNTY CONSERVATION DISTRICT TO REVIEW ANY REVISIONS. ALL EROSION AND SEDIMENT CONTROL DEVICES MUST BE INSTALLED IN ACCORDANCE WITH THEIR RESPECTIVE DETAIL AND IN WORKING ORDER PRIOR TO DISTURBING AN AREA.
6. ESTABLISH THE TOPSOIL STORAGE LOCATIONS AND PLACE DOWNSLOPE COMPOST FILTER SOCK. ESTABLISH THE STAGING AREA LOCATION, AS SHOWN ON THE PLANS.
7. REMOVE ALL ITEMS LISTED AS TO BE REMOVED. THE EXISTING STRUCTURES, FOUNDATIONS, AND PAVEMENT, IF FEASIBLE, ARE TO BE DEMOLISHED ONLY TO THEIR FOUNDATIONS AND BACKFILLED AS NECESSARY.
8. *BEGIN BULK EARTHWORK ACTIVITIES BY CLEARING THE REMAINING AREAS WITHIN THE LIMITS OF DISTURBANCE AND EXCAVATE AREA FOR THE UNDERGROUND BASIN. EXCAVATE 2' OF MATERIAL IN ALL PROPOSED LANDSCAPE AREAS AND UTILIZE AS ON-SITE FILL WHERE APPLICABLE. ANY SOIL TAKEN OFF-SITE MUST BE TESTED AND DOCUMENTED FOR ENVIRONMENTAL PURPOSES.
9. INSTALL THE DOGHOUSE STORM MANHOLE LOCATED IN LLOYD ST., THE BASIN OUTFALL CONVEYANCE PIPE AND THE BASIN OUTLET STRUCTURE.
10. *INSTALL GEOTEXTILE, PVC LINER, MANHOLES AND PIPES ASSOCIATED WITH UNDERGROUND BASIN 1 AND DIRECT RUNOFF INTO THE PROPOSED STORM CONVEYANCE SYSTEM. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. ALL OPEN TRENCHES MUST BE PROTECTED. WATER, WHICH ACCUMULATES IN THE OPEN TRENCH, WILL BE COMPLETELY REMOVED BY FILTER BAG PUMPING, BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS.
11. *ROUGH GRADE THE BUILDING PADS AND BEGIN INSTALLATION OF THE BUILDING FOUNDATIONS, UTILITIES AND BASE AGGREGATE FOR THE DRIVEWAYS, AND PARKING LOTS AS EARTHWORK ALLOWS. UTILIZING THE 2' OF EXCAVATED MATERIAL FROM THE LANDSCAPE AREAS, IMMEDIATELY STABILIZE STEEP SLOPES WITH EROSION CONTROL MATTING. DO NOT PLACE EROSION CONTROL MATTING ON OR UNDER COMPOST FILTER SOCKS. ADJUST COMPOST FILTER SOCKS AS NEEDED TO FIT PROPOSED IMPROVEMENTS, AS CONSTRUCTION REQUIRES. ADD AND ADJUST COMPOST FILTER SOCKS.
12. INSTALL THE PROPOSED STORM CONVEYANCE SYSTEM, WORKING UPSLOPE. ADJUST CONSTRUCTION ENTRANCE AS NEEDED. INSTALL INLET PROTECTION ON ANY PROPOSED INLETS AS SHOWN ON THE PLANS. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. ALL OPEN TRENCHES MUST BE PROTECTED. WATER, WHICH ACCUMULATES IN THE OPEN TRENCH, WILL BE COMPLETELY REMOVED BY FILTER BAG PUMPING, BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS.
13. CONTINUE CONSTRUCTION OF THE BUILDINGS, INCLUDING THE INSTALLATION OF UTILITY SERVICE CONNECTORS FOR ELECTRIC TO THE CONNECTION POINT IN 2ND STREET, AS SHOWN ON THE PLANS. INSTALL CONNECTIONS FOR WATER, SANITARY AND GAS. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE OR CONDUIT PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. ALL OPEN TRENCHES MUST BE PROTECTED. WATER, WHICH ACCUMULATES IN THE OPEN TRENCH, WILL BE COMPLETELY REMOVED BY FILTER BAG PUMPING, BEFORE PIPE OR CONDUIT PLACEMENT AND/OR BACKFILLING BEGINS.
14. INSTALL SANITARY LINE TO OIL SEPARATOR FROM THE PROPOSED BUILDING CONNECTION TO THE CONNECTION IN PENNELL STREET. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. ALL OPEN TRENCHES MUST BE PROTECTED. WATER, WHICH ACCUMULATES IN THE OPEN TRENCH, WILL BE COMPLETELY REMOVED BY FILTER BAG PUMPING, BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. IMMEDIATELY STABILIZE AREAS AFTER GRADING COMPLETION.
