PLANS FOR

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN
HUDSON COUNTY , NEW JERSEY

PUBLIC UTILITIES

ELECTRIC:
PUBLIC SERVICE ELECTRIC & GAS CO.
ELECTRIC, PALISADES DIVISION
325 COUNTY AVENUE
SECAUCUS, NEW JERSEY 07094
SUE WOODELL 201-330-6456

GAS:
PUBLIC SERVICE ELECTRIC & GAS CO. GAS DISTRIBUTION,
CENTRAL GAS DIVISION
444 ST. PAUL'S AVENUE
JERSEY CITY, NEW JERSEY 07306
JIM CAVANAUGH, DISTRIBUTION SUPERVISOR 201-420-3950

WATER:
UNITED WATER
69 DEVOE PLACE
HACKENSACK, NEW JERSEY 07601
JOE SENSALE 201-525-4582

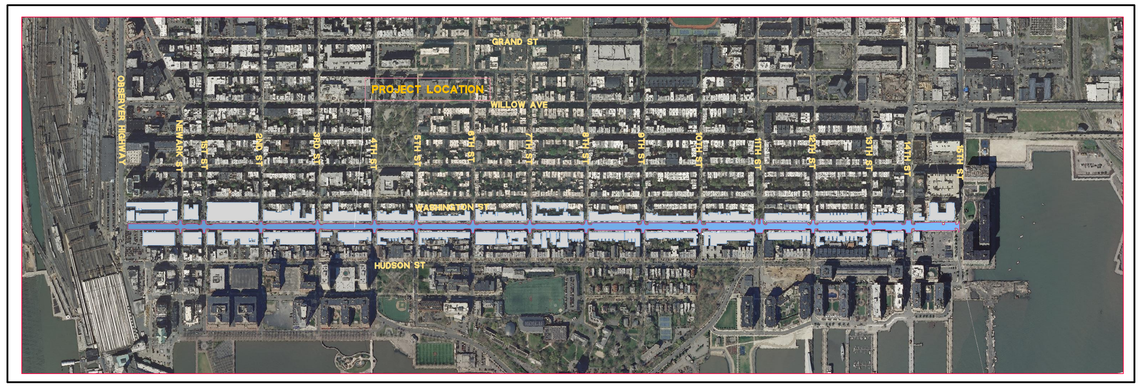
TELEPHONE:
VERIZON – NEW JERSEY, INC.
114 PATERSON STREET, 3rd FLOOR
PATERSON, NEW JERSEY 07501
JESTON GUY, NETWORK ENGINEER 973-925-1488

SEWERS:
NORTH HUDSON SEWAGE AUTHORITY
1600 ADAMS STREET
HOBOKEN, NEW JERSEY 07030
FREDRIC POCCI 201-420-0935

CABLE
CABLEVISION
800 RAHWAY AVENUE
UNION, NJ 07083
MR. RICHARD GUGULSKI
732-602-7444 EXT. 2293

LOCATION OF UTILITIES SHOWN ON THE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE WITH THE UTILITY COMPANIES AND ARE NOT WARRANTED AS TO EXACTNESS. CONTRACTOR IS TO DETERMINE EXACT LOCATION AND DEPTH OF UTILITIES AT ALL CROSSINGS PRIOR TO CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

PRIOR TO DIGGING CALL 1-800-272-1000



KEY MAP

600′ 300′ 0 600′ 1200′
1″ = 600′

CITY OF HOBOKEN

MAYOR
DAWN ZIMMER

CITY COUNCIL
JENNIFER GIATTINO, PRESIDENT
DAVID MELLO
JAMES DOYLE
MICHAEL DEFUSCO
MICHAEL RUSSO
PETER CUNNINGHAM
RAVINDER S. BHALLA
RUBEN RAMOS JR.
TIFFANIE FISHER

CITY CLERK
JAMES J. FARINA

PREPARED BY

JACLYN J . FLOR, P.E., P.P., C.M.E.

CONSULTING ENGINEER

03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS
AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

NJEIFP AND PERMIT PLANS

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBA\00090\Plans\
FILE NAME: HOBA00090-00000-COVER.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 1:33AM
LAST SAVE BY: thoberguno

SHEET INDEX

SHT. NO.	DWG. NO.	DESCRIPTION	
1	CVR-1	COVER SHEET	-NJEIFP
2	CVR-2	SHEET INDEX	-NJEIFP
3	LEG-1	LEGEND AND GENERAL NOTES	-NJEIFP
		LAYOUT AND DRAINAGE PLANS	
4	LDP-1	WASHINGTON STREET (STA 10+00 - STA 14+25)	-NJEIFP
5	LDP-2	WASHINGTON STREET (STA 14+25 - STA 19+50)	-NJEIFP
6	LDP-3	WASHINGTON STREET (STA 19+50 - STA 24+50)	-NJEIFP
7	LDP-4	WASHINGTON STREET (STA 24+50 - STA 28+75)	-NJEIFP
8	LDP-5	WASHINGTON STREET (STA 28+75 - STA 33+50)	-NJEIFP
9	LDP-6	WASHINGTON STREET (STA 33+50 - STA 37+50)	-NJEIFP
10	LDP-7	WASHINGTON STREET (STA 37+50 - STA 42+50)	-NJEIFP
11	LDP-8	WASHINGTON STREET (STA 42+50 - STA 46+75)	-NJEIFP
12	LDP-9	WASHINGTON STREET (STA 46+75 - STA 51+75)	-NJEIFP
13	LDP-10	WASHINGTON STREET (STA 51+75 - STA 56+75)	-NJEIFP
14	LDP-11	WASHINGTON STREET (STA 56+75 - STA 61+50)	-NJEIFP
15	LDP-12	WASHINGTON STREET (STA 61+50 - STA 66+50)	-NJEIFP
16	LDP-13	WASHINGTON STREET (STA 66+50 - STA 70+75)	-NJEIFP
17	LDP-14	WASHINGTON STREET (STA 70+75 - STA 74+50)	-NJEIFP
18	LDP-15	WASHINGTON STREET (STA 74+50 - STA 80+31)	-NJEIFP
		GREEN INFRASTRUCTURE: DRAINAGE PLAN	
19	GID-1	3rd ST. & 4th ST. INTERSECTIONS	-NJEIFP
20	GID-2	4th ST. & 5th ST. INTERSECTIONS	-NJEIFP
21	GID-3	6th ST. INTERSECTION	-NJEIFP
22	GID-4	8th ST. INTERSECTION	-NJEIFP
23	GID-5	9th ST. INTERSECTION	-NJEIFP
24	GID-6	10th ST. INTERSECTION	-NJEIFP
25	GID-7	11th ST. INTERSECTION	-NJEIFP
26	GID-8	12th ST. INTERSECTION	-NJEIFP
		GREEN INFRASTRUCTURE: LIGHTING & MONITERING FACILITIES PLAN	
27	GIL-1	3rd ST. & 4th ST. INTERSECTIONS	-NJEIFP
28	GIL-2	4th ST. & 5th ST. INTERSECTIONS	-NJEIFP
29	GIL-3	6th ST. INTERSECTION	-NJEIFP
30	GIL-4	8th ST. INTERSECTION	-NJEIFP
31	GIL-5	9th ST. INTERSECTION	-NJEIFP
32	GIL-6	10th ST. INTERSECTION	-NJEIFP
33	GIL-7	11th ST. INTERSECTION	-NJEIFP
34	GIL-8	12th ST. INTERSECTION	-NJEIFP
		LANDSCAPING PLANS	
35	LSP-1	3RD STREET & WASHINGTON STREET (STA 24+50 - STA 28+75)	-NJEIFP
36	LSP-2	4TH STREET & WASHINGTON STREET (STA 28+75 - STA 33+50)	-NJEIFP
37	LSP-3	5TH STREET & WASHINGTON STREET (STA 33+50 - STA 37+50)	-NJEIFP
38	LSP-4	6TH STREET & WASHINGTON STREET (STA 37+50 - STA 42+50)	-NJEIFP
39	LSP-5	8TH STREET & WASHINGTON STREET (STA 46+75 - STA 52+25)	-NJEIFP
40	LSP-6	9TH STREET & WASHINGTON STREET (STA 52+25 - STA 56+75)	-NJEIFP
41	LSP-7	10TH STREET & WASHINGTON STREET (STA 56+75 - STA 61+50)	-NJEIFP
42	LSP-8	12TH STREET & WASHINGTON STREET (STA 66+50 - STA 70+75)	-NJEIFP
		UTILITY PLANS	
43	WTR-1	WASHINGTON STREET (STA 10+00 - STA 14+25)	-NJEIFP
44	WTR-2	WASHINGTON STREET (STA 14+25 - STA 19+50)	-NJEIFP
45	WTR-3	WASHINGTON STREET (STA 19+50 - STA 24+50)	-NJEIFP
46	WTR-4	WASHINGTON STREET (STA 24+50 - STA 28+75)	-NJEIFP
47	WTR-5	WASHINGTON STREET (STA 28+75 - STA 33+50)	-NJEIFP
48	WTR-6	WASHINGTON STREET (STA 33+50 - STA 37+50)	-NJEIFP
49	WTR-7	WASHINGTON STREET (STA 37+50 - STA 42+50)	-NJEIFP
50	WTR-8	WASHINGTON STREET (STA 42+50 - STA 46+75)	-NJEIFP
51	WTR-9	WASHINGTON STREET (STA 46+75 - STA 52+25)	-NJEIFP
52	WTR-10	WASHINGTON STREET (STA 52+25 - STA 56+75)	-NJEIFP
53	WTR-11	WASHINGTON STREET (STA 56+75 - STA 61+50)	-NJEIFP
54	WTR-12	WASHINGTON STREET (STA 61+50 - STA 66+50)	-NJEIFP
55	WTR-13	WASHINGTON STREET (STA 66+50 - STA 70+75)	-NJEIFP
56	WTR-14	WASHINGTON STREET (STA 70+75 - STA 74+50)	-NJEIFP
57	WTR-15	WASHINGTON STREET (STA 74+50 - STA 80+50)	-NJEIFP
		CONSTRUCTION DETAILS	
58	CSD-1	UTILITY CONSTRUCTION DETAILS	-NJEIFP
59	CSD-2	UTILITY CONSTRUCTION DETAILS	-NJEIFP
60	CSD-3	DRAINAGE STRUCTURES - 1	-NJEIFP
61	CSD-4	DRAINAGE STRUCTURES - 2	-NJEIFP
62	CSD-5	DRAINAGE STRUCTURES - 3	-NJEIFP
63	CSD-6	DRAINAGE STRUCTURES - 4	-NJEIFP
64	CSD-7	DRAINAGE STRUCTURES - 5	-NJEIFP
65	CSP-8	DRAINAGE STRUCTURES - 6	-NJEIFP
66	CSD-9	SIDEWALKS & CURB RAMPS IN PUBLIC RIGHT-OF-WAY	-NJEIFP
67	CSD-10	SIDEWALKS & CURB RAMPS IN PUBLIC RIGHT-OF-WAY	-NJEIFP
68	CSD-11	CONCRETE DRIVEWAYS & APRONS	-NJEIFP
69	CSD-12	SOIL EROSION AND SEDIMENT CONTROL	-NJEIFP
70	CSD-13	SOIL EROSION AND SEDIMENT CONTROL	-NJEIFP

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

SHEET INDEX

NJEIFP

YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

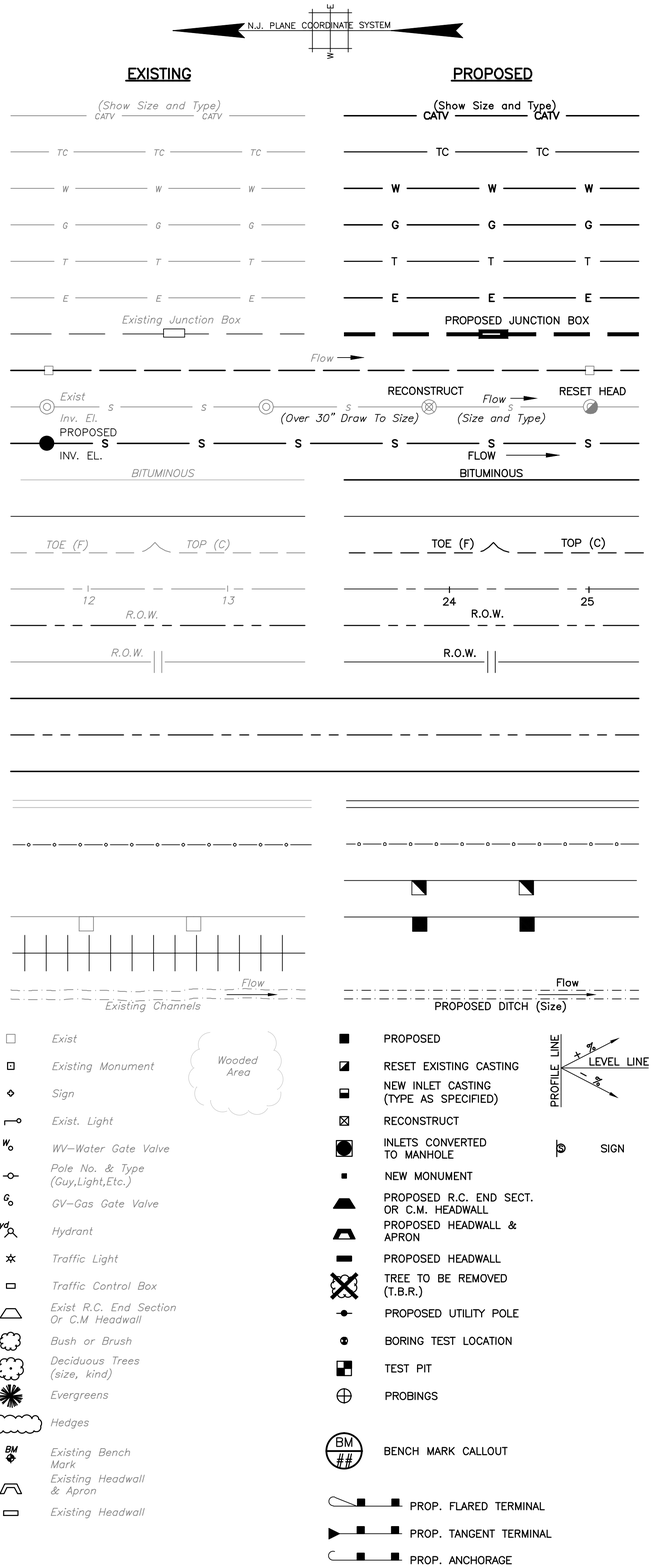
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY PB	DRAWING CVR-2
CHECKED BY DM	
DRAWN BY NSV	SHEET 2
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT002_INX.dwg
LAYOUT SHEET: CVR-2 PLOTTED: Friday, March 11 Mar 2016, 8:28PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

STANDARD LEGEND



NORTH ARROW

CABLE TELEVISION

TELECOMMUNICATION CONDUIT

WATER MAIN

GAS MAIN

TELEPHONE CONDUIT

ELECTRIC CONDUIT

ELECTRIC CONDUIT, HIGHWAY

EXISTING STORM DRAINS

EXISTING SANITARY SEWERS

PROPOSED SANITARY SEWERS AND STORM DRAINS (ONLY IN SPECIAL CASES DRAW TO SIZE)

EDGE OF PAVEMENT (BITUMINOUS, CONCRETE)

SHOULDERS

SLOPES

CENTERLINE, BASELINE AND TRAVERSE LINE
LABEL LINE: ℄, ℬ,

RIGHT OF WAY LINES
ACCESS PERMITTED

NO ACCESS

TOWNSHIP, CITY, COUNTY LINE

PROPERTY LINES

WETLANDS LINE

CURBS

FENCES

RESET BEAM GUIDE RAIL

BEAM GUIDE RAIL

RAILROAD

REPRESENTS BOTTOM OF DITCH OR CREEK

INLETS (TYPE AS INDICATED)

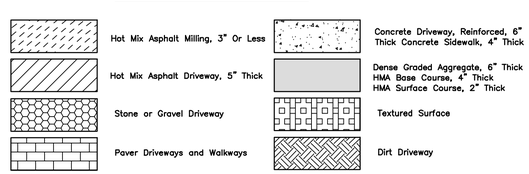
GENERAL NOTES:

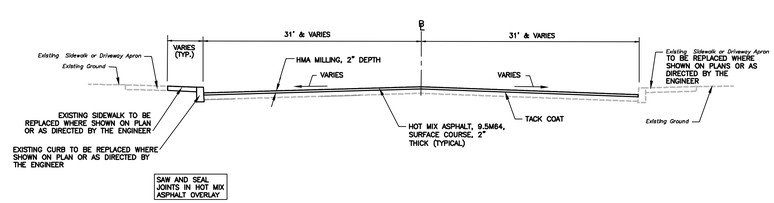
1. HORIZONTAL DATUM IS IN THE NEW JERSEY PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983.
2. ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM, 1988.
3. ALL DIMENSIONS, UNITS, ETC. ARE IN THE U.S. CUSTOMARY SYSTEM.
4. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE 2007 NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
5. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY. SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO GROUND DISTURBANCE.
6. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
7. ONLY PAY ITEMS LISTED IN THE PROPOSAL ARE APPLICABLE TO THIS PROJECT. PAY ITEMS NOT IN THE PROPOSAL WILL NOT BE USED.
8. THE CONTRACTOR SHALL PROTECT ALL SURVEY CONTROL POINT MARKS FROM DAMAGE AND SHALL ESTABLISH OFFSET POINTS AS REQUIRED FOR ITS WORK.
9. DEPRESSED CURBS AT HANDICAPPED RAMPS/CROSSWALKS SHALL BE FLUSH WITH THE PAVEMENT SURFACE. DEPRESSED CURBS AT DRIVEWAYS SHALL HAVE A 1 1/2" CURB FACE.
10. EXISTING DRAINAGE IS TO BE REMOVED OR ABANDONED ONLY AFTER PROPOSED DRAINAGE IS FUNCTIONAL, UNLESS APPROVED BY THE RESIDENT ENGINEER.
11. THE CONTRACTOR SHALL EXAMINE AND VERIFY IN THE FIELD ALL EXISTING CONDITIONS AND DIMENSIONS WITH THOSE SHOWN ON THE PLANS. IF FIELD CONDITIONS AND DIMENSIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL USE THE FIELD CONDITIONS AND DIMENSIONS AND MAKE THE APPROPRIATE CHANGES TO THOSE SHOWN ON THE PLANS AS APPROVED BY THE RE. THE RESULTS OF THIS CHECK OF CONDITIONS AND DIMENSIONS SHALL BE SO NOTED ON THE DRAWINGS SUBMITTED FOR APPROVAL. THERE SHALL BE NO CLAIM AGAINST THE COUNTY MADE BY THE CONTRACTOR FOR WORK PERTAINING TO MODIFICATIONS AS MAY BE REQUIRED DUE TO ANY DIFFERENCES BETWEEN ACTUAL FIELD CONDITIONS AND THE DETAILS AND DIMENSIONS SHOWN ON THE CONTRACT PLANS.
12. CLEARING WITHIN THE LIMITS SHOWN ON THE PLANS SHALL INCLUDE ALL TREES AND BRUSH, WHETHER INDIVIDUALLY SHOWN ON THE PLANS OR NOT.
13. THE CONTRACTOR SHALL VERIFY EXISTING GRADES IN ORDER TO CONFIRM PROPOSED GRADING AND LIMITS OF MILLING/RECONSTRUCTION PRIOR TO MILLING AND RESURFACING.
14. THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL–INCLUSIVE. THE CONTRACTOR SHALL VERIFY THEIR LOCATION AND COMPLETENESS PRIOR TO THE BEGINNING OF WORK. NO WORK SHALL BEGIN UNTIL THE CONTRACTOR PROVIDES THE ENGINEER WITH THE CONFIRMATION NUMBER OBTAINED FROM THE ONE–CALL SYSTEM IN ACCORDANCE WITH THE UNDERGROUND FACILITY PROTECTION ACT.
15. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES TO DETERMINE THEIR SCHEDULE FOR PERFORMING UTILITY RELOCATION WORK AND HE SHALL SCHEDULE HIS WORK ACCORDINGLY SO AS NOT TO INTERFERE WITH THE WORK OF THE UTILITY COMPANIES.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRIVEWAY ACCESS AT ALL LOCATIONS THROUGHOUT THE DURATION OF THE PROJECT. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE PRICES BID IN THE VARIOUS ITEMS IN THE PROPOSAL.
17. THE CONTRACTOR SHALL EXERCISE CAUTION SO AS NOT TO DAMAGE THE ROOT SYSTEM OF ANY PLANTINGS TO REMAIN. ALL ROOTS OF ANY PLANTS OR TREES TO REMAIN WHICH ARE EXPOSED DURING CONSTRUCTION, SHALL BE WATERED AND KEPT SHADED OR COVERED WITH WET STRAW, MOSS OR OTHER SUITABLE MATERIAL UNTIL THE FINAL GRADING IS COMPLETED. THE CONTRACTOR SHALL REPLACE ANY EXISTING PLANTINGS DAMAGED DURING CONSTRUCTION, AS IN THE OPINION OF THE ENGINEER, WITH A PLANTING OF SIMILAR SPECIES, HEIGHT AND/OR CALIPER TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE COUNTY. PLANT ESTABLISHMENT AND REPLACEMENT PERIOD WILL BE SPECIFIED IN THE STANDARD SPECIFICATIONS.
18. STRIPPED MATERIAL SUITABLE FOR USE AS TOPSOIL SHALL BE STORED AND REUSED AS REQUIRED FOR THE PROJECT. EXCESS STRIPPED MATERIAL SHALL BE DISPOSED OF OFF–SITE BY THE CONTRACTOR. THE COST OF STRIPPING SHALL BE INCLUDED IN THE PRICE BID FOR THE ITEM "EXCAVATION UNCLASSIFIED". NO SEPARATE PAYMENT WILL BE MADE FOR THE VOLUME OF MATERIAL STRIPPED.
19. ALL EXISTING DIMENSIONS, PIPE SIZES AND ELEVATIONS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD. ANY DEVIATIONS SHALL BE REPORTED TO THE RESIDENT ENGINEER.
20. EXISTING FEATURES TO BE RESET/RELOCATED OR REMOVED IN THE PROJECT FOR WHICH THERE IS NO PAY ITEM SHALL BE RESET/RELOCATED OR REMOVED UNDER THE LUMP SUM PRICE BID FOR THE ITEM "CLEARING SITE".
21. EXISTING PAVEMENT TO BE REMOVED SHALL BE PAID UNDER THE PRICE BID FOR THE ITEM "EXCAVATION, UNCLASSIFIED". LIMITS OF FULL DEPTH PAVEMENT MAY BE ADJUSTED BY THE RE IN THE FIELD.
22. THE CONTRACTOR SHALL PROVIDE SMOOTH DRIVABLE TRANSITIONS BETWEEN EXISTING AND PROPOSED PAVEMENT IN DRIVEWAY AREAS AND AT CONSTRUCTION LIMITS. THE EXACT LIMITS OF PAVEMENT CONSTRUCTION MAY BE ADJUSTED BY THE RE IN THE FIELD.
23. THE CONTRACTOR SHALL NOTIFY THE MIDDLETOWN MUNICIPAL CLERK, THE POLICE DEPARTMENT, FIRE DEPARTMENT, RESCUE SQUADS, AND THE BOARD OF EDUCATION AT LEAST 7 DAYS IN ADVANCE AND 24 HOURS PRIOR TO THE BEGINNING OF WORK.
24. NO SEPARATE PAYMENT WILL BE MADE FOR SAWCUTTING. ALL COST THEREOF SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS IN THE PROPOSAL.
25. NO TREES ARE TO BE REMOVED UNTIL VERIFIED IN THE FIELD BY THE RESIDENT ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR TREE AND/OR SHRUB TRIMMING OR REMOVAL. ALL COSTS THEREOF SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE ITEM "CLEARING SITE".
26. A PRECONSTRUCTION MEETING WILL BE HELD WITH THE COUNTY ENGINEER'S REPRESENTATIVES PRIOR TO BEGINNING ANY CONSTRUCTION ON THE PROJECT.
27. ALL HOLES LEFT BY THE REMOVAL OF EXISTING FEATURES SHALL BE BACKFILLED WITH EXCAVATION OBTAINED FROM ON–SITE, WITH APPROVAL FROM THE RESIDENT ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR BACKFILLING AREAS/HOLES RESULTING FROM REMOVAL OF EXISTING FEATURES.
28. THE PROPOSED LAYOUT OF STRIPING AND PAVEMENT MARKINGS SHALL BE MARKED IN THE FIELD AND APPROVED BY THE RE PRIOR TO INSTALLATION.
29. CONTRACTOR SHALL NOT ORDER ANY MATERIALS UNTIL ALL TEST PITS HAVE BEEN EXCAVATED AND EVALUATED.

ABBREVIATIONS:

A.D.	ALGEBRAIC DIFFERENCE
AGG.	AGGREGATE
AVG.	AVERAGE
ℬ, B	BASELINE
BIT.	BITUMINOUS
BM.	BENCHMARK
BOT., BOT.	BOTTOM
℄, C.L.	CENTERLINE
CL.	CLEAR
C	CUT
C. TO C.	CENTER TO CENTER
C.R.	COUNTY ROUTE
CONC	CONCRETE
CONSTR.	CONSTRUCTION
CONTR.	CONTRACTION
COV.	COVER
CFS	CUBIC FEET PER SECOND
C.J.	CONSTRUCTION JOINT
CP	CONTROL POINT
CORS.	COURSE
CY	CUBIC YARD
ø, DIA.	DIAMETER
D.C.	DEPRESSED CURB
DWY	DRIVEWAY
DEG.	DEGREE
E	EAST
E.F.	EACH FACE
EL., ELEV.	ELEVATION
E.S.	EQUAL SPACE
E.W.	EACH WAY
EX., EXIST.	EXISTING
F	FILL
F.F.	FRONT FACE
F.G.R.T.	FLARED GUIDE RAIL TERMINAL
FT	FEET
FERT.	FERTILIZER
GAL	GALLON
GR.	GRATE/GRADE
GRD	GRADED
H.C.	HANDICAP RAMP
H.P.	HIGH POINT
HMA	HOT MIX ASPHALT
I.D.	INNER DIAMETER
INV.	INVERT
JT.	JOINT
K	RATE OF VERTICAL CURVATURE
L.O.M.	LIMIT OF MILLING
L.O.P.	LIMIT OF PAVING
L.P.	LOW POINT
LS	LUMP SUM
LBS	POUNDS
LC	LOCKING COVER
LF	LINEAR FEET
LT.	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX.	MAXIMUM
M.H.	MANHOLE
MHW	MEAN HIGH WATER
MI.	MILES
MIN.	MINIMUM
N	NORTH
N.J.N.G	NEW JERSEY NATURAL GAS
N.T.S.	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER
O.D.	OUTER DIAMETER
O.J.	OPEN JOINT
PCC	POINT OF COMPOUND CURVE
P, ℙ	PROPERTY LINE
P.G.L.	PROFILE GRADE LINE
PSE&G	PUBLIC SERVICE ELECTRIC AND GAS
PI	POINT OF INTERSECTION
POL	POINT ON LINE
PROP.	PROPOSED
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE, POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT.	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
R.C.E.S.	REINFORCED CONCRETE END SECTION
R.C.P.	REINFORCED CONCRETE PIPE
R.F.	REAR FACE
R.O.W.	RIGHT OF WAY
R.R.S.P.	RIP RAP STONE PROTECTION
RCCP	REINFORCED CONCRETE CULVERT PIPE
RE	DEPARTMENT'S FIELD REPRESENTATIVE, RESIDENT ENGINEER
REINF.	REINFORCED
RT.	RIGHT
S	SOUTH
S.C.F.	SEDIMENT CONTROL FENCE
SEC	SECTION
S.O.D.	SUBBASE OUTLET DRAIN
STA.	STATION
STB.	STABILIZED
SURF.	SURFACE
SW,SDWK	SIDEWALK
SY	SQUARE YARD
SQ.	SQUARE
T.	TOP
T.B.R.	TO BE REMOVED
T.O.C.	TOP OF CURVE
T.O.G.	TOP OF GRATE
T.G.R.T.	TANGENT GUIDE RAIL TERMINAL
THK.	THICK
TYP.	TYPICAL
U.E.A.	USE EXISTING HEAD
UN	UNIT
UP	UTILITY POLE
VAR.	VARIES, VARIABLE
VC	VERTICAL CURVE (LENGTH)
W	WEST
WW	WINGWALL
WP	WORKING POINT
YR.	YEAR

HATCH PATTERNS:





TYPICAL MILL AND OVERLAY SECTION
WASHINGTON STREET
STA. 10+00 TO STA. 80+31
N.T.S.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

LEGEND AND GENERAL NOTES

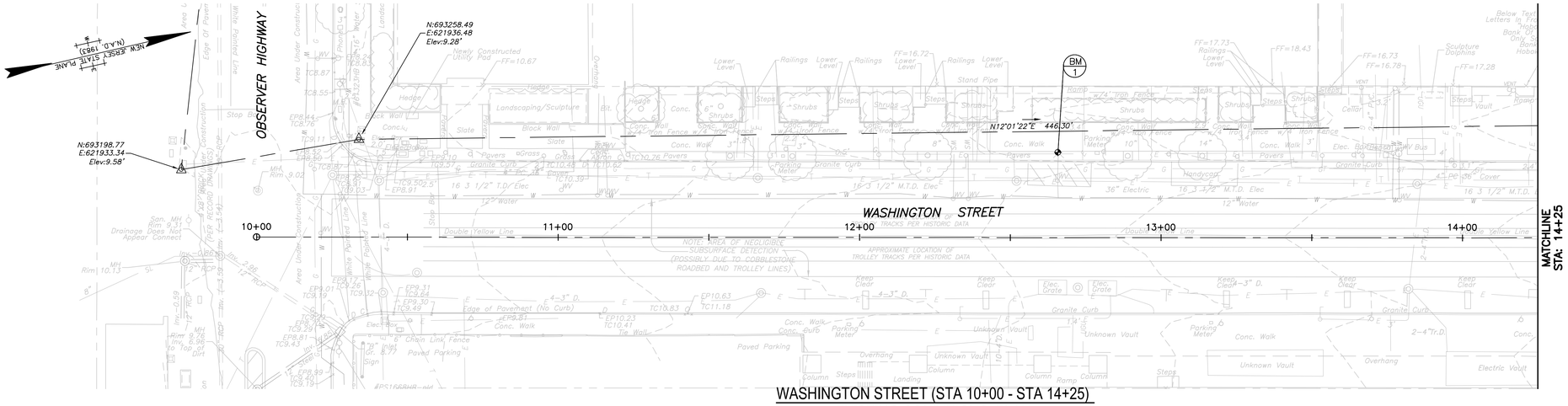
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

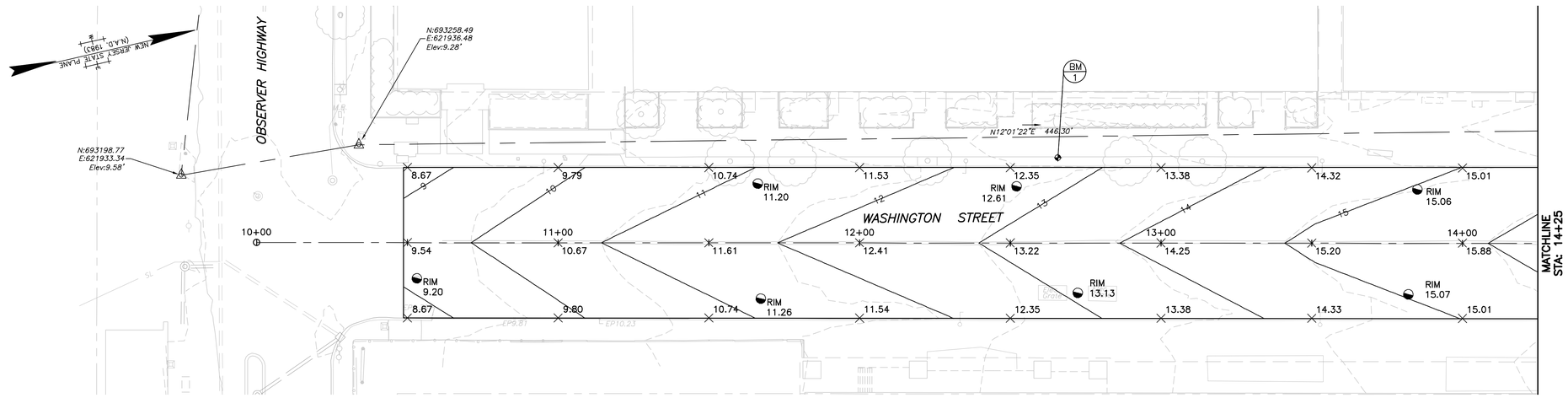
DESIGNED BY PB	DRAWING LEG–1
CHECKED BY DM	
DRAWN BY NSV/JLS	SHEET 3
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT003_LEG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, March 2, 2018, 12:21AM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



WASHINGTON STREET (STA 10+00 - STA 14+25)
EXISTING CONDITIONS PLAN
BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 10+00 - STA 14+25)
LAYOUT, GRADING PLAN & DRAINAGE PLAN
BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M–SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M–SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M–SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/– FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/– FOOT) RESULTS WERE INCONCLUSIVE.

BM 1 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN OBSERVER HWY. AND NEWARK STREET.
ELEV.=16.31'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE–GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT–OF–WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DRWG.dwg
LAST SAVED: Friday, October 09, 2015, 14 Mar 2016, 12:28PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

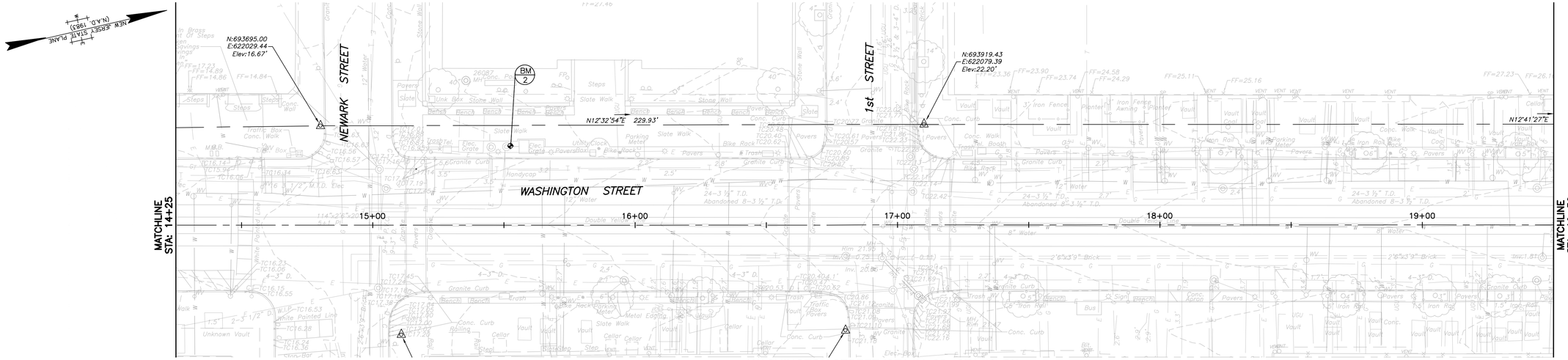
LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 10+00 - STA 14+25)

NJEIFP

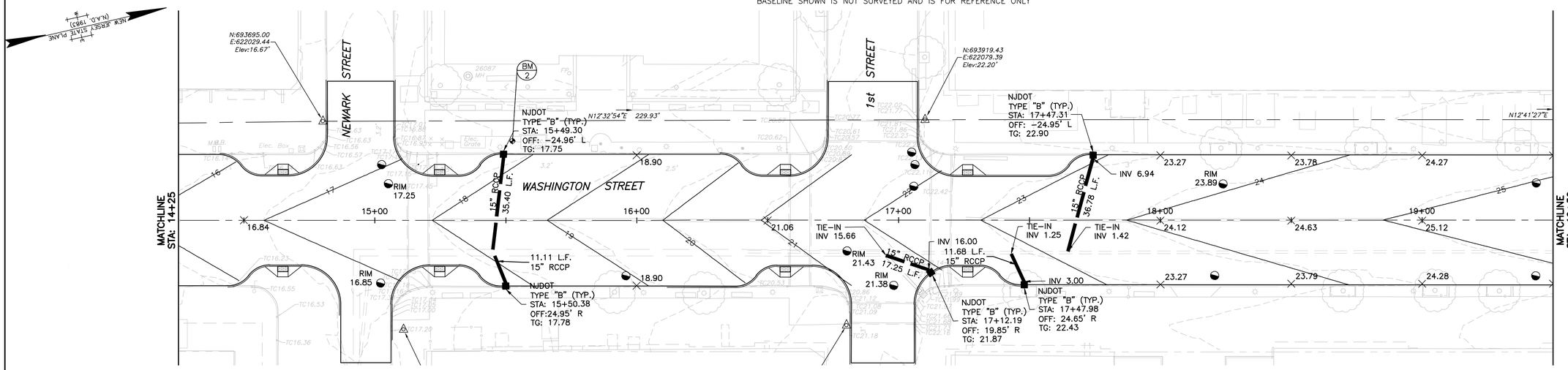
T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP–1
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 4
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 14+25 - STA 19+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 14+25 - STA 19+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 1 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN OBSERVER HWY. AND NEWARK STREET. ELEV.=16.31'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
E	RELOCATED CONDUIT	E	S	SANITARY SEWER	
	PROPOSED CONDUIT		W WV	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR SITE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT024_SHT018_DRNG.dwg
LAST SAVED: Wed, May 04, 2016, 12:28PM
LAST SAVE BY: mvalenzuela

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

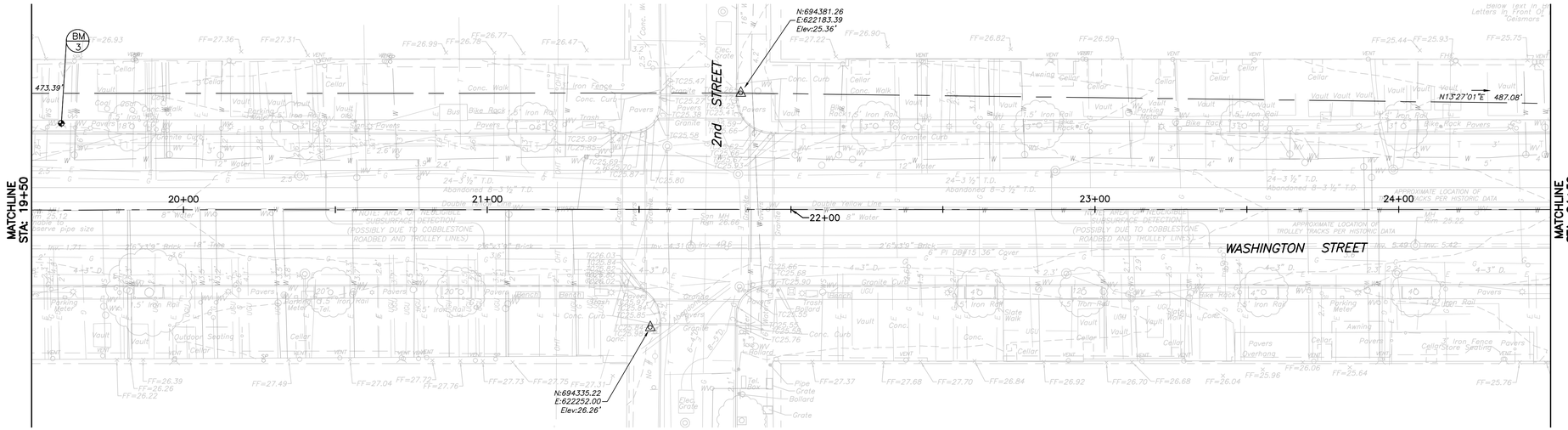
LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 14+25 - STA 19+50)

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

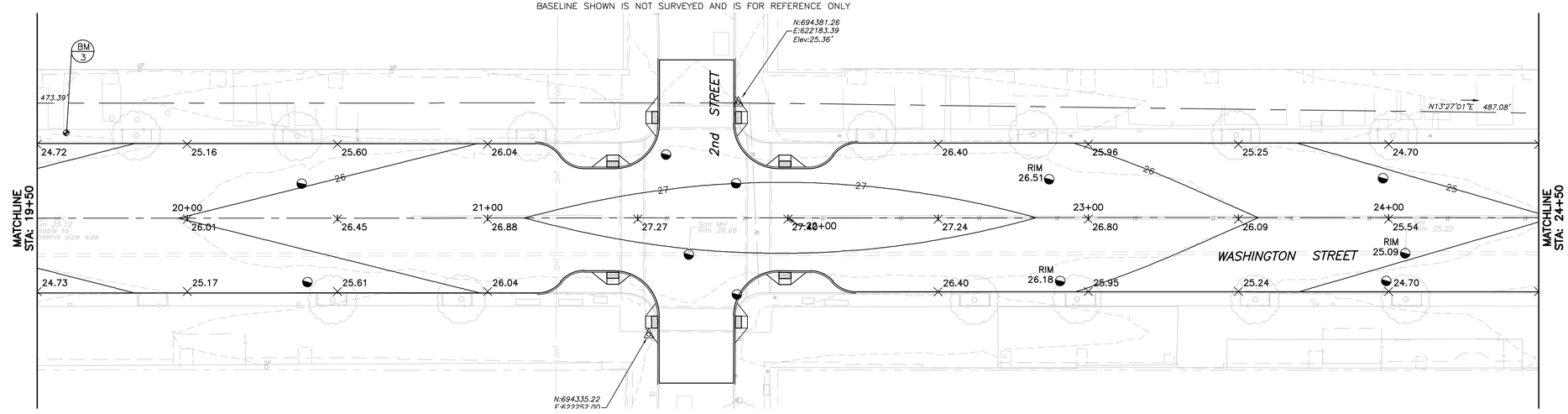
DESIGNED BY GD/NSV	DRAWING LDP-2
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 5
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 19+50 - STA 24+50)

EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 19+50 - STA 24+50)

LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 3 — BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 1ST STREET AND 2ND STREET. ELEV.=27.89'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT		E E	SANITARY SEWER	
	PROPOSED CONDUIT		W W	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'

1" = 20'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 19+50 - STA 24+50)

NJEIFP

YOUR GOALS. OUR MISSION.

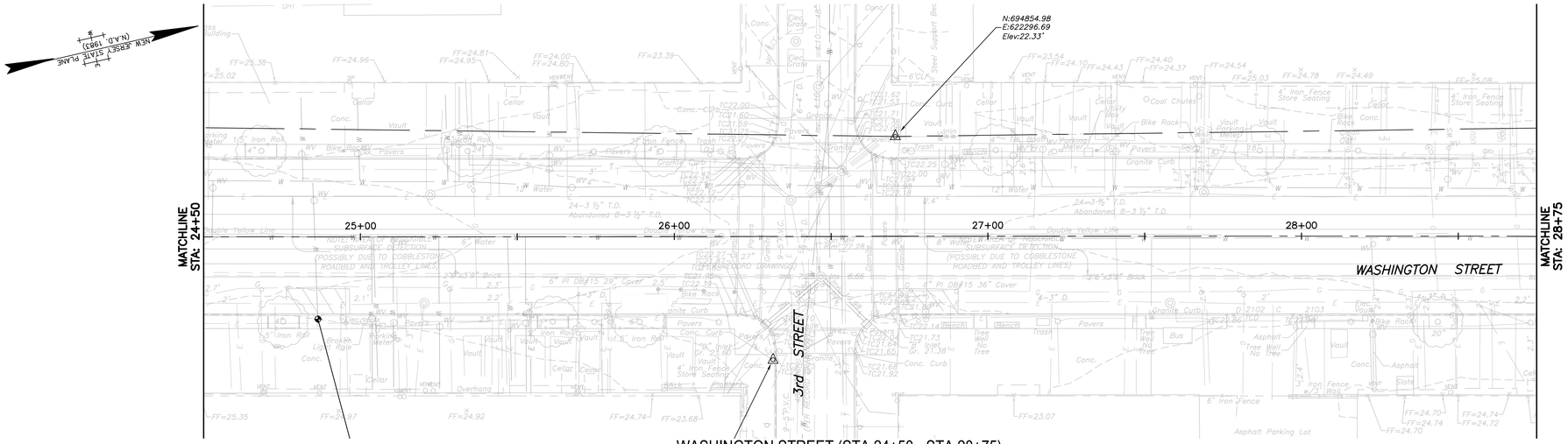
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-3
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 6
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	

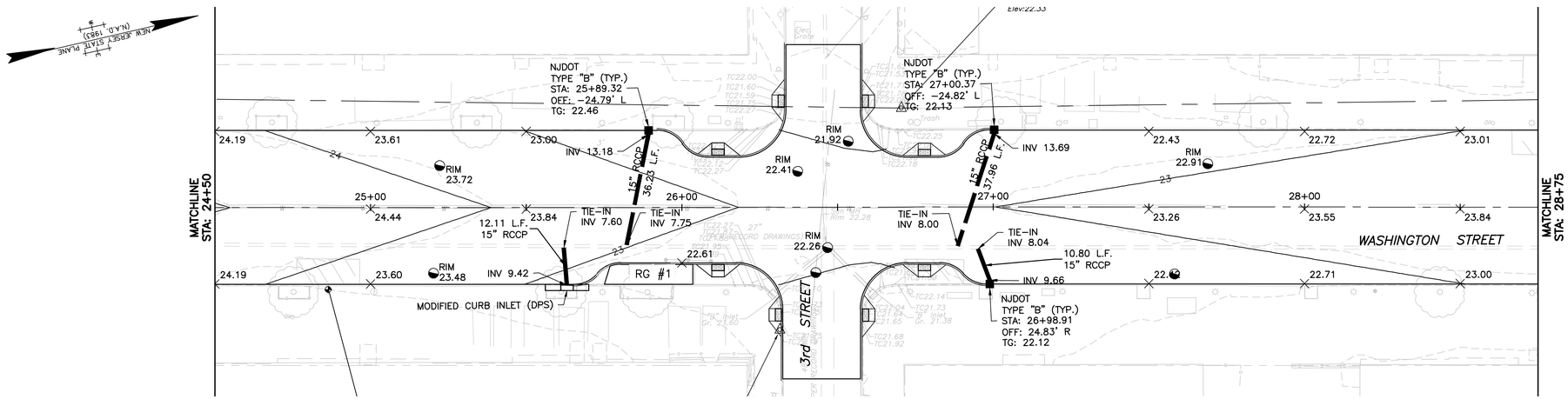
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT104-SHT018_DRNG.dwg
LAST SAVED: Friday, March 04, 2016 14 Mar 2016, 12:28PM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR SITE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



WASHINGTON STREET (STA 24+50 - STA 28+75)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 24+50 - STA 28+75)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 4 — BM IS A TOP BOLT OF HYDRANT EAST SIDE OF WASHINGTON STREET BETWEEN 2ND STREET AND 3RD STREET. ELEV.=26.70'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
E	RELOCATED CONDUIT		S	SANITARY SEWER	
	PROPOSED CONDUIT		W WV	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DRWG.dwg
PLOT DATE: Friday, June 17, 2016 - 14 Mar 2016, 12:29PM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THE DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE OWNER, IS GENERALLY PROHIBITED WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

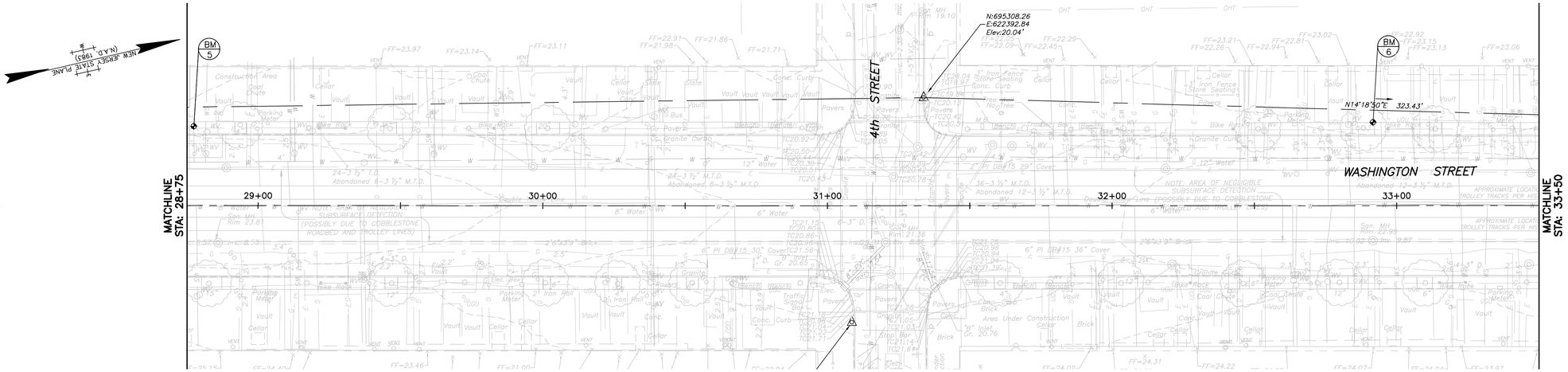
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

LAYOUT AND DRAINAGE PLANS
WASHINGTON STREET (STA 24+50 - STA 28+75)

NJEIFP

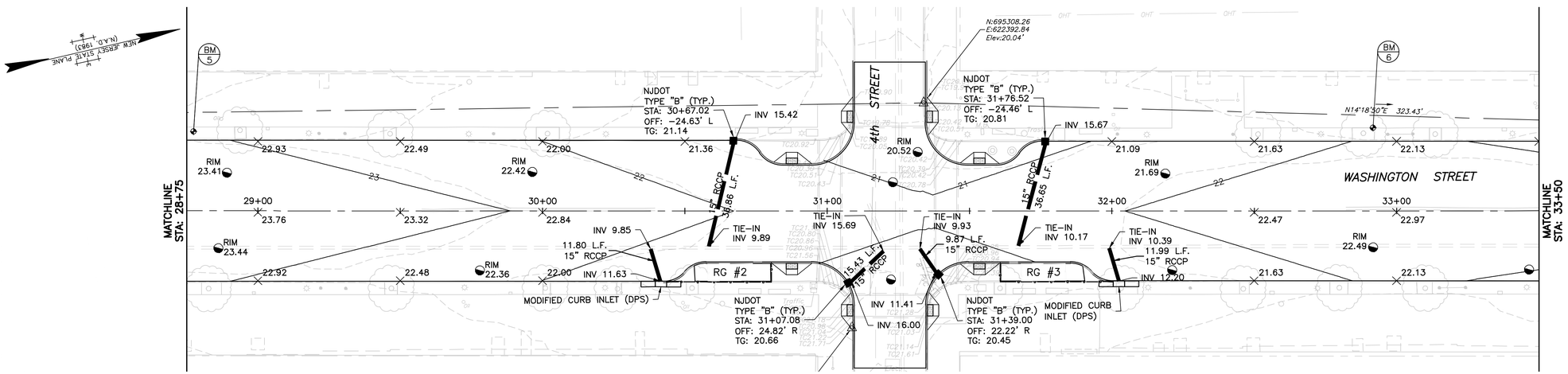
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-4
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 7
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 28+75 - STA 33+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 28+75 - STA 33+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 5 — BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 3RD STREET AND 4TH STREET. ELEV.=26.46'

BM 6 — BM IS AN X-CUT ON SIDEWALK BACK OF TREE WELL WEST SIDE OF WASHINGTON STREET BETWEEN 4TH STREET AND 5ST STREET. ELEV.=22.30'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DPNG.dwg
PLOT DATE: Mar 29, 2016 - 12:28PM
LAST SAVE BY: mvolenzuela

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

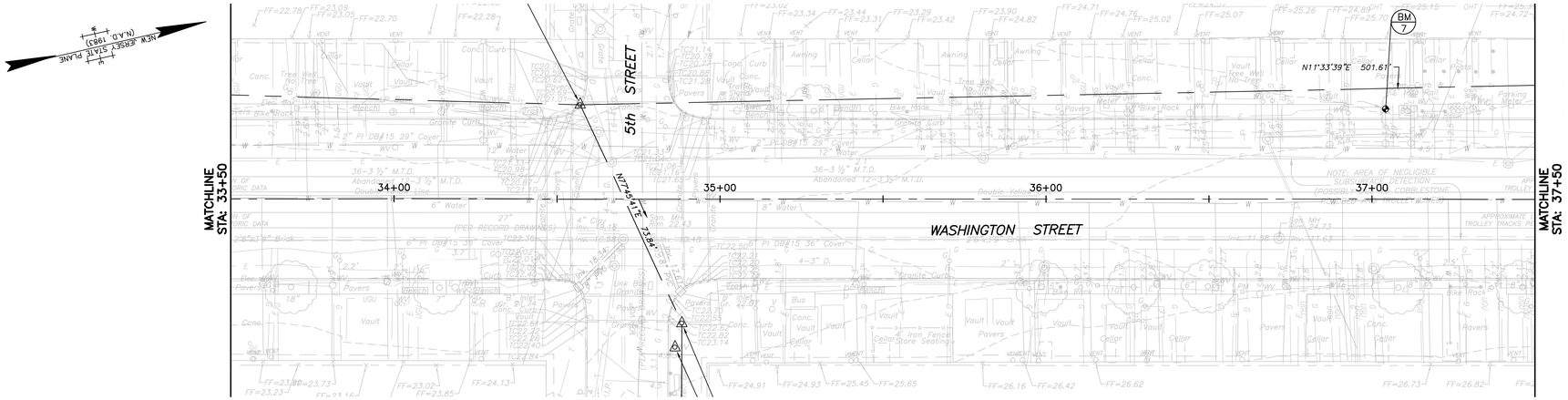
LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 28+75 - STA 33+50)

NJEIFP

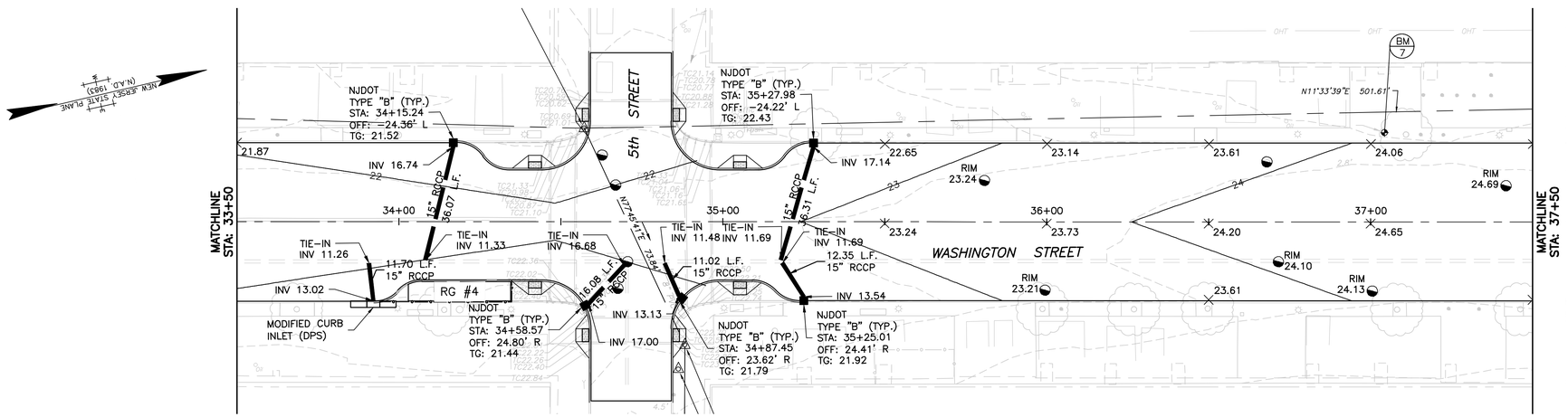
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-5
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 8
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 33+50 - STA 37+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 33+50 - STA 37+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M–SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M–SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M–SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/– FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/– FOOT) RESULTS WERE INCONCLUSIVE.