15. INSTALL THE PROPOSED ROOF DRAIN SYSTEM WORKING FROM MANHOLE S-18 AND S-21 UPSLOPE TO THE PROPOSED BUILDING ROOF DRAIN CLEANOUT. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY. ALL OPEN TRENCHES MUST BE PROTECTED. WATER, WHICH ACCUMULATES IN THE OPEN TRENCH, WILL BE COMPLETELY REMOVED BY FILTER BAG PUMPING, BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS.
16. CONTINUE INSTALLATION OF THE PAVEMENT BASE COURSE FOR THE DRIVEWAYS, AND PARKING LOTS IN ACCORDANCE WITH THE PLAN DETAILS, DIRECTING STORMWATER TO THE PROPOSED INLETS. INSTALL CURBING, ADJUST COMPOST FILTER SOCKS AS NEEDED TO FIT PROPOSED IMPROVEMENTS.
17. FINALIZE GRADING IN ALL LAWN AREAS BY PLACING GEOTEXTILE, 18" OF IMPROVED CLEAN FILL, AND 6" OF TOPSOIL WITHIN ALL PROPOSED LANDSCAPE AREAS. IMMEDIATELY STABILIZE AREAS AFTER GRADING COMPLETION. GRADEN AREAS SHOULD BE SCARIFIED OR OTHERWISE LOOSENEED TO A DEPTH OF 3" TO 5" PRIOR TO TOPSOIL PLACEMENT TO PERMIT BONDING. PREPARE AND SEED LANDSCAPE RESTORATION AREAS.
18. INSTALL PROPOSED SIDEWALKS, CURBS, AND ADA RAMPS.
19. INSTALL PROPOSED STREET SIGNS, LIGHT POLES/FIXTURES, AND PROPOSED TREES.
20. COMPLETE PAVING IN ACCORDANCE WITH THE PLAN DETAILS. ONCE PAVING IS COMPLETED, ADD PAVEMENT MARKINGS.
21. * ONCE THE ABOVE IMPROVEMENTS ARE COMPLETED AND THE SITE IS STABILIZED, CONTACT THE DELAWARE COUNTY CONSERVATION DISTRICT FOR FINAL INSPECTION PRIOR TO CONVERSION OR REMOVAL OF PRIMARY E&S BMPs. UNTIL THE SITE IS STABILIZED, ALL EROSION AND SEDIMENTATION CONTROLS MUST BE MAINTAINED PROPERLY. MAINTENANCE MUST INCLUDE INSPECTIONS OF ALL EROSION AND SEDIMENTATION CONTROLS AFTER EACH RUNOFF EVENT AND ON A WEEKLY BASIS. ALL PREVENTATIVE AND REMEDIAL MAINTENANCE WORK, INCLUDING CLEAN OUT, REPAIR, REPLACEMENT, RE-GRADING, RESEEDING, RE-MULCHING, AND RE-NETTING, MUST BE PERFORMED IMMEDIATELY. CONTACT THE DCCD PRIOR TO REMOVING TEMPORARY E&S BMPs.
22. UPON ACHIEVING A MINIMUM UNIFORM 70% PERENNIAL VEGETATIVE COVER OVER THE ENTIRE VEGETATED TRIBUTARY AREA, ALL THE REMAINING TEMPORARY E&S CONTROLS SHOULD BE REMOVED, INCLUDING COMPOST FILTER SOCKS, ROCK CONSTRUCTION ENTRANCES, AND INLET PROTECTION. ALL AREAS DISTURBED DURING THE REMOVAL PROCESS SHOULD BE IMMEDIATELY STABILIZED WITH PERMANENT SEEDING, AS INDICATED ON THE PLANS.
23. THE PERMITTEE SHALL SUBMIT A NOTICE OF TERMINATION TO THE DCCD ONCE SITE WORK IS COMPLETED.
* CRITICAL STAGES OF CONSTRUCTION NOTED ABOVE MUST BE COMPLETED WHILE A LICENSED ENGINEER IN THE STATE OF PA IS PRESENT ON SITE.



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Gabrielle Buchter

PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER LICENSE NUMBER: PE096502 COLLIERS ENGINEERING & DESIGN, INC.

PRELIMINARY/FINAL LAND DEVELOPMENT PLAN

FOR CITY OF CHESTER

PROJECT TYPE: PUBLIC WORKS FACILITIES

LOCATION: 2ND ST. & PENNELL ST. CITY OF CHESTER, PA 19013

PHILADELPHIA 2 Penn Center, Suite 700 1500 J.K. Boulevard Philadelphia, PA 19102 Phone: 215.861.9021 COLLIERS ENGINEERING & DESIGN, INC. DOING BUSINESS AS MASER CONSULTANTS

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