BM 7 — BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 5TH STREET AND 6TH STREET. ELEV.=26.99'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE–GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED
	TRACT BOUNDARY	
	PROPERTY LINE	
	RIGHT–OF–WAY	
	EASEMENT	
	EDGE OF PAVEMENT	
	CURB	
	DEPRESSED CURB	
	SIDEWALK	
	CONCRETE	
	BUILDINGS	
	FENCE LINE	
	LIGHT FIXTURE	
	RELOCATED CONDUIT	
	PROPOSED CONDUIT	
	PROPOSED MONITORING EQUIP	
	MODIFIED CURB INLET (DPS)	

EXISTING		PROPOSED
	UTILITY POLES	
	SIGNS	
102	INTERMEDIATE CONTOURS	
100	INDEX CONTOURS	
× 102.6	SPOT ELEVATIONS	× 102.64
	STORM SEWER	
	10" OVERFLOW DRAINAGE PIPE	
	6" UNDER DRAIN PIPE	
	CLEANOUT	
	DOMED OVERFLOW RISER	
	RIVER STONE	
	DECORATIVE IRON FENCE	
	SANITARY SEWER	
	POTABLE WATER	
	NJDOT TYPE "A" INLET	
	NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DPRG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, March 04 Mar 2016, 12:28PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

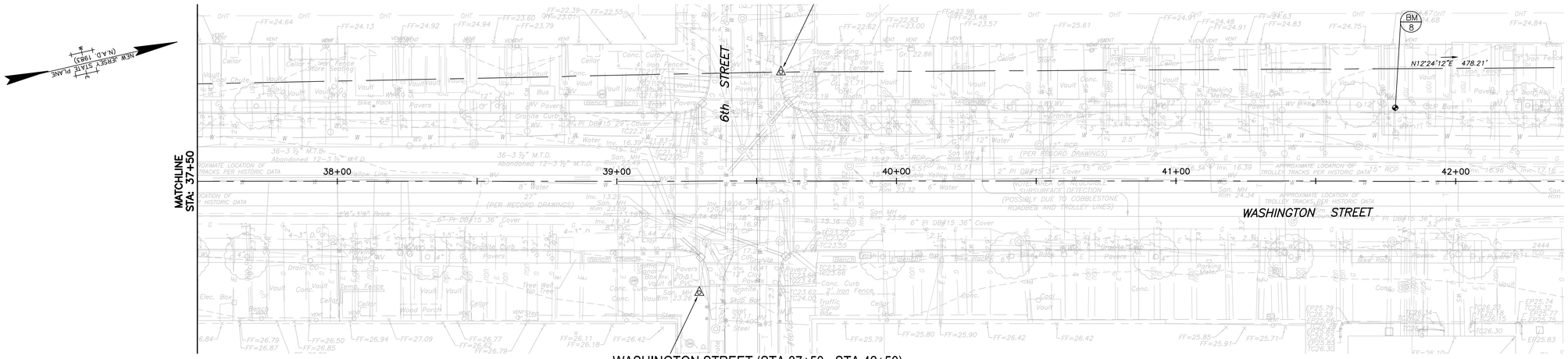
LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 33+50 - STA 37+50)

NJEIFP

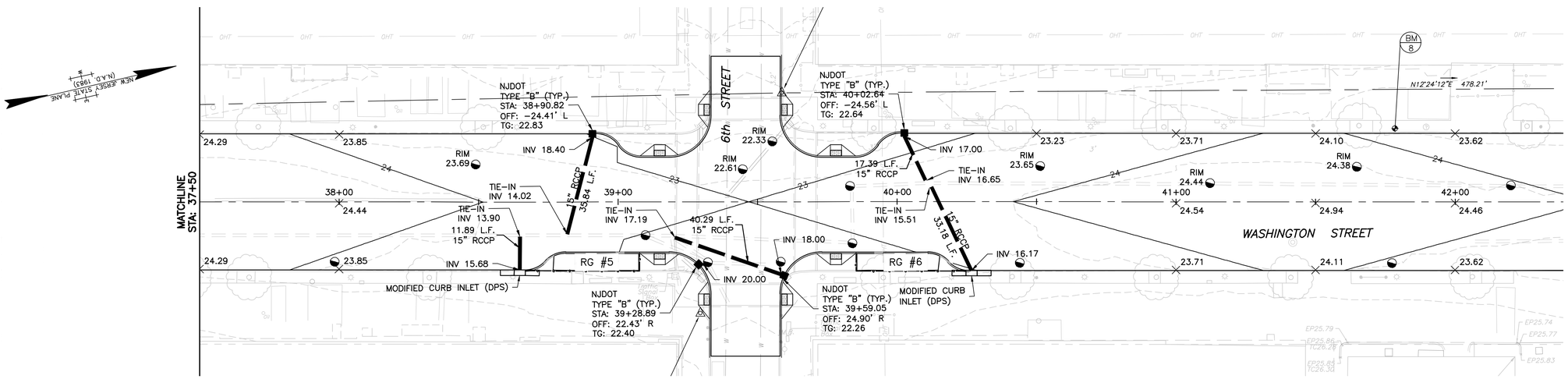
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP–6
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 9
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 37+50 - STA 42+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 37+50 - STA 42+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 8 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 6TH STREET AND 7TH STREET. ELEV.=26.92'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED
	TRACT BOUNDARY	
	PROPERTY LINE	
	RIGHT-OF-WAY	
	EASEMENT	
	EDGE OF PAVEMENT	
	CURB	
	DEPRESSED CURB	
	SIDEWALK	
	CONCRETE	
	BUILDINGS	
	FENCE LINE	
	LIGHT FIXTURE	
	RELOCATED CONDUIT	
	PROPOSED CONDUIT	
	PROPOSED MONITORING EQUIP	
	MODIFIED CURB INLET (DPS)	

EXISTING		PROPOSED
	UTILITY POLES	
	SIGNS	
102	INTERMEDIATE CONTOURS	
100	INDEX CONTOURS	
× 102.6	SPOT ELEVATIONS	× 102.64
	STORM SEWER	
	10" OVERFLOW DRAINAGE PIPE	
	6" UNDER DRAIN PIPE	
	CLEANOUT	
	DOMED OVERFLOW RISER	
	RIVER STONE	
	DECORATIVE IRON FENCE	
	SANITARY SEWER	
	POTABLE WATER	
	NJDOT TYPE "A" INLET	
	NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

LAYOUT AND DRAINAGE PLANS
WASHINGTON STREET (STA 37+50 - STA 42+50)

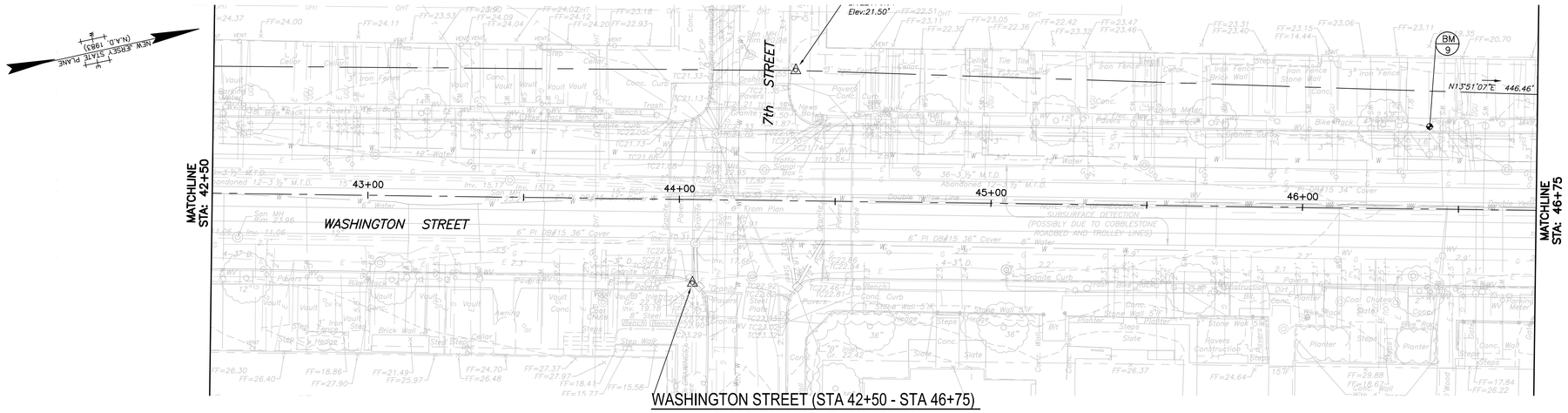
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-7
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 10
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DWNG.dwg
LAST SAVE DATE: FRIDAY, MARCH 11, 2016 12:29PM
LAST SAVE BY: mvalenzuela

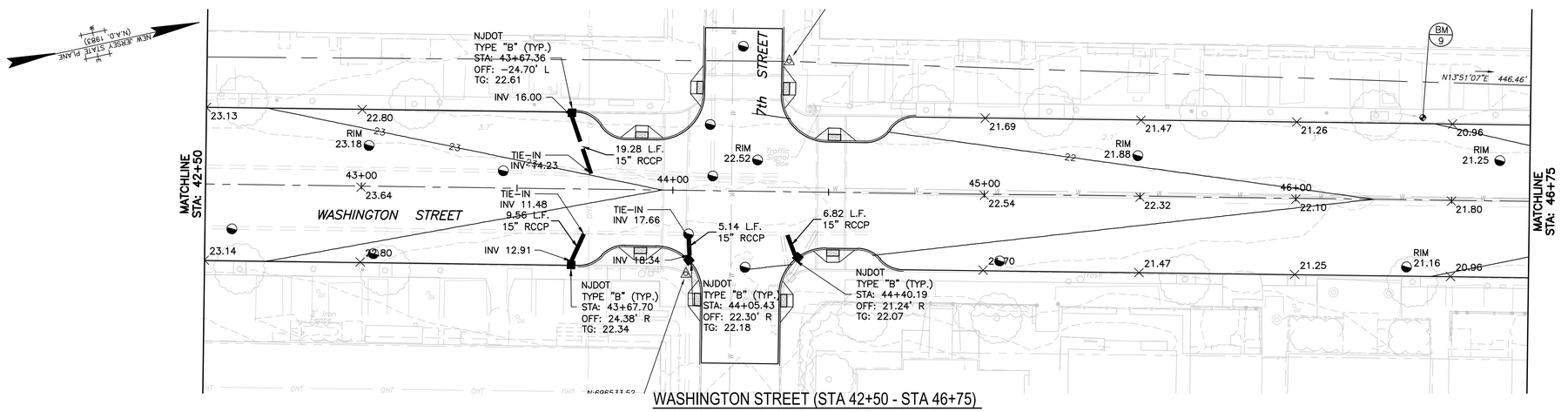
COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



WASHINGTON STREET (STA 42+50 - STA 46+75)

EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 42+50 - STA 46+75)

LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

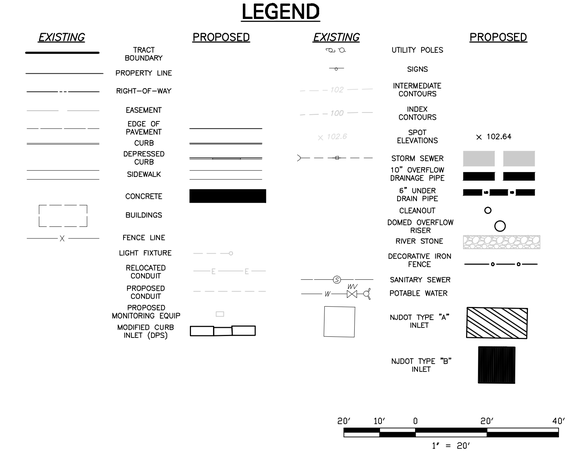
1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 9 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 7TH STREET AND 8TH STREET. ELEV.=23.75'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND



COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DRNG.dwg
LIST SHEET: DWG-ALL, DWG-14 Mar 2016, 12:28PM
LAST SAVE BY: nvalenzuela

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE045420600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

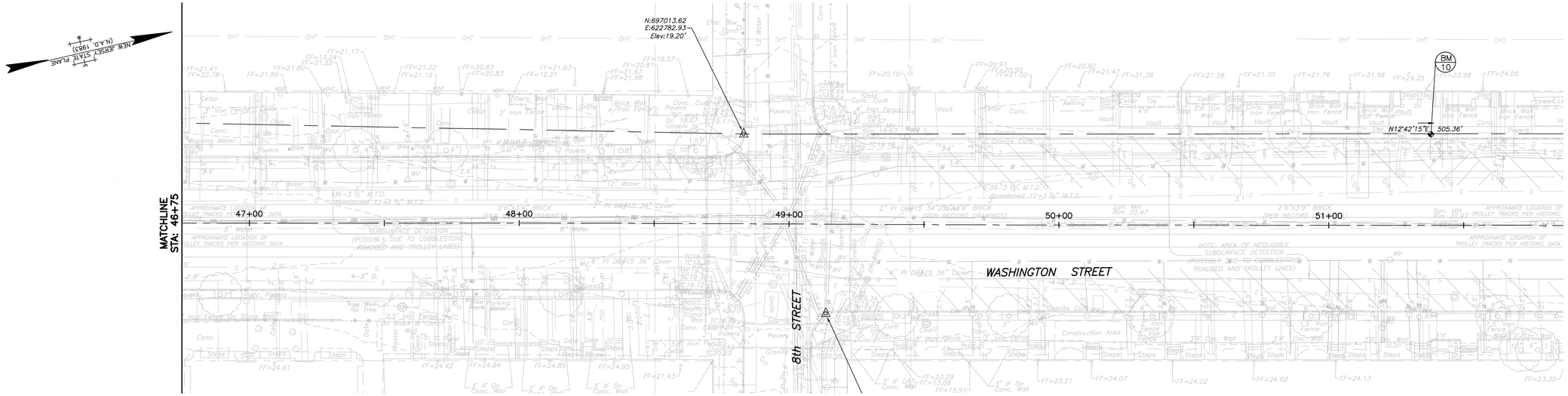
LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 42+50 - STA 46+75)

NJEIFP

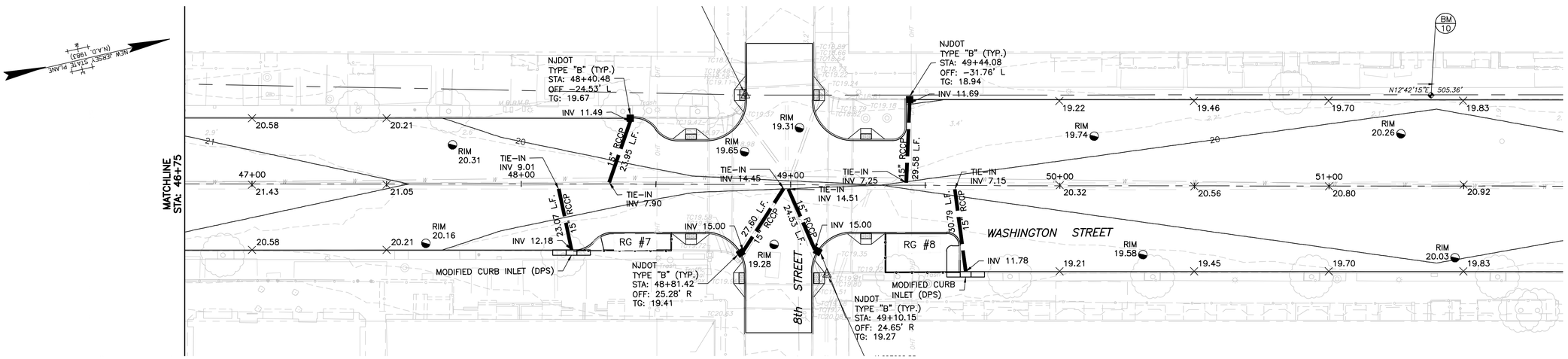
T&M AND
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-8
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 11
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 46+75 - STA 51+75)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 46+75 - STA 51+75)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 10 — BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 8TH STREET AND 9TH STREET. ELEV.=23.45'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
E	RELOCATED CONDUIT	E	S	SANITARY SEWER	
	PROPOSED CONDUIT		W WV	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT024-SHT018_DRWG.dwg
LAST SAVED: Friday, March 04, 2016 2:22:29PM
LAST SAVE BY: mvlaenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THE DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS PREPARED AND INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE045420600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

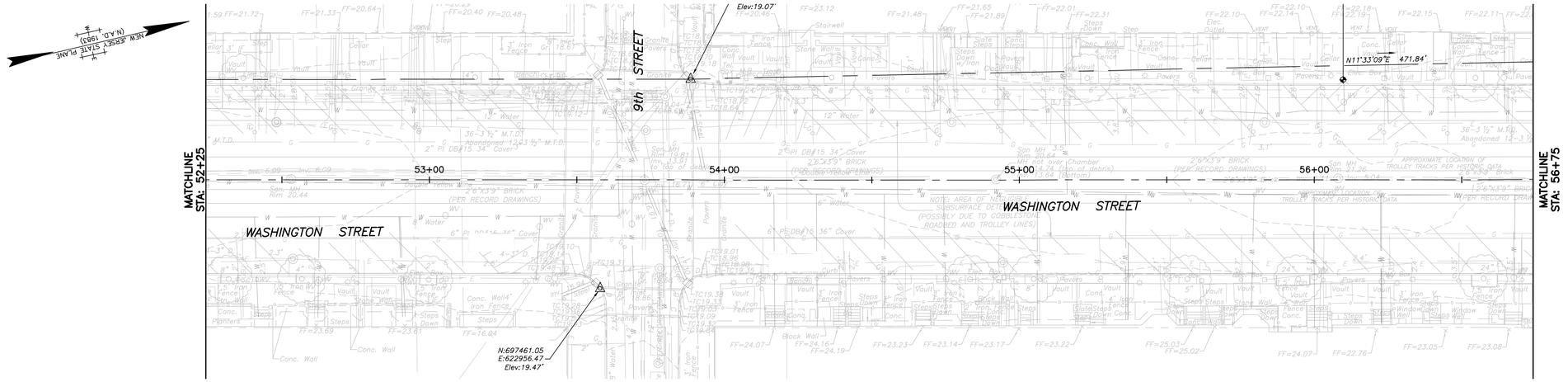
LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 46+75 - STA 51+75)

NJEIFP

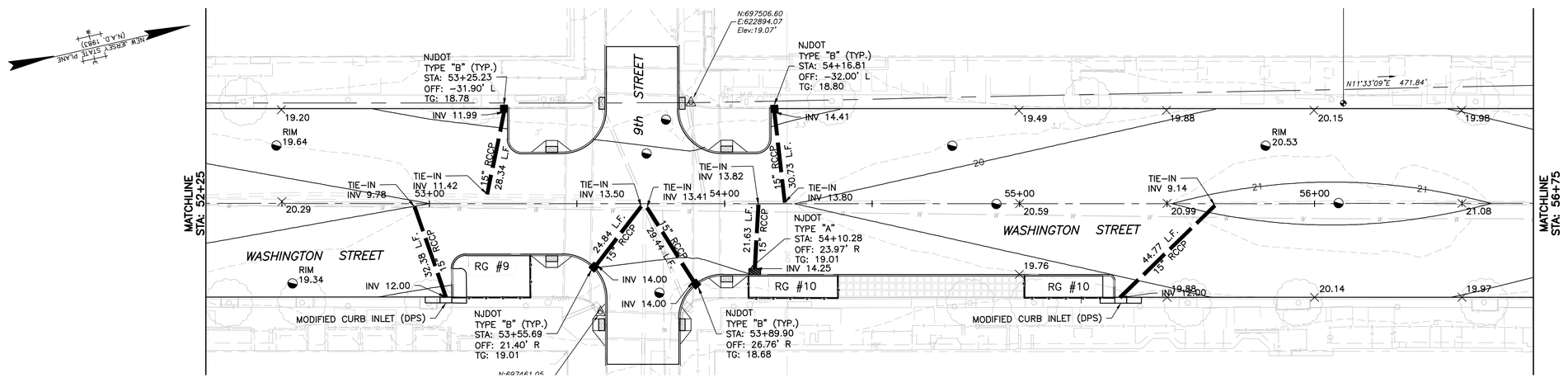
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-9
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 12
DATE 03-11-2016	
SCALE 1"=20'	
PROJ. NO. HOBK-00090	OF 70



WASHINGTON STREET (STA 51+75 - STA 56+75)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 51+75 - STA 56+75)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 11 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 9TH STREET AND 10TH STREET. ELEV.=23.50'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.8	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 51+75 - STA 56+75)

NJEIFP

YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com

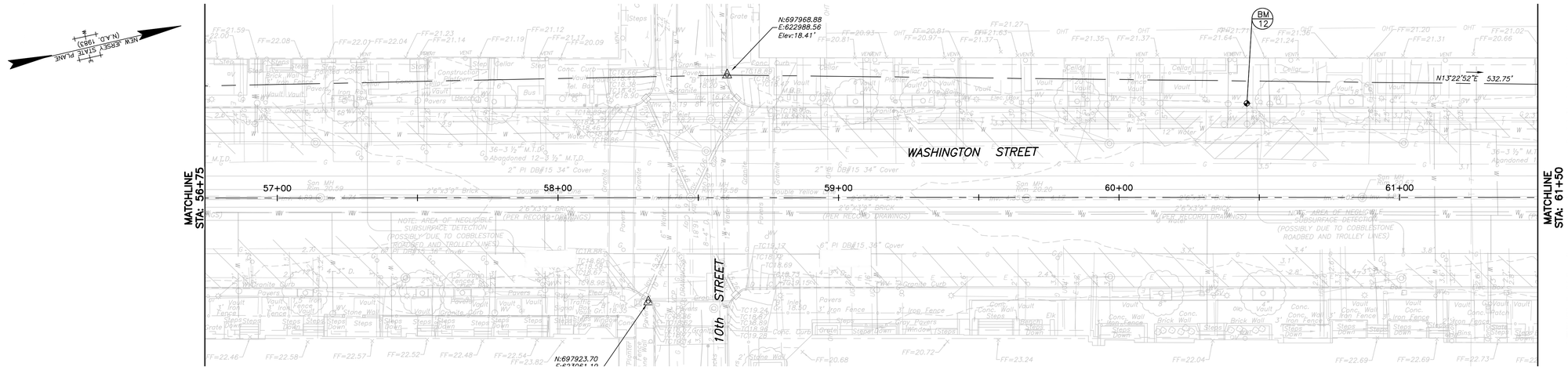
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-10
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 13
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

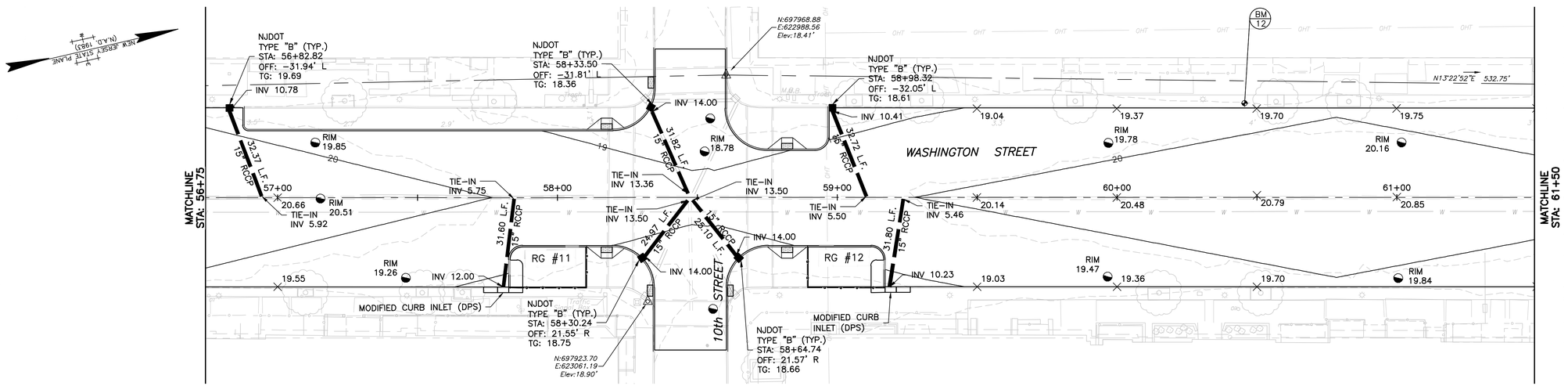
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_CPNG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, March 14 Mar 2016, 12:28AM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THE DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS PREPARED AND INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



WASHINGTON STREET (STA 56+75 - STA 61+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 56+75 - STA 61+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 12 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 10TH STREET AND 11TH STREET. ELEV.=23.00'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED
	TRACT BOUNDARY	
	PROPERTY LINE	
	RIGHT-OF-WAY	
	EASEMENT	
	EDGE OF PAVEMENT	
	CURB	
	DEPRESSED CURB	
	SIDEWALK	
	CONCRETE	
	BUILDINGS	
	FENCE LINE	
	LIGHT FIXTURE	
	RELOCATED CONDUIT	
	PROPOSED CONDUIT	
	PROPOSED MONITORING EQUIP	
	MODIFIED CURB INLET (DPS)	

EXISTING		PROPOSED
	UTILITY POLES	
	SIGNS	
102	INTERMEDIATE CONTOURS	
100	INDEX CONTOURS	
× 102.6	SPOT ELEVATIONS	× 102.64
	STORM SEWER	
	10" OVERFLOW DRAINAGE PIPE	
	6" UNDER DRAIN PIPE	
	CLEANOUT	
	DOMED OVERFLOW RISER	
	RIVER STONE	
	DECORATIVE IRON FENCE	
	SANITARY SEWER	
WV	POTABLE WATER	
	NJDOT TYPE "A" INLET	
	NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN HUDSON COUNTY NEW JERSEY

LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 56+75 - STA 61+50)

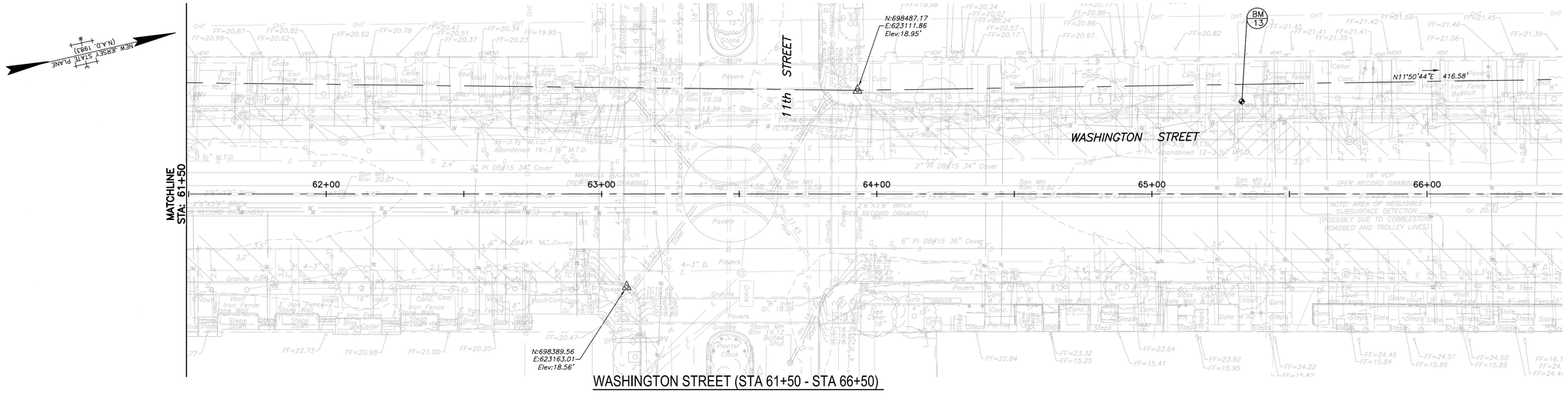
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY DG/NSV	DRAWING LDP-11
CHECKED BY DM	
DRAWN BY DP/NSV	
DATE 03-11-2016	SHEET 14
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	

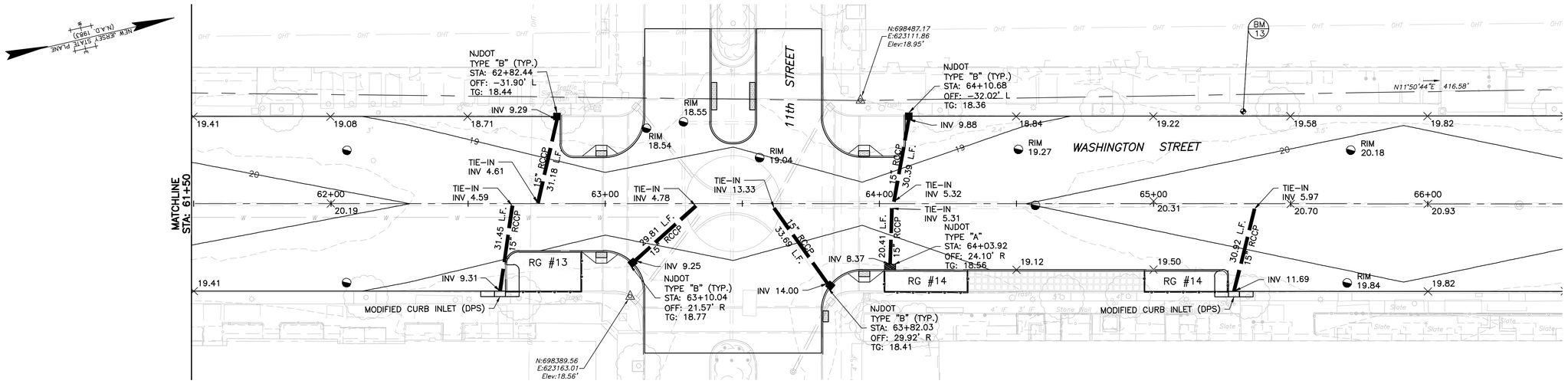
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DPNG.dwg
LAST SAVED: DONNA PAPPAS, WED, 14 MAR 2016, 12:28PM
LAST SAVE BY: nvelenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS PREPARED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



WASHINGTON STREET (STA 61+50 - STA 66+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 61+50 - STA 66+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 13 — BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 11TH STREET AND 12TH STREET. ELEV.=22.88'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
E	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT		W	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 61+50 - STA 66+50)

NJEIFP

YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com

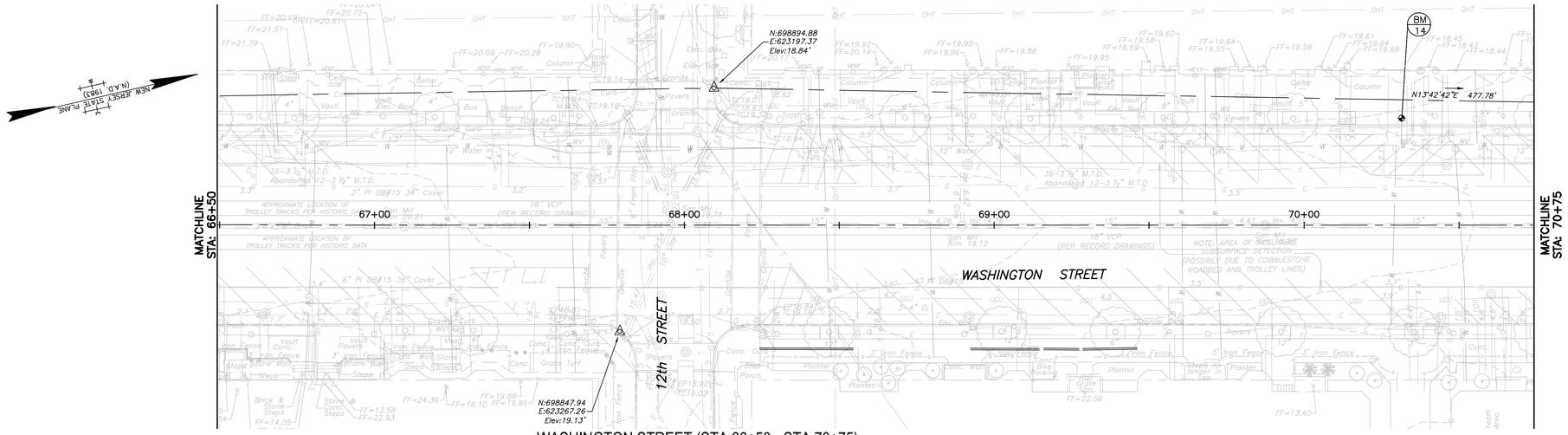
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-12
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 15
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

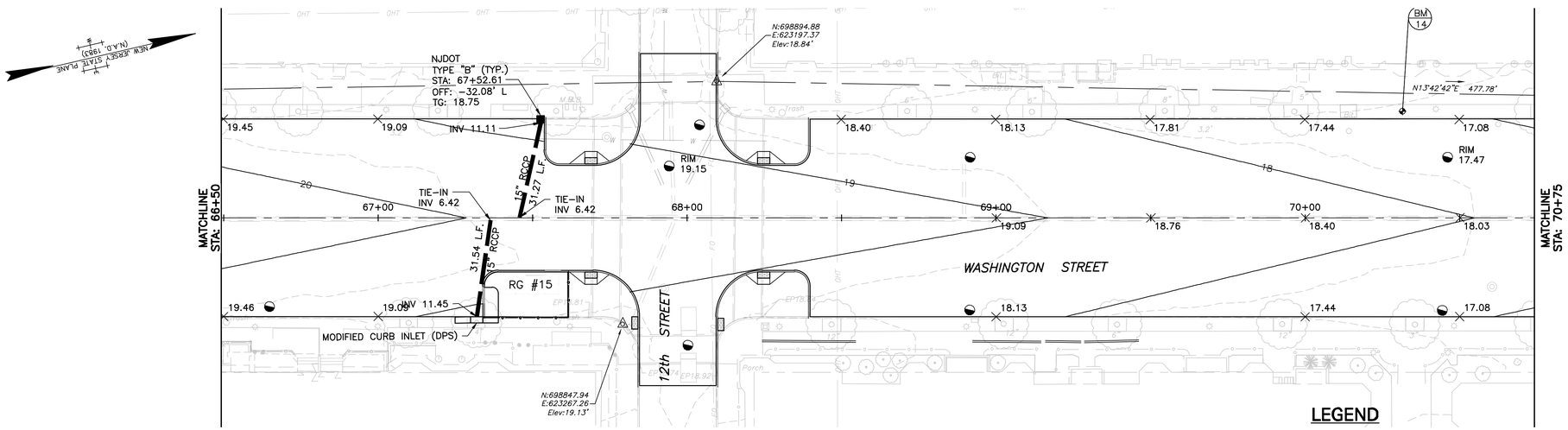
COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS SPECIFICALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HUDKO0090_SHT004 -SHT018_DRWG.dwg
LAST SAVED DATE: FRIDAY, MARCH 14, Mar 2016, 12:28PM
LAST SAVE BY: mvilencurto



WASHINGTON STREET (STA 66+50 - STA 70+75)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 66+50 - STA 70+75)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 14 BM IS A TOP BOLT OF HYDRANT WEST SIDE OF WASHINGTON STREET BETWEEN 12TH STREET AND 13TH STREET. ELEV.=20.38'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

LAYOUT AND DRAINAGE PLANS

WASHINGTON STREET (STA 66+50 - STA 70+75)

NJEIFP

YOUR GOALS. OUR MISSION.

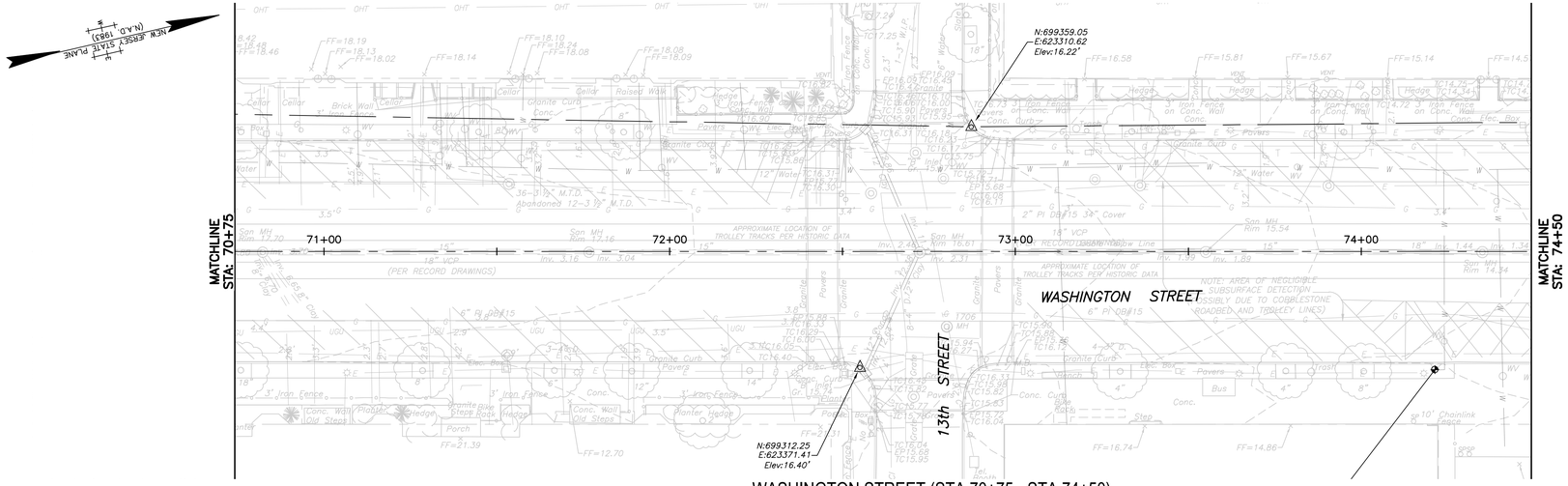
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-13
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 16
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

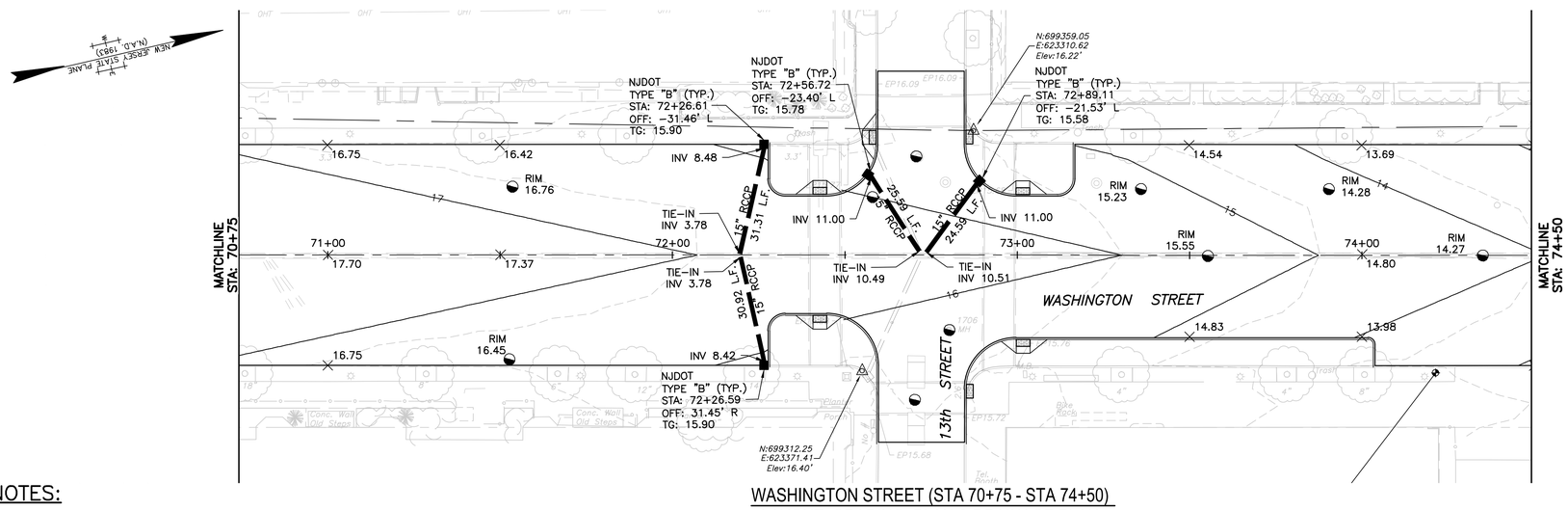
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DPRG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, March 14 Mar 2016, 12:28PM
LAST SAVE BY: nvolenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



WASHINGTON STREET (STA 70+75 - STA 74+50)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 70+75 - STA 74+50)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION – OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 15 — BM IS A TOP BOLT OF HYDRANT EAST SIDE OF WASHINGTON STREET BETWEEN 13TH STREET AND 14TH STREET. ELEV.=16.52'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED
	TRACT BOUNDARY	
	PROPERTY LINE	
	RIGHT-OF-WAY	
	EASEMENT	
	EDGE OF PAVEMENT	
	CURB	
	DEPRESSED CURB	
	SIDEWALK	
	CONCRETE	
	BUILDINGS	
	FENCE LINE	
	LIGHT FIXTURE	
	RELOCATED CONDUIT	
	PROPOSED CONDUIT	
	PROPOSED MONITORING EQUIP	
	MODIFIED CURB INLET (DPS)	

EXISTING		PROPOSED
	UTILITY POLES	
	SIGNS	
102	INTERMEDIATE CONTOURS	
100	INDEX CONTOURS	
× 102.6	SPOT ELEVATIONS	× 102.64
	STORM SEWER	
	10" OVERFLOW DRAINAGE PIPE	
	6" UNDER DRAIN PIPE	
	CLEANOUT	
	DOMED OVERFLOW RISER	
	RIVER STONE	
	DECORATIVE IRON FENCE	
SW	SANITARY SEWER	
W	POTABLE WATER	
	NJDOT TYPE "A" INLET	
	NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1' = 20'

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THE DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS PREPARED AND INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_LPRNG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, March 14 Mar 2016, 12:28PM
LAST SAVE BY: nvalenzuela

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

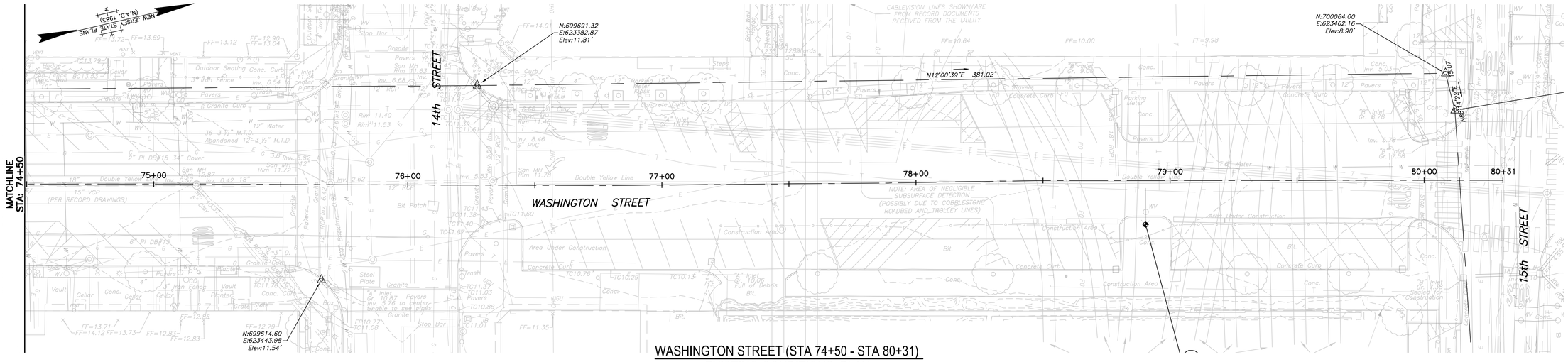
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

LAYOUT AND DRAINAGE PLANS
WASHINGTON STREET (STA 70+75 - STA 74+50)

NJEIFP

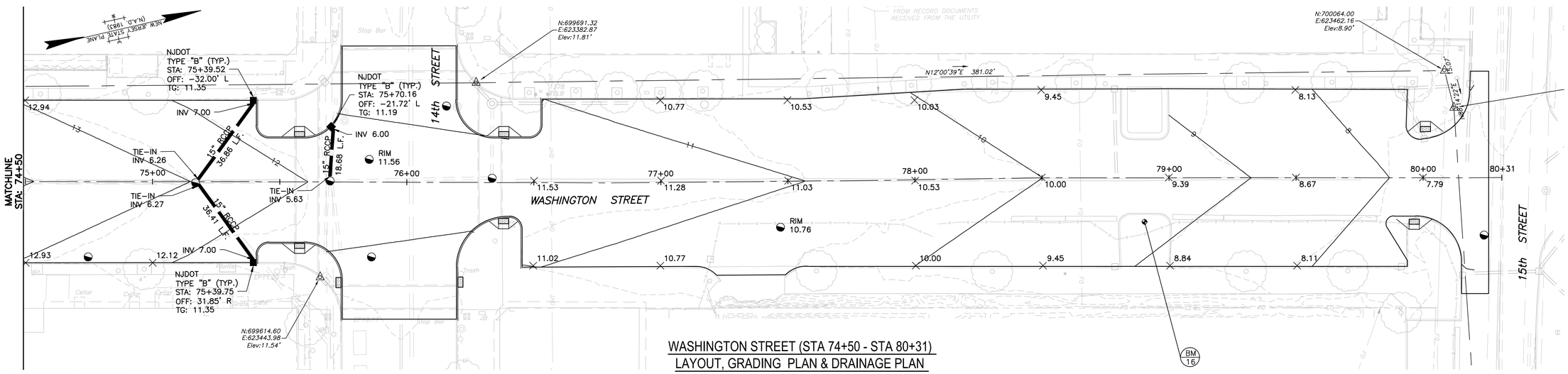
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-14
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 17
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	



WASHINGTON STREET (STA 74+50 - STA 80+31)
EXISTING CONDITIONS PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY



WASHINGTON STREET (STA 74+50 - STA 80+31)
LAYOUT, GRADING PLAN & DRAINAGE PLAN

BASELINE SHOWN IS NOT SURVEYED AND IS FOR REFERENCE ONLY

GENERAL NOTES:

1. PLANIMETRIC AND TOPOGRAPHIC FEATURES SHOWN HEREON HAVE BEEN DRAWN IN ACCORDANCE WITH FIELD SURVEY PERFORMED BY GEOD CORPORATION BETWEEN AUGUST 24TH AND OCTOBER 9TH, 2015.
2. HORIZONTAL SYSTEM IS NAD 1983 COORDINATE SYSTEM AND VERTICAL DATUM IS NAVD 1988.
3. PLEASE NOTE THAT ON GOING CONSTRUCTION AT BOTH END OF THE PROJECT AND ALONG THE LENGTH OF WASHINGTON STREET WILL RESULT IN FEATURES NEEDING TO BE REMOVED AND OR ADDED TO THE MAPPING.
4. BASE MAP WAS PRODUCED FROM AERIAL PHOTOGRAPHY AND FIELD EDITS ON THE GROUND FOR BOTH UNDERGROUND UTILITIES AND SURFACE FEATURES.
5. WATER LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM UNITED WATER.
6. GAS LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G. PLEASE NOTE THAT NEW GAS LINES WERE BEING INSTALLED DURING THE SURVEY. VALVES WERE ADDED AND REMOVED DURING THE SURVEY BY THE CONSTRUCTION CREW.
7. ELECTRIC LINES SHOWN ARE BASED ON A COMBINATION OF GPR AND M-SCOPE UTILITY MARKOUT ALONG WITH PROVIDED PLAN INFORMATION. SIZES AND SUPPLEMENTED LINES FROM PLANS WERE TAKEN FROM PLANS SUPPLIED BY CLIENT FROM PSE&G.
8. CABLEVISION - OPTIMUM UTILITY LINES WERE PLACED IN DRAWING UTILIZING PROVIDED PLANS. THESES LINES FELL IN 5TH, 12TH, AND BETWEEN 14TH AND 15TH ONLY.
9. STORM AND SEWER LINES WERE INVERTED BY MEASURING FROM RIM OR GRATE TO THE IN OR OUT PIPE. PLEASE NOTE THERE WERE MANHOLES SHOWN ON OLD PLANS THAT WERE NOT FOUND IN THE FIELD. SOME CATCHBASIN CONSTRUCTION WAS TAKING PLACE DURING SURVEY BY DE LUCIA CONTRACTORS. INVERTS MAY HAVE CHANGED AND OR PIPES COULD HAVE BEEN ADDED AND OR REMOVED?
10. IT WAS OBSERVED SIDEWALK CONSTRUCTION THROUGHOUT THE PROJECT HAS COVERED PREVIOUSLY VISIBLE VALVES.
11. SIDEWALK VAULT SURVEY RESULTED IN NUMEROUS FOUND VAULTS/VOIDS UNDER THE SIDEWALKS. AT TIMES VAULT ACCESS WAS ALLOWED; WHILE VISIBLE INSPECTION SHOWED A VAULT, DUE TO THE AMOUNT OF ITEMS PILED IN THE VAULT, THEY WERE NOT VIEWABLE BY THE GPR. IT IS GEOD'S OPINION THAT ALL SIDEWALKS SHOULD BE VIEWED AS HAVING A VAULT UNDERNEATH.
12. UTILITIES WITHIN THE MIDDLE OF THE ROAD 15' +/- FROM CENTERLINE ARE PROJECTIONS FROM UTILITY INVESTIGATION ALONG THE EDGE OR ROAD/SIDEWALK. FOUND UTILITIES IN THE PARKING AREAS / SIDEWALKS WERE PROJECTED TO CROSS THROUGH VALVES AND HIT THE STARTING UTILITY IF DETERMINABLE THEN TO THE BUILDINGS.
13. UNDERGROUND UTILITY BELOW GROUND ELEVATIONS WERE ATTEMPTED. DETERMINABLE APPROXIMATE DEPTHS WERE NOTED WHEN OBSERVED.
14. SOIL CONDITIONS AND OTHER FACTORS RESULTED IN MUCH LESS THEN OPTIMAL CONDITIONS FOR UTILITY GPR INVESTIGATION. CALL NJ ONE CALL PRIOR TO ANY EXCAVATION.
15. ELEVATIONS SHOWN BY UTILITIES ARE APPROXIMATE ELEVATIONS DERIVED BY GPR METHODS. THEY SHOULD BE DEEMED APPROXIMATE UNLESS VERIFIED BY SOFTDIG.
16. GPR ALONG THE CENTERLINE (45 +/- FOOT) RESULTS WERE INCONCLUSIVE.

BM 16 — BM IS A TOP BOLT OF HYDRANT EAST SIDE OF WASHINGTON STREET BETWEEN 14TH STREET AND 15TH STREET. ELEV.=12.53'

LAYOUT AND GRADING PLAN NOTES:

1. THE CONTRACTOR SHALL RE-GRADE ALL AREAS BEHIND CURB TO MEET EXISTING GRADE.
2. ALL EXISTING UTILITIES SHALL BE VERIFIED IN THE FIELD.
3. GRADE ELEVATIONS SHOWN ARE TOP OF FINISHED PAVEMENT, UNLESS OTHERWISE SPECIFIED.
4. PROPOSED PAVEMENT CROSS SLOPES MAY VARY.

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT		W	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

20' 10' 0 20' 40'
1" = 20'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT004-SHT018_DRWG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, 14 Mar 2016, 12:29PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THE DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

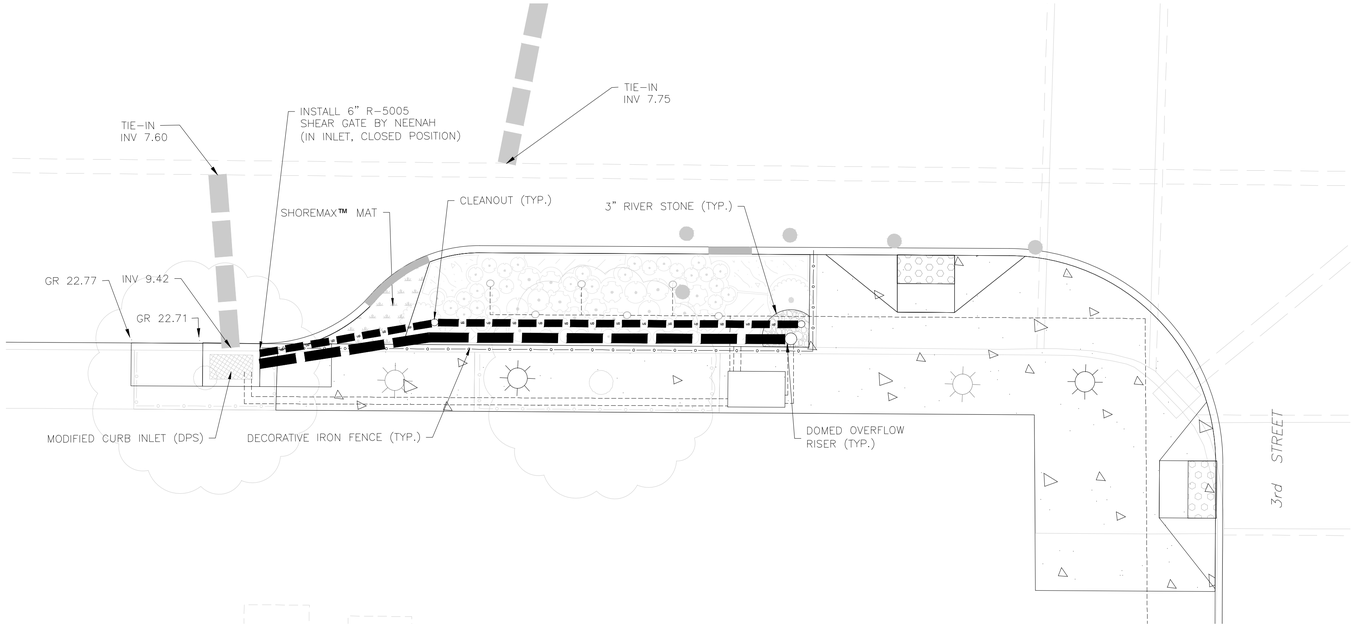
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

LAYOUT AND DRAINAGE PLANS
WASHINGTON STREET (STA 74+50 - STA 80+31)

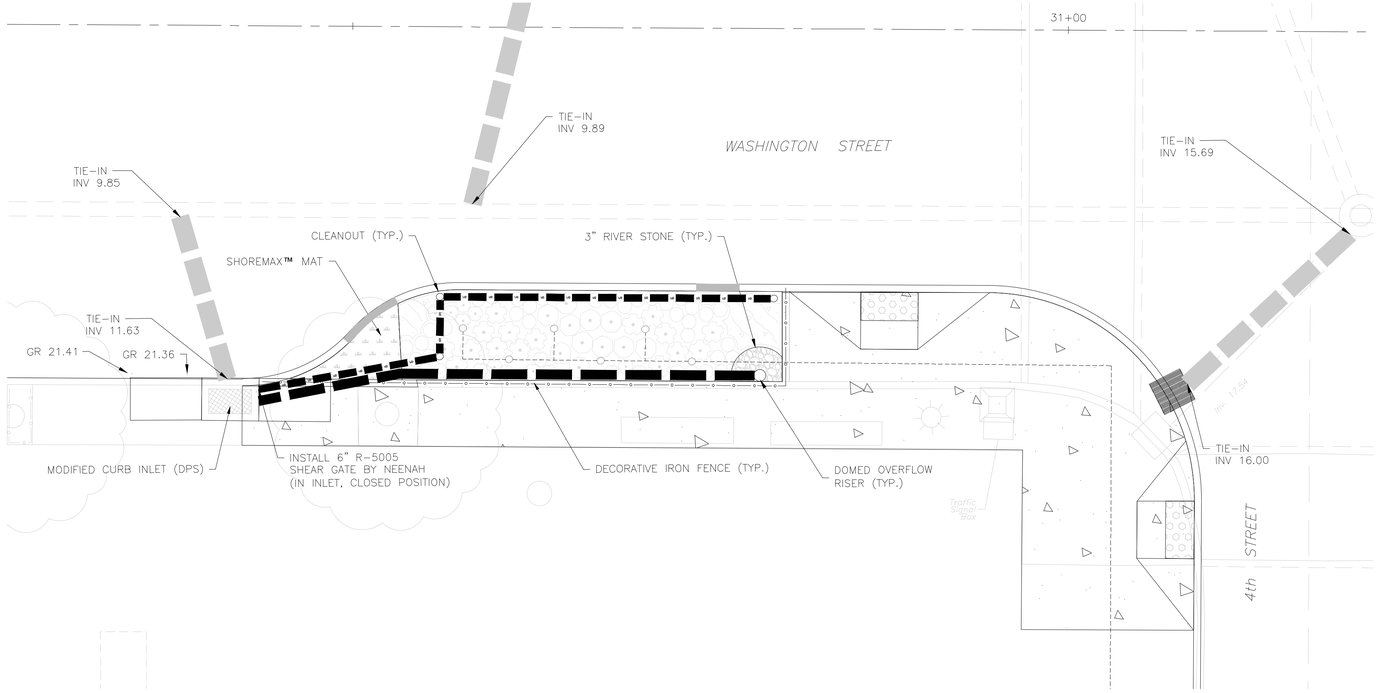
NJEIFP

T&M AND ASSOCIATES
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD/NSV	DRAWING LDP-15
CHECKED BY DM	
DRAWN BY DP/NSV	SHEET 18
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	



DRAINAGE PLAN
RAIN GARDEN 1: 3rd ST. INTERSECTION – S.E. CORNER



DRAINAGE PLAN
RAIN GARDEN 2: 4th ST. INTERSECTION – S.E. CORNER

5' 2.5' 0 5' 10'
1" = 5'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT019-SHT026_DRNG_GID.dwg
LAST SAVED: Mar 12, 2016, 10:45AM LAST PLOTTED: Mar 12, 2016, 12:01PM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR SITE PURPOSE HEREIN INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

CITY OF HOBOKEN

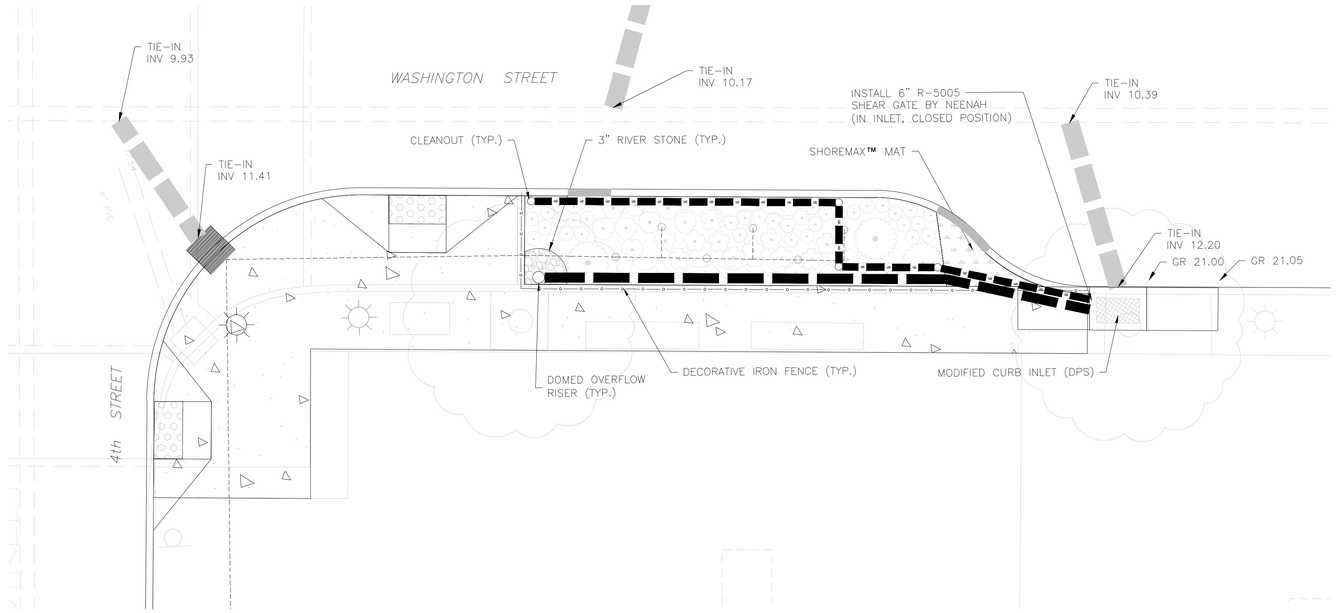
WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

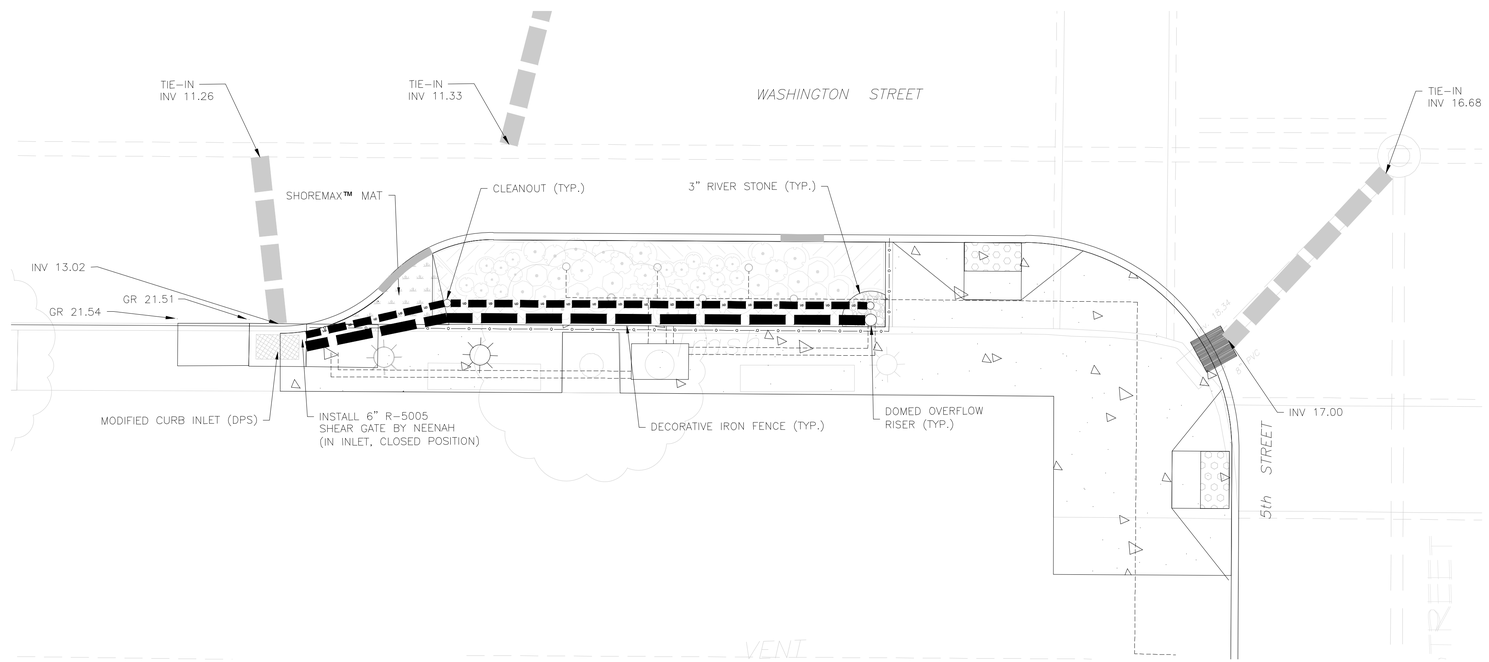
GREEN INFRASTRUCTURE
DRAINAGE PLAN
3RD ST. & 4TH ST. INTERSECTIONS NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GID-1
CHECKED BY DM	
DRAWN BY DP	SHEET 19
DATE 03-11-2016	
SCALE 1"=5'	OF 70
PROJ. NO. HOBK-00090	



DRAINAGE PLAN
RAIN GARDEN 3: 4th ST. INTERSECTION – N.E. CORNER



DRAINAGE PLAN
RAIN GARDEN 4: 5th ST. INTERSECTION – S.E. CORNER

5' 2.5' 0 5' 10'
1" = 5'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT019-SHT026_DRNG_GID.dwg
LAST SAVED: Wednesday, May 18, 2016, 12:01PM
LAST PLOTTED: Monday, May 23, 2016, 12:01PM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR SITE FOR WHICH IT WAS ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

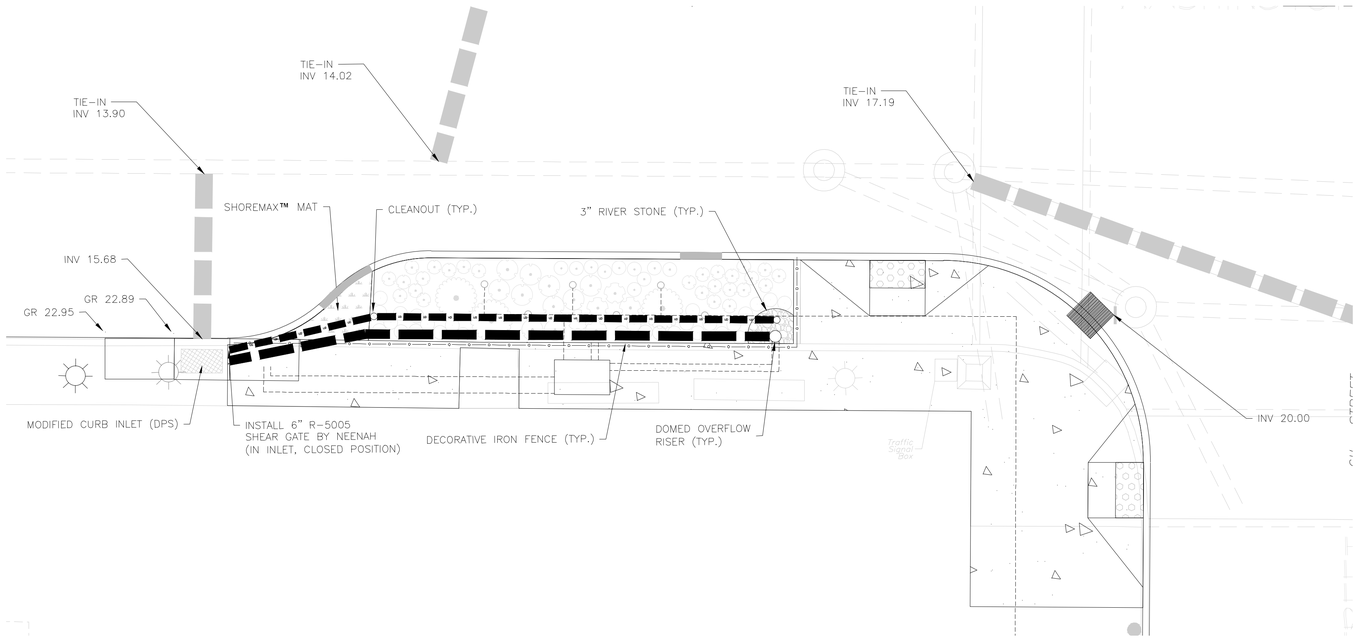
GREEN INFRASTRUCTURE
DRAINAGE PLAN
4TH ST. & 5TH ST. INTERSECTIONS NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

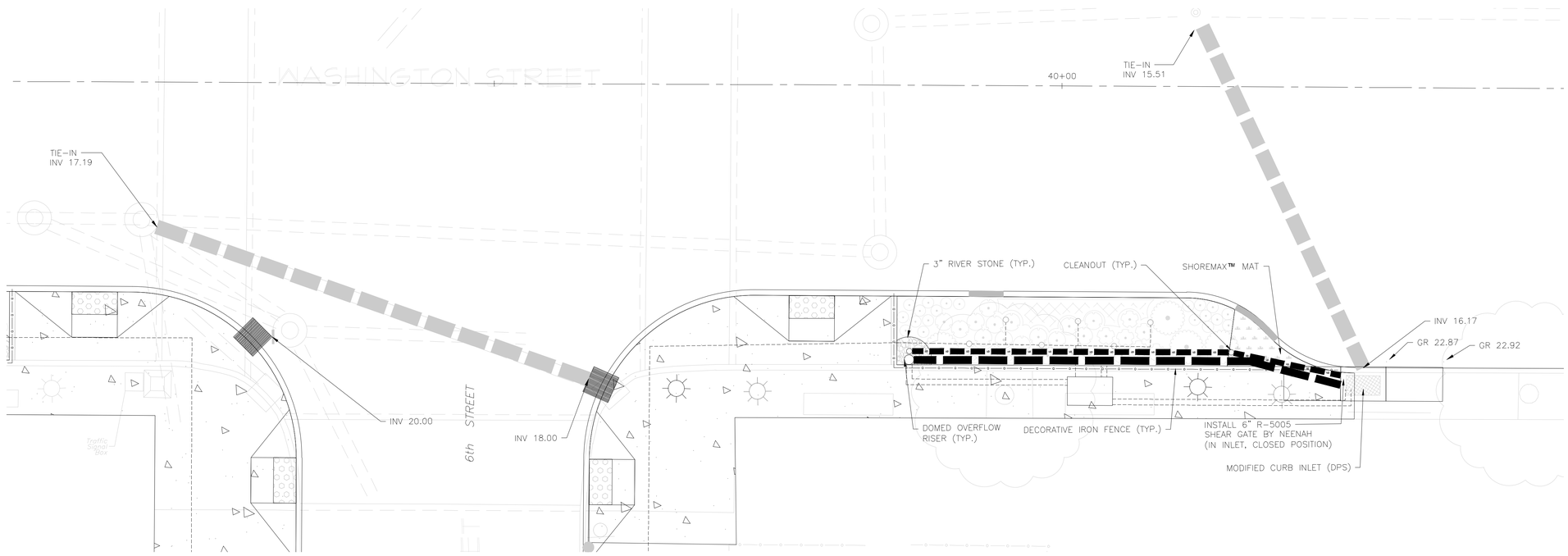
DESIGNED BY GD	DRAWING GID-2
CHECKED BY DM	
DRAWN BY DP	SHEET 20
DATE 03-11-2016	
SCALE 1"=5'	OF 70
PROJ. NO. HOBK-00090	

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT			SANITARY SEWER	
	PROPOSED CONDUIT			POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	



RAIN GARDEN 5: SE CORNER OF SIXTH AND WASHINGTON



RAIN GARDEN 6: NE CORNER OF SIXTH AND WASHINGTON

5' 2.5' 0 5' 10'
1" = 5'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

GREEN INFRASTRUCTURE
DRAINAGE PLAN
6TH ST. INTERSECTION

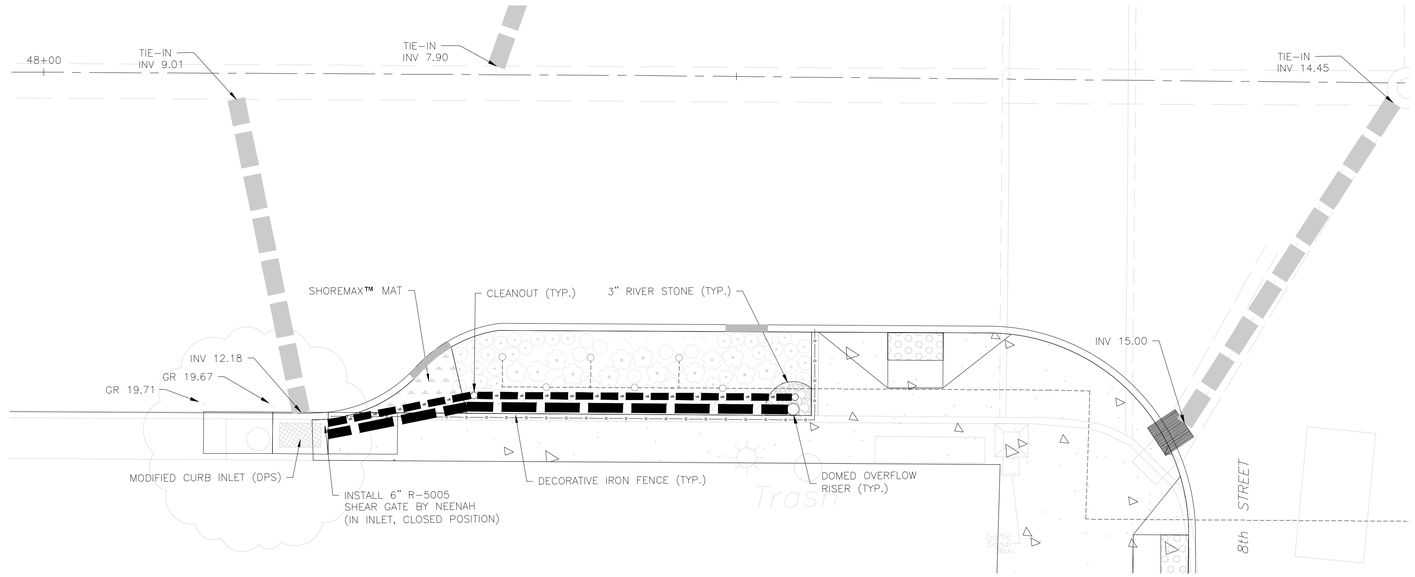
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN :
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

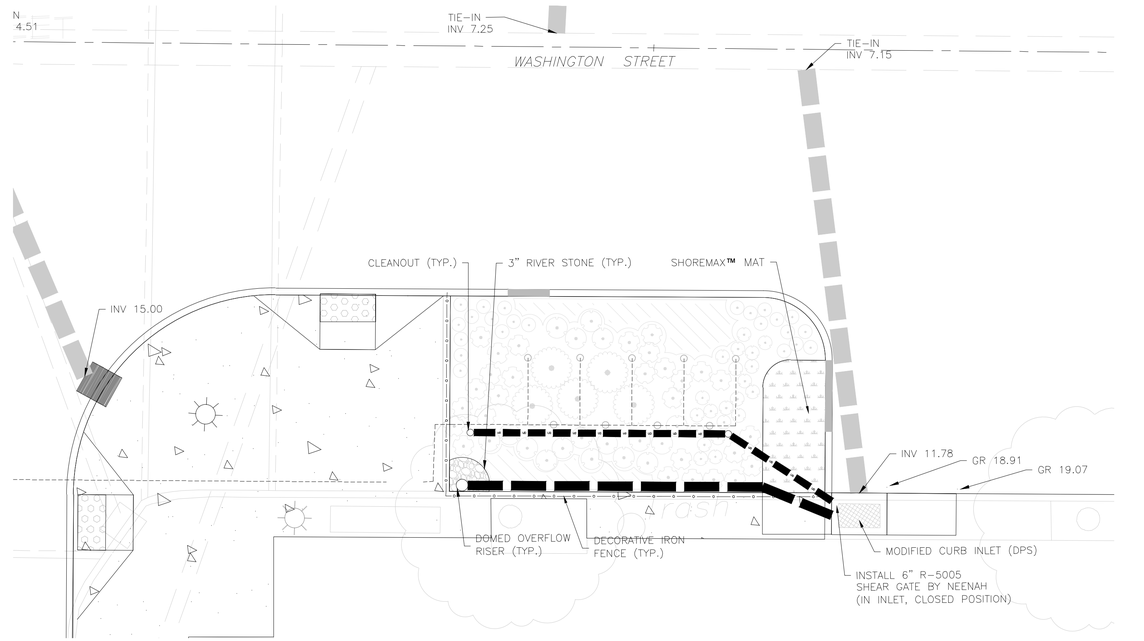
DESIGNED BY GD	DRAWING GID-3
CHECKED BY DM	
DRAWN BY DP	SHEET 21
DATE 03-11-2016	OF 70
SCALE 1"=5'	
PROJ. NO. H0BK-00090	

PROJECT INFORMATION:
FILE PATH: H:\H0BK00090\H0BK00090\Plans\
FILE NAME: H0BK00090_SHT019-SHT026_DRNG_GI.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 8:57AM
LAST SAVE BY: mpetersen

COPYRIGHT 2016, T&M ASSOCIATES — ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



DRAINAGE PLAN
RAIN GARDEN 7: 8th ST. INTERSECTION – S.E. CORNER



DRAINAGE PLAN
RAIN GARDEN 8: 8th ST. INTERSECTION – N.E. CORNER

5' 2.5' 0 5' 10'
1" = 5'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT–OF–WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
E	RELOCATED CONDUIT	E	S	SANITARY SEWER	
	PROPOSED CONDUIT		W WV	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

PROJECT INFORMATION:
FILE PATH: H:\H0BK00090_00090\Plans\
FILE NAME: H0BK00090_SHT019–SHTO26_DRNG_GI.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 8:57AM
LAST SAVE BY: mvdenzwig

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

GREEN INFRASTRUCTURE
DRAINAGE PLAN
8TH ST. INTERSECTION

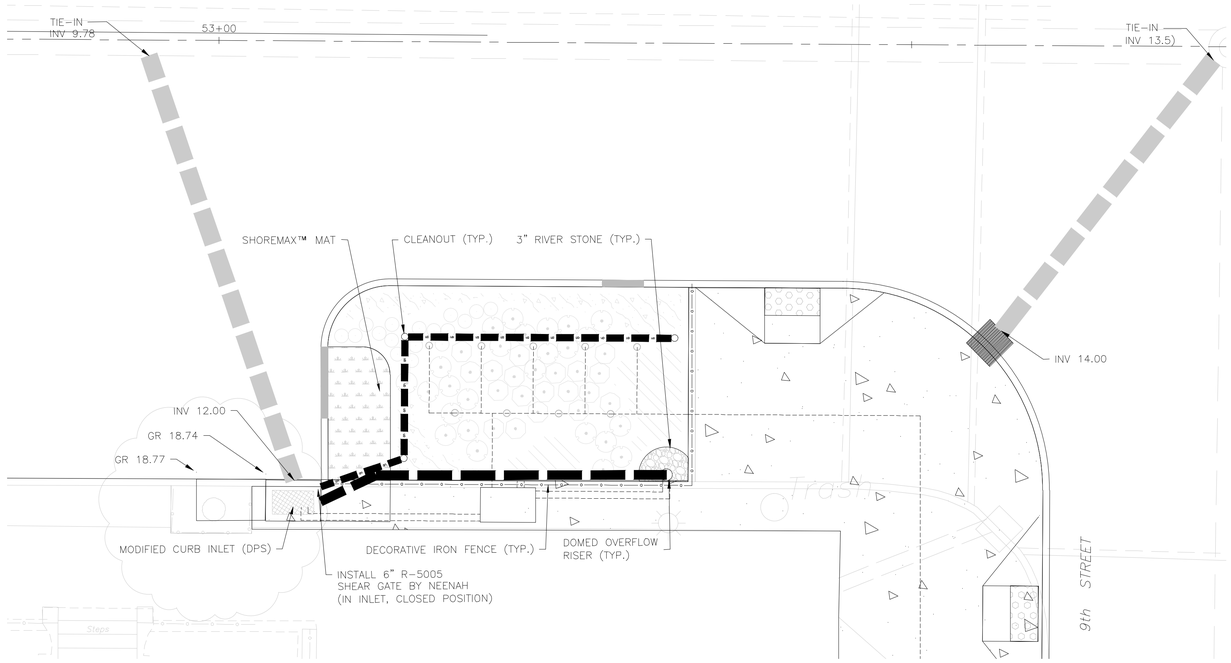
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN :
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

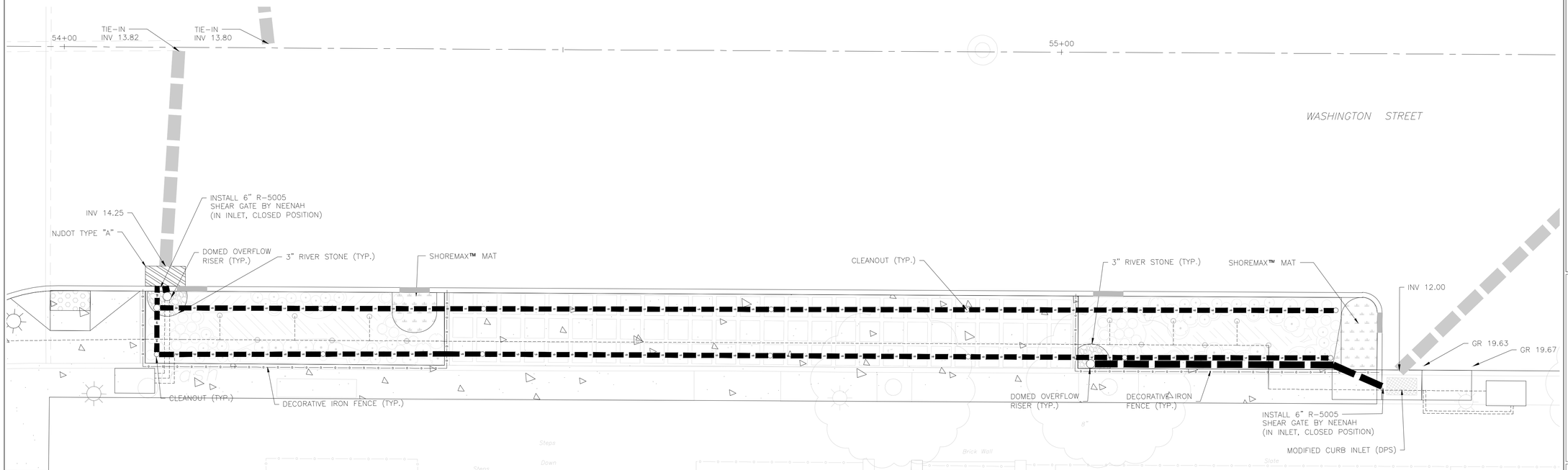
DESIGNED BY GD	DRAWING GID–4
CHECKED BY DM	
DRAWN BY DP	SHEET 22
DATE 03-11-2016	OF 70
SCALE 1"=5'	
PROJ. NO. H0BK-00090	

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT		S	SANITARY SEWER	
	PROPOSED CONDUIT		W	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	



DRAINAGE PLAN
RAIN GARDEN 9: 9th ST. INTERSECTION – S.E. CORNER



DRAINAGE PLAN
RAIN GARDEN 10: 9th ST. INTERSECTION – N.E. CORNER

5' 2.5' 0 5' 10'
1" = 5'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

GREEN INFRASTRUCTURE
DRAINAGE PLAN
9TH ST. INTERSECTION

NJEIFP

YOUR GOALS. OUR MISSION.

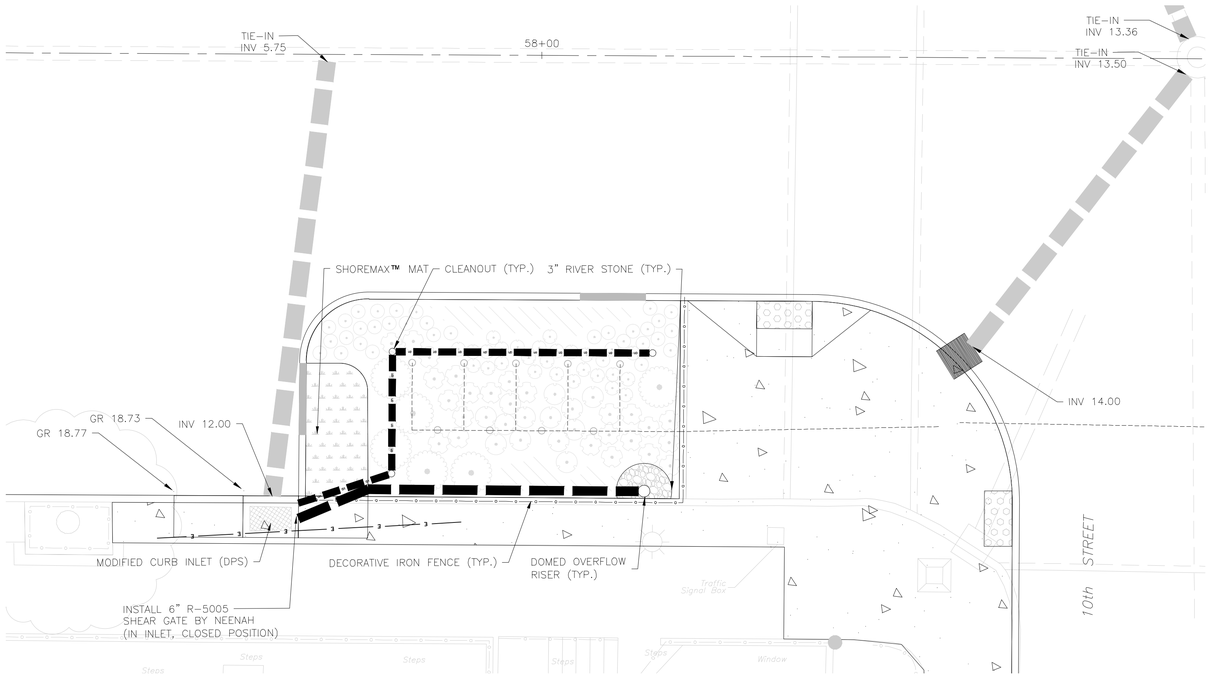
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN :
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

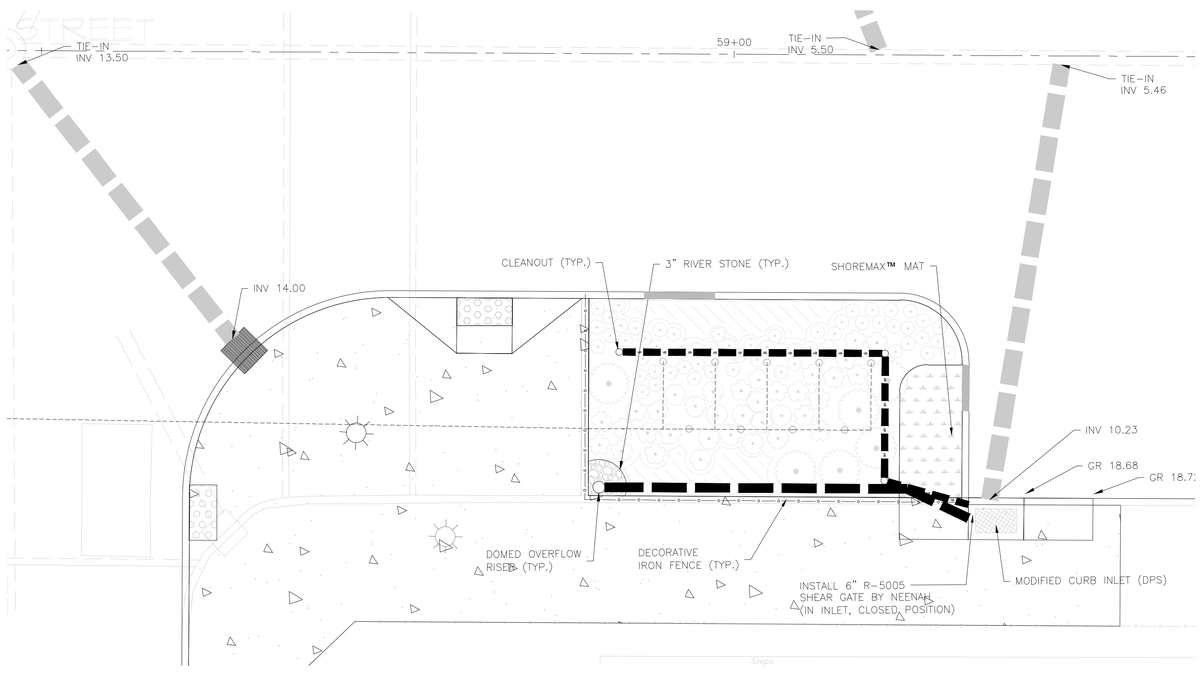
DESIGNED BY GD	DRAWING GID-5
CHECKED BY DM	
DRAWN BY DP	SHEET 23
DATE 03-11-2016	OF 70
SCALE 1"=5'	
PROJ. NO. H0BK-00090	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\H0BK00090\H0BK00090\Plans\
FILE NAME: H0BK00090_SHT019-SHT026_DRNG_GI.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 8:57AM
LAST SAVE BY: mvdenzuela



DRAINAGE PLAN
RAIN GARDEN 11: 10th ST. INTERSECTION – S.E. CORNER



DRAINAGE PLAN
RAIN GARDEN 12: 10th ST. INTERSECTION – N.E. CORNER

5' 2.5' 0 5' 10'
1" = 5'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
E	RELOCATED CONDUIT	E	S WV	SANITARY SEWER	
	PROPOSED CONDUIT		W	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	

PROJECT INFORMATION:
FILE PATH: H:\HOBK00090\00090\Plans\
FILE NAME: HOBK00090_SH019-SHT026_DRNG_GI.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 8:57AM
LAST SAVE BY: mvolenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

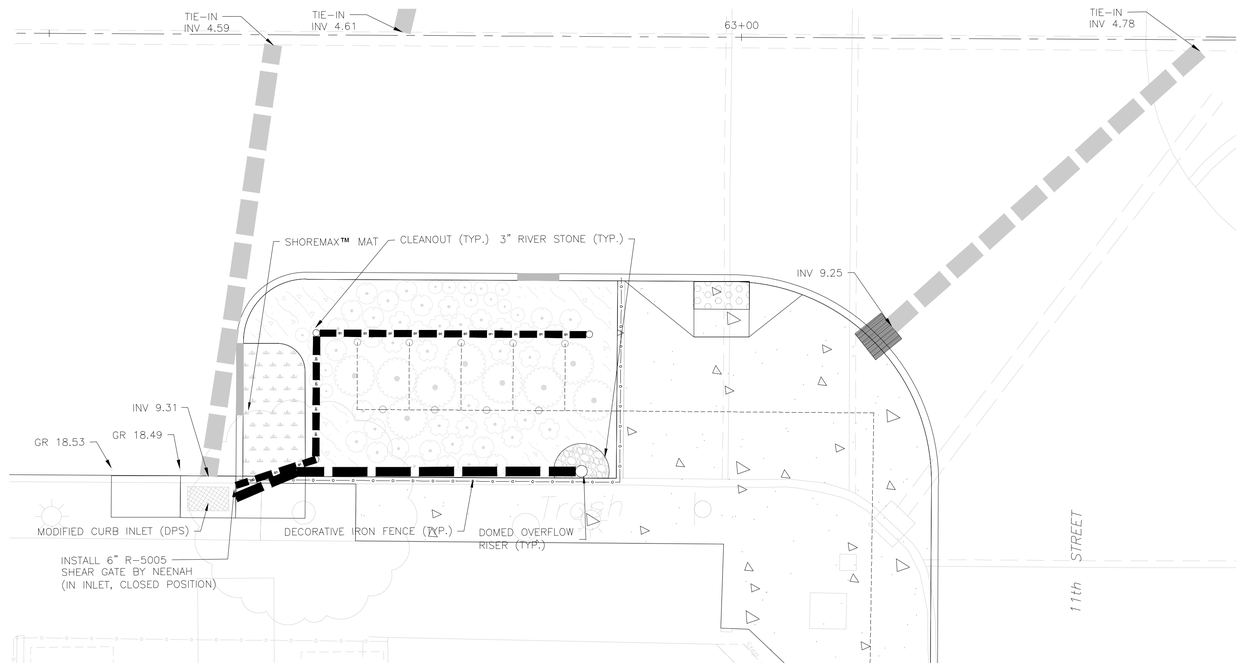
CITY OF HOBOKEN
WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY
GREEN INFRASTRUCTURE
DRAINAGE PLAN
10TH ST. INTERSECTION
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

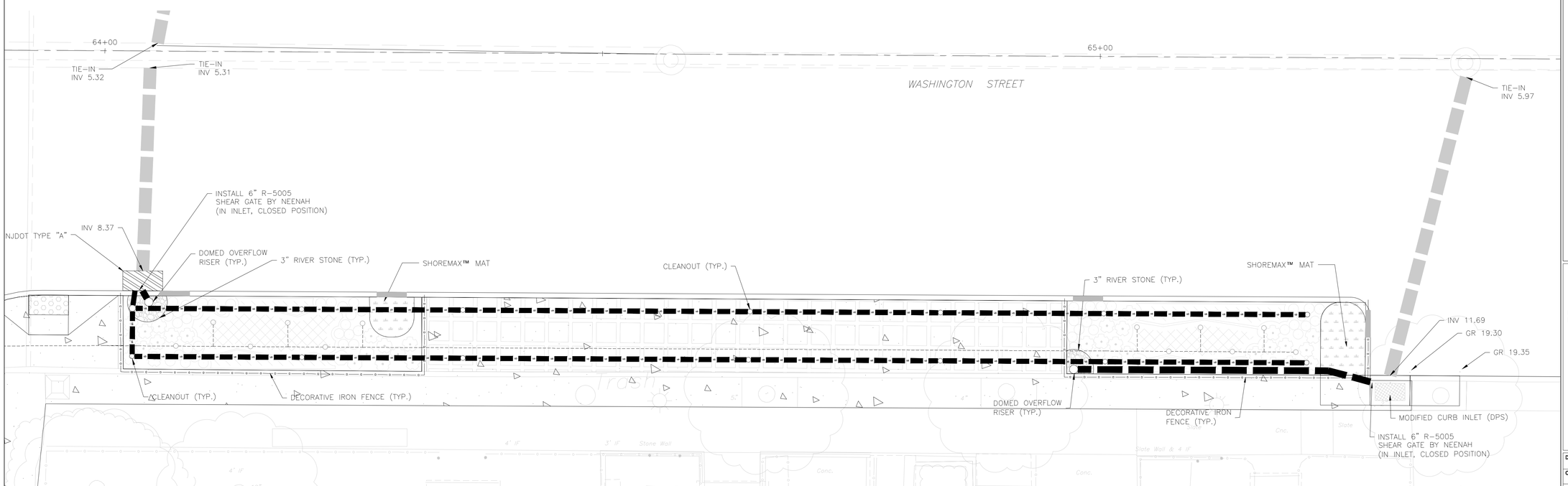
DESIGNED BY GD	DRAWING GID-6
CHECKED BY DM	
DRAWN BY DP	SHEET 24
DATE 03-11-2016	OF 70
SCALE 1"=5'	
PROJ. NO. HOBK-00090	

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY			UTILITY POLES	
	PROPERTY LINE			SIGNS	
	RIGHT-OF-WAY		102	INTERMEDIATE CONTOURS	
	EASEMENT		100	INDEX CONTOURS	
	EDGE OF PAVEMENT		× 102.6	SPOT ELEVATIONS	× 102.64
	CURB			STORM SEWER	
	DEPRESSED CURB			10" OVERFLOW DRAINAGE PIPE	
	SIDEWALK			6" UNDER DRAIN PIPE	
	CONCRETE			CLEANOUT	
	BUILDINGS			DOMED OVERFLOW RISER	
X	FENCE LINE			RIVER STONE	
	LIGHT FIXTURE			DECORATIVE IRON FENCE	
	RELOCATED CONDUIT	E E	S	SANITARY SEWER	
	PROPOSED CONDUIT		WV W	POTABLE WATER	
	PROPOSED MONITORING EQUIP			NJDOT TYPE "A" INLET	
	MODIFIED CURB INLET (DPS)			NJDOT TYPE "B" INLET	



DRAINAGE PLAN
RAIN GARDEN 13: 11th ST. INTERSECTION – S.E. CORNER



DRAINAGE PLAN
RAIN GARDEN 14: 11th ST. INTERSECTION – N.E. CORNER

5' 2.5' 0 5' 10'
1" = 5'

PROJECT INFORMATION:
FILE PATH: H:\HOBK00090\00090\Plans\
FILE NAME: HOBK00090_SHT019-SHT028_DRNG_G.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 8:57AM
LAST SAVE BY: mcdervjwb

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

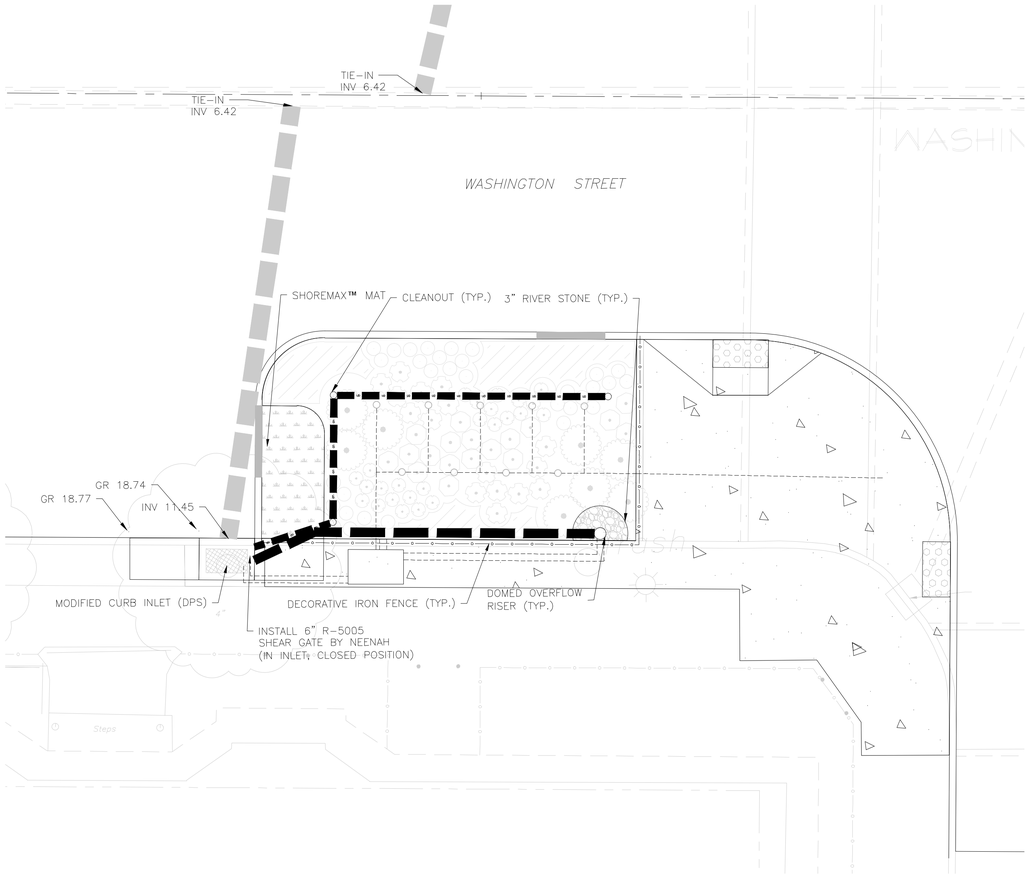
NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN
WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY
GREEN INFRASTRUCTURE
DRAINAGE PLAN
11TH ST. INTERSECTION
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN :
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GID-7
CHECKED BY DM	
DRAWN BY DP	SHEET 25
DATE 03-11-2016	OF 70
SCALE 1"=5'	
PROJ. NO. HOBK-00090	



DRAINAGE PLAN
RAIN GARDEN 15: 12th ST. INTERSECTION

LEGEND

EXISTING		PROPOSED
	TRACT BOUNDARY	
	PROPERTY LINE	
	RIGHT-OF-WAY	
	EASEMENT	
	EDGE OF PAVEMENT	
	CURB	
	DEPRESSED CURB	
	SIDEWALK	
	CONCRETE	
	BUILDINGS	
	FENCE LINE	
	LIGHT FIXTURE	
	RELOCATED CONDUIT	
	PROPOSED CONDUIT	
	PROPOSED MONITORING EQUIP	
	MODIFIED CURB INLET (DPS)	

EXISTING		PROPOSED
	UTILITY POLES	
	SIGNS	
102	INTERMEDIATE CONTOURS	
100	INDEX CONTOURS	
× 102.6	SPOT ELEVATIONS	× 102.64
	STORM SEWER	
	10" OVERFLOW DRAINAGE PIPE	
	6" UNDER DRAIN PIPE	
	CLEANOUT	
	DOMED OVERFLOW RISER	
	RIVER STONE	
	DECORATIVE IRON FENCE	
	SANITARY SEWER	
	POTABLE WATER	
	NJDOT TYPE "A" INLET	
	NJDOT TYPE "B" INLET	

5' 2.5' 0 5' 10'
1" = 5'

PROJECT INFORMATION:
FILE PATH: H:\HOBK00090\00090\Plans\
FILE NAME: HOBK00090_SHT019-SHT028_DRNG_GI.dwg
LAST SAVED DATE AND TIME: 12 Mar 2016, 8:57AM
LAST SAVE BY: mcdermott

COPYRIGHT 2016, T&M ASSOCIATES — ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

GREEN INFRASTRUCTURE
DRAINAGE PLAN
12TH ST. INTERSECTION

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN :
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GID-8
CHECKED BY DM	
DRAWN BY DP	SHEET 26
DATE 03-11-2016	OF 70
SCALE 1"=5'	
PROJ. NO. H0BK-00090	

ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.

2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.

3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.

4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.

7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.

8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.

9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.

10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.

11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.

12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.

13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.

14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.

15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.

16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.

17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.

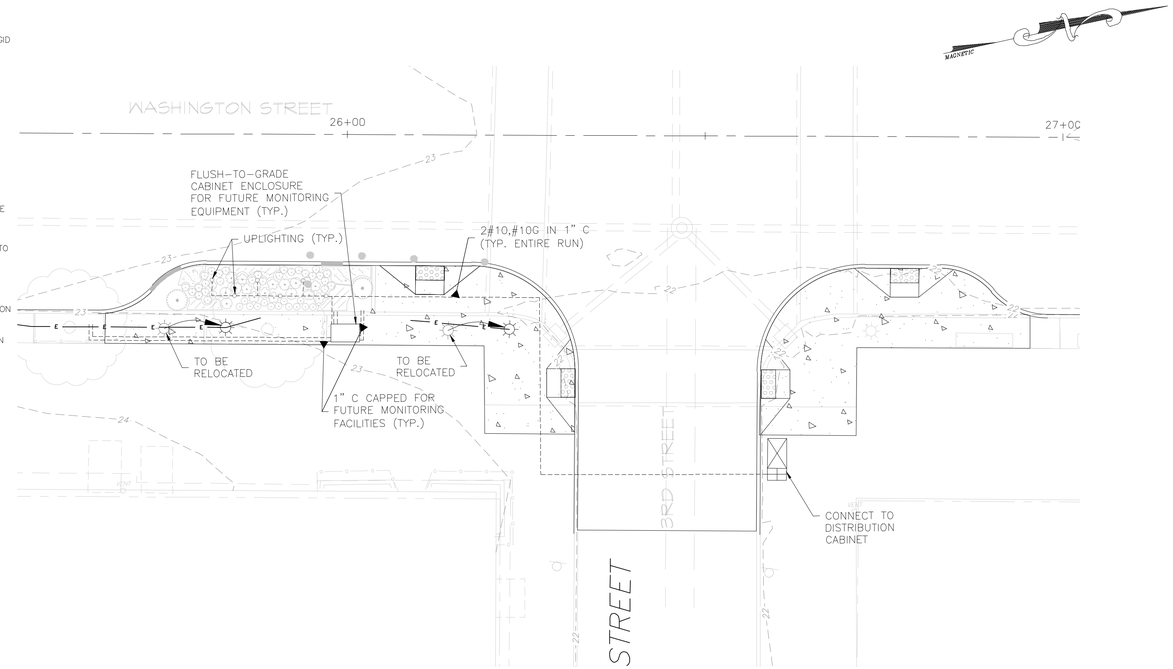
18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.

19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.

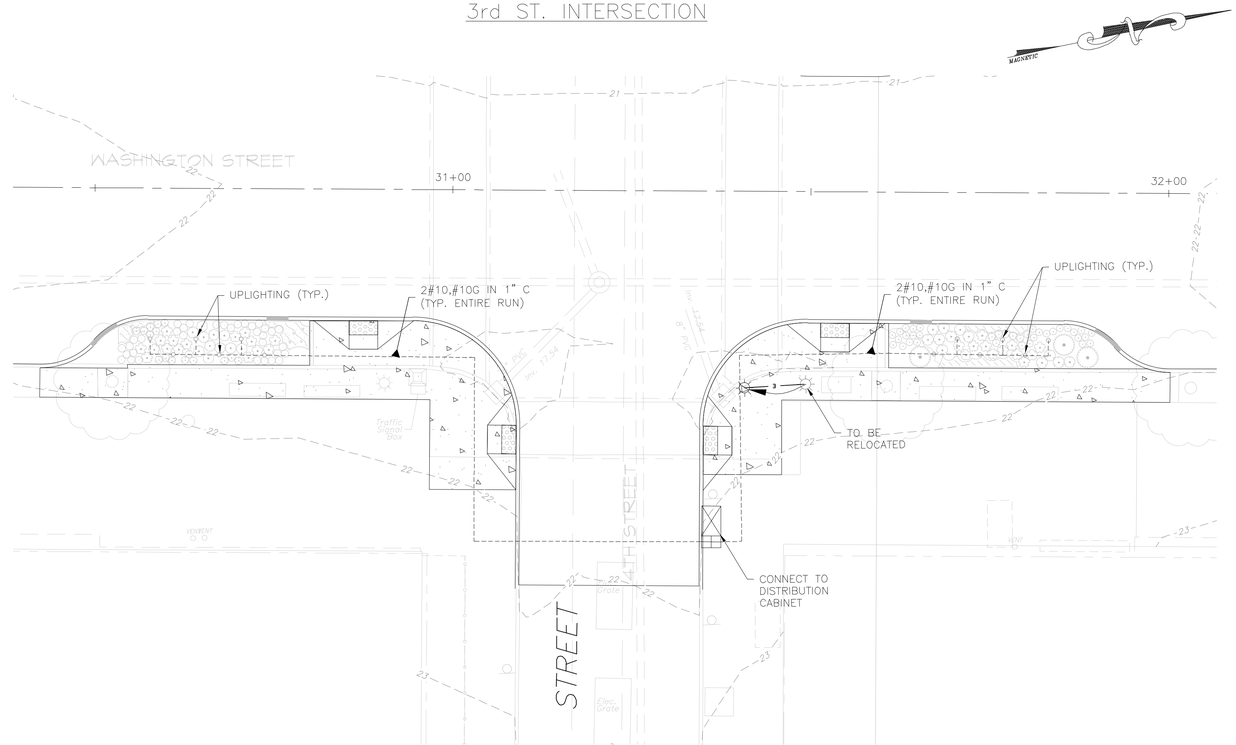
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD



LIGHTING & MONITERING FACILITIES PLAN
3rd ST. INTERSECTION



LIGHTING & MONITERING FACILITIES PLAN
4th ST. INTERSECTION

10' 5' 0 10' 20'
1" = 10'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT		S	SANITARY SEWER	
	CURB		W WV	POTABLE WATER	
	SIDEWALK		G GV	NATURAL GAS	
	BUILDINGS		E E OH OH	ELECTRIC	
	CONCRETE MONUMENTS		T T	TELEPHONE LINE	
	IRON PINS		SL	SANITARY LATERAL	
X	FENCE LINE			LIGHT FIXTURE	
	LIGHT POLES			RELOCATED CONDUIT	E E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRWG_GI_-L&M.dwg
LAST SAVED: Wed, 09-Mar-2016, TUE 12 Mar 2016, 12:17AM
LAST SAVE BY: mvalenzuela

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
3RD ST. & 4TH ST. INTERSECTIONS NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-1
CHECKED BY DM	
DRAWN BY DP	SHEET 27
DATE 03-11-2016	OF 70
SCALE 1"=10'	
PROJ. NO. HOBK-00090	

ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.

2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.

3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.

4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.

7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.

8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.

9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.

10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.

11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.

12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.

13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.

14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.

15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.

16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.

17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.

18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.

19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.

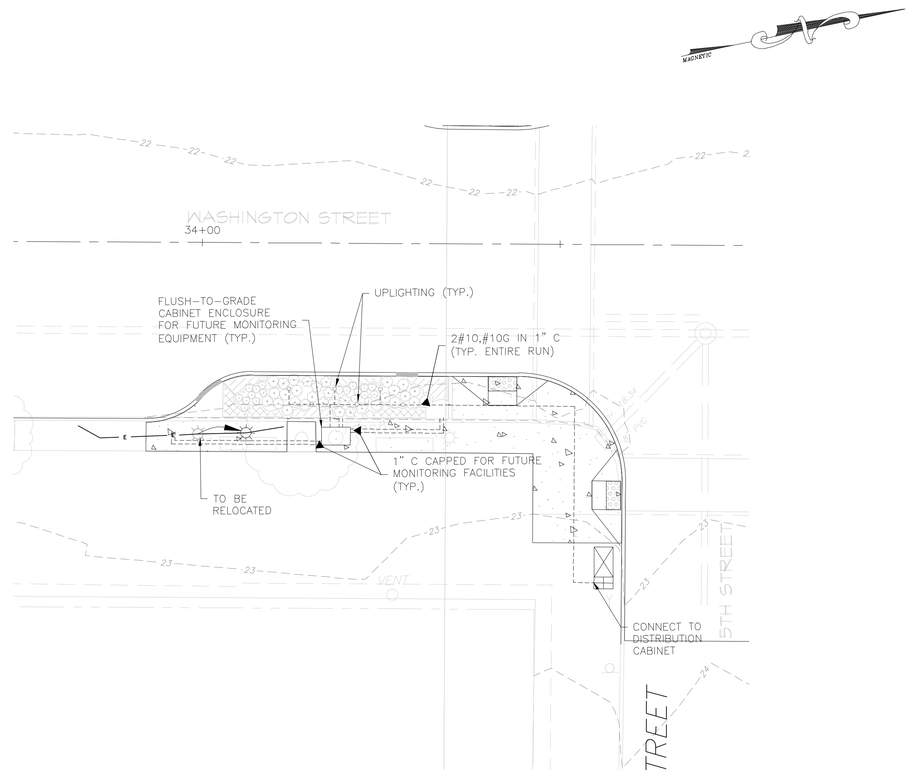
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT		S	SANITARY SEWER	
	CURB		W WV	POTABLE WATER	
	SIDEWALK		G GV	NATURAL GAS	
	BUILDINGS		E E	ELECTRIC	
	CONCRETE MONUMENTS		OH OH	TELEPHONE LINE	
	IRON PINS		T T	SANITARY LATERAL	
X	FENCE LINE		SL	LIGHT FIXTURE	
	LIGHT POLES			RELOCATED CONDUIT	E E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	



LIGHTING & MONITERING FACILITIES PLAN
5th ST. INTERSECTION – S.E. CORNER

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
5TH ST. INTERSECTIONS

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-2
CHECKED BY DM	
DRAWN BY DP	SHEET 28
DATE 03-11-2016	
SCALE 1"=10'	
PROJ. NO. HOBK-00090	OF 70

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRNG_GI-L&M.dwg
LAST SAVED: Friday, 04/01/2016 12:17:12 Mar 2016, 12:17AM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.

2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.

3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.

4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.

7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.

8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.

9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.

10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.

11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.

12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.

13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.

14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.

15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.

16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.

17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.

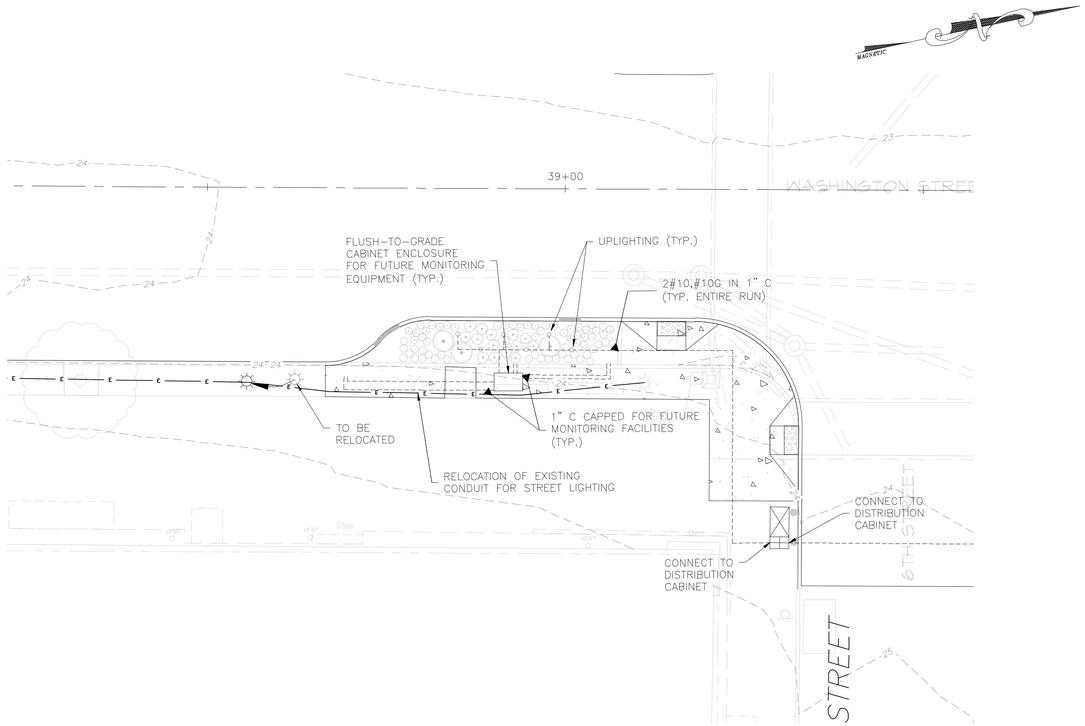
18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.

19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.

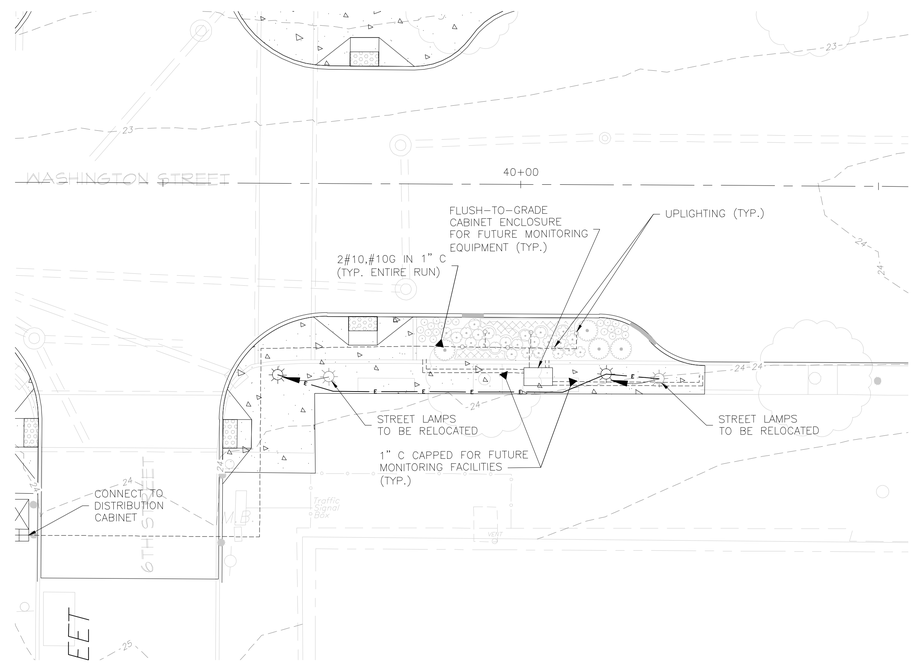
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD



LIGHTING & MONITERING FACILITIES PLAN
6th ST. INTERSECTION – S.E. CORNER



LIGHTING & MONITERING FACILITIES PLAN
6th ST. INTERSECTION – N.E. CORNER

10' 5' 0 10' 20'
1" = 10'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT			SANITARY SEWER	
	CURB		W WV	POTABLE WATER	
	SIDEWALK		G GV	NATURAL GAS	
	BUILDINGS		E E OH OH	ELECTRIC	
	CONCRETE MONUMENTS		T T	TELEPHONE LINE	
	IRON PINS		SL	SANITARY LATERAL	
X	FENCE LINE			LIGHT FIXTURE	
	LIGHT POLES			RELOCATED CONDUIT	E E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRNG_GI-L&M.dwg
LAST SAVED: Mar 12, 2016, 12:17AM
LAST SAVE BY: mvlentzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN
WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY
GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
6TH ST. INTERSECTION
NJEIFP

T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-3
CHECKED BY DM	
DRAWN BY DP	SHEET 29
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	

ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.

2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.

3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.

4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.

7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.

8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.

9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.

10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.

11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.

12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.

13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.

14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.

15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.

16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.

17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.

18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.

19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.

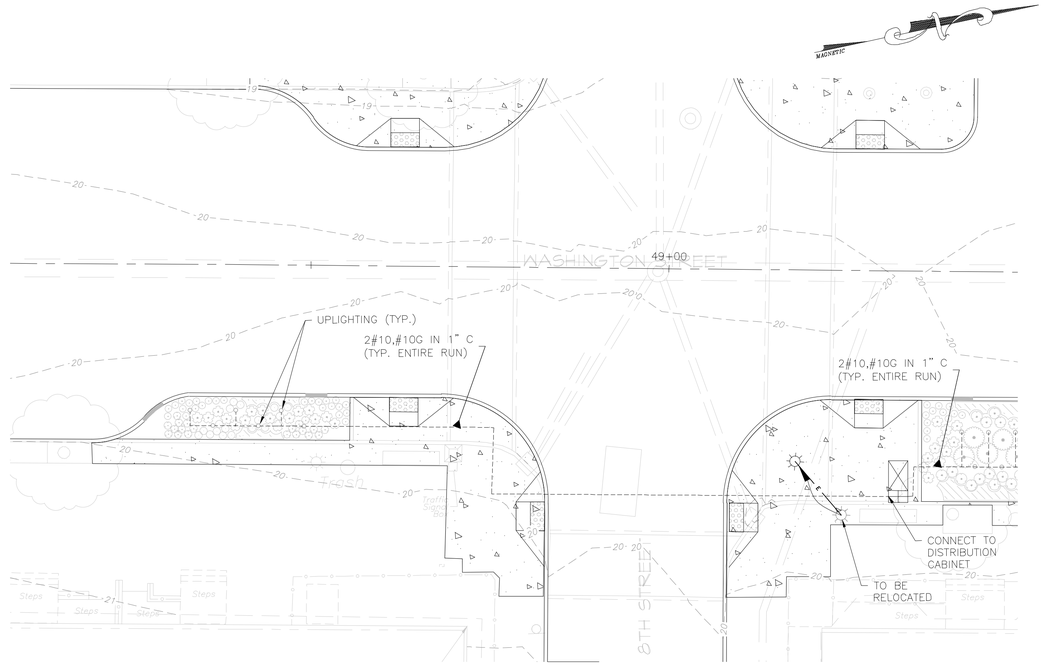
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE

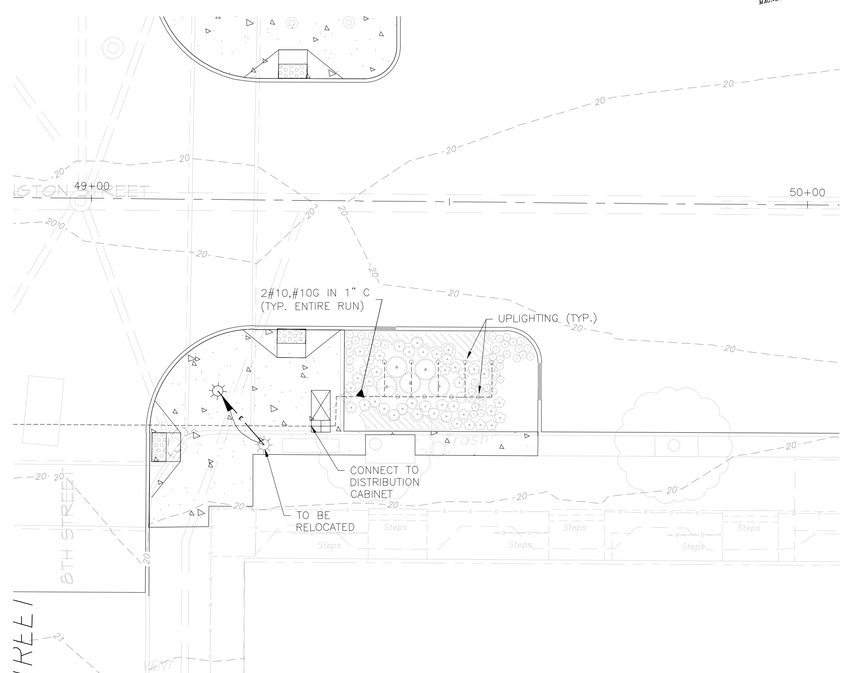
SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT			SANITARY SEWER	
	CURB		W	POTABLE WATER	
	SIDEWALK		G	NATURAL GAS	
	BUILDINGS		E / OH / T	ELECTRIC	
	CONCRETE MONUMENTS		T	TELEPHONE LINE	
	IRON PINS		SL	SANITARY LATERAL	
X	FENCE LINE			LIGHT FIXTURE	
	LIGHT POLES			RELOCATED CONDUIT	E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	



LIGHTING & MONITERING FACILITIES PLAN
8th ST. INTERSECTION – S.E. CORNER



LIGHTING & MONITERING FACILITIES PLAN
8th ST. INTERSECTION – N.E. CORNER

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
8TH ST. INTERSECTION NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-4
CHECKED BY DM	
DRAWN BY DP	SHEET 30
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRWG_01_L&M.dwg
LAST SAVED DATE: Friday, Mar 12, Mar 2016, 12:17AM
LAST SAVE BY: rivalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

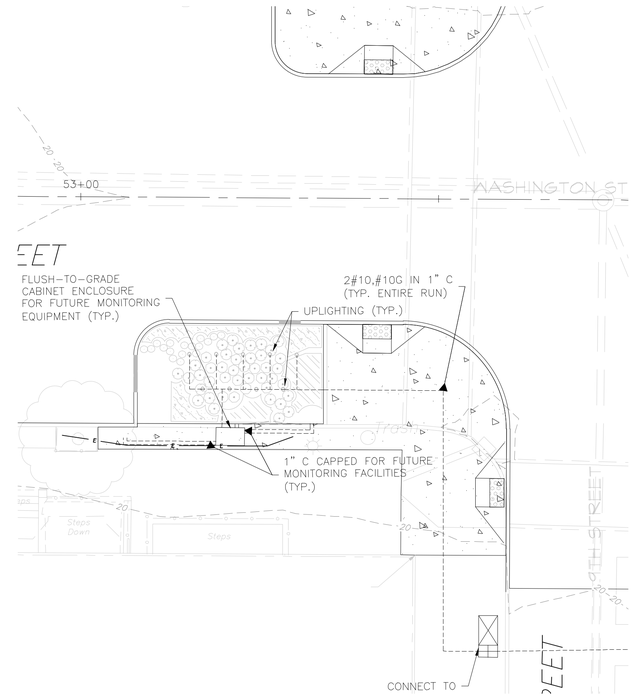
ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.
2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.
3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.
4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

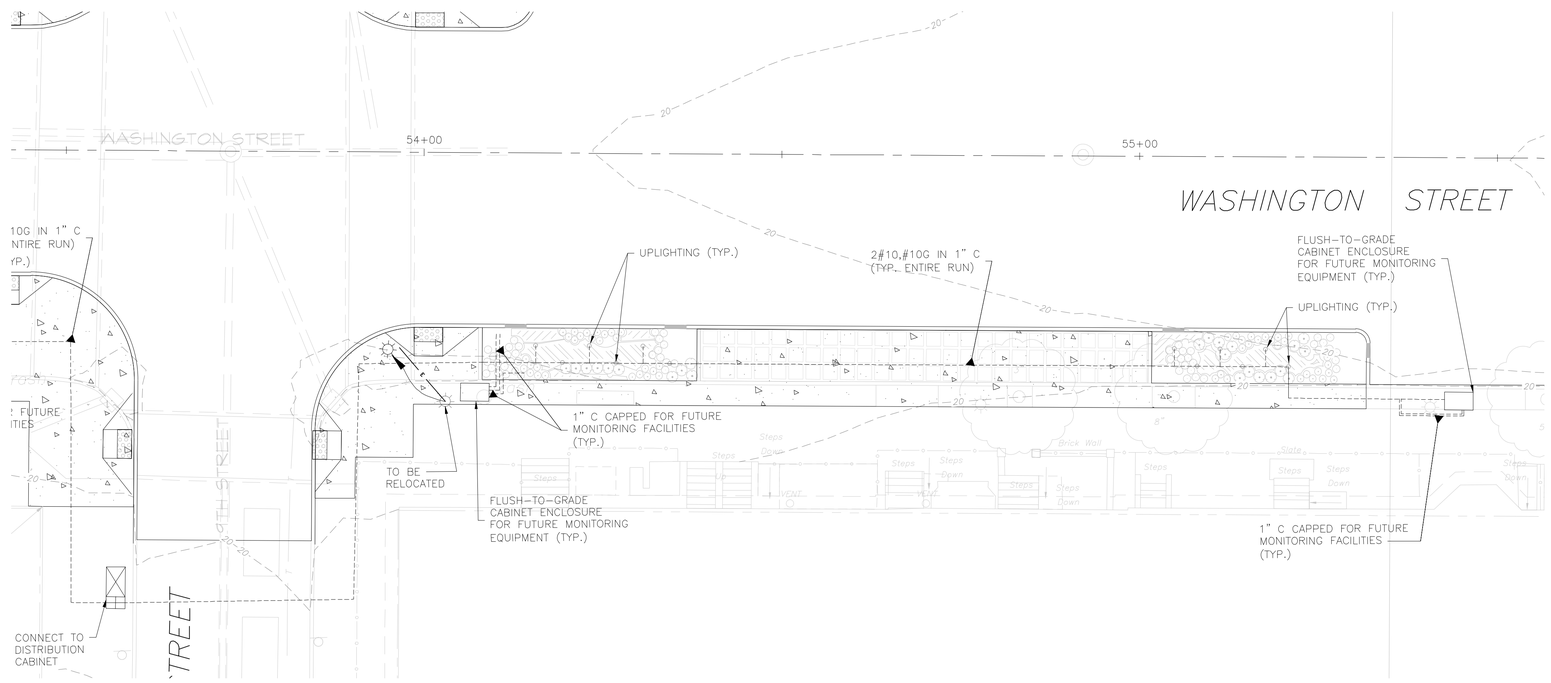
	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.
6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.
7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.
8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.
9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.
10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.
11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.
12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.
13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.
14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.
15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.
16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.
17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.
18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.
19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE					
SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD



LIGHTING & MONITERING FACILITIES PLAN
9th ST. INTERSECTION – S.E. CORNER



LIGHTING & MONITERING FACILITIES PLAN
9th ST. INTERSECTION – N.E. CORNER

10' 5' 0 10' 20'
1" = 10'

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT		S	SANITARY SEWER	
	CURB		W	POTABLE WATER	
	SIDEWALK		G	NATURAL GAS	
	BUILDINGS		E, OH	ELECTRIC	
	CONCRETE MONUMENTS		T	TELEPHONE LINE	
	IRON PINS		SL	SANITARY LATERAL	
X	FENCE LINE			LIGHT FIXTURE	
	LIGHT POLES		E	RELOCATED CONDUIT	E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THE DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRNG_GI-L&M.dwg
LAST SAVED: Monday, 2016-03-12 Mar 2016, 12:17AM
LAST SAVE BY: mvalenzuela

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN
WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY
GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
9TH ST. INTERSECTION NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN :
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-5
CHECKED BY DM	
DRAWN BY DP	SHEET 31
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	

ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.

2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.

3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.

4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.

7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.

8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.

9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.

10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.

11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.

12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.

13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.

14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.

15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.

16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.

17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.

18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.

19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.

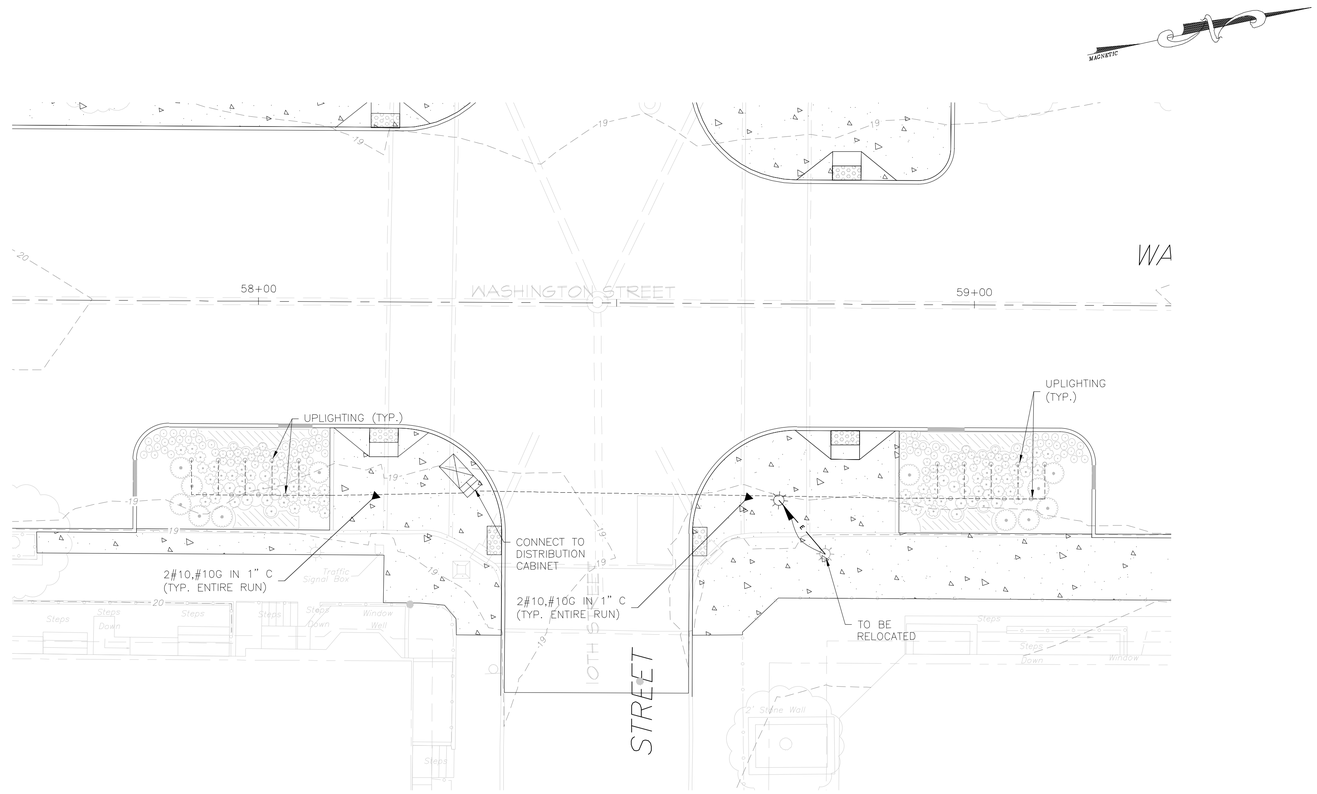
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE

SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT		S	SANITARY SEWER	
	CURB		W WV	POTABLE WATER	
	SIDEWALK		G GV	NATURAL GAS	
	BUILDINGS		E E	ELECTRIC	
	CONCRETE MONUMENTS		OH OH		
	IRON PINS		T T	TELEPHONE LINE	
X	FENCE LINE		SL	SANITARY LATERAL	
	LIGHT POLES			LIGHT FIXTURE	
	UTILITY POLES		E E	RELOCATED CONDUIT	E E
	SIGNS			PROPOSED CONDUIT	
				PROPOSED MONITORING EQUIP	



LIGHTING & MONITERING FACILITIES PLAN
10th ST. INTERSECTION

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER

03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
10TH ST. INTERSECTION

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-6
CHECKED BY DM	
DRAWN BY DP	SHEET 32
DATE 03-11-2016	
SCALE 1"=10'	
PROJ. NO. HOBK-00090	OF 70

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRNG_GI-L&M.dwg
LAST SAVED: Mar 12, 2016, 12:17AM
LAST PLOTTED: Mar 12, 2016, 12:17AM
LAST SAVE BY: mvalenzuela

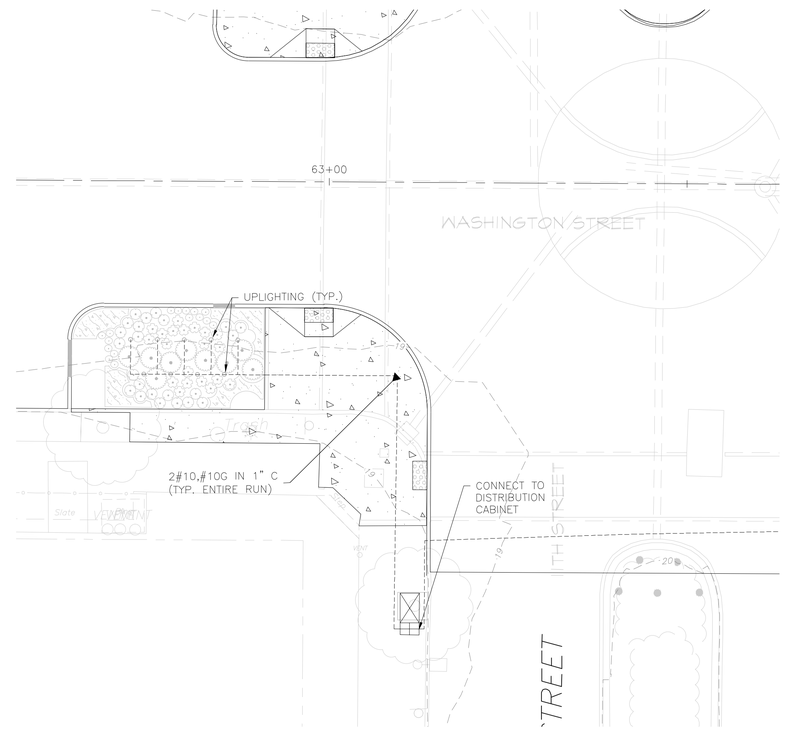
ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.
2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.
3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.
4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

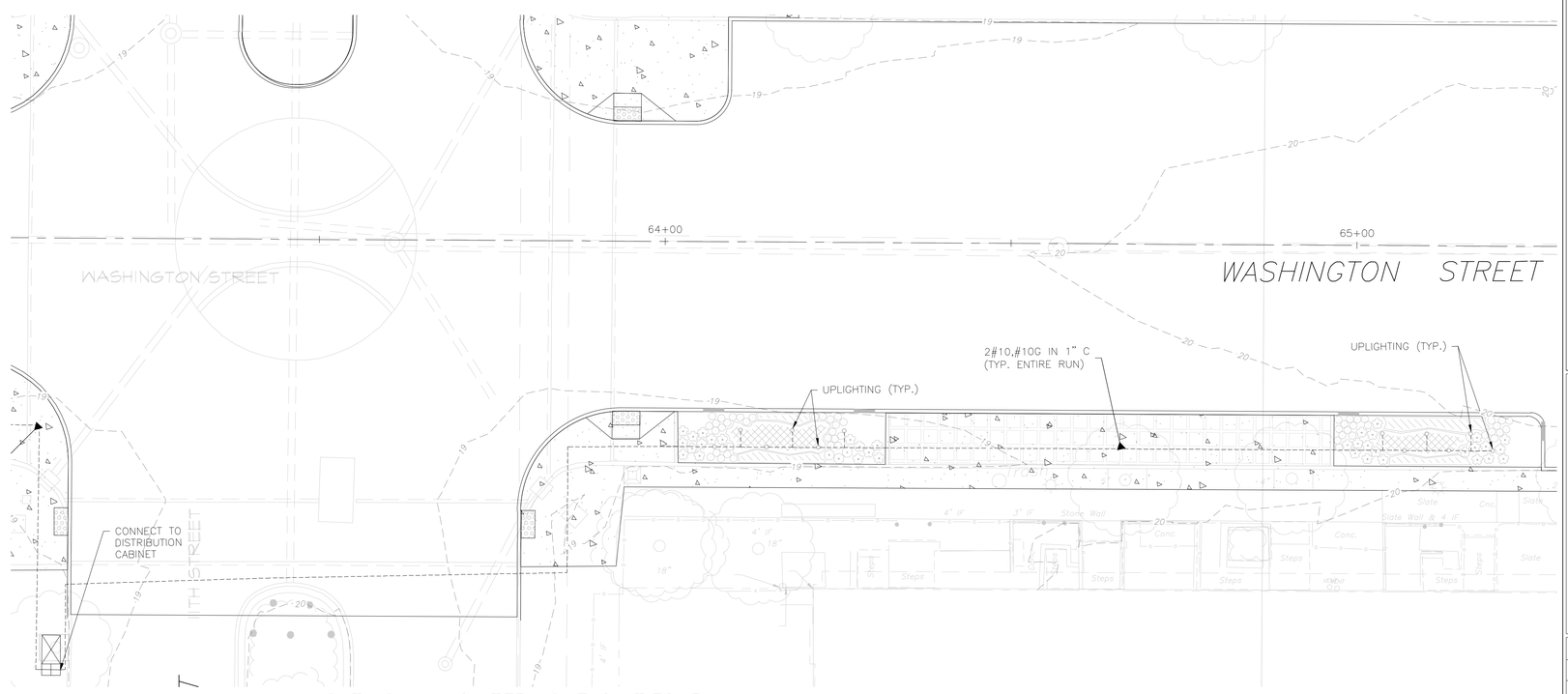
	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.
6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.
7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.
8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.
9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.
10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.
11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.
12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.
13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.
14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.
15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.
16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.
17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.
18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.
19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.
20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE					
SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD



LIGHTING & MONITERING FACILITIES PLAN
11th ST. INTERSECTION – S.E. CORNER



LIGHTING & MONITERING FACILITIES PLAN
11th ST. INTERSECTION – N.E. CORNER

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT			SANITARY SEWER	
	CURB		W	POTABLE WATER	
	SIDEWALK		G	NATURAL GAS	
	BUILDINGS		E	ELECTRIC	E
	CONCRETE MONUMENTS		OH	TELEPHONE LINE	
	IRON PINS		SL	SANITARY LATERAL	
X	FENCE LINE			LIGHT FIXTURE	
	LIGHT POLES			RELOCATED CONDUIT	E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRWG_01 - L&M.dwg
LAST SAVED: DATE 2016, TUE 12 Mar 2016, 12:17AM
LAST SAVE BY: mvilenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
11TH ST. INTERSECTION

NJEIFP

T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING GIL-7
CHECKED BY DM	
DRAWN BY DP	SHEET 33
DATE 03-11-2016	OF 70
SCALE 1"=10'	
PROJ. NO. HOBK-00090	

ELECTRICAL CONSTRUCTION NOTES:

1. THE ELECTRICAL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE OR ANY OTHER STATE OR LOCAL CODE HAVING JURISDICTION.

2. ALL CONDUIT RUNS ARE DIAGRAMATICALLY SHOWN ON THE DRAWINGS. THE FINAL ROUTING OF CONDUITS SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AND APPROVED BY THE ENGINEER. CONDUIT SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUITS SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS. CONDUIT SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.

3. THE ELECTRICAL APPARATUS SUCH AS SWITCHES, RECEPTACLES, CONTROL DEVICES, PANELS, ETC., ARE SHOWN IN THEIR APPROXIMATE LOCATION. ACTUAL LOCATION OF THESE APPARATUS SHALL BE DETERMINED BY CHECKING JOB SITE AND OTHER TRADE DRAWINGS. FINAL LOCATION SHALL BE APPROVED BY THE ENGINEER. SWITCHES AND DISCONNECTS MOUNTING HEIGHT SHALL BE 4'-6" MIN. ABOVE FINISHED FLOOR OR GRADE UNLESS OTHERWISE NOTED.

4. THE TYPE CONDUIT SHALL BE AS FOLLOWS:

	TYPE
OUTDOOR ABOVE GRADE LOCATIONS	RMC
OUTDOOR BELOW GRADE LOCATIONS	RMC
ELECTRIC SERVICE	RMC
OTHER AREAS	RMC

5. THE POWER AND CONTROL WIRING SHALL BE STRANDED COPPER CONDUCTOR WITH THHW INSULATION RATED 600 VOLTS. SERVICE WIRING SHALL BE AS POWER WIRING BUT HAVE "XHHW" TYPE INSULATION. MINIMUM SIZE OF POWER WIRING SHALL BE #12 AWG. CONTROL WIRING SHALL BE #14 AWG.

6. THE ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE GROUNDING SYSTEM IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. ELECTRICAL WIRE RACEWAYS, APPARATUS AND PANEL ENCLOSURES AND OTHER NON-CURRENT CARRYING METAL PARTS SHALL BE MECHANICALLY JOINED TO FORM A CONTINUOUS CONDUCTING METALLIC PATH AND ASSURE ELECTRICAL CONTINUITY OF THE GROUNDING CIRCUITS. THE STRANDED COPPER BONDING JUMPER CABLES AND/OR GROUND WIRES SHALL BE INSTALLED WHERE REQUIRED. THE SURFACE WHERE GROUNDING CONNECTIONS ARE TO BE MADE SHALL BE CLEAN AND DRY. STEEL SURFACES SHALL BE GROUND OR FILED TO REMOVE ALL SCALE, RUST, GREASE AND DIRT. COPPER AND GALVANIZED STEEL SHALL BE CLEANED WITH EMERY CLOTH TO REMOVE OXIDE BEFORE MAKING CONNECTIONS.

7. ALL DEVICE BOXES, COVER PLATES AND JUNCTION BOXES SHALL BE RATED NEMA 4X OR 12.

8. ALL PVC TYPE CONDUIT EXCEPT ELECTRIC SERVICE CONNECTIONS SHALL INCLUDE A GROUNDING CONDUCTOR IN ADDITION TO THOSE THAT ARE SHOWN ON THE DRAWING.

9. ALL FIELD WIRING TERMINATIONS SHALL BE MADE AT TERMINALS LOCATED IN THE INDIVIDUAL COMPARTMENTS OR ENCLOSURES. USE OF WIRE NUTS OR DIRECT WIRING WILL NOT BE ACCEPTED. ALL TERMINATION POINTS MUST BE IDENTIFIED IN THE SHOP DRAWINGS AND PERMANENTLY / CLEARLY MARKED IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS. TERMINATOR MATERIALS SHALL BE SIZED FOR THE INSTALLED CONDUCTORS.

10. ALL WIRES SHALL BE NEATLY BUNDLED AND TAGGED TO INDICATE THE CONNECTED DEVICE. EACH WIRE SHALL BE COLOR CODED AND TAGGED WITH A PLASTIC SLEEVE TYPE WIRING TAG. WIRING SHALL BE TAGGED AT EACH POINT OF TERMINATION.

11. CONDUIT INSTALLATION INTO EQUIPMENT WITH EXPOSED LIVE COMPONENTS SHALL BE ROUTED FOR BOTTOM ENTRY WHERE POSSIBLE OR SEALED IN A WATERTIGHT MANNER ACCEPTABLE TO THE ENGINEER.

12. ALL 90 DEGREE ELBOWS AND CONDUIT PENETRATING CONCRETE SHALL BE PVC COATED GALVANIZED RIGID STEEL.

13. ALL RELAYS AND CONTACTORS SHALL HAVE A SUFFICIENT AMOUNT OF CONTACTS TO SATISFY THE CONTRACT REQUIREMENT AND ONE SPARE.

14. ALL DEVICES AND APPARATUS FURNISHED SHALL BE NEW AND SHALL BE UL LISTED.

15. THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUIT REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. CONTRACTOR IS TO PROVIDE A FINAL ELECTRICAL LAYOUT TO THE DESIGN ENGINEER FOR REVIEW AND FINAL APPROVAL BEFORE ORDERING EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATION.

16. DISCONNECT AND REMOVE EXISTING CONDUIT, WIRING, POWER AND CONTROL DEVICES ASSOCIATED WITH EQUIPMENT TO BE DEMOLISHED EXCEPT WHERE OTHERWISE INDICATED TO BE REUSED. REMOVE ALL WIRE AND EXPOSED CONDUIT.

17. EXISTING UNDERGROUND PIPE, CONDUIT AND APPURTENANCES ARE NOT SHOWN. CONTRACTOR SHALL LOCATE ALL EXISTING SUBSURFACE EQUIPMENT WHICH MAY CONFLICT WITH NEW CONSTRUCTION SO AS TO AVOID CONFLICTS OR DAMAGE.

18. UTILITY COMPANY WORK SHALL BE COORDINATED BY THE CONTRACTOR. ANY ASSOCIATED FEES AND COSTS WILL BE PAID BY THE CONTRACTOR.

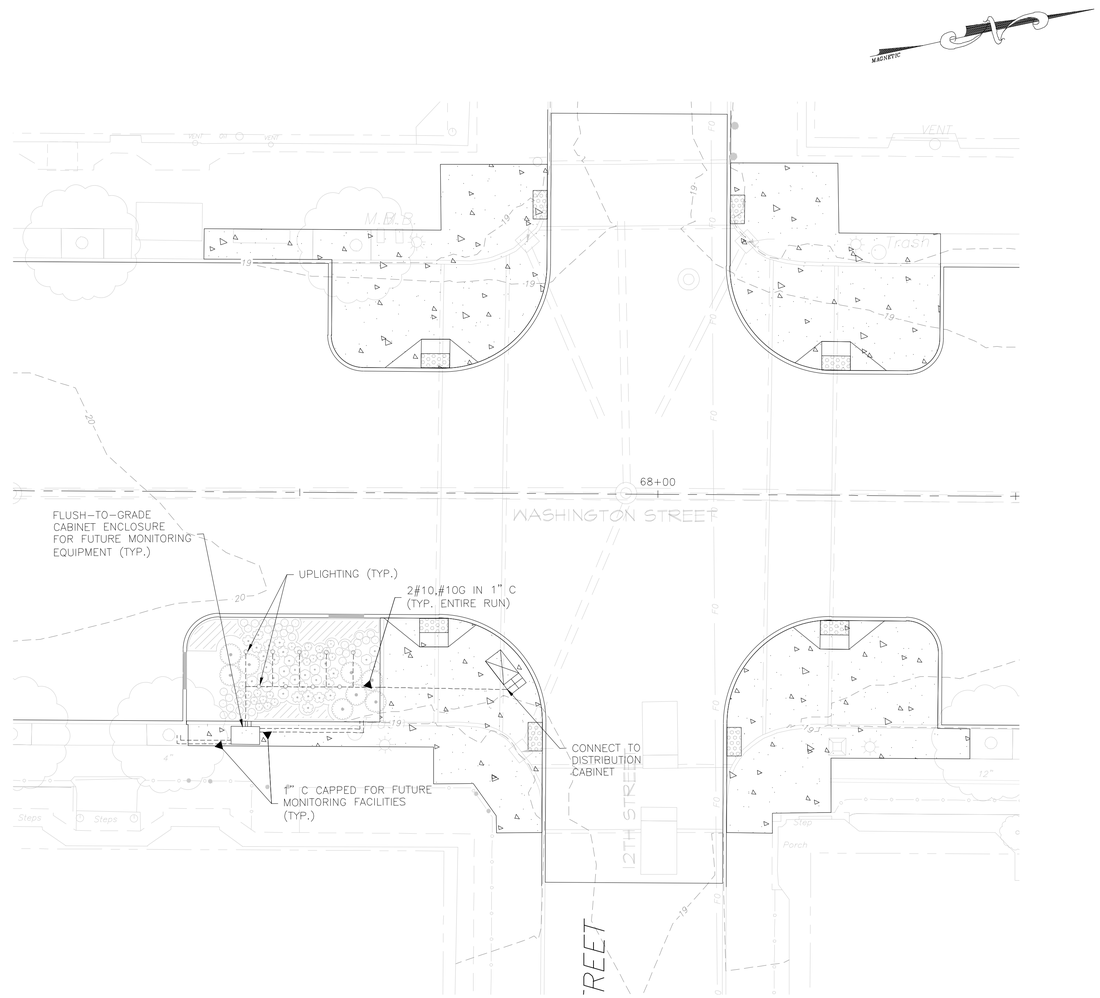
19. CONTRACTOR WILL PROVIDE 3 FEET OF WIRE AT THE WEATHERHEAD FOR PPL TO MAKE FINAL CONNECTION TO POLE. WIRE IS TO BE COILED NEATLY AND NOT HANGING.

20. DURING AND AFTER THE TIME OF INSTALLATION BY THE CONTRACTOR, SERVICE DISCONNECT IS TO BE IN THE "OFF" POSITION AND LOCKED OUT BEFORE PPL IS CONTACTED TO PROVIDE FINAL CONNECTION.

LUMINAIRE SCHEDULE					
SYMBOL	QTY	LABEL	ARRANGEMENT	WATTS	DESCRIPTION
— —O	125	PHILIPS/HADCO I25-SS-NF-WL40	SINGLE	17	NORROW FLOOD OPTIC, 17 WATT, MOUNTED TO ROCKGUARD

LEGEND

EXISTING		PROPOSED	EXISTING		PROPOSED
	TRACT BOUNDARY		102	INTERMEDIATE CONTOURS	
	PROPERTY LINE		100	INDEX CONTOURS	
	RIGHT-OF-WAY			TREES	
	EASEMENT			STORM SEWER	
	EDGE OF PAVEMENT		S	SANITARY SEWER	
	CURB		W WV	POTABLE WATER	
	SIDEWALK		G GV	NATURAL GAS	
	BUILDINGS		E E / OH OH	ELECTRIC	
	CONCRETE MONUMENTS		T T	TELEPHONE LINE	
	IRON PINS		SL	SANITARY LATERAL	
X	FENCE LINE			LIGHT FIXTURE	
	LIGHT POLES			RELOCATED CONDUIT	E E
	UTILITY POLES			PROPOSED CONDUIT	
	SIGNS			PROPOSED MONITORING EQUIP	



LIGHTING & MONITERING FACILITIES PLAN
12th ST. INTERSECTION

10' 5' 0 10' 20'
1" = 10'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT027-SHT034_DRWG_01-L&M.dwg
LAST SAVED: 03-11-2016, 9:40 AM
PLOTTED: 12 Mar 2016, 12:17AM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE OWNER, IS GENERALLY PROHIBITED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

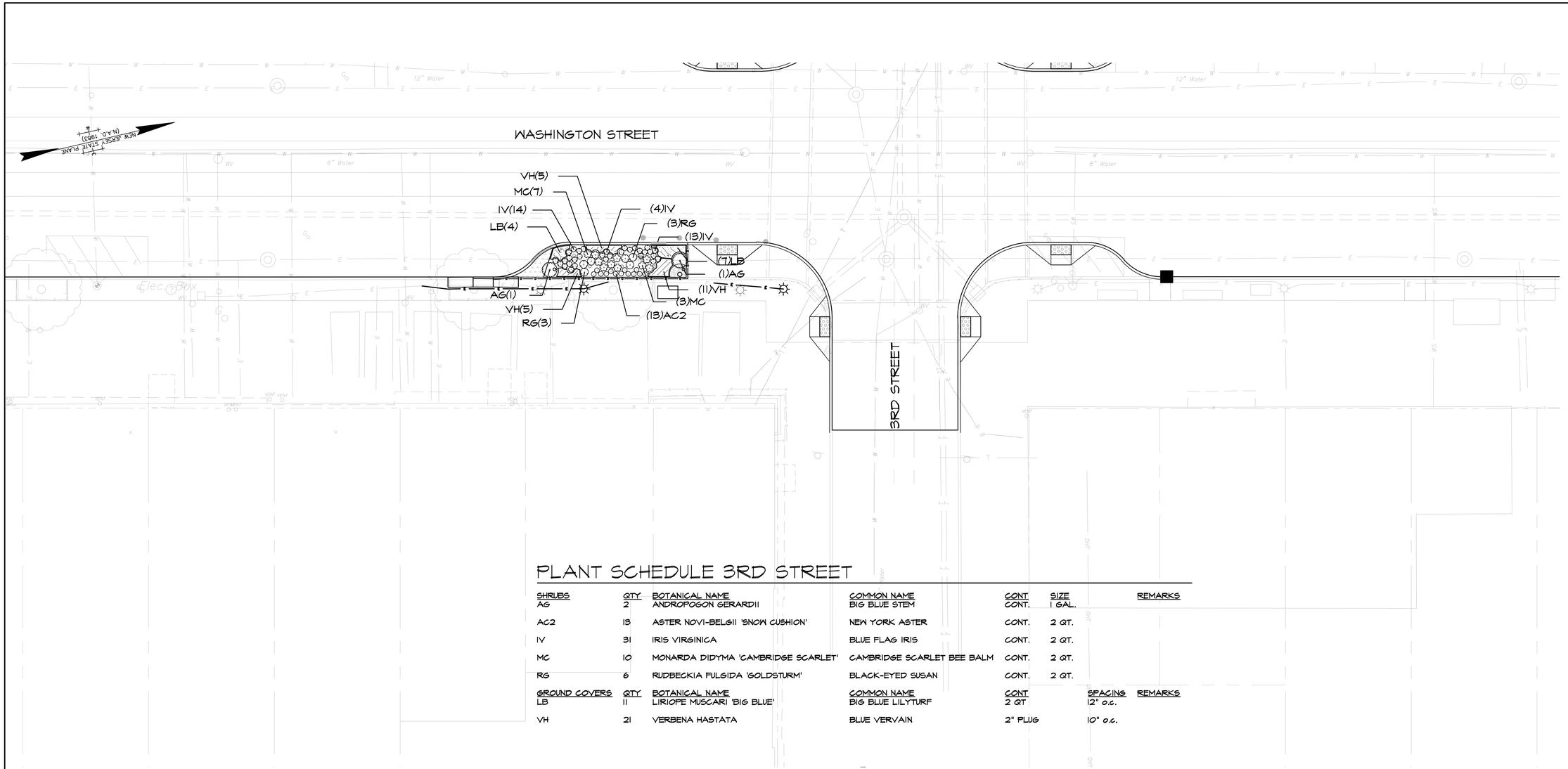
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

GREEN INFRASTRUCTURE
LIGHTING & MONITERING FACILITIES PLAN
12TH ST. INTERSECTION

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

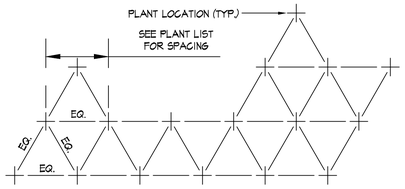
DESIGNED BY GD	DRAWING GIL-8
CHECKED BY DM	
DRAWN BY DP	SHEET 34
DATE 03-11-2016	
SCALE 1"=10'	
PROJ. NO. HOBK-00090	OF 70



PLANT SCHEDULE 3RD STREET

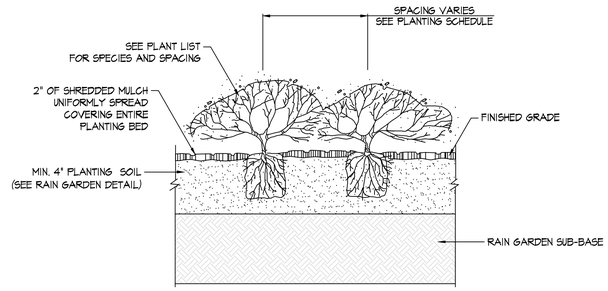
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
AG	2	ANDROPOGON GERARDII	BIG BLUE STEM	CONT.	1 GAL.	
AC2	13	ASTER NOVI-BELGII 'SNOW CUSHION'	NEW YORK ASTER	CONT.	2 QT.	
IV	31	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.	
MC	10	MONARDA DIDYMA 'CAMBRIDGE SCARLET'	CAMBRIDGE SCARLET BEE BALM	CONT.	2 QT.	
RG	6	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
LB	11	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	2 QT	12" o.c.	
VH	21	VERBENA HASTATA	BLUE VERVAIN	2" PLUG	10" o.c.	



PLANT SPACING DIAGRAM

NOT TO SCALE



NOTES:

1. GROUND COVER MATERIAL SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE IN THE NURSERY.

PLUG AND PERENNIAL PLANTING

NOT TO SCALE

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

3RD STREET & WASHINGTON STREET (STA 24+50 - STA 28+75)

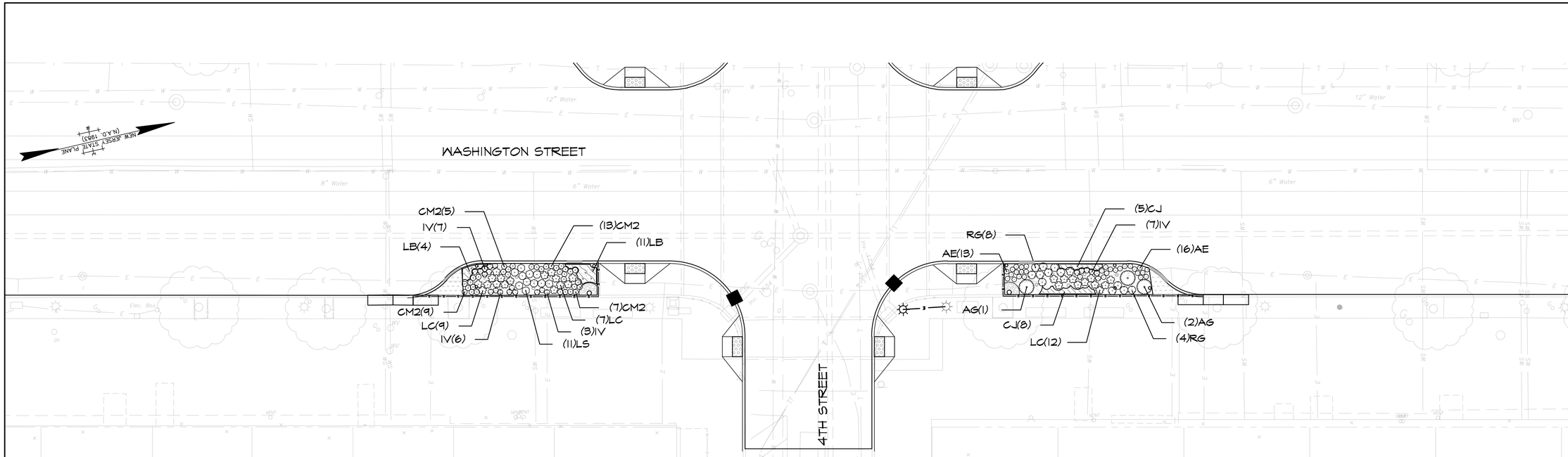
NJEIFP

T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-1
CHECKED BY XXX	
DRAWN BY BL	SHEET 35
DATE 03-11-2016	OF 70
SCALE 1"=10'	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT035_SHT042_LSP.dwg
LAST SAVED: Friday, March 11, 2016, 7:42 AM
LAST PLOTTED: Friday, March 11, 2016, 7:21 AM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



PLANT SCHEDULE 4TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
AG	3	ANDROPOGON GERARDII	BIG BLUE STEM	CONT.	1 GAL.	
AE	29	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	CONT.	2 QT.	
CM2	34	COREOPSIS X 'MOONBEAM'	MOONBEAM COREOPSIS	CONT.	2 QT.	
IV	23	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.	
LS	11	LIATRIS SPICATA 'SNOW WHITE'	SPIKE GAYFEATHER	CONT.	2 QT.	
LC	28	LOBELIA CARDINALIS	CARDINAL FLOWER	CONT.	2 QT.	
RG	12	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CJ	13	CAREX MORROWII	JAPANESE SEDGE	2" PLUG	12" o.c.	
LB	15	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	2 QT	12" o.c.	

LANDSCAPE PLANTING NOTES AND SPECIFICATIONS:

1. ALL PLANT MATERIAL SHALL BE PROVIDED AND INSTALLED IN STRICT CONFORMANCE WITH USDA STANDARDS FOR NURSERY STOCK AND THE "AMERICAN NURSERY AND LANDSCAPE ASSOCIATION" STANDARDS LATEST EDITIONS.

2. THE CONTRACTOR SHALL VERIFY ALL UTILITIES WITHIN WORK AREA PRIOR TO COMMENCING WITH ANY EXCAVATIONS AND SHALL BE RESPONSIBLE FOR THEIR PROTECTION.

3. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS SHOWN ON THE DRAWINGS, AS SPECIFIED, AND IN QUANTITIES INDICATED ON THE PLANT LIST. IF A DISCREPANCY SHOULD ARISE BETWEEN THE AMOUNT OF PLANTS SHOWN ON THE PLAN VS. THE PLANT SCHEDULE, THE PLAN SHALL GOVERN.

4. ALL PLANTS SHALL BE NURSERY GROWN.

5. ALL PLANTS SHALL BE HARDY UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT.

6. ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES OR VARIETY AND SHALL HAVE A NORMAL HABIT OR GROWTH. THEY SHALL BE SOUND, HEALTHY AND VIGOROUS WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF THEY SHALL BE FREE OF DISEASE AND INSECT PESTS, EGGS OR LARVAE. THEY SHALL HAVE HEALTHY WELL-DEVELOPED ROOT SYSTEMS.

7. SUBSTITUTIONS: WHEN PLANTS OF A SPECIFIED KIND OR SIZE ARE NOT AVAILABLE WITHIN A REASONABLE DISTANCE, SUBSTITUTIONS MAY BE MADE UPON REQUEST BY THE CONTRACTOR IF APPROVED BY THE LANDSCAPE ARCHITECT OR HIS/HER REPRESENTATIVE.

8. ALL AREAS TO BE SHOWN AS LAWN SHALL BE SEEDED, AS SPECIFIED, AND WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.

9. PLANT LOCATIONS MAY NEED TO BE ADJUSTED BASED ON LOCATIONS OF UTILITIES, FIELD CONDITIONS, OR FINAL GRADING. THE CONTRACTOR SHALL NOTIFY THE OWNER AND/OR THEIR REPRESENTATIVE IF ADJUSTMENTS ARE NECESSARY.

10. ALL PLANTING BEDS TO RECEIVE 2" SHREDDED HARDWOOD MULCH. THE COST OF MULCHING PLANT BEDS SHALL BE INCLUDED IN THE COST OF THE PLANT INSTALLATION. NO SEPARATE PAYMENT WILL BE MADE.

11. ROOT BALLS OF ALL PLANTS SHALL BE ADEQUATELY PROTECTED AT ALL TIMES FROM SUN AND DRYING WINDS OR FROST.

12. PLANTS WITH BROKEN ROOT BALLS, TRUNK AND BARK DAMAGE OR EXCESSIVE DAMAGE TO THE CROWN SHALL BE REPLACED PRIOR TO PLANTING.

13. ROPES AT TOP OF BALL SHALL BE CUT. REMOVE TOP 1/3 OF BURLAP. ALL NON- BIODEGRADABLE MATERIAL SHALL BE TOTALLY REMOVED. WIRE BASKETS SHALL BE CAREFULLY REMOVED ENTIRELY AT THE TIME OF PLANTING, PREFERABLY AFTER THE ROOT BALL HAS BEEN INSTALLED IN THE PLANTING PIT.

14. PREPARATION OF PLANTING: ALL SOIL EXCAVATED FROM THE PLANTING BEDS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE RULES, LAWS, AND REGULATIONS

15. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING.

16. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE PROJECT LANDSCAPE ARCHITECT OR HIS/HER EQUAL.

17. INSTALL ALL PLANTS SO THAT THE TOP OF THE ROOTBALL IS SLIGHTLY ABOVE FINISHED GRADE. IN NO CASE SHALL THE PLANT BE INSTALLED WITH NO LESS THAN THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANT'S ORIGINAL ROOT CROWN. EXCESS SOIL MAY EXIST AROUND THE ROOT CROWN FROM NURSERY OPERATIONS. THIS EXCESS MATERIAL SHALL BE REMOVED PRIOR TO PLANTING TO DETERMINE THE PROPER BALL INSTALLATION DEPTH.

18. ALL EXISTING TREES THAT ARE TO BE SAVED AS DETERMINED BY LANDSCAPE ARCHITECT SHALL BE PROTECTED UNTIL CONSTRUCTION HAS BEEN COMPLETED. AREA WITHIN DRIPLINE SHALL NOT BE TRAVELED ACROSS BY CONSTRUCTION TRAFFIC.

19. TREES PLANTED ALONG STREETS SHALL HAVE A SINGLE STRAIGHT TRUNK THAT DOES NOT FORK BELOW 6'.

20. ALL PLANTS SHALL BE BALLED AND WRAPPED OR CONTAINER GROWN AS SPECIFIED. NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL NON-BIODEGRADEABLE ROOT WRAPPING MATERIAL SHALL BE REMOVED AT TIME OF PLANTING.

21. WITH CONTAINER GROWN STOCK, THE CONTAINER SHALL BE REMOVED AND THE CONTAINER BALL CUT THROUGH THE SURFACE IN TWO VERTICAL LOCATIONS MINIMUM.

22. THE CONTRACTOR SHALL LAYOUT WITH IDENTIFIABLE STAKES INDIVIDUAL TREE AND SHRUB LOCATIONS AND AREAS FOR MULTIPLE PLANTING ALONG WITH THE ARRANGEMENTS AND OUTLINE OF PLANTING BEDS AS INDICATED ON DRAWING. THE LAYOUT OF PLANTING WILL THEN BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO ANY EXCAVATION OF PLANT PITS OR PLANT BEDS.

23. AT PLANTING TIME, ALL PLANT MATERIAL SHALL BE TRIMMED TO REMOVE BROKEN AND/OR DEAD VEGETATIVE MATERIAL.

24. ALL PLANTS SHALL BE INSTALLED AS PER THE PLANTING DETAILS AND THE CONTRACT SPECIFICATIONS, WHERE APPLICABLE.

25. ALL PLANTS SHALL BE INSTALLED PLUMB UNLESS OTHERWISE SPECIFIED.

26. ALL PLANTS SHALL BE THOROUGHLY WATERED TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL THEN BE WATERED WEEKLY OR MORE OFTEN, IF NECESSARY, DURING THE FIRST GROWING SEASON.

27. CONDITIONS DETRIMENTAL TO PLANTS: THE CONTRACTOR SHALL NOTIFY THE PROJECT REPRESENTATIVE IN WRITING OF ALL SOIL OR DRAINAGE CONDITIONS WHICH THE CONTRACTOR CONSIDERS DETRIMENTAL TO THE GROWTH OF PLANTS. HE SHALL STATE THE CONDITIONS AND SUBMIT A PROPOSAL FOR CORRECTING THE CONDITIONS INCLUDING ANY CHANGE IN COST FOR REVIEW AND ACCEPTANCE BY THE PROJECT REPRESENTATIVE.

28. WARRANT TREES AND SHRUBS FOR A MINIMUM PERIOD OF ONE (1) YEAR AFTER DATE OF WRITTEN FINAL ACCEPTANCE BY THE LANDSCAPE ARCHITECT AND/OR THE OWNERS AUTHORIZED REPRESENTATIVE AGAINST DEFECTS INCLUDING DEATH AND UNSATISFACTORY GROWTH. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MONITOR THE PROJECT PLANTINGS DURING THE WARRANTY PERIOD AND NOTIFY THE OWNER IF PROBLEMS DEVELOP. PLANTS THAT DIE DURING THE WARRANTY PERIOD SHALL BE REMOVED IMMEDIATELY AND REPLACED.

10' 5' 0 10' 20'
1" = 10'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT035-SHT042_LSP.dwg
PLOT SCALE: 1:1 PLOT DATE: Monday, Mar 12, 2018 - 12:18AM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS PREPARED, SHALL NOT BE REPRODUCED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

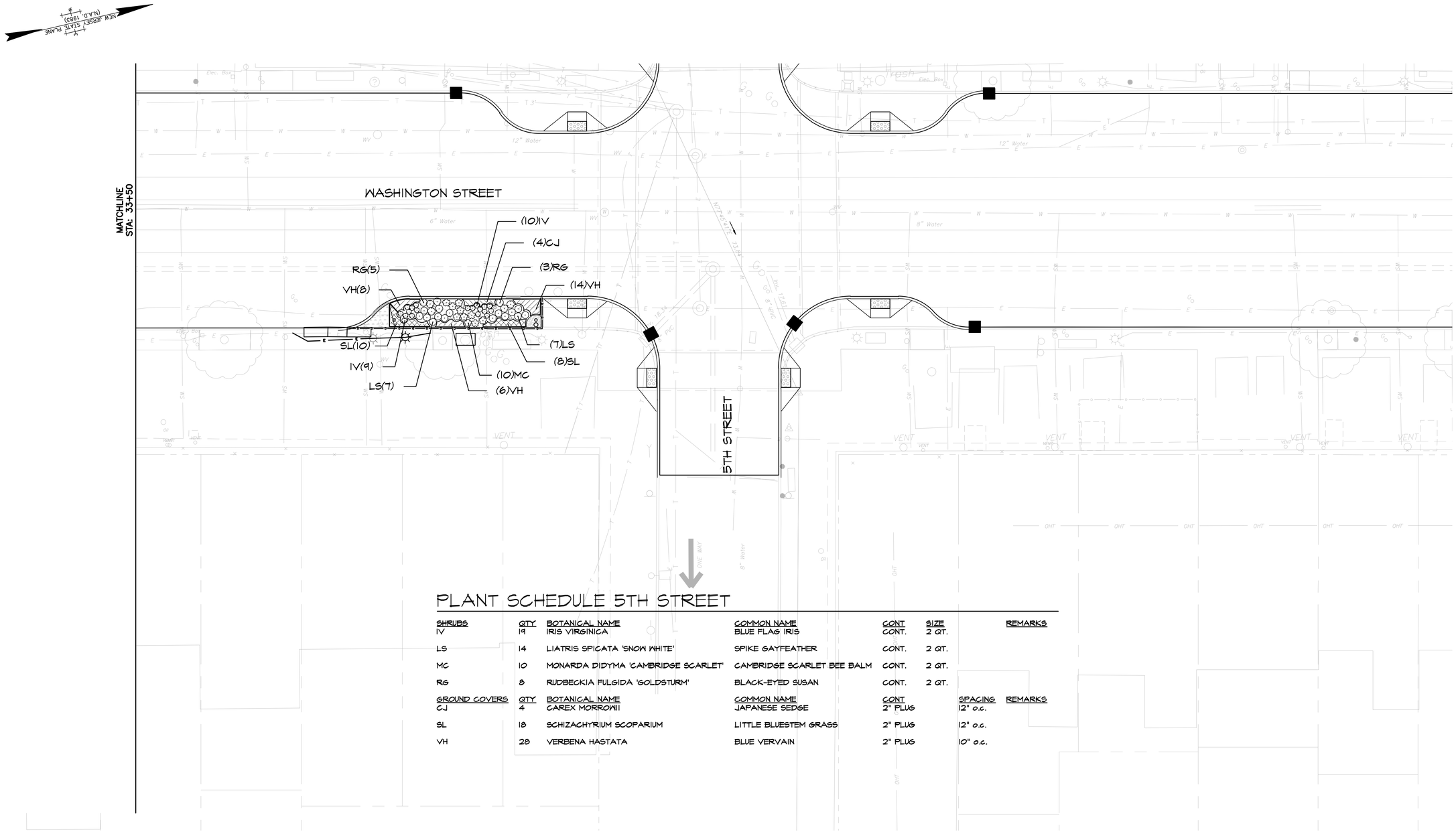
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

4TH STREET & WASHINGTON STREET (STA 28+75 - STA 33+50)

NJEIFP

T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-2
CHECKED BY DM	
DRAWN BY BL	SHEET 36
DATE 03-11-2016	OF 70
SCALE 1"=10'	
PROJ. NO. HOBK-00090	



PLANT SCHEDULE 5TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE		REMARKS
IV	19	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.		
LS	14	LIATRIS SPICATA 'SNOW WHITE'	SPIKE GAYFEATHER	CONT.	2 QT.		
MC	10	MONARDA DIDYMA 'CAMBRIDGE SCARLET'	CAMBRIDGE SCARLET BEE BALM	CONT.	2 QT.		
RG	8	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.		
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		**SPACING**	**REMARKS**
CJ	4	CAREX MORROWII	JAPANESE SEDGE	2" PLUG		12" o.c.	
SL	18	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM GRASS	2" PLUG		12" o.c.	
VH	28	VERBENA HASTATA	BLUE VERVAIN	2" PLUG		10" o.c.	

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

5TH STREET & WASHINGTON STREET (STA 33+50 - STA 37+50)

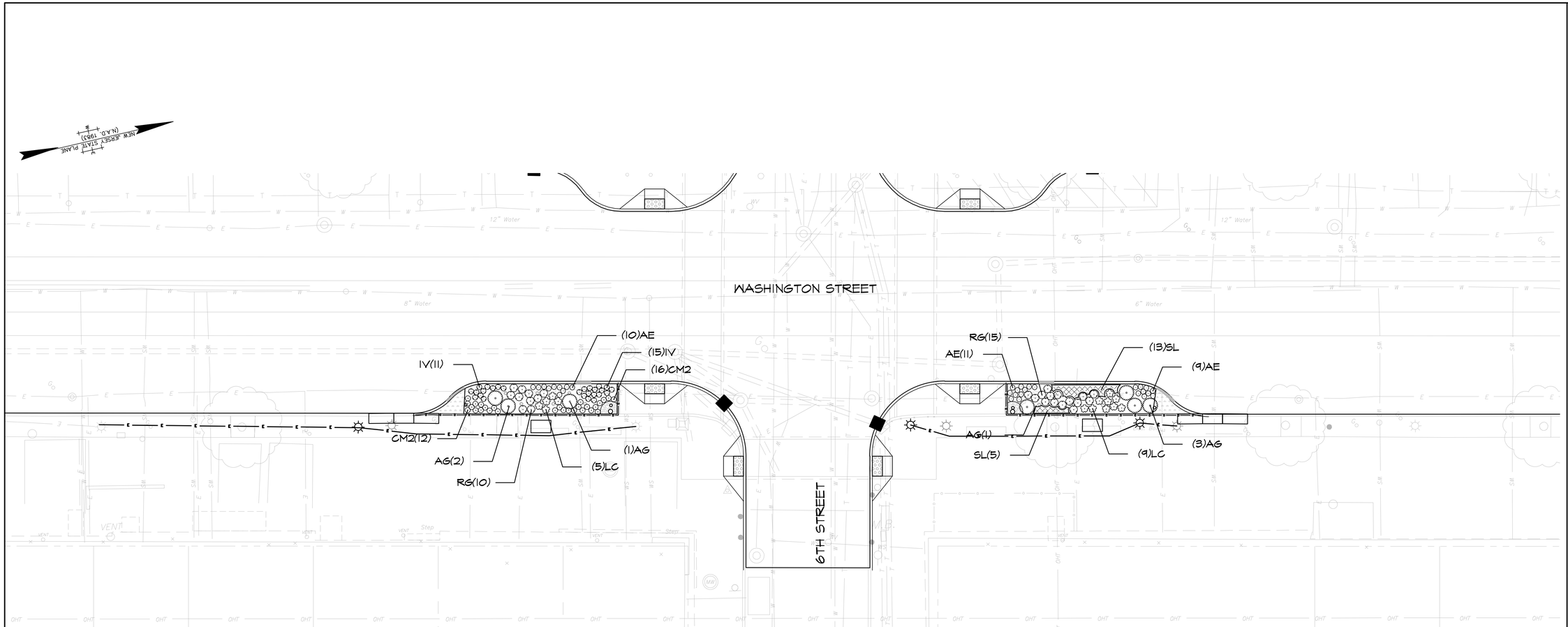
NJEIFP

T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-3
CHECKED BY DM	
DRAWN BY BL	SHEET 37
DATE 03-11-2016	OF 70
SCALE 1"=10'	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT035-SHT042_LSP.dwg
LAST SAVED: Friday, March 04, 2016, TUE 22 Mar 2016, 12:16AM
LAST SAVE BY: mvilenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



PLANT SCHEDULE 6TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE		REMARKS
AG	7	ANDROPOGON GERARDII	BIG BLUE STEM	CONT.	1 GAL.		
AE	30	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	CONT.	2 QT.		
CM2	28	COREOPSIS X 'MOONBEAM'	MOONBEAM COREOPSIS	CONT.	2 QT.		
IV	26	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.		
LC	14	LOBELIA CARDINALIS	CARDINAL FLOWER	CONT.	2 QT.		
RG	25	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.		
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT		SPACING	REMARKS
SL	18	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM GRASS	2" PLUG		12" o.c.	

10′ 5′ 0 10′ 20′
1″ = 10′

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

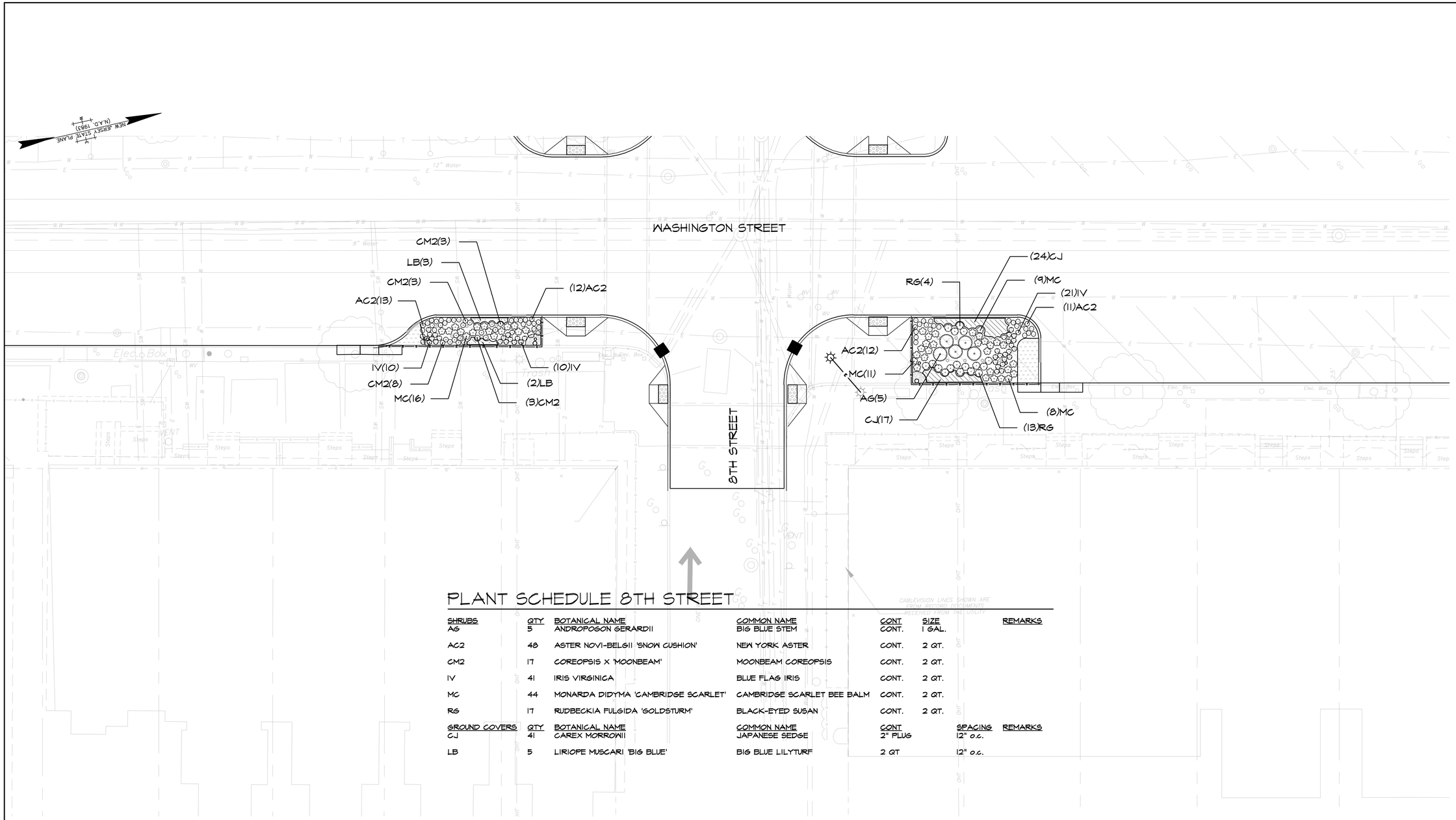
6TH STREET & WASHINGTON STREET (STA 37+50 - STA 42+50)
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-4
CHECKED BY DM	
DRAWN BY BL	SHEET 38
DATE 03-11-2016	OF 70
SCALE 1"=10'	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT035-SHT042_LSP.dwg
LAST SAVED: Friday, November 04, 2016, 7:21 AM
LAST SAVE BY: mvienzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



PLANT SCHEDULE 8TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
AG	5	ANDROPOGON GERARDII	BIG BLUE STEM	CONT.	1 GAL.	
AC2	48	ASTER NOVI-BELGII 'SNOW CUSHION'	NEW YORK ASTER	CONT.	2 QT.	
CM2	17	COREOPSIS X 'MOONBEAM'	MOONBEAM COREOPSIS	CONT.	2 QT.	
IV	41	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.	
MC	44	MONARDA DIDYMA 'CAMBRIDGE SCARLET'	CAMBRIDGE SCARLET BEE BALM	CONT.	2 QT.	
RG	17	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CJ	41	CAREX MORROWII	JAPANESE SEDGE	2" PLUG	12" o.c.	
LB	5	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	2 QT	12" o.c.	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT035-SHT042_LSP.dwg
LIST SHEET: 01-Base, 02-Grade, 12 Mar 2016, 12:11:6AM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

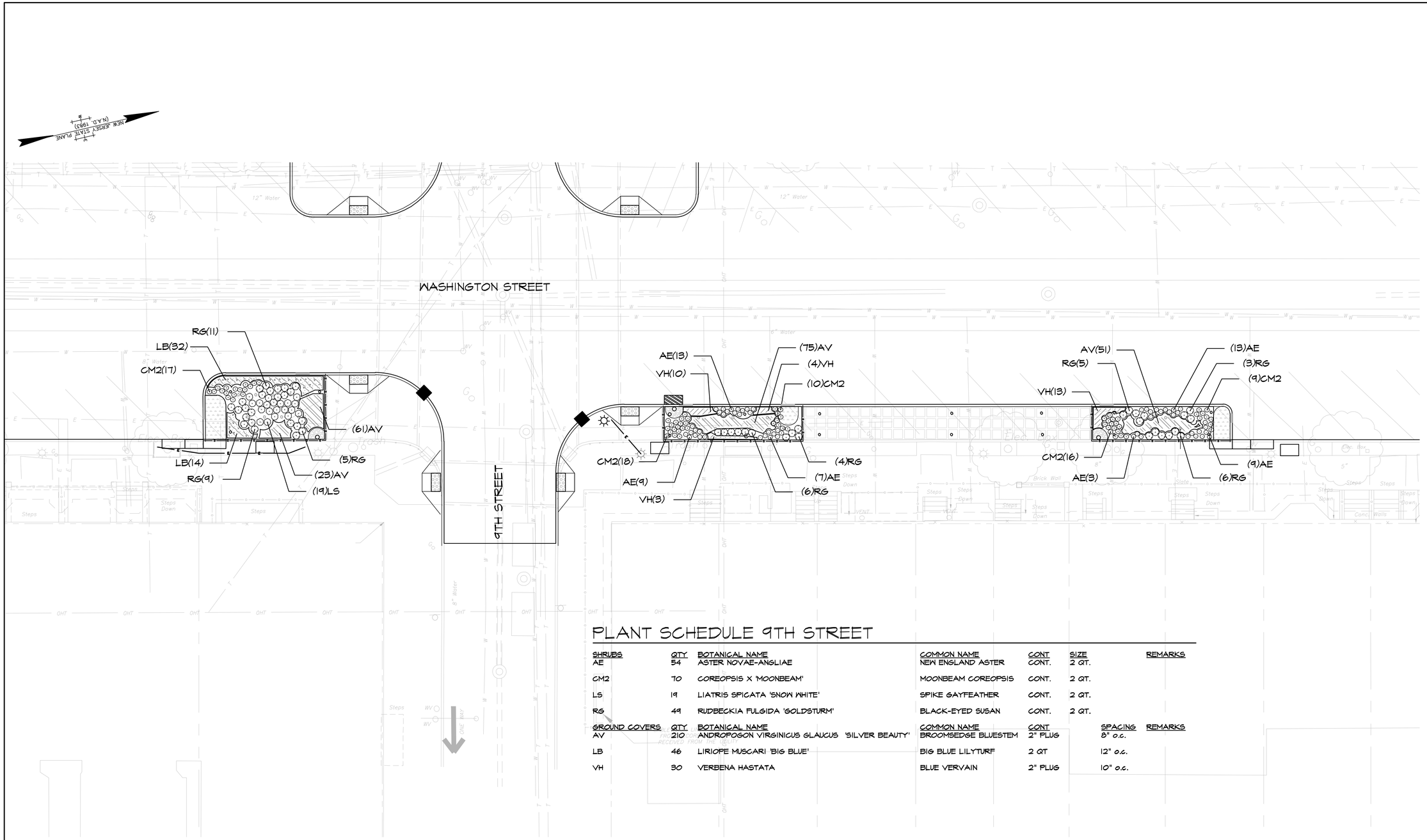
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

8TH STREET & WASHINGTON STREET (STA 46+75 - STA 52+25)

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-5
CHECKED BY DM	
DRAWN BY BL	SHEET 39
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	



PLANT SCHEDULE 9TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
AE	54	ASTER NOVAE-ANGLIAE	NEW ENGLAND ASTER	CONT.	2 QT.	
CM2	70	COREOPSIS X 'MOONBEAM'	MOONBEAM COREOPSIS	CONT.	2 QT.	
LS	19	LIATRIS SPICATA 'SNOW WHITE'	SPIKE GAYFEATHER	CONT.	2 QT.	
RG	49	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
AV	210	ANDROPOGON VIRGINICUS GLAUCUS 'SILVER BEAUTY'	BROOMSEDGE BLUESTEM	2" PLUG	8" o.c.	
LB	46	LIRIOPE MUSCARI 'BIG BLUE'	BIG BLUE LILYTURF	2 QT	12" o.c.	
VH	30	VERBENA HASTATA	BLUE VERVAIN	2" PLUG	10" o.c.	

10' 5' 0 10' 20'
1" = 10'

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT053-SHT042_LSP.dwg
LAYOUT TAB: LSP-6 PLOT DATE: Tue, 12 Mar 2016, 7:21:18AM
LAST SAVE BY: mvilenzuela

COPYRIGHT 2016, T&M ASSOCIATES -- ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

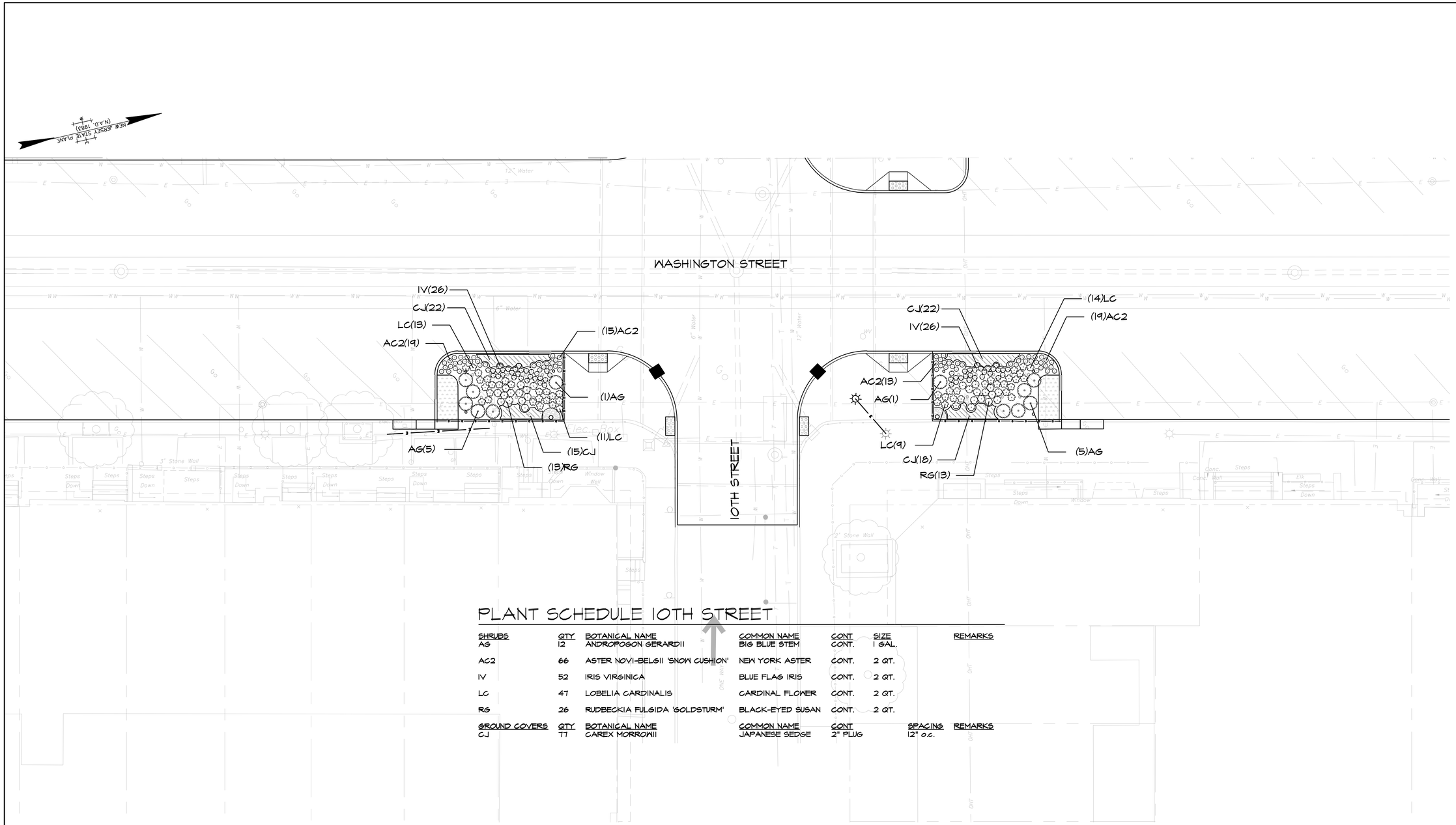
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

9TH STREET & WASHINGTON STREET (STA 52+25 - STA 56+75)

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-6
CHECKED BY DM	
DRAWN BY BL	SHEET 40
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	



PLANT SCHEDULE 10TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	REMARKS
AG	12	ANDROPOGON GERARDII	BIG BLUE STEM	CONT.	1 GAL.	
AC2	66	ASTER NOVI-BELGII 'SNOW CUSHION'	NEW YORK ASTER	CONT.	2 QT.	
IV	52	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.	
LC	47	LOBELIA CARDINALIS	CARDINAL FLOWER	CONT.	2 QT.	
RG	26	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	CONT.	2 QT.	

GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	REMARKS
CJ	77	CAREX MORROWII	JAPANESE SEDGE	2" PLUG	12" o.c.	

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

10TH STREET & WASHINGTON STREET (STA 56+75 - STA 61+50)

NJEIFP

YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365

www.tandmassociates.com

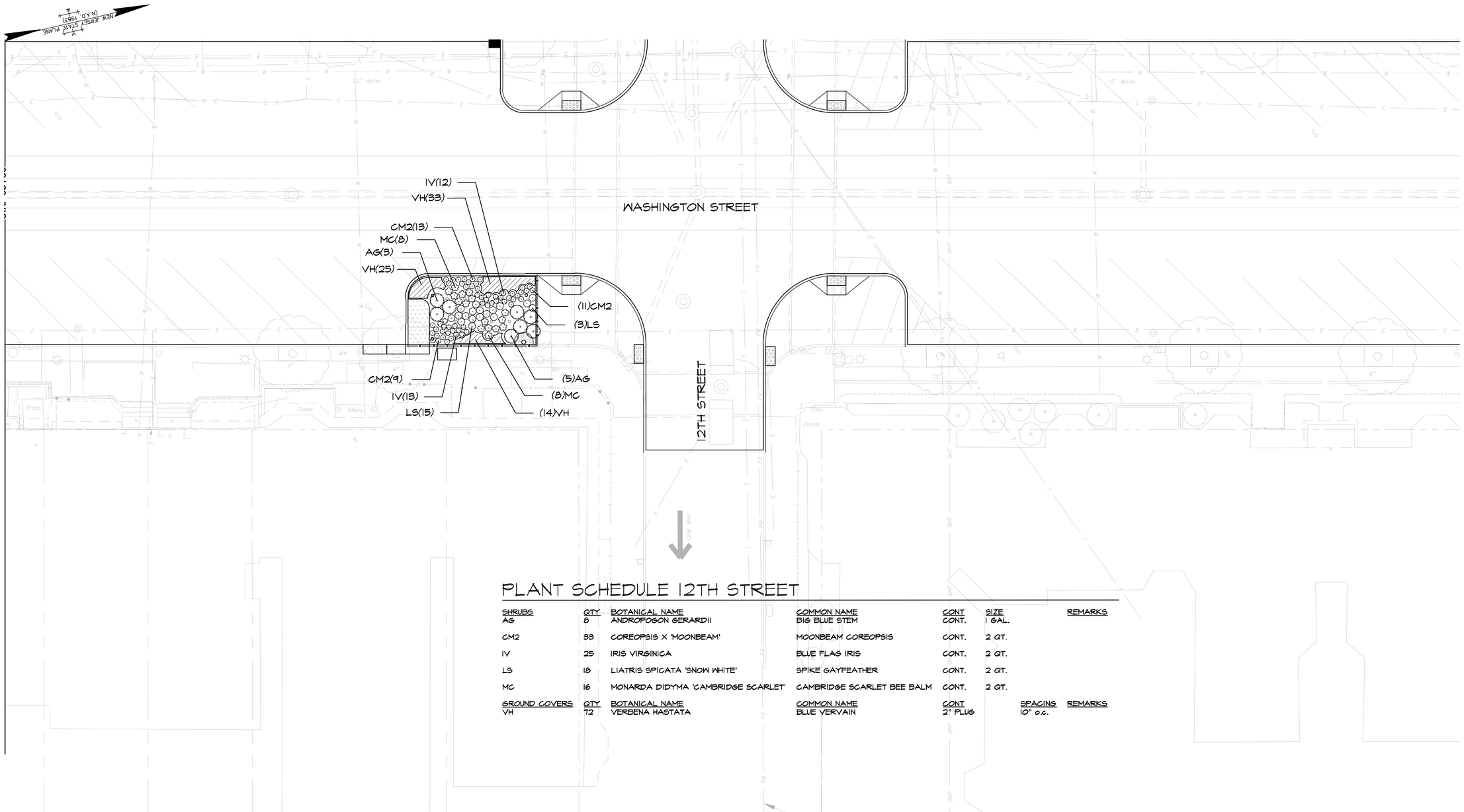
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-7
CHECKED BY DM	
DRAWN BY BL	SHEET 41
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT035-SHT042_LSP.dwg
LAST SAVED: Thursday, March 03, 2016, Tue 22 Mar 2016, 12:16AM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



PLANT SCHEDULE 12TH STREET

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE		REMARKS
AG	8	ANDROPOGON GERARDII	BIG BLUE STEM	CONT.	1 GAL.		
CM2	33	COREOPSIS X 'MOONBEAM'	MOONBEAM COREOPSIS	CONT.	2 QT.		
IV	25	IRIS VIRGINICA	BLUE FLAG IRIS	CONT.	2 QT.		
LS	18	LIATRIS SPICATA 'SNOW WHITE'	SPIKE GAYFEATHER	CONT.	2 QT.		
MC	16	MONARDA DIDYMA 'CAMBRIDGE SCARLET'	CAMBRIDGE SCARLET BEE BALM	CONT.	2 QT.		
GROUND COVERS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**		**SPACING**	**REMARKS**
VH	72	VERBENA HASTATA	BLUE VERVAIN	2" PLUG		10" o.c.	

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

BRIAN LEFF, L.L.A., P.P.
LICENSED LANDSCAPE ARCHITECT
LICENSED LANDSCAPE ARCHITECT
STATE OF NJ LICENSE No. A00079900
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

12TH STREET & WASHINGTON STREET (STA 66+50 - STA 70+75)

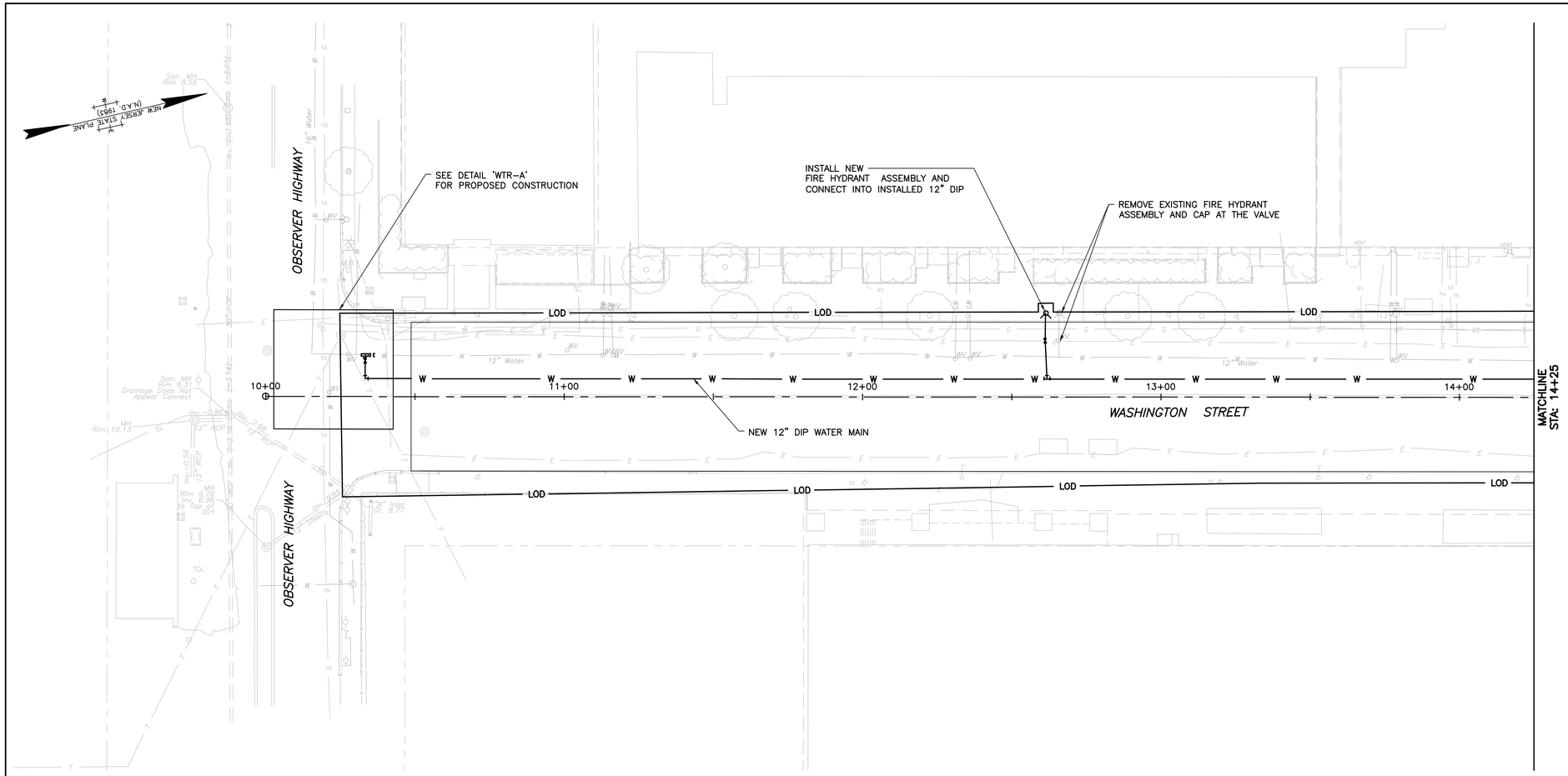
NJEIFP

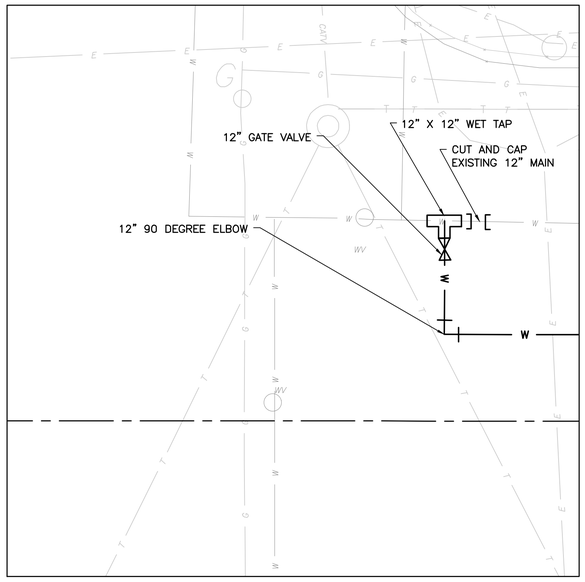
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY BL	DRAWING LSP-8
CHECKED BY DM	
DRAWN BY BL	SHEET 42
DATE 03-11-2016	
SCALE 1"=10'	OF 70
PROJ. NO. HOBK-00090	

COPYRIGHT 2016, T&M ASSOCIATES -- ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT053-SHT042_LSP.dwg
LAST SAVED: Friday, March 04, 2016 12:00:00 PM
LAST PLOTTED: Friday, March 04, 2016 - 12:12PM
LAST SAVE BY: mvilenzuela





DETAIL 'WTR-A'
(WASHINGTON STREET & OBSERVER HIGHWAY)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 10+00 - STA 14+25)

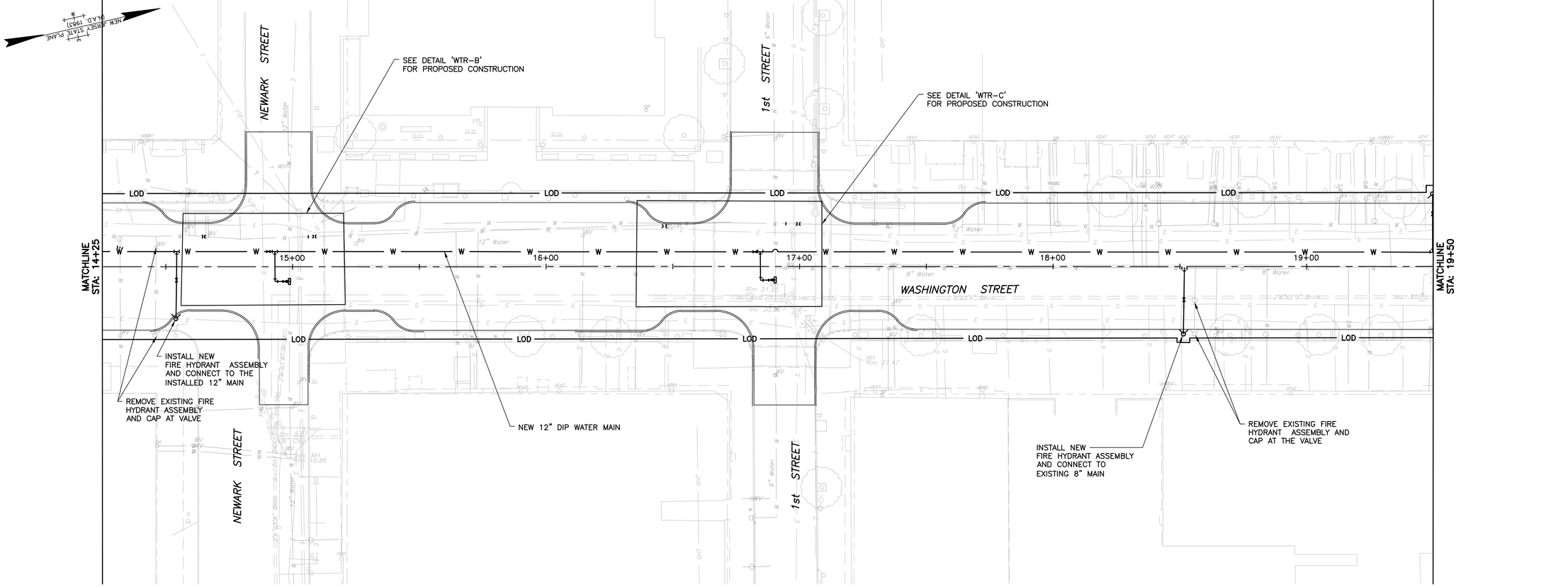
NJEIFP

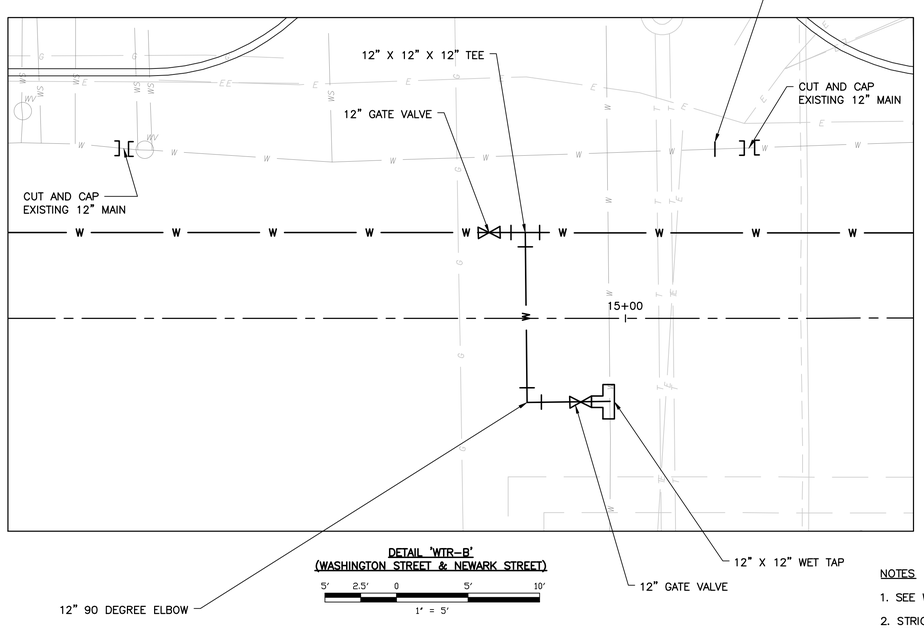
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-1
CHECKED BY SB	
DRAWN BY DN	SHEET 43
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

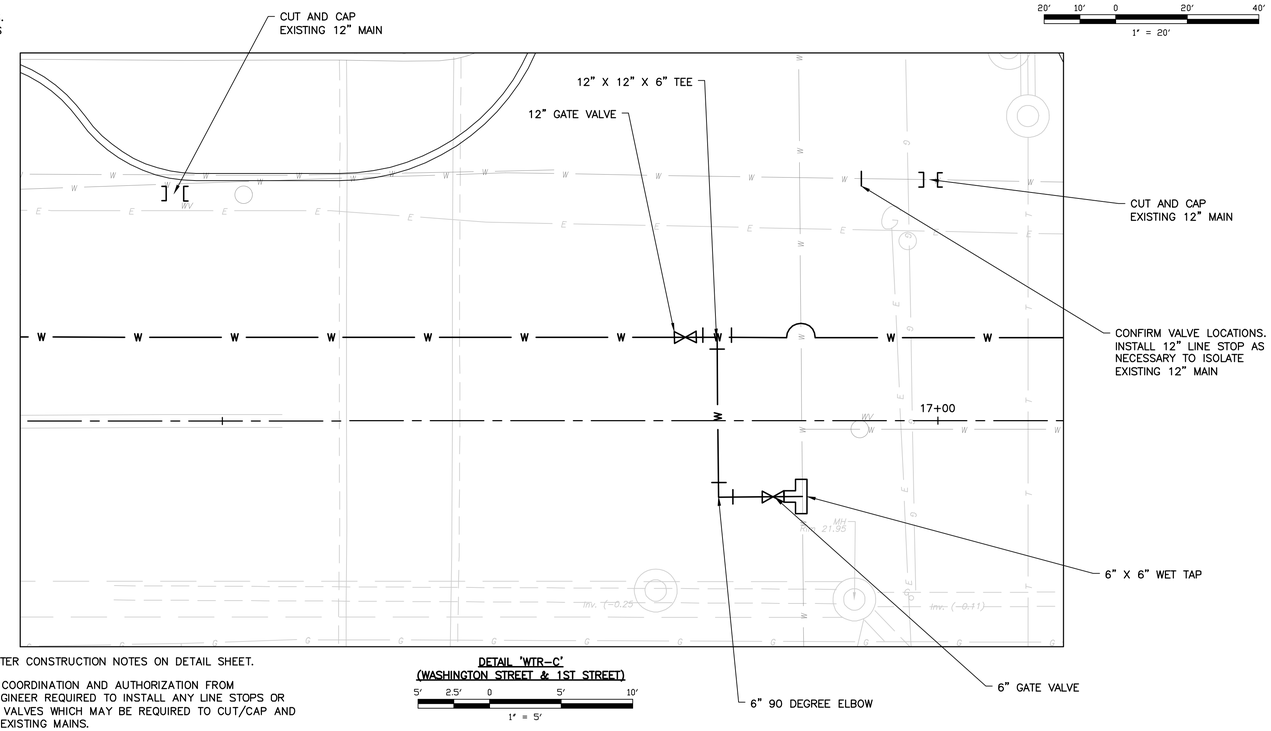
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAST SAVED: 03-14-2016, 1:46 PM
PLOTTED: 14 Mar 2016, 12:20PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-B'
(WASHINGTON STREET & NEWARK STREET)



DETAIL 'WTR-C'
(WASHINGTON STREET & 1ST STREET)

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 14+25 - STA 19+50)

NJEIFP

YOUR GOALS. OUR MISSION.

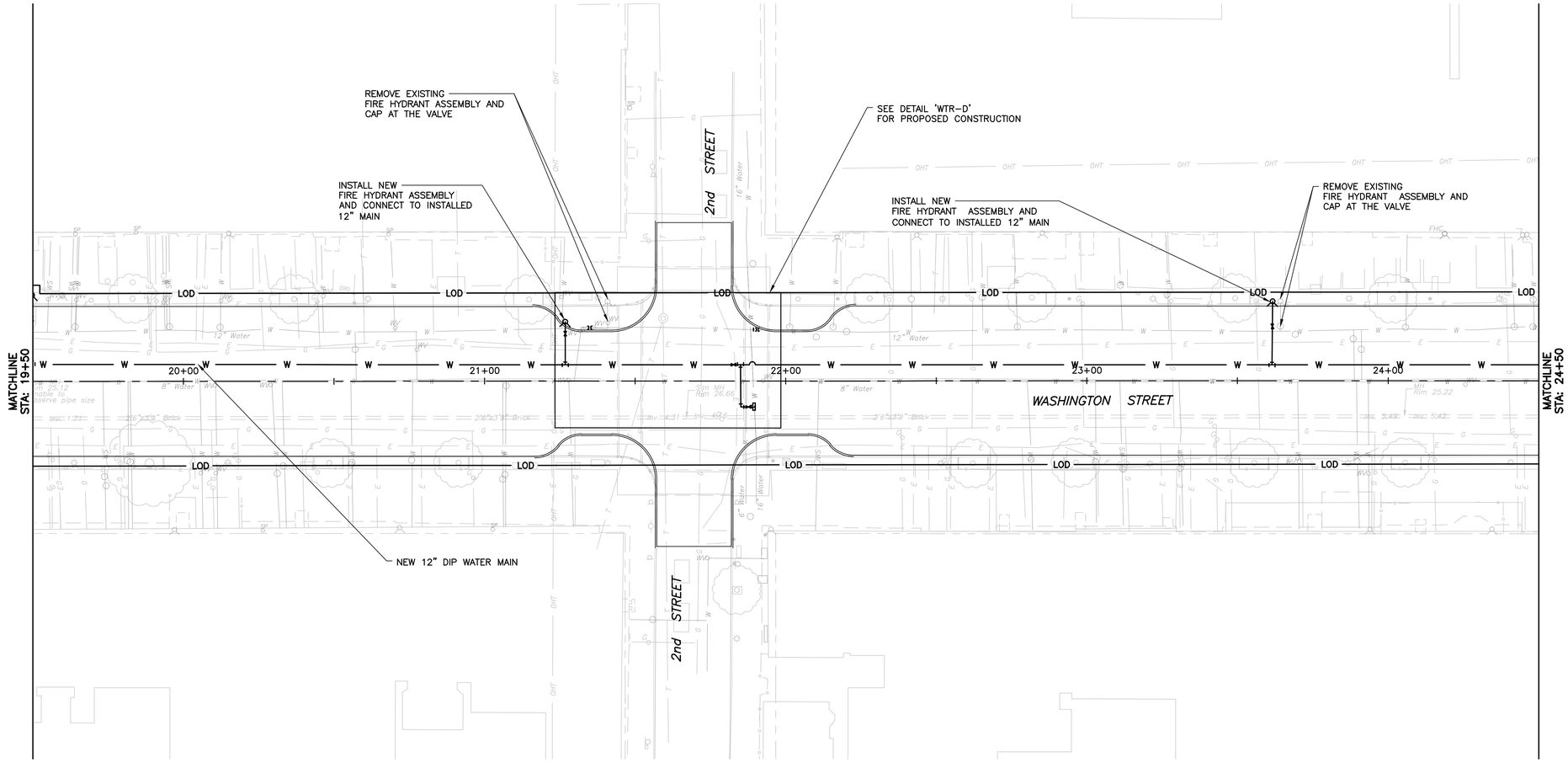
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

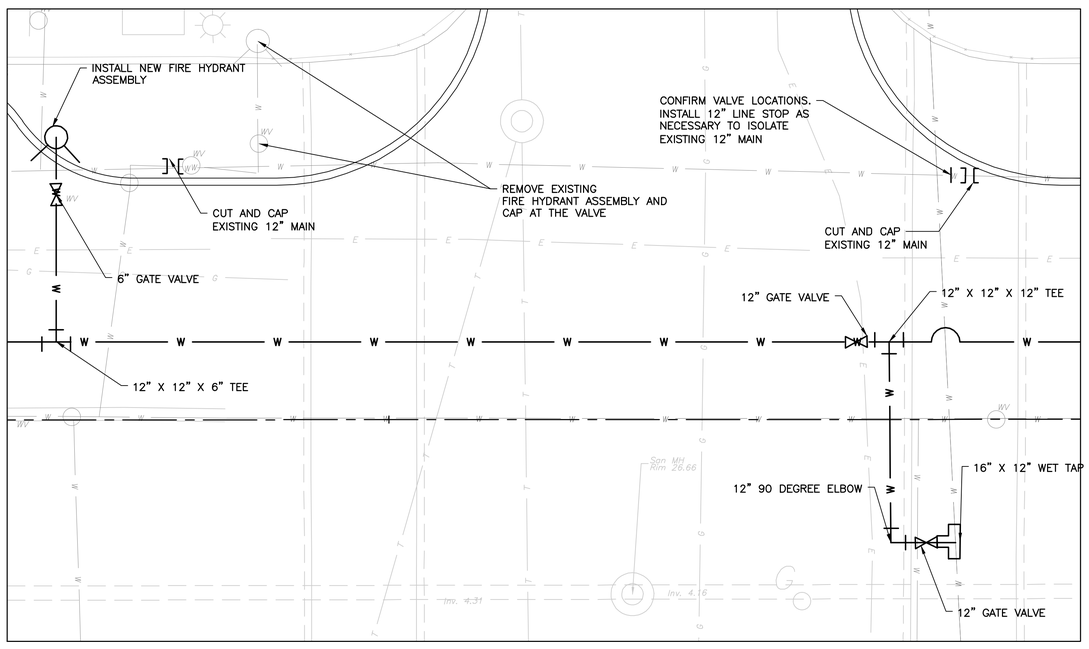
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-2
CHECKED BY SB	
DRAWN BY DN	SHEET 44
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043_SHT057_UTL.dwg
LAST SAVED: Monday, March 14, 2016, 12:20PM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE EXPRESS PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-D'
(WASHINGTON STREET & 2ND STREET)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 19+50 - STA 24+50)

NJEIFP

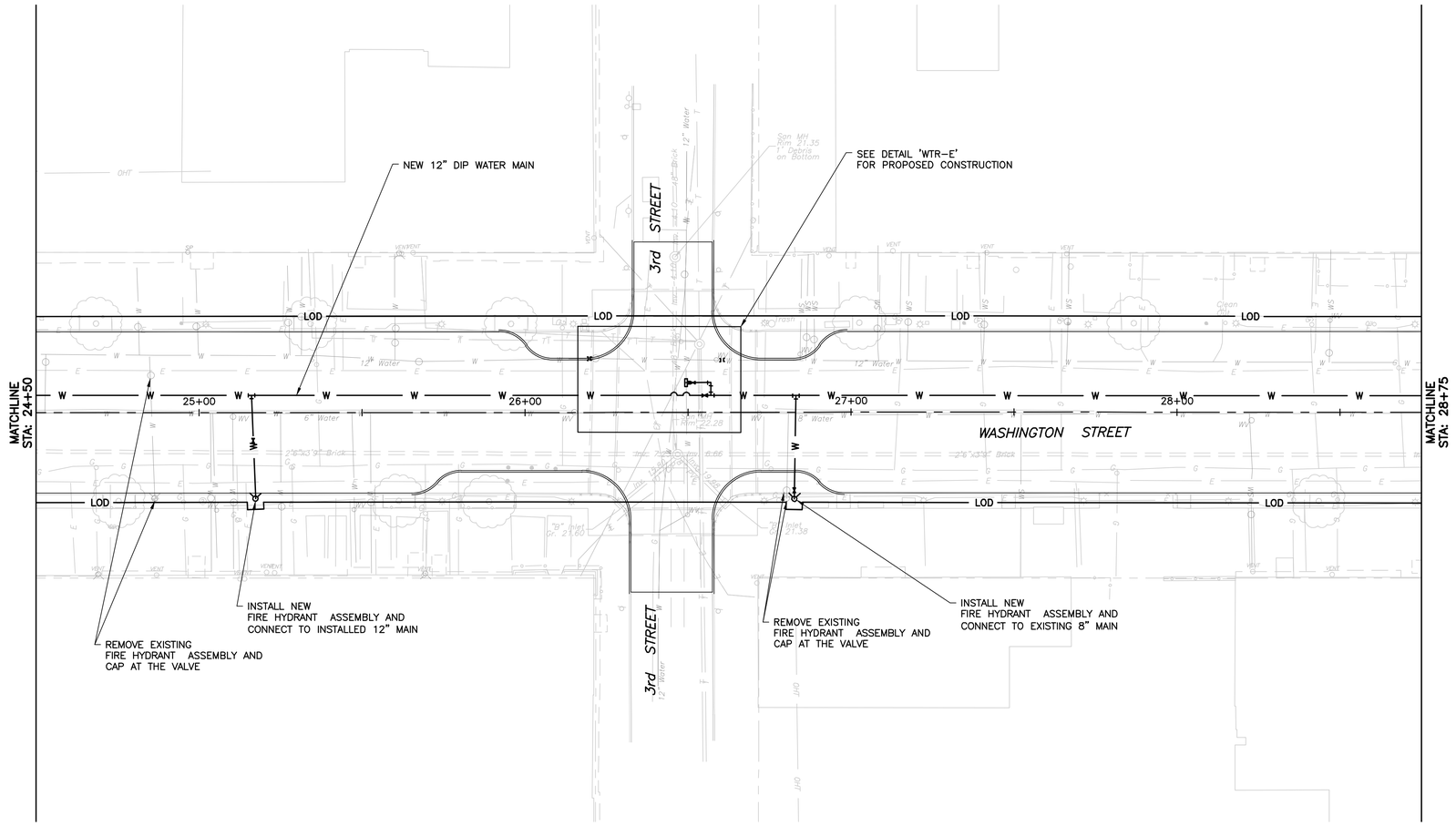
T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-3
CHECKED BY SB	
DRAWN BY DN	SHEET 45
DATE 03-11-2016	
SCALE AS INDICATED	OF 70
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
PLOT SCALE: 1:1 PLOT DATE: FRIDAY, THE 14 MAY 2016, 12:20PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR SITE FOR WHICH IT WAS ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

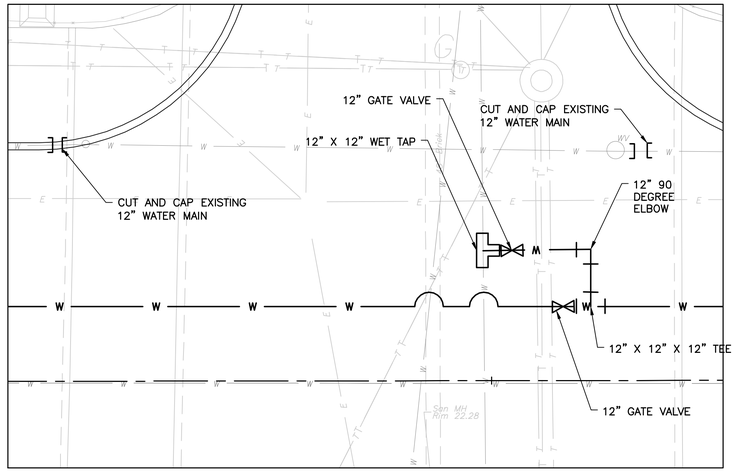


20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.



DETAIL 'WTR-E'
(WASHINGTON STREET & 3RD STREET)

5' 2.5' 0 5' 10'
1" = 5'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 24+50 - STA 28+75)

NJEIFP

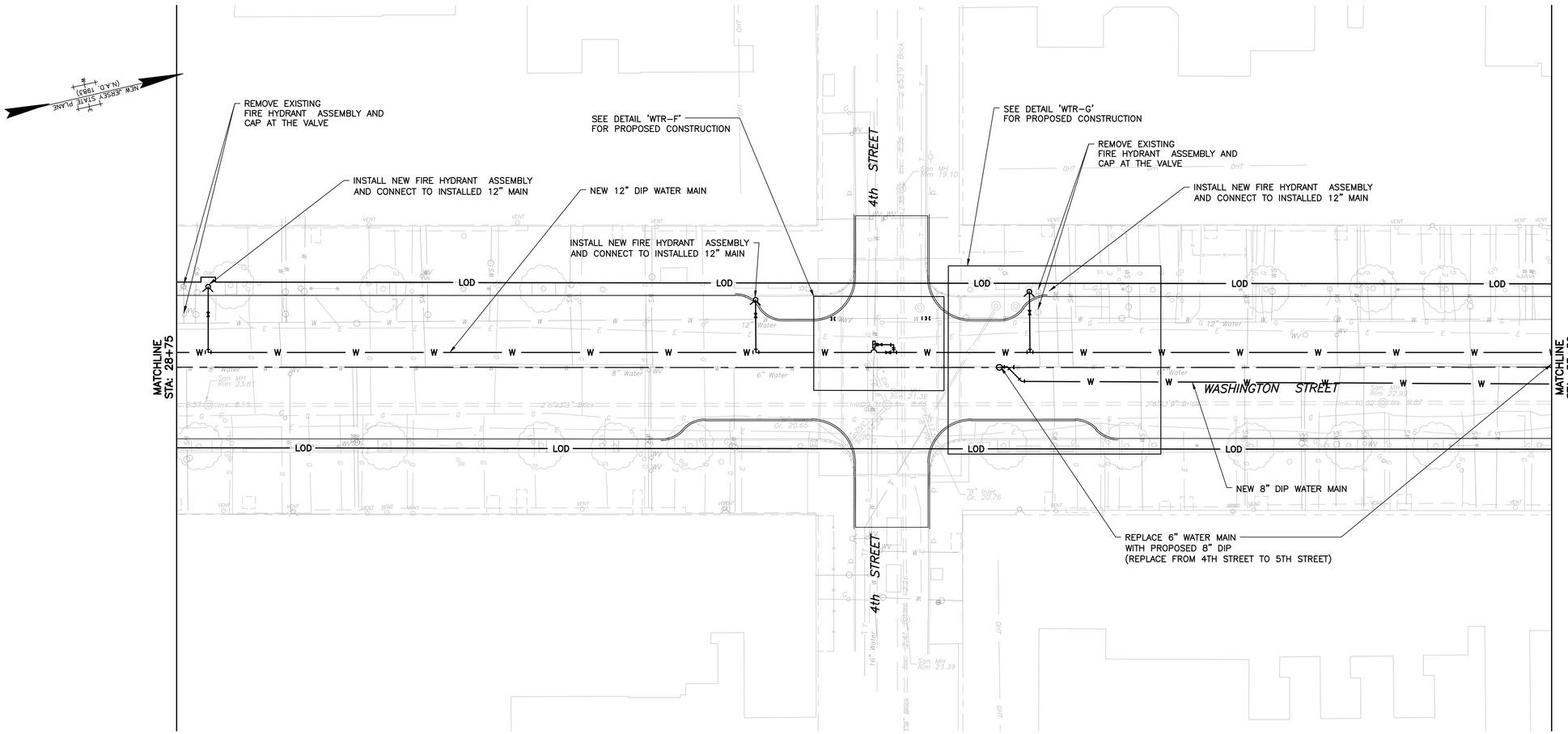
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

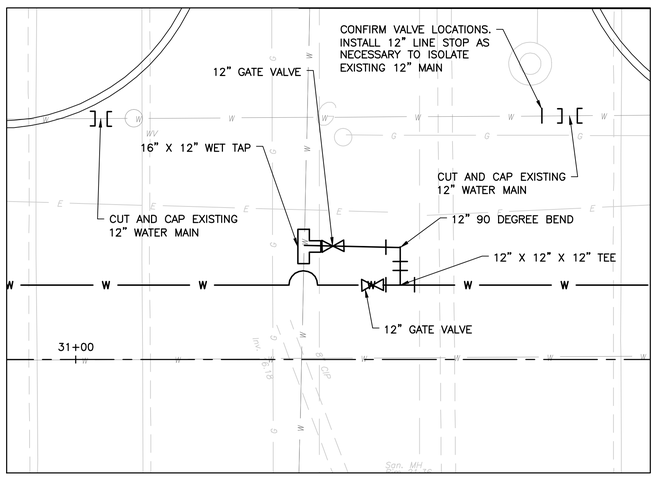
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-4
CHECKED BY SB	
DRAWN BY DN	SHEET 46
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAST SAVED DATE AND TIME: Wed, 14 Mar 2016, 12:20PM
LAST SAVE BY: mvilarzuelo

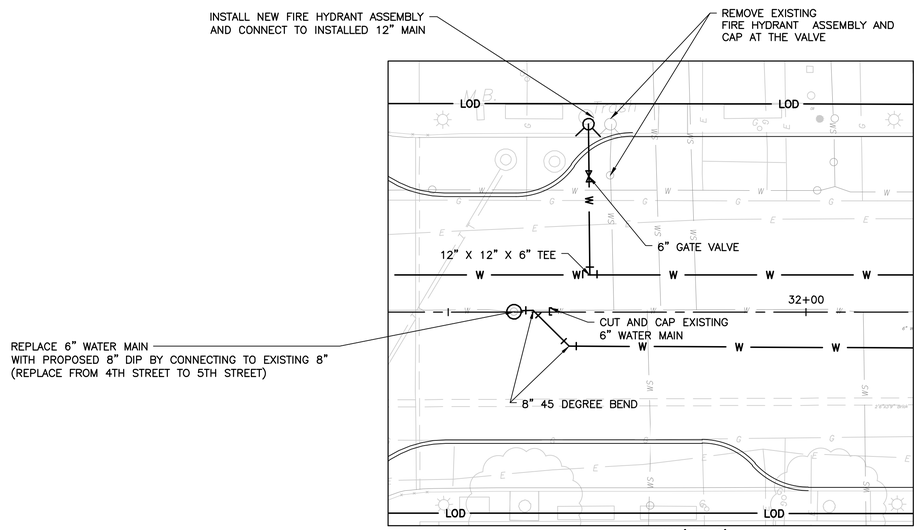
COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE INDICATED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-F'
(WASHINGTON STREET & 4TH STREET)

5' 2.5' 0 5' 10'
1" = 5'



DETAIL 'WTR-G'
(WASHINGTON STREET & 4TH STREET)

10' 5' 0 10' 20'
1" = 10'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTIONS AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 28+75 - STA 33+50)

NJEIFP

YOUR GOALS. OUR MISSION.

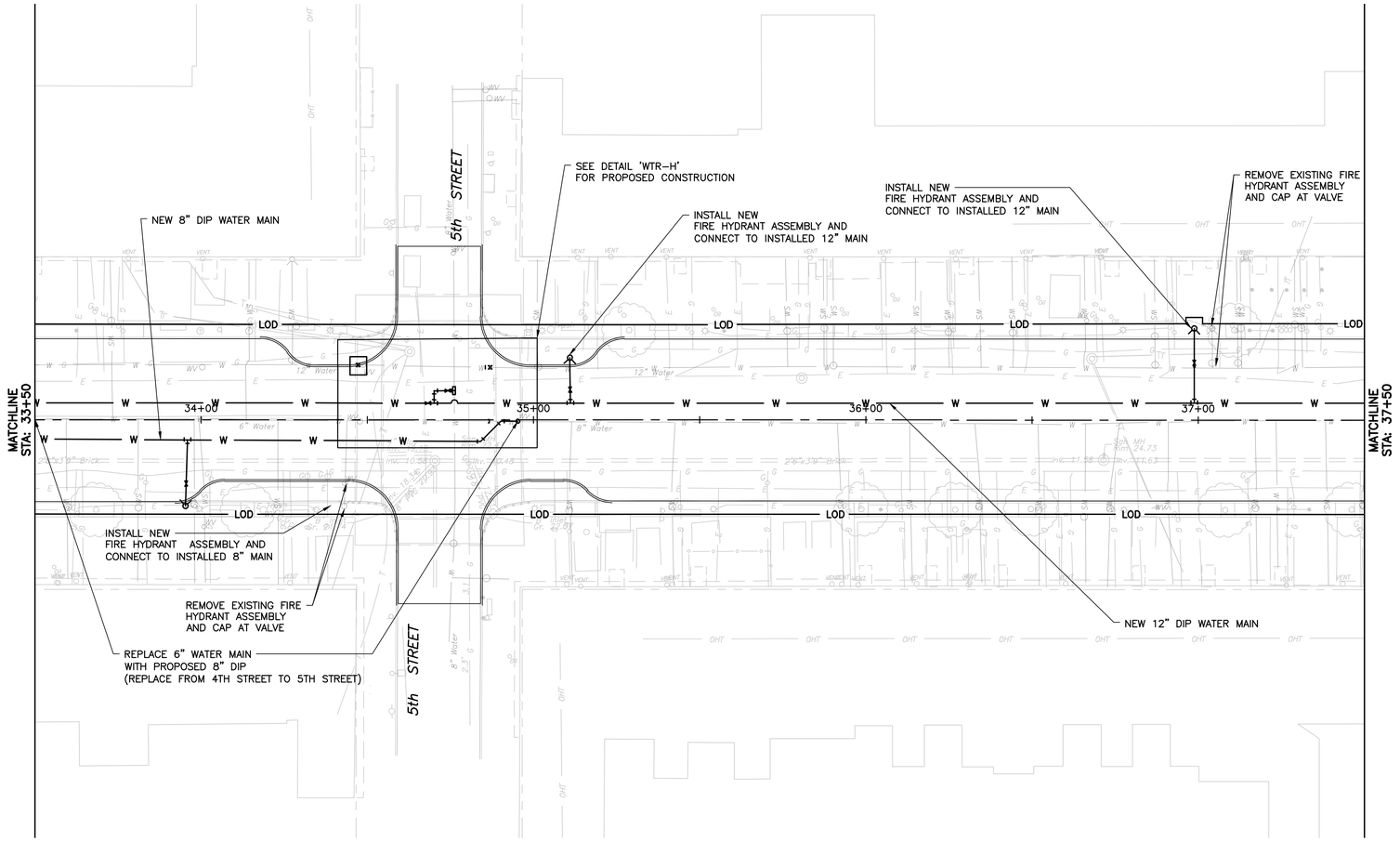
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

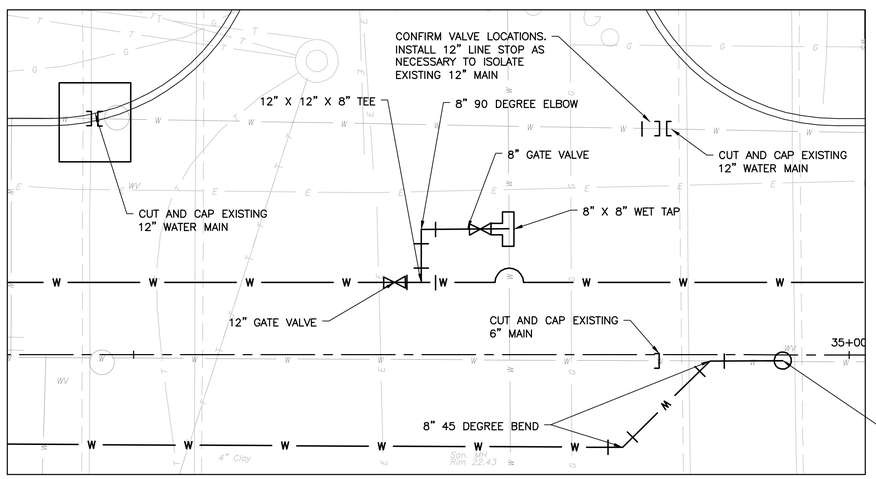
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-5
CHECKED BY SB	
DRAWN BY DN	SHEET 47
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, 14 Mar 2016, 12:39PM
LAST SAVE BY: rvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-H'
(WASHINGTON STREET & 5TH STREET)

REPLACE 6" WATER MAIN WITH PROPOSED 8" DIP BY CONNECTING TO EXISTING 8" (REPLACE FROM 4TH STREET TO 5TH STREET)

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTIONS AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 33+50 - STA 37+50)

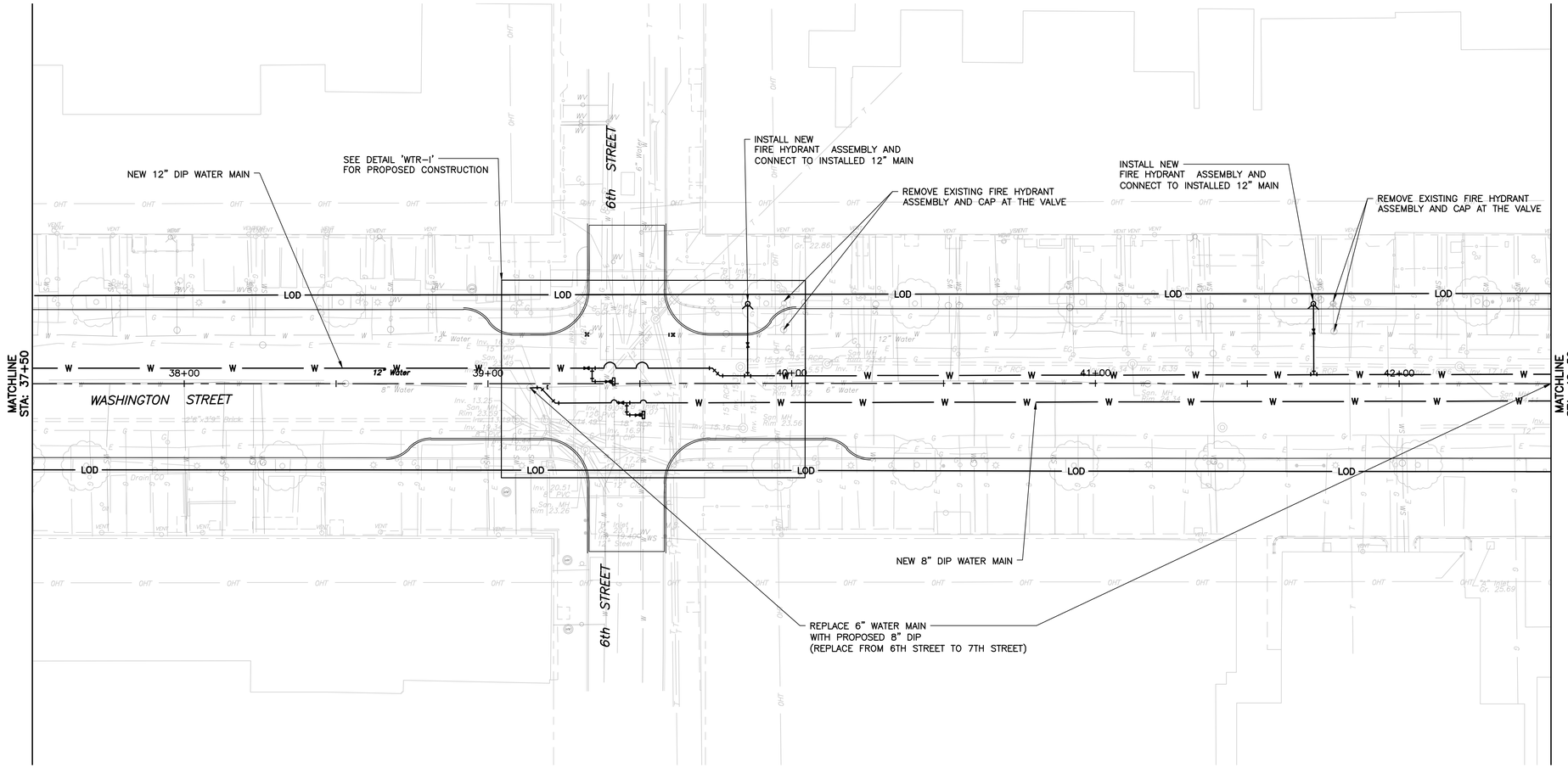
NJEIFP

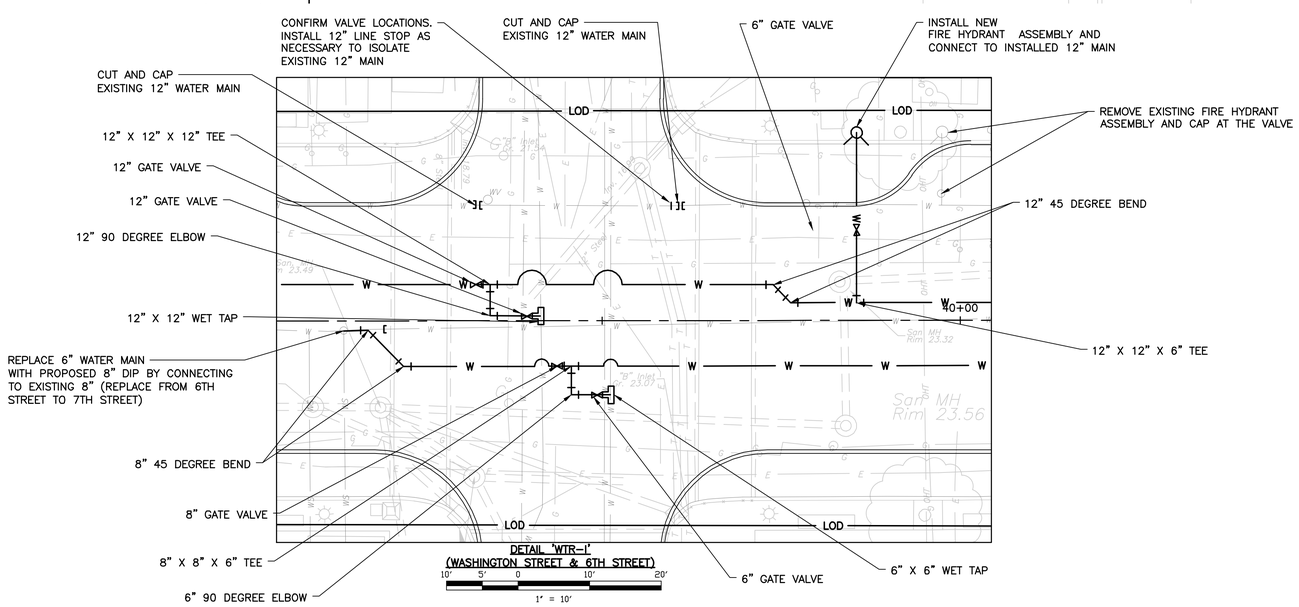
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-6
CHECKED BY SB	
DRAWN BY DN	SHEET 48
DATE 03-11-2016	
SCALE AS INDICATED	OF 70
PROJ. NO. HOBK-00090	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAYOUT: WTR-6 PLOT SCALE: 1:1 DATE: 14 Mar 2016, 12:20PM
LAST SAVE BY: mvlenzuela





DETAIL 'WTR-1'
(WASHINGTON STREET & 6TH STREET)

10' 5' 0 10' 20'
1" = 10'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DRAWING XX-XX.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTIONS AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 37+50 - STA 42+50)
NJEIFP

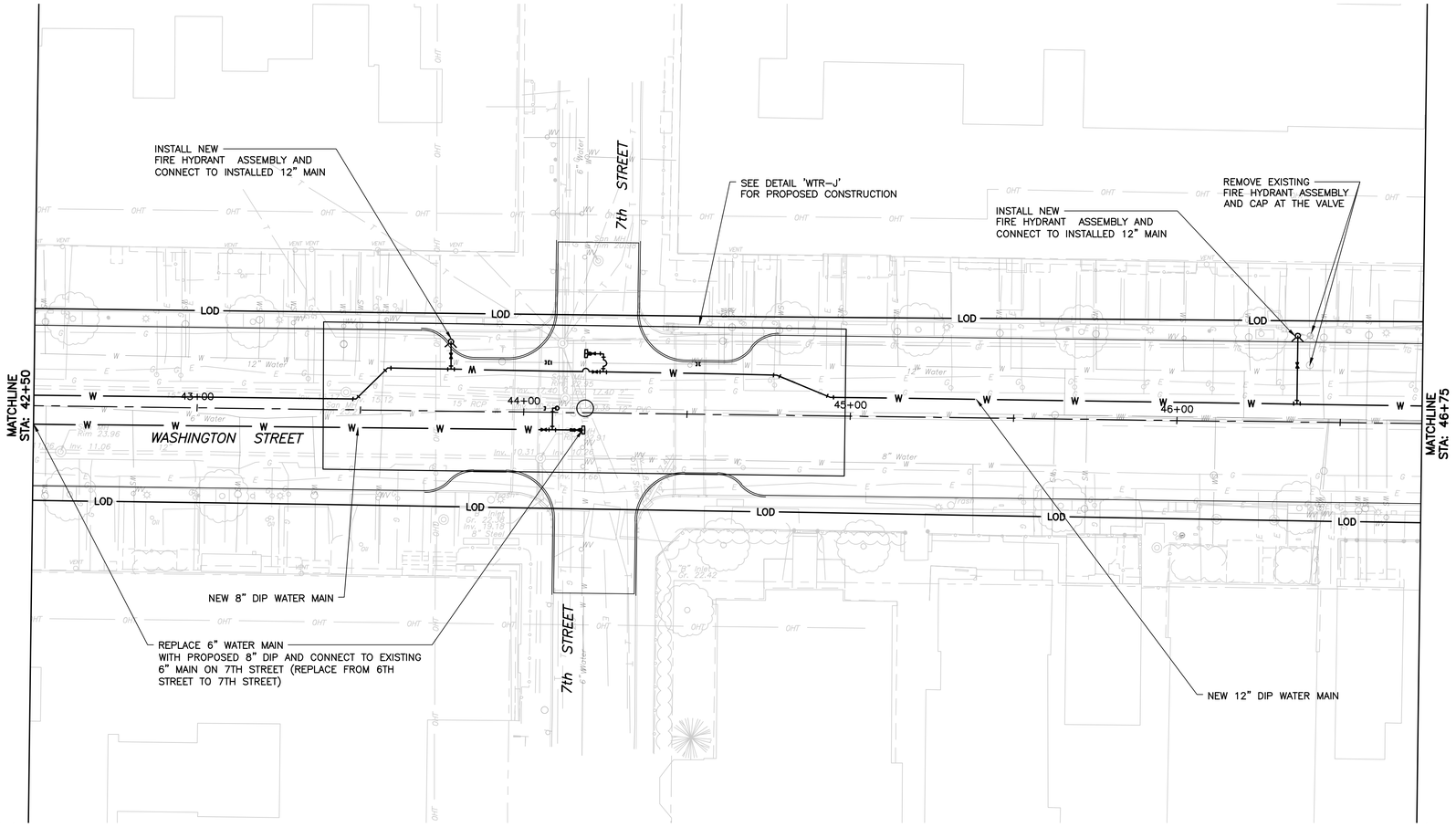
T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-7
CHECKED BY SB	
DRAWN BY DN	SHEET 49
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SH1043-SHT057_UTL.dwg
LAYOUT: WTR-7 DATE: THU, 14 Mar 2016, 12:30PM
LAST SAVE BY: mvilencurio

NEW JERSEY STATE PLANE (N.A.D. 1983)



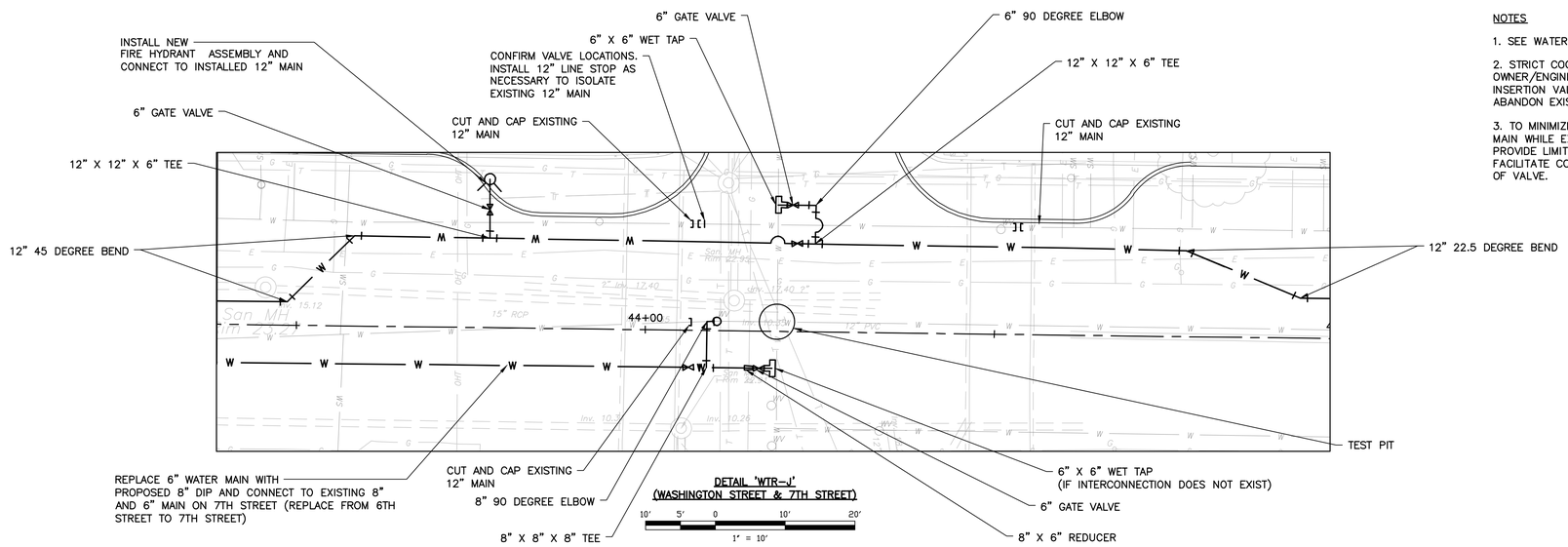
20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTIONS AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.



DETAIL 'WTR-J'
(WASHINGTON STREET & 7TH STREET)

10' 5' 0 10' 20'
1" = 10'

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 42+50 - STA 46+75)

NJEIFP

YOUR GOALS. OUR MISSION.

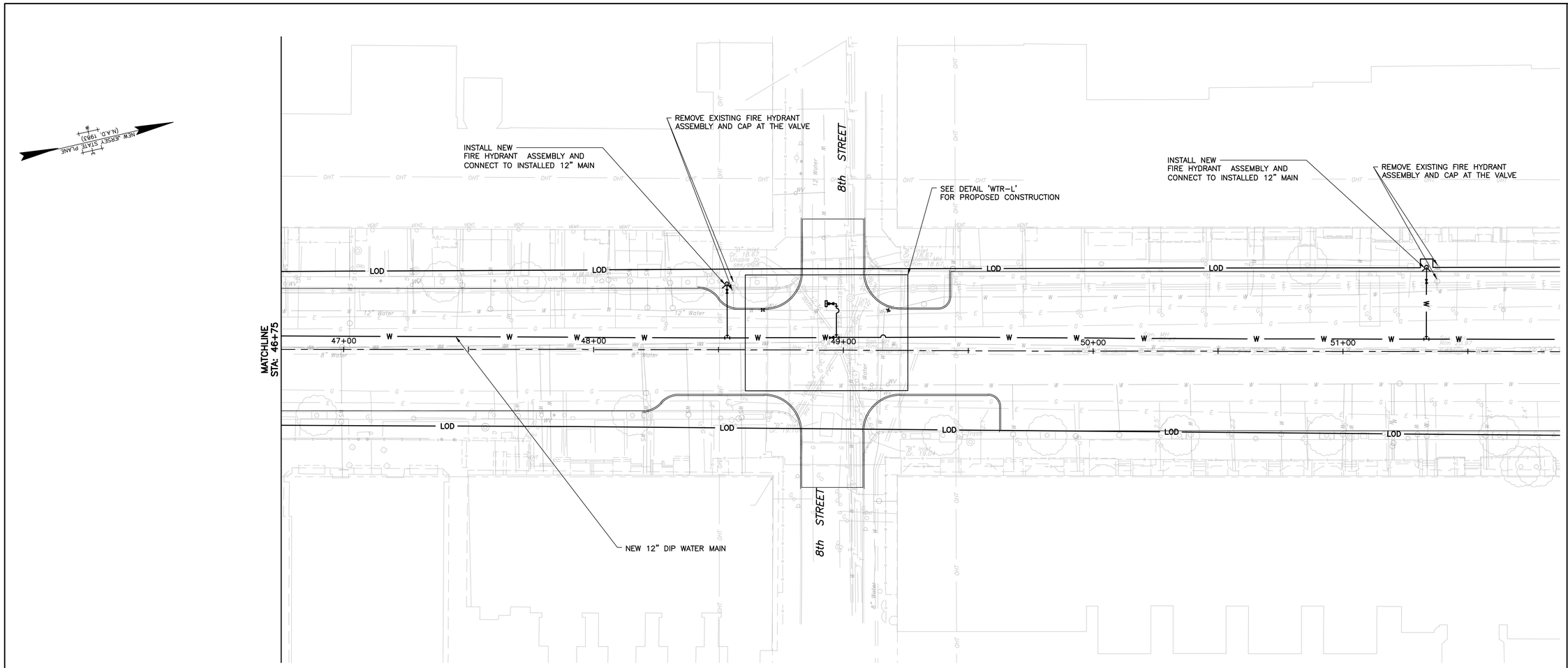
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

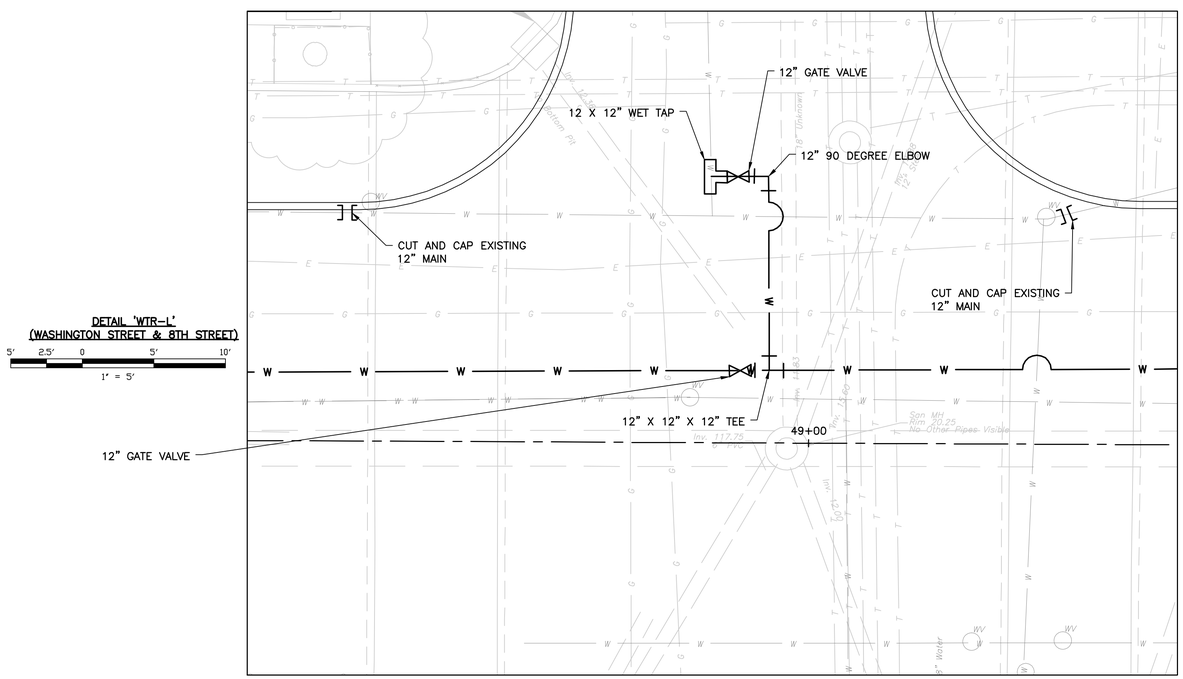
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-8
CHECKED BY SB	
DRAWN BY DN	SHEET 50
DATE 03-11-2016	OF 70
SCALE 1"=X'	
PROJ. NO. HOBK-00090	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, 14 Mar 2016, 12:20PM
LAST SAVE BY: mvlenzuela





DETAIL 'WTR-L'
(WASHINGTON STREET & 8TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600

ROSARIO R. DAWSON, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. 24GE05060000

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 46+75 - STA 52+25)

NJEIFP

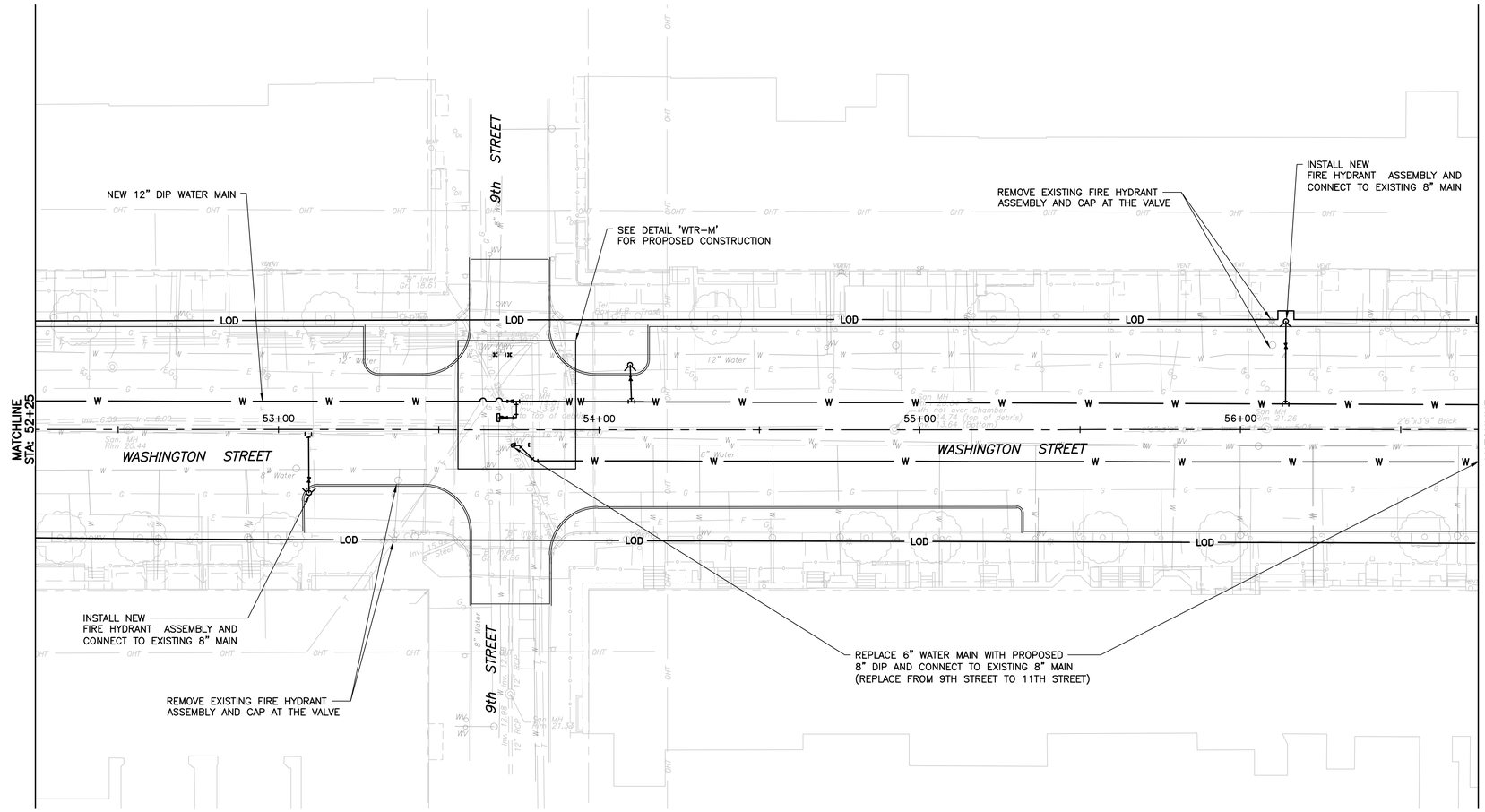
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

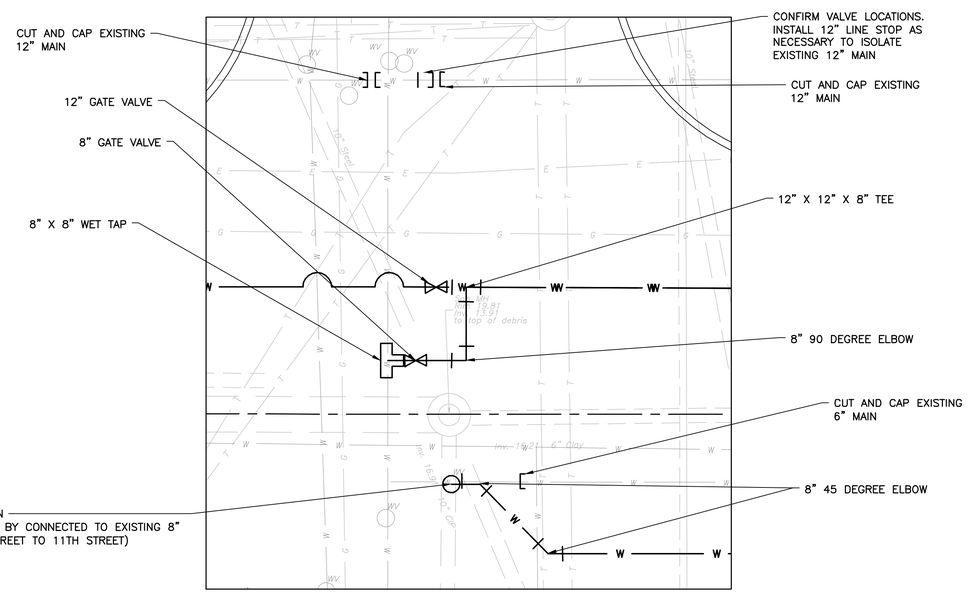
DESIGNED BY RS	DRAWING WTR-9
CHECKED BY SB	
DRAWN BY DN	SHEET 51
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043_SHT057_UTL.dwg
LAST SAVED: 03-14-2016, Mar 14, 2016, 12:20PM
LAST SAVE BY: mvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



20' 10' 0 20' 40'
1" = 20'



DETAIL 'WTR-M'
(WASHINGTON STREET & 9TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTIONS AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 52+25 - STA 56+75)

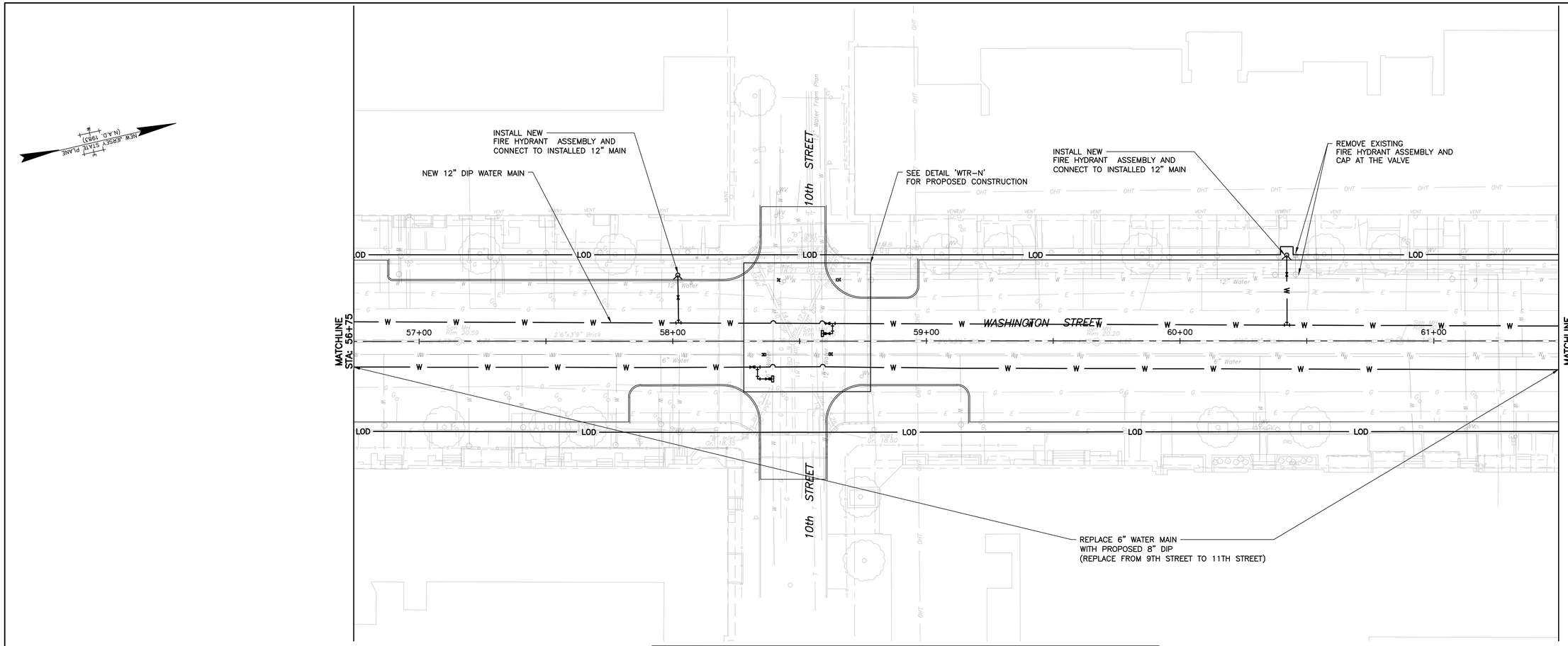
NJEIFP

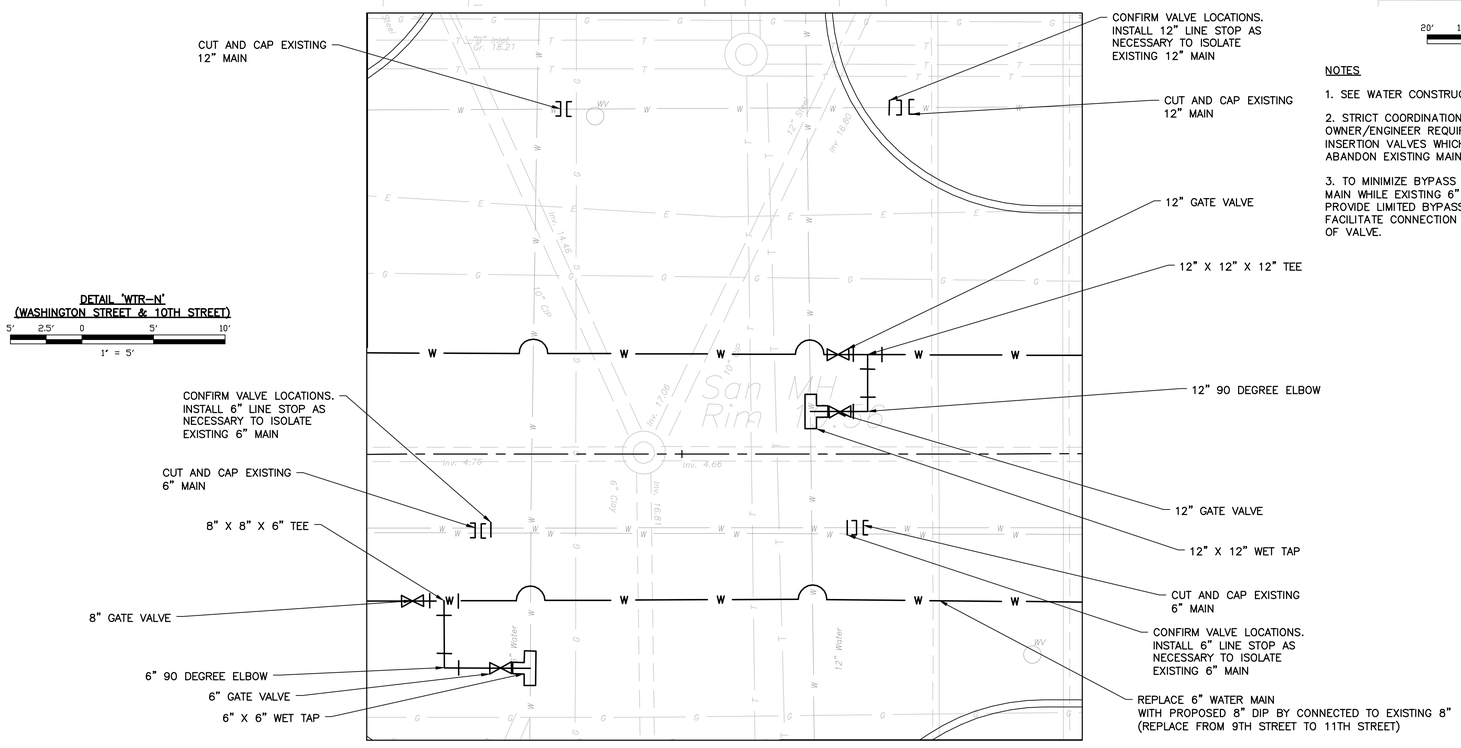
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-10
CHECKED BY SB	
DRAWN BY DN	SHEET 52
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
PLAN SCALE: 1:1 DATE: Mar 14, 2016, 12:39PM
LAST SAVE BY: rvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-N'
(WASHINGTON STREET & 10TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTION AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 56+75 - STA 61+50)

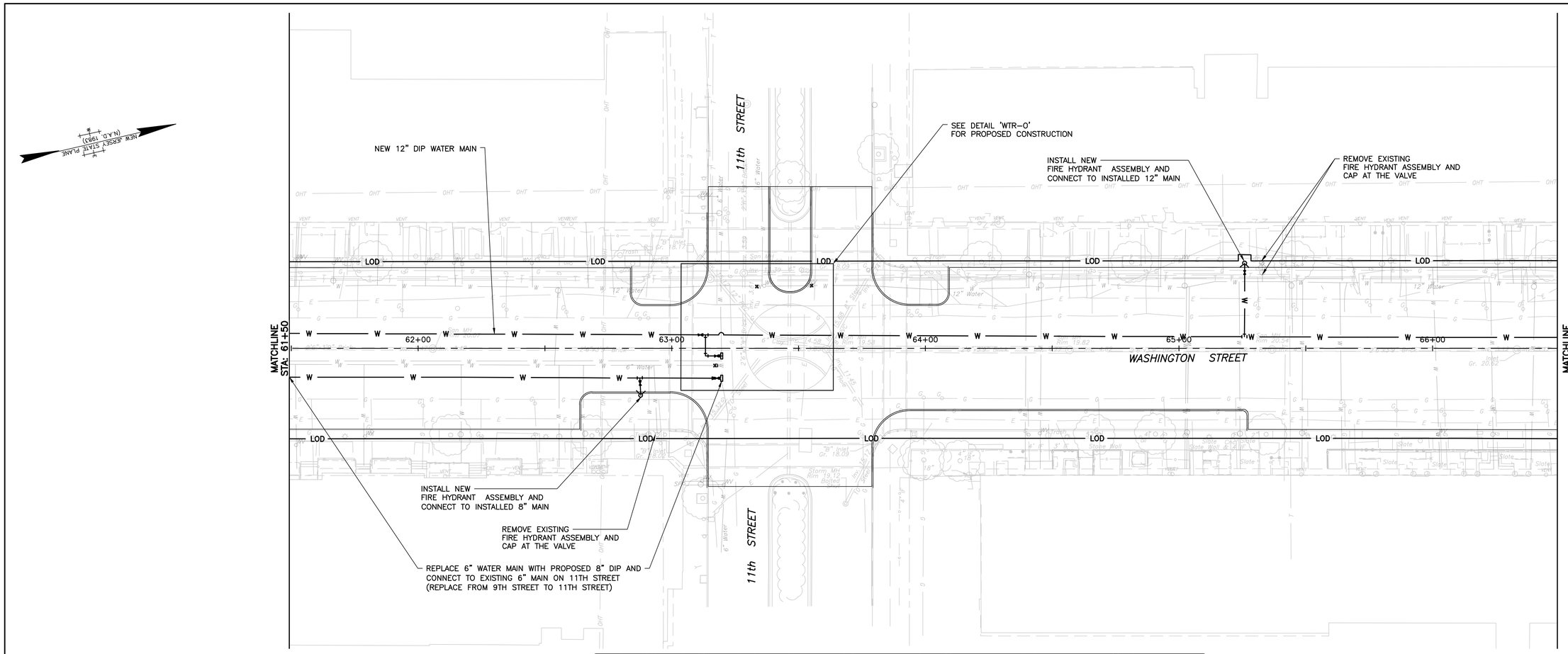
NJEIFP

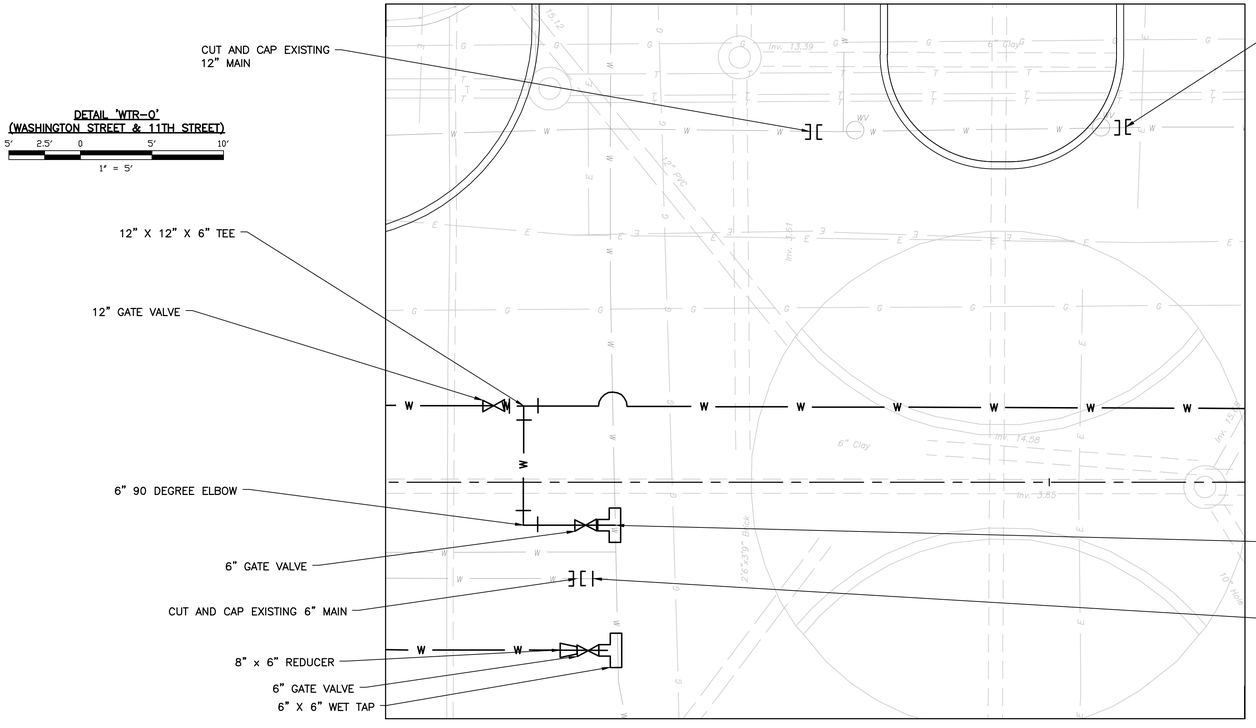
T&M AND ASSOCIATES
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-11
CHECKED BY SB	
DRAWN BY DN	SHEET 53
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAST SAVED: Friday, November 04, 2016, 12:20PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE FOR WHICH IT WAS ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-O'
(WASHINGTON STREET & 11TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

3. TO MINIMIZE BYPASS FLOW, CONTRACTOR TO INSTALL 8" MAIN WHILE EXISTING 6" MAIN IS STILL IN OPERATION. PROVIDE LIMITED BYPASS CONNECTIONS AS REQUIRED TO FACILITATE CONNECTION TO EXISTING 8" AND REPLACEMENT OF VALVE.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 61+50 - STA 66+50)

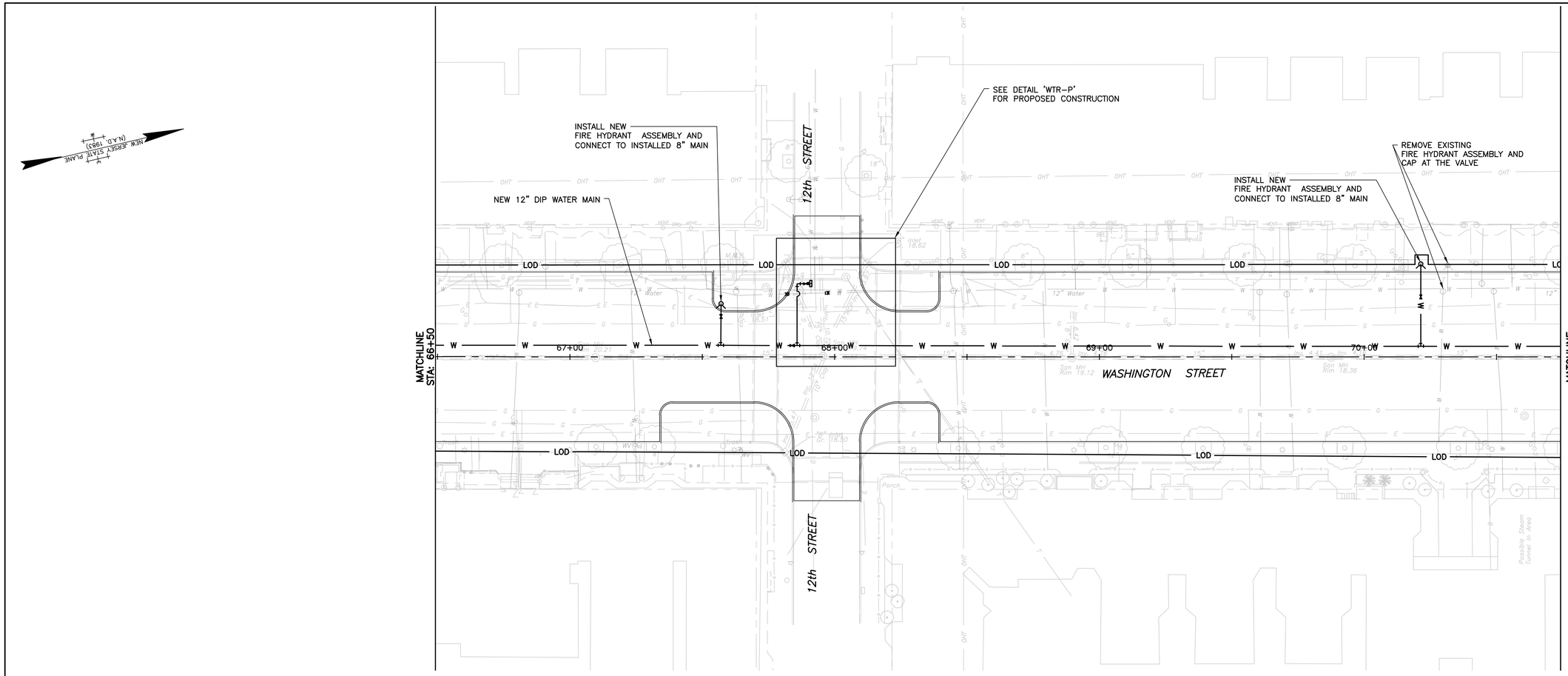
NJEIFP

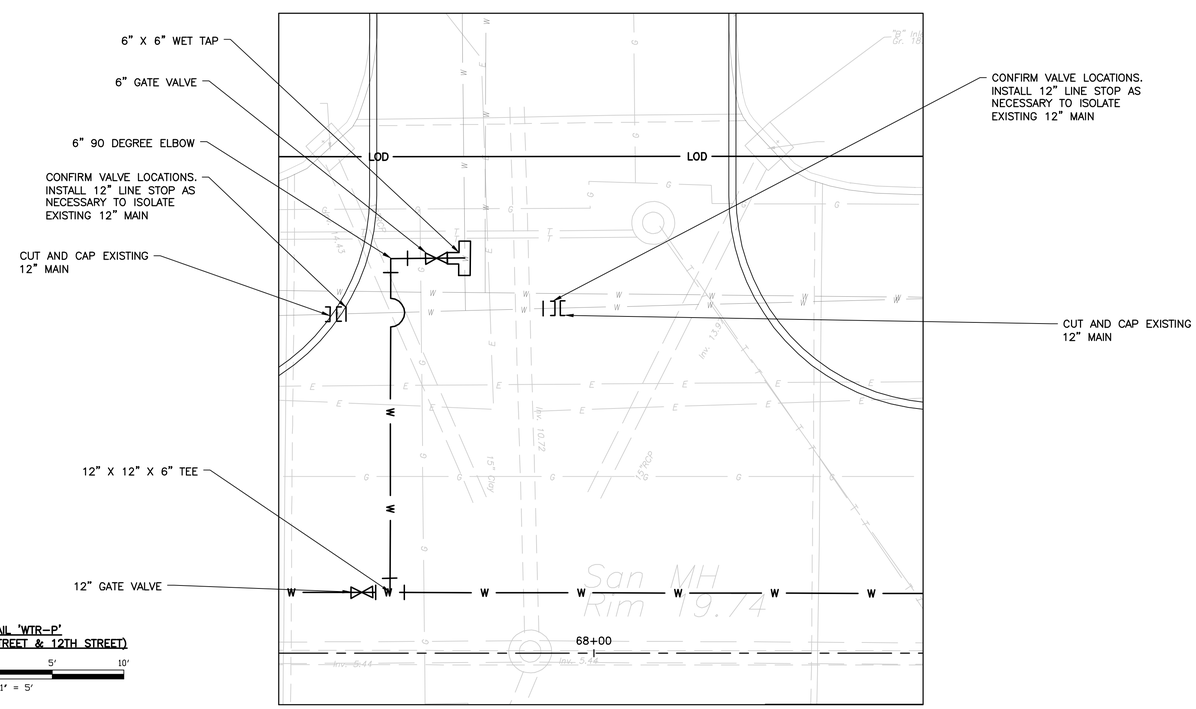
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-12
CHECKED BY SB	
DRAWN BY DN	SHEET 54 OF 70
DATE 03-11-2016	
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAST SAVED DATE AND TIME: 14 Mar 2016, 12:20PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE PRIMARILY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-P'
(WASHINGTON STREET & 12TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 66+50 - STA 70+75)

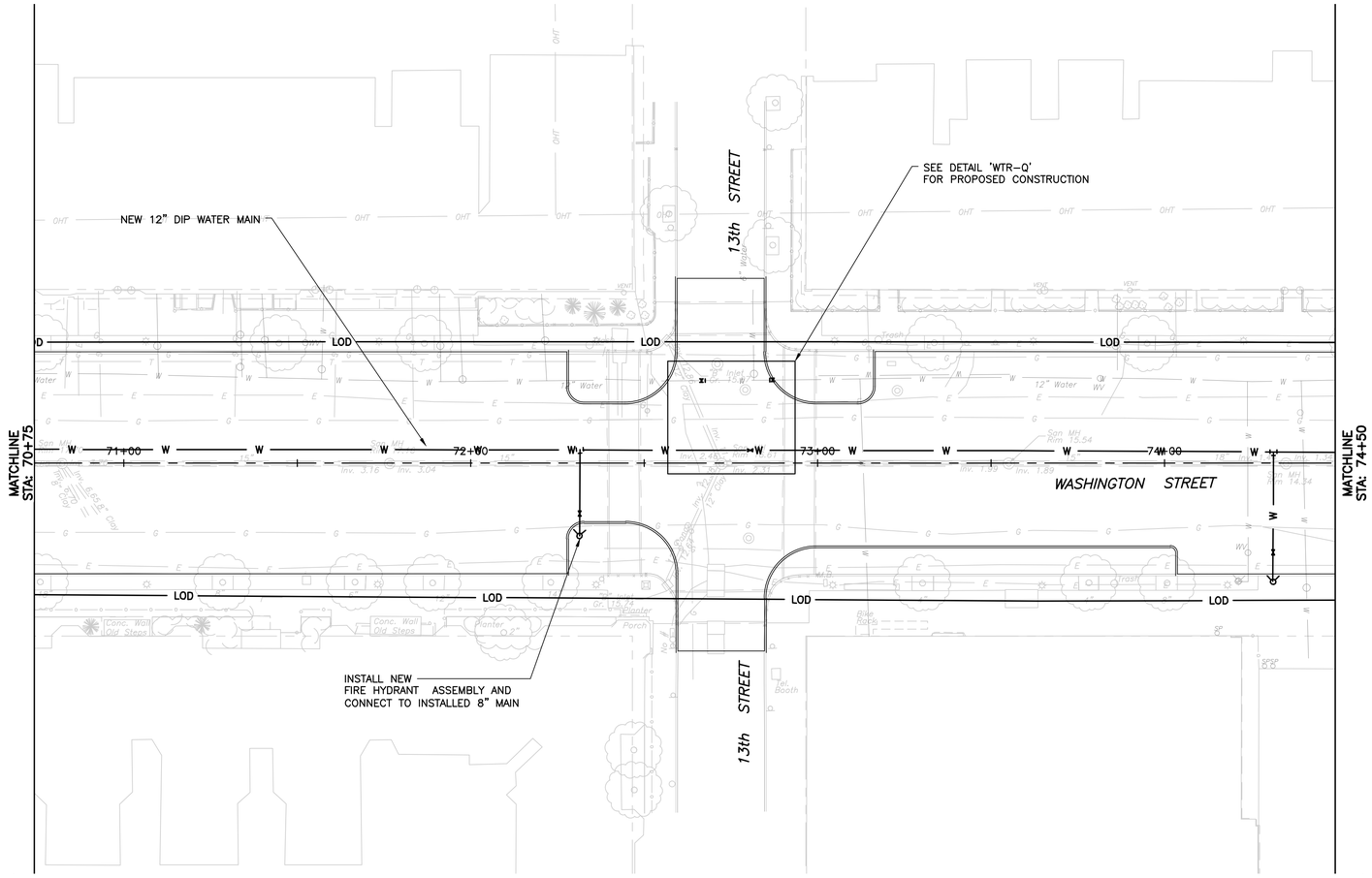
NJEIFP

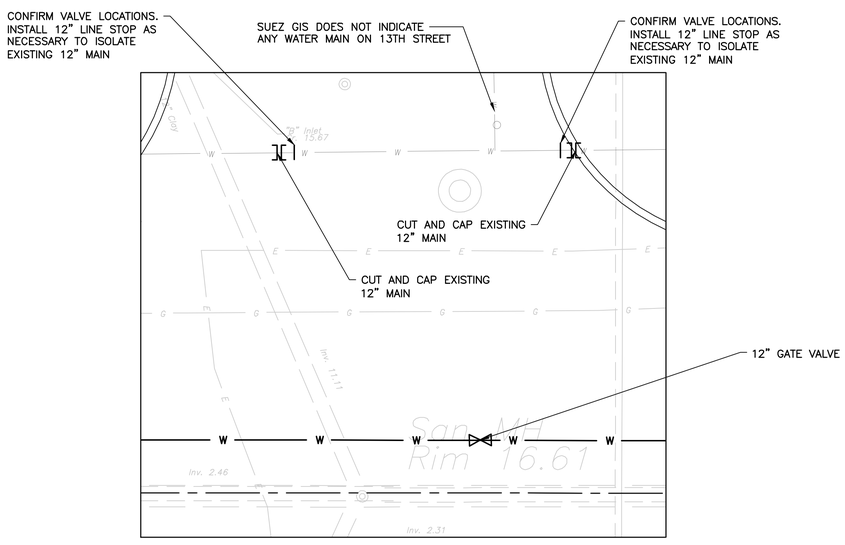
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-13
CHECKED BY SB	
DRAWN BY DN	SHEET 55
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAST SAVED: Thursday, March 03, 2016, 1:49PM
LAST PLOTTED: Friday, March 11, 2016, 12:20PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE FOR WHICH IT WAS ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-Q'
(WASHINGTON STREET & 13TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

20' 10' 0 20' 40'
1" = 20'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

WASHINGTON STREET (STA 70+75 - STA 74+50)

NJEIFP

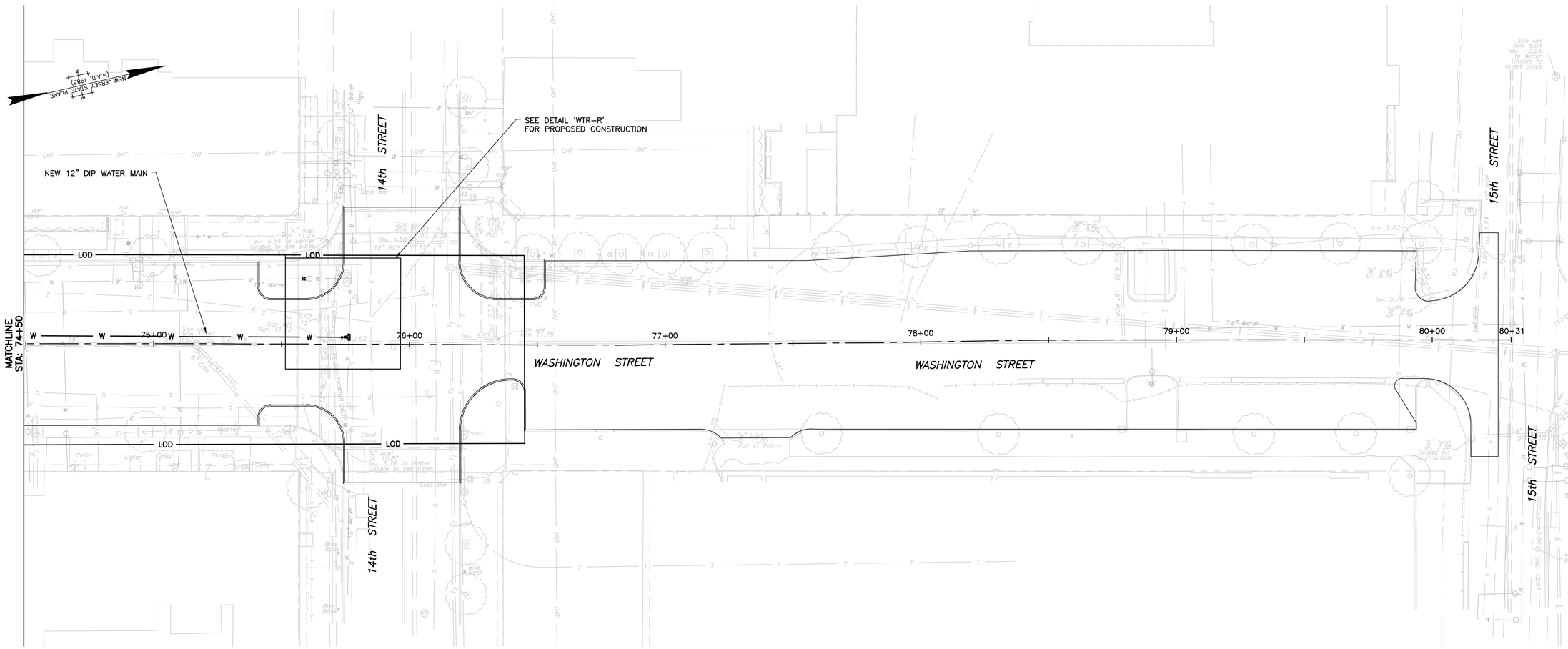
T&M ASSOCIATES
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

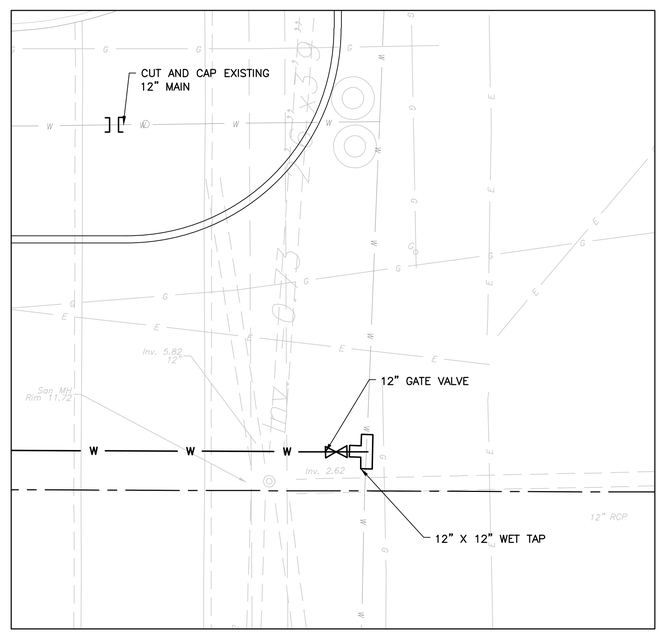
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING WTR-14
CHECKED BY SB	
DRAWN BY DN	SHEET 56
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT043-SHT057_UTL.dwg
LAST SAVED: 03-11-2016, 1:46:46 PM
LAST PLOTTED: 14 Mar 2016, 12:20PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





DETAIL 'WTR-R'
(WASHINGTON STREET & 14TH STREET)

5' 2.5' 0 5' 10'
1" = 5'

NOTES

1. SEE WATER CONSTRUCTION NOTES ON DETAIL SHEET.

2. STRICT COORDINATION AND AUTHORIZATION FROM OWNER/ENGINEER REQUIRED TO INSTALL ANY LINE STOPS OR INSERTION VALVES WHICH MAY BE REQUIRED TO CUT/CAP AND ABANDON EXISTING MAINS.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE/No. 24GE05060000

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

WASHINGTON STREET (STA 74+50 - STA 80+50)

NJEIFP

YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

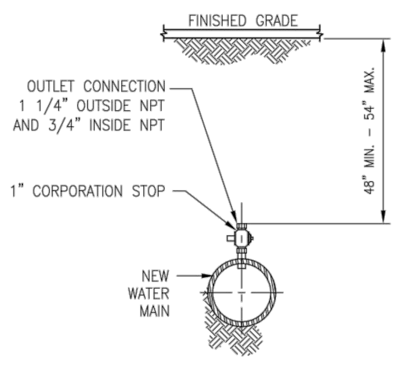
DESIGNED BY RS	DRAWING WTR-15
CHECKED BY SB	
DRAWN BY DN	SHEET 57
DATE 03-11-2016	OF 70
SCALE AS INDICATED	
PROJ. NO. HOBK-00090	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT057_UTL.dwg
LAST SAVED: Friday, November 04, 2016, 12:20PM
LAST SAVE BY: mvlenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT058_SHT059_CSD_UTL.dwg
LAST SAVED DATE AND TIME: 11 Mar 2016, 7:15PM
LAST SAVE BY: nvalenzuela

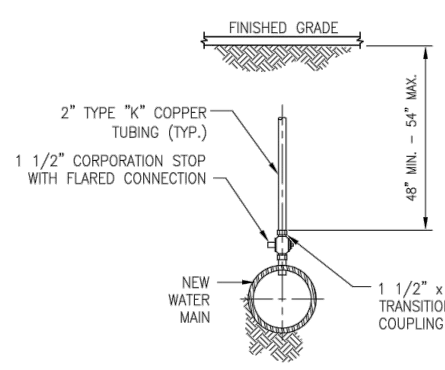


INSTALLATION OF 1" PITOMETER TAP FOR CHLORINATION

DETAIL -/– N.T.S.

suez | INSTALLATION OF 1" PITOMETER TAP FOR CHLORINATION | 0001

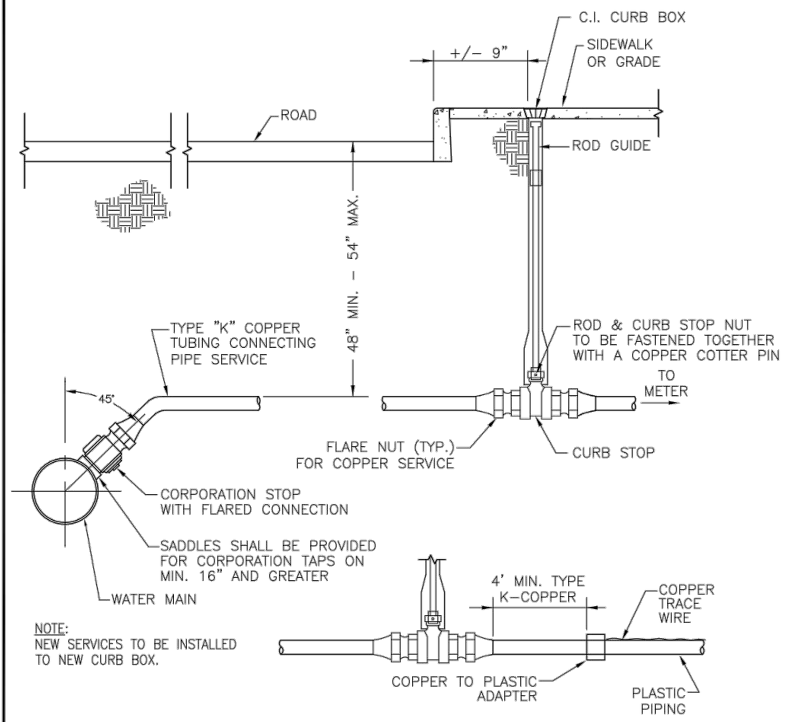
File: R:\Engineering\ENG PROJECT FILES\Suez-Design Templates\STD CIVIL DETAILS\0001-1in-PITOMETER-CHLORINATION.dwg Date: Feb 03, 2016 - 3:05pm User: jarguell



INSTALLATION OF 2" FLUSHING/SAMPLE TAP FOR CHLORINATION

DETAIL -/– N.T.S.

suez | INSTALLATION OF 2" FLUSHING/SAMPLE TAP FOR CHLORINATION | 0002

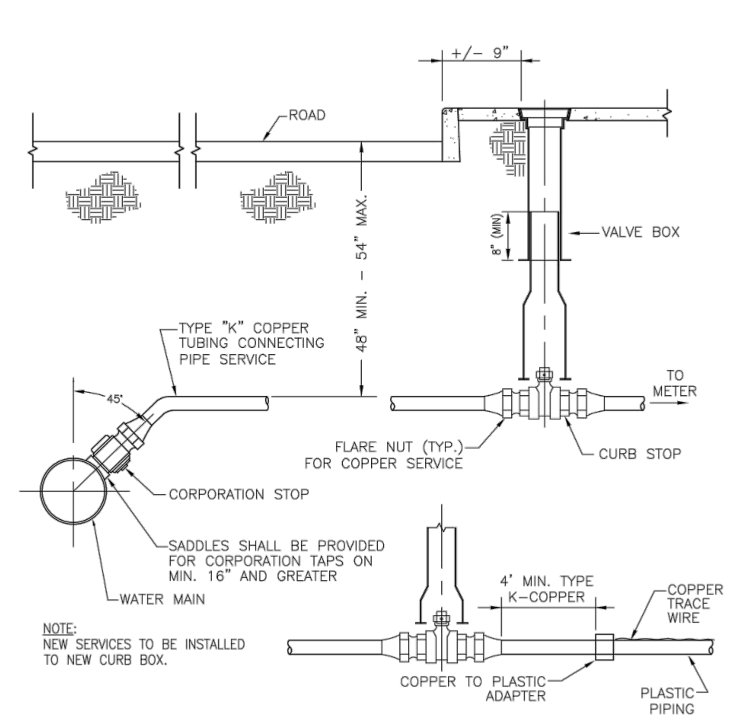


NOTE:
NEW SERVICES TO BE INSTALLED TO NEW CURB BOX.

TYP. 1" SERVICE CONNECTION

DETAIL -/– N.T.S.

suez | TYPICAL 1" SERVICE CONNECTION | 0003

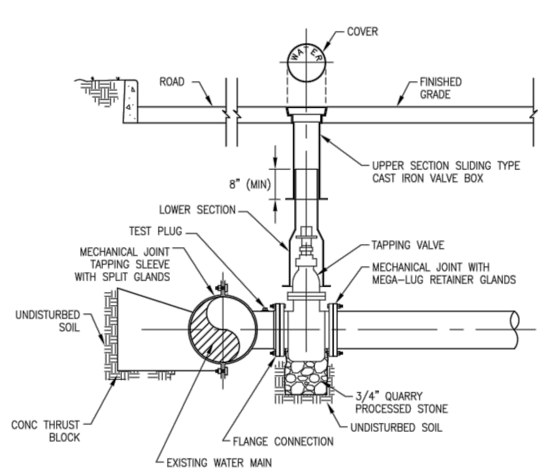


NOTE:
NEW SERVICES TO BE INSTALLED TO NEW CURB BOX.

TYP. 1 1/2" – 2" SERVICE CONNECTION

DETAIL -/– N.T.S.

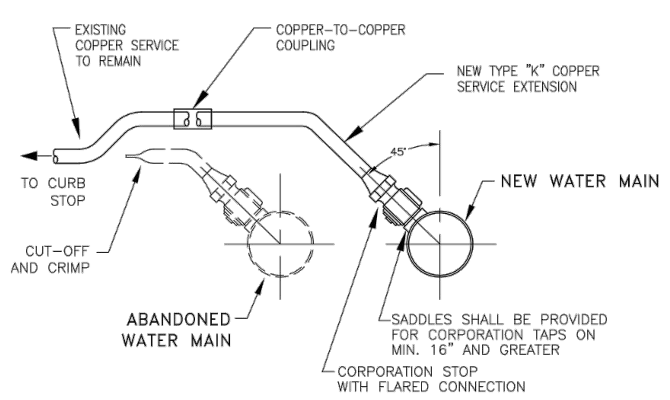
suez | TYPICAL 1 1/2" - 2" SERVICE CONNECTION | 0004



WET TAP

DETAIL -/– N.T.S.

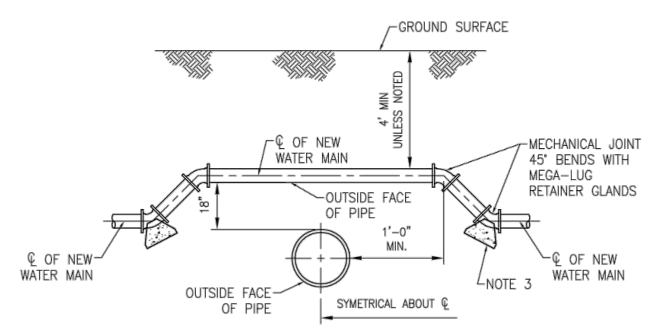
suez | WET TAP | 0006



SERVICE TRANSFER

DETAIL -/– N.T.S.

suez | SERVICE TRANSFER | 0007

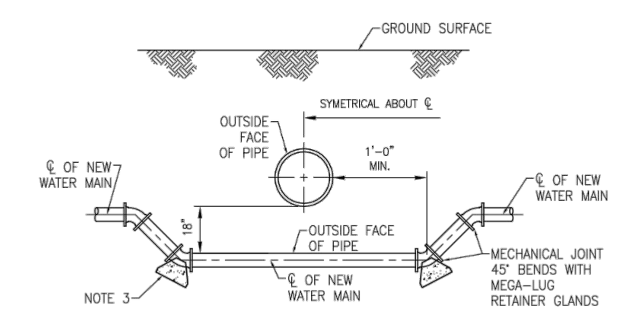


1. WATER MAINS SHALL BE INSTALLED WITH A MINIMUM OF 18" VERTICAL SEPARATION ABOVE SANITARY SEWER (SEWER LATERALS ARE NOT SUBJECT TO THIS REQUIREMENT) IF THIS SEPARATION LEAVES THE WATER MAIN WITH LESS THAN 42" COVER THEN THIS WATER MAIN SHALL BE INSULATED (SEE NOTE BELOW), WITH THE APPROVAL OF SUEZ WATER. HOWEVER, IN NO CASE SHALL THIS BE LESS THAN 36"
2. INSULATION WHERE REQUIRED SHALL BE GILSULATE 500XR AS MANUFACTURED BY GILSULATE INTERNATIONAL INC., OR APPROVED EQUAL. INSTALLATION OF BEDDING AND INSULATION SHALL BE AS PER THE MANUFACTURER'S SPECIFICATIONS.
3. SEE DETAIL THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS.

ABOVE UTILITY CROSSING DETAIL

DETAIL -/– N.T.S.

suez | ABOVE UTILITY CROSSING DETAIL | 0008

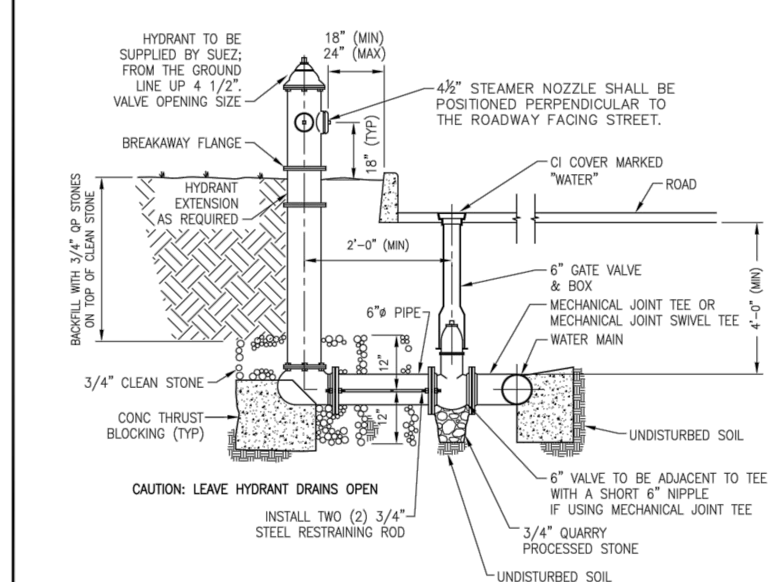


1. WATER MAINS SHALL BE INSTALLED BENEATH SANITARY SEWER ONLY IF SUFFICIENT VERTICAL CLEARANCE ABOVE SEWER DOES NOT EXIST. IN SUCH CASES A MINIMUM OF 18" VERTICAL SEPARATION MUST BE PROVIDED. THE WATER SHALL BE INSTALLED 10' FROM THE SEWER JOINTS AND THE SEWER SHALL BE OF WATER TIGHT CONSTRUCTION [NJAC 7:10 – 11.10E(5)]
2. IF THE WATER MAIN WILL BE INSTALLED LESS THAN 18" VERTICAL OR 10' LATERAL SEPARATION FROM SANITARY SEWER, THEN THIS WATER MAIN SHALL BE INSTALLED WITH RESTRAINED JOINT GASKETS.
3. SEE DETAIL THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS.

BELOW UTILITY CROSSING DETAIL

DETAIL -/– N.T.S.

suez | BELOW UTILITY CROSSING DETAIL | 0009

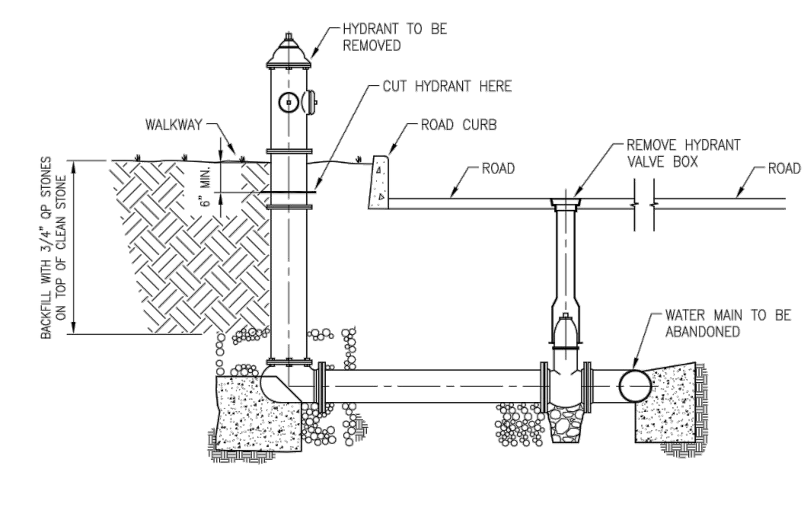


NOTES:
1. INSTALL CLEAN STONE AROUND THE HYDRANT BASE. WEEP HOLES AT BASE SHALL NOT BE BLOCKED.

FIRE HYDRANT INSTALLATION

DETAIL -/– N.T.S.

suez | FIRE HYDRANT INSTALLATION | 0010

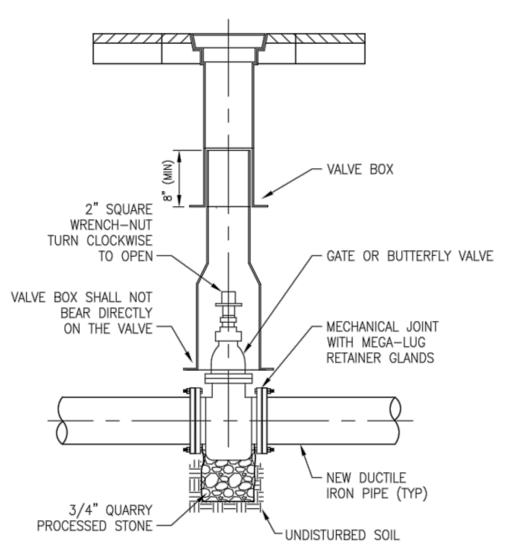


1. CONTRACTOR OR UTILITY REPRESENTATIVE SHALL CLOSE THE HYDRANT GUARD VALVE.
2. CONTRACTOR SHALL CUT THE HYDRANT BARREL AT A MINIMUM OF 6" BELOW THE EXISTING GROUND SURFACE.
3. CONTRACTOR SHALL CAREFULLY REMOVE THE HYDRANT AND RETURN TO SUEZ WATER YARD.
4. CONTRACTOR SHALL BACKFILL THE EXCAVATED AREA INCLUDING THE HYDRANT BARREL WITH DENSE GRADE AGGREGATE COMPACTED WITH A VIBRATORY COMPACTOR A MINIMUM OF EVERY 12 INCHES.
5. CONTRACTOR SHALL REMOVE THE HYDRANT GUARD VALVE BOX, BURY THE VALVE, AND RESTORE PAVEMENT PER MUNICIPAL, COUNTIES OR STATE REQUIREMENT.
6. CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE THE DISTURBED AREA IN COMPLIANCE WITH THE ENGINEER'S RECOMMENDATION OR THE ROAD AGENCY'S REQUIREMENT.
7. THIS DETAIL ONLY APPLIES WHEN THE HYDRANT TO BE REMOVED IS CONNECTED TO A WATER MAIN TO BE ABANDONED.

REMOVAL OF A FIRE HYDRANT FOR ABANDONED WATER MAIN

DETAIL -/– N.T.S.

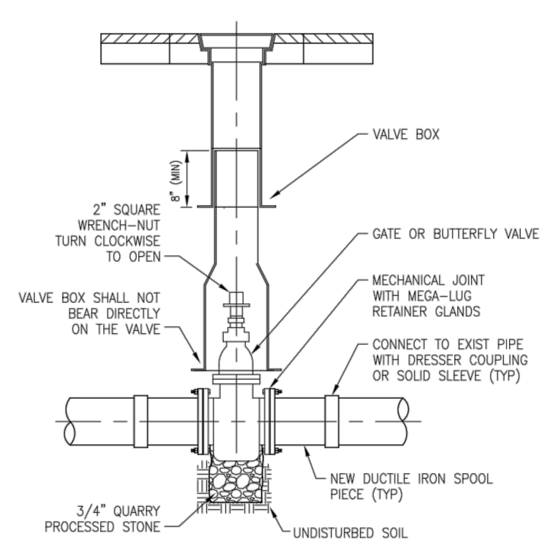
suez | REMOVAL OF A FIRE HYDRANT FOR ABANDONED WATER MAIN | 0011



VALVE INSTALLATION

DETAIL -/– N.T.S.

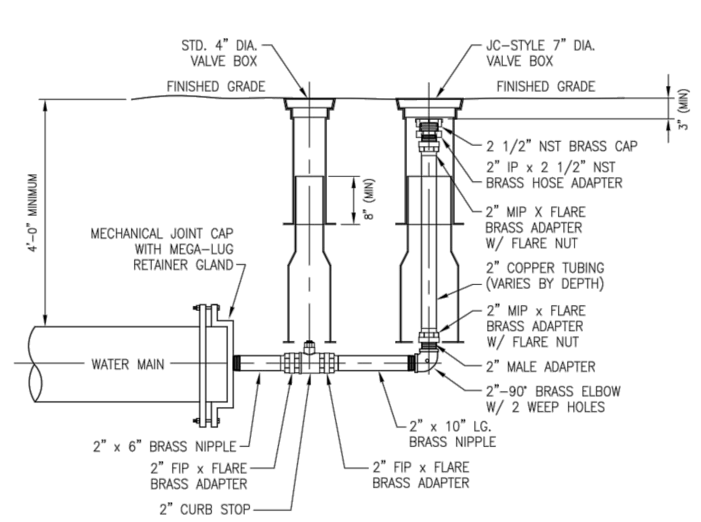
suez | VALVE INSTALLATION | 0012



VALVE REPLACEMENT

DETAIL -/– N.T.S.

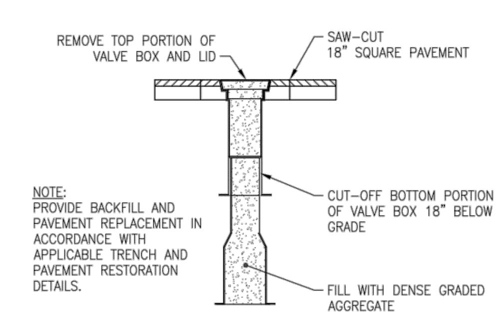
suez | VALVE REPLACEMENT | 0013



2" BLOW OFF ASSEMBLY

DETAIL -/– N.T.S.

suez | 2" BLOW OFF ASSEMBLY | 0014



NOTE:
PROVIDE BACKFILL AND PAVEMENT REPLACEMENT IN ACCORDANCE WITH APPLICABLE TRENCH AND PAVEMENT RESTORATION DETAILS.

EXISTING VALVE BOX REMOVAL

DETAIL -/– N.T.S.

suez | EXISTING VALVE BOX REMOVAL | 0015

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR VERTICAL DOWN BENDS
(WITHOUT POLYETHYLENE ENCASEMENT)

DIAMETER (IN)	VERTICAL DOWN BEND ANGLE (DEGREES)		
	45	22½	11¼
6	20	10	5
8	27	13	7
10	32	16	8
12	38	18	9
14	43	21	11
16	49	24	12
18	54	26	13
20	60	29	15
24	70	34	17

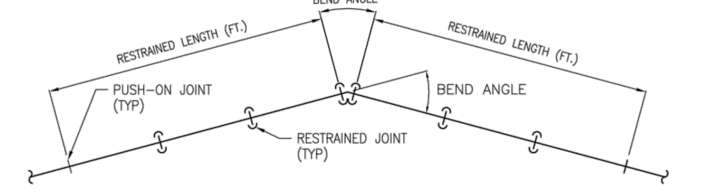
MINIMUM RESTRAINED PIPE LENGTH (FT) FOR HORIZONTAL BENDS
(WITHOUT POLYETHYLENE ENCASEMENT)

DIAMETER (IN)	HORIZONTAL BEND ANGLE (DEGREES)			
	90	45	22½	11¼
6	15	7	3	2
8	20	9	4	2
10	24	10	5	3
12	28	12	6	3
14	32	14	7	4
16	36	15	8	4
18	40	17	8	4
20	44	18	9	5
24	51	22	11	6

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR DEAD ENDS
(WITHOUT POLYETHYLENE ENCASEMENT)

DIAMETER (IN)	LENGTH (FT)
6	34
8	45
10	54
12	65
14	74
16	84
18	93
20	103
24	122

NOTES:
1 DESIGN PRESSURE = 150 PSI
2 DEPTH OF COVER = 4 FEET
3 SAFETY FACTOR = 1.5
4 SOIL TYPE = COHESIVE GRANULAR
5 SOIL INTERNAL FRICTION ANGLE = 20 DEGREES
6 SOIL COHESION = 200 PSF
7 SOIL DENSITY = 90 PCF



RESTRAINED DI PIPE LENGTH

DETAIL -/– N.T.S.

suez | RESTRAINED DI PIPE LENGTH | 0016

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE NO. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

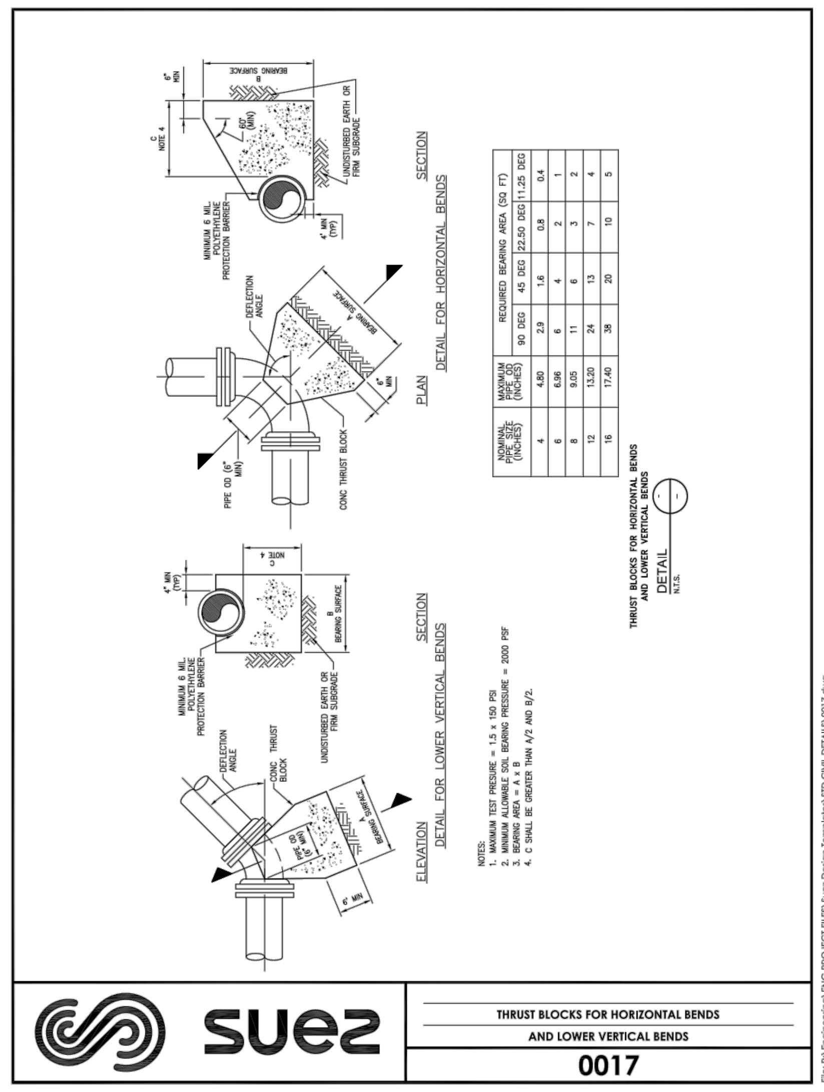
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

UTILITY CONSTRUCTION DETAILS

NJEIFP

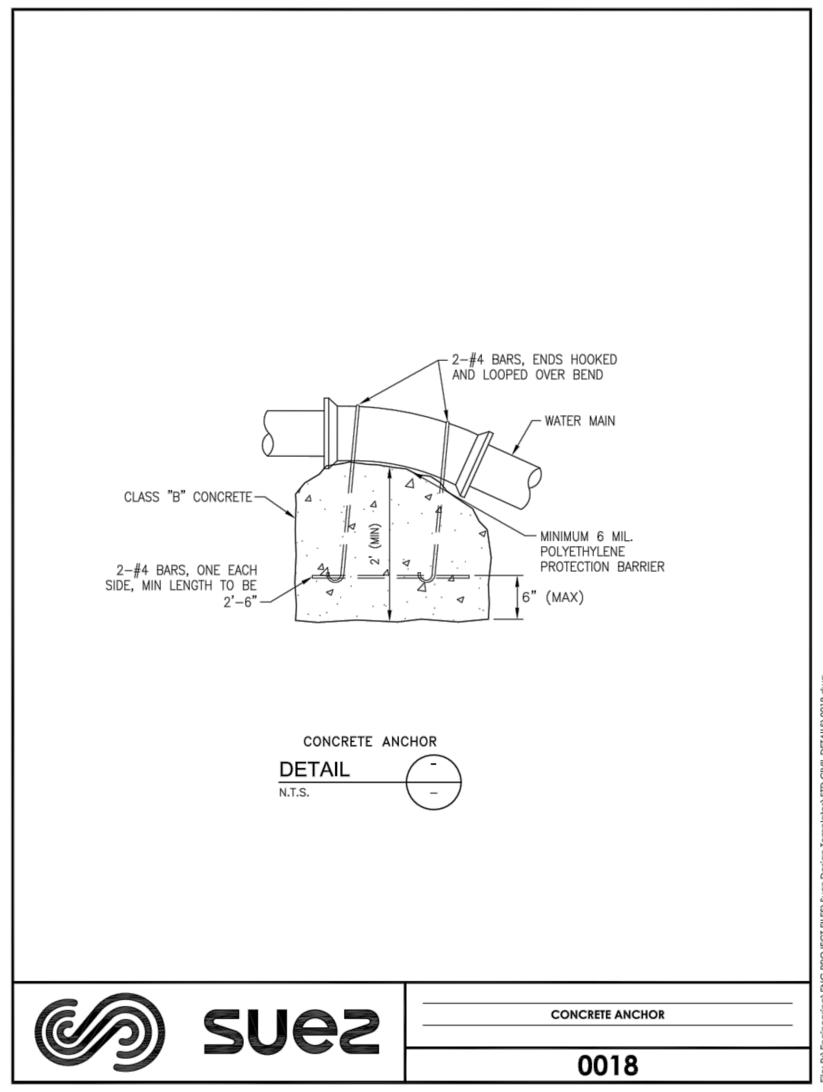
T AND M
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY RS	DRAWING CSD–1
CHECKED BY SB	
DRAWN BY DN	SHEET 58 OF 70
DATE 03-11-2016	
SCALE AS SHOWN	
PROJ. NO. HOBK-00090	

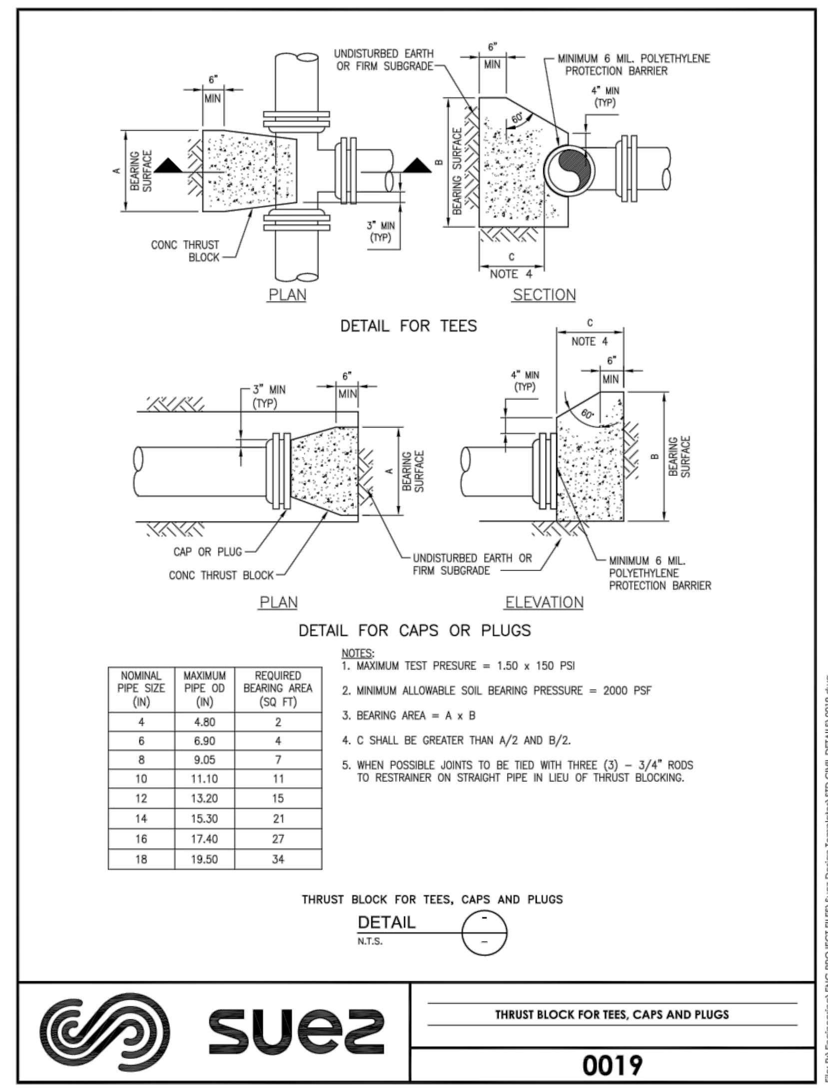


NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (INCHES)	REQUIRED BEARING AREA (SQ FT) 90 DEG	45 DEG	22.50 DEG	11.25 DEG
4	4.80	2.9	1.6	0.8	0.4
6	6.96	6	4	2	1
8	9.05	11	6	3	2
12	13.20	24	13	7	4
16	17.40	38	20	10	5

SUEZ — THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS — 0017

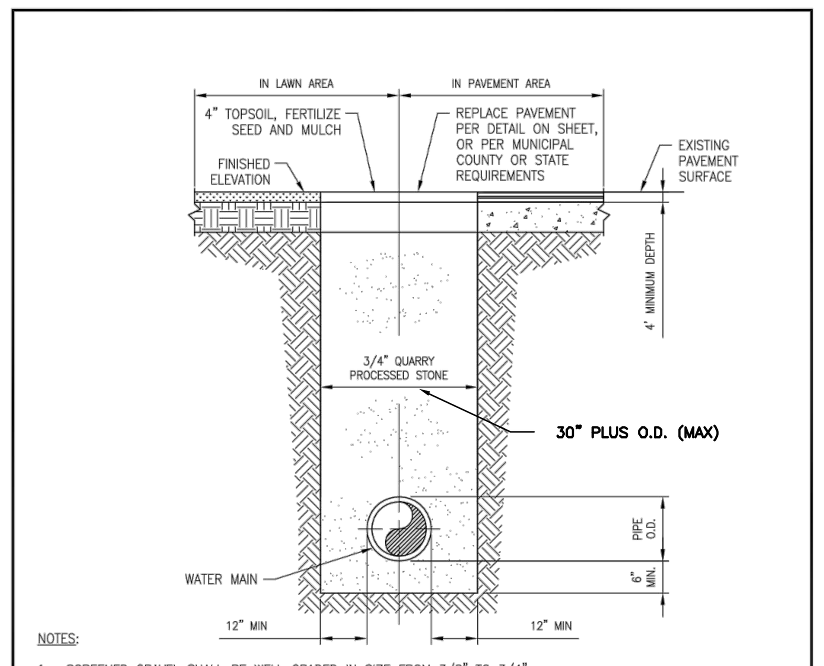


SUEZ — CONCRETE ANCHOR — 0018



NOMINAL PIPE SIZE (IN)	MAXIMUM PIPE OD (IN)	REQUIRED BEARING AREA (SQ FT)
4	4.80	2
6	6.90	4
8	9.05	7
10	11.10	11
12	13.20	15
14	15.30	21
16	17.40	27
18	19.50	34

SUEZ — THRUST BLOCK FOR TEES, CAPS AND PLUGS — 0019

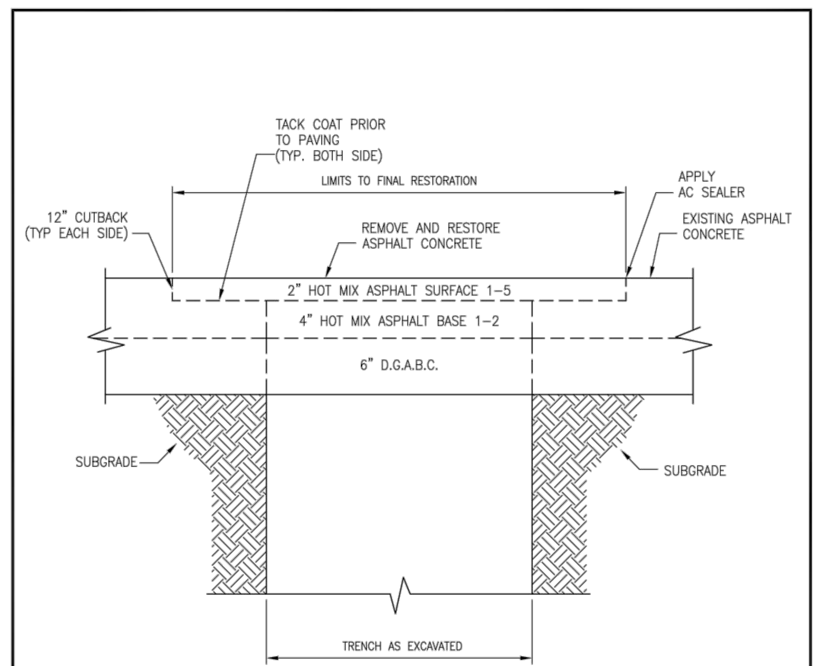


NOTES:

1. SCREENED GRAVEL SHALL BE WELL GRADED IN SIZE FROM 3/8" TO 3/4".
2. SCREENED GRAVEL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY.
3. FOR UNIMPROVED AREAS, RESTORE SURFACE WITH 8" MINIMUM OF COMPACTED CRUSHED GRAVEL.
4. TOPSOIL SHALL BE SEEDED TO MATCH EXISTING GRASS TYPE.
5. COMPACTION REQUIREMENTS: MIN. 12" LIFTS WITH JUMPING JACK TYPE. MIN. 24" LIFTS WITH RAMEX TRENCH COMPACTOR TYPE. REQUIREMENTS MAY VARY BASED ON SITE CONDITIONS AS DIRECTED BY THE ENGINEER.
6. WHEN WET TRENCH CONDITION EXIST, THE CONTRACTOR SHALL USE 3/4" CLEAN CRUSHED STONE AS BEDDING.

PIPE TRENCH EXCAVATION AND BACKFILL
DETAIL
N.T.S.

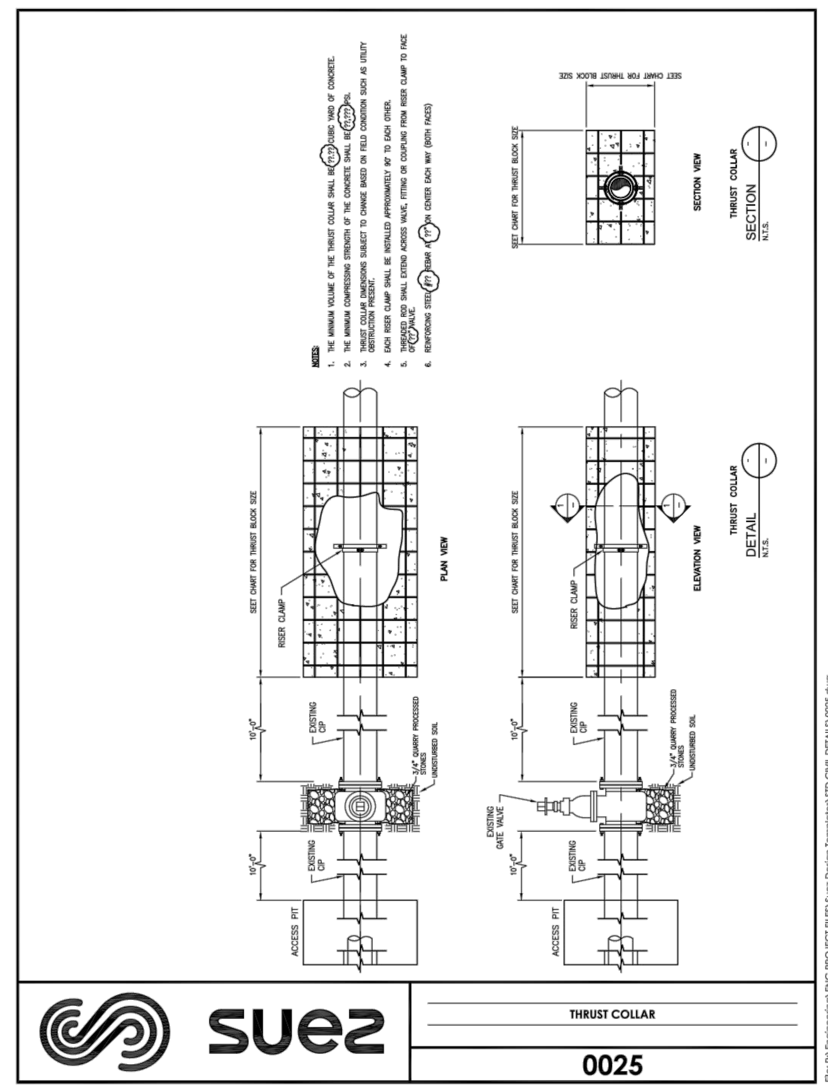
SUEZ — PIPE TRENCH EXCAVATION AND BACKFILL — 0020



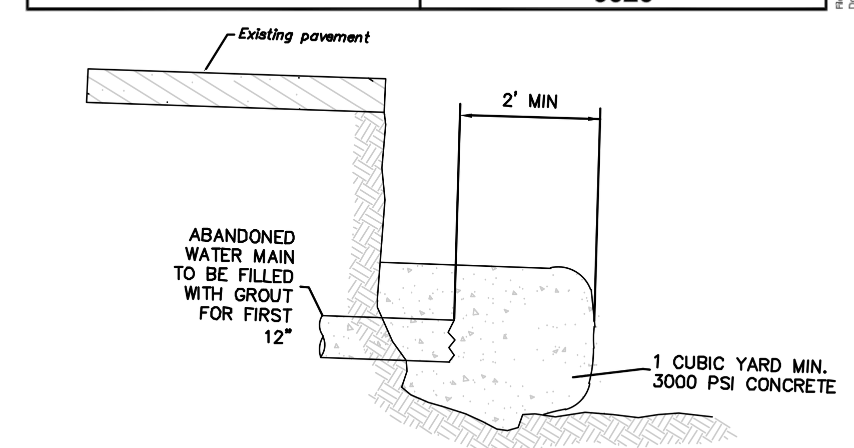
NOTE: REFER TO PIPE TRENCH EXCAVATION AND BACKFILL DETAIL

DETAIL
N.T.S.

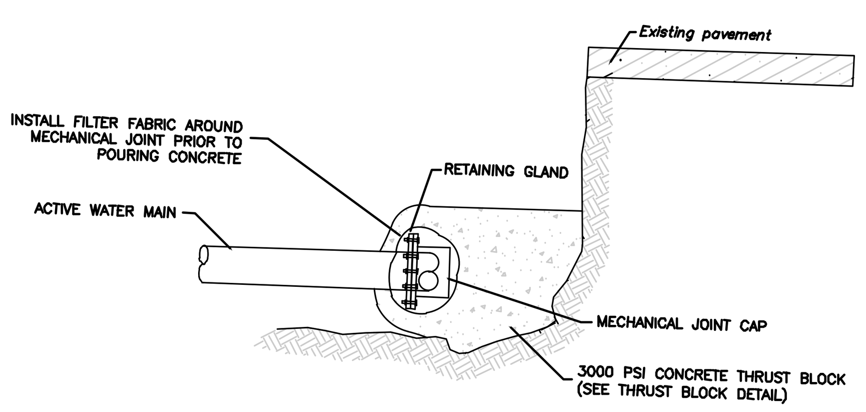
SUEZ — PAVEMENT RESTORATION — 0023



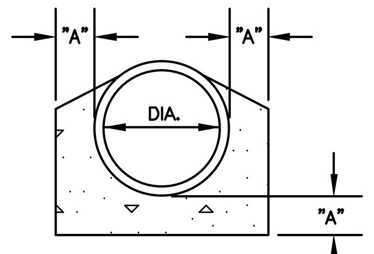
SUEZ — THRUST COLLAR — 0025



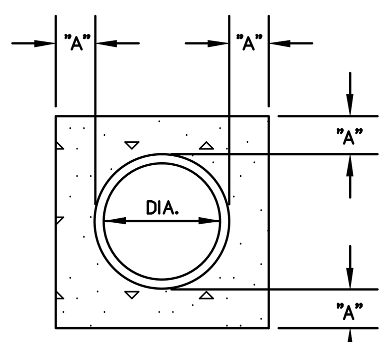
END CAP FOR ABANDONED WATER MAIN
NOT TO SCALE



MECHANICAL JOINT END CAP FOR ACTIVE WATER MAIN
NOT TO SCALE



HALF ENCASEMENT



FULL ENCASEMENT

DIMENSIONS

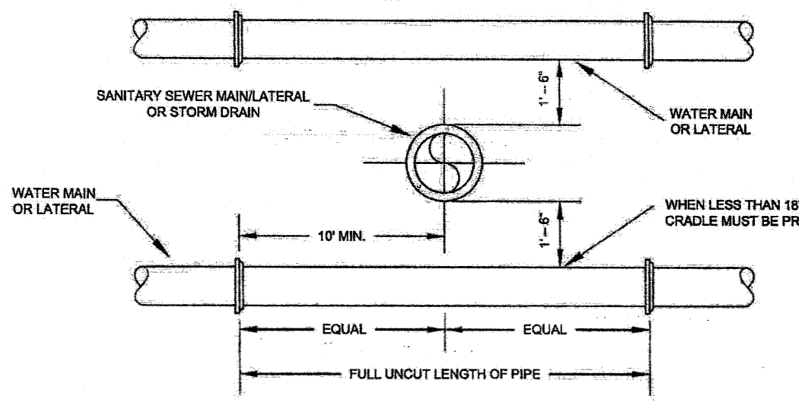
DIA.	"A"
6" or less	5"
8"	5.5"
10"	5.5"
12"	6"
15"	6"
18"	6"
24"	6"
27"	6"
30"	7"
36"	8"
42"	9"
48"	10"
54"	12"

CONSTRUCTION NOTES:

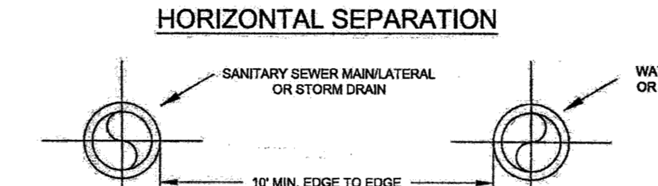
1. TO BE CONSTRUCTED WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
2. CONCRETE TO BE 3000 PSI.
3. FULL ENCASEMENT TO BE USED AT ALL TIMES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

TYPICAL CONCRETE ENCASEMENT DETAIL
NOT TO SCALE

VERTICAL SEPARATION

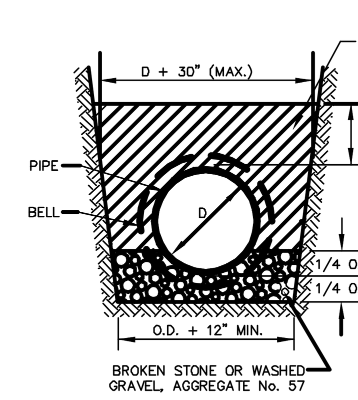


HORIZONTAL SEPARATION



NOTE: WHEN WATER AND SEWER LINES ARE PARALLEL, MIN. HOR. SEPARATION SHALL BE 10' (MEASURED FROM EDGE TO EDGE)

TYPICAL WATER & SEWER CROSSING AND SEPARATION



PIPE BEDDING DETAIL
NOT TO SCALE

GENERAL WATER MAIN CONSTRUCTION NOTES (APPLIES TO ALL SHEETS):

1. CONTRACTOR SHALL REMOVE AND DISPOSE OF 100% OF EXCAVATED MATERIAL PER THE SPECIFICATIONS.
2. WHERE NECESSARY, THE CONTRACTOR IS TO PROVIDE TEMPORARY FLOW BYPASS (TO MAINTAIN SERVICE) TO FACILITATE SHUTDOWNS FOR TIE–INS AND CAPPING. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, THEIR PROPOSED BYPASS DESIGN, WHICH SHOULD INCLUDE AT–LEAST AN 8" PIPE FOR FIRE HYDRANT SUPPLY AND 6" FOR DOMESTIC SUPPLY.
3. THE CONTRACTOR SHALL LOCATE, PLUG, AND ABANDON ALL EXISTING WATER MAIN PIPING TO BE REMOVED FROM SERVICE.
4. EXISTING WATER MAINS AND WATER SERVICES SHALL BE KEPT IN SERVICE UNTIL THE NEW PIPING IS TESTED AND DISINFECTED AND ALL NEW SERVICE CONNECTIONS ARE CONNECTED TO THE PROPOSED WATER MAINS.
5. CONTRACTOR SHALL PROVIDE TEMPORARY RESTRAINT OF ALL EXISTING PIPE AND APPURTENANCES DISTURBED DURING CONSTRUCTION.
6. CONTRACTOR SHALL INSTALL PIPE RESTRAINTS AT ALL CHANGES IN DIRECTIONS, TERMINAL POINTS, AND IF AND WHERE DIRECTED BY THE ENGINEER.
7. SERVICE SHALL BE REPLACED FROM THE CURB TO THE NEW WATER MAIN FOR ALL EXISTING WATER SERVICES, WHETHER SHOWN ON THE PLANS OR NOT. SERVICE CONNECTIONS SHALL BE PROVIDED FROM THE NEW WATER MAIN UP TO THE CURB AND CONNECT WITH THE EXISTING WATER SERVICE CONNECTION. NEW SERVICE CONNECTIONS TO BE PROVIDED UP TO THE EXISTING SERVICE UP TO 6" AS APPLICABLE. WHERE NO VALVE BOXES EXIST AT THE CURB, ONE SHALL BE INSTALLED. MISCELLANEOUS SERVICE FITTINGS AND ADAPTORS SHALL BE PROVIDED AS REQUIRED TO CONSTRUCT NEW SERVICES. EXISTING $\frac{3}{4}$" SERVICES SHALL BE REPLACED WITH NEW 1" SERVICE. ALL OTHER WATER SERVICES SHALL BE REPLACED WITH SAME SIZE COPPER SERVICE. WHERE COPPER WATER SERVICES ALREADY EXIST, THE CONTRACTOR SHALL EXTEND IT AND RECONNECT TO THE NEW MAIN. CONTRACTOR SHALL CONNECT TO THE EXISTING WATER SERVICE AT THE CURB STOP. RESTORATION REQUIRED DUE TO NEW CURB STOP INSTALLATION SHALL BE INCLUDED IN THE PRICE OF THE NEW CURB STOP.
8. THE SURVEY BASE MAP DOES NOT INDICATE THE LOCATIONS OF EACH WATER SERVICE WITHIN THIS CONTRACT AREA. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND RECONNECT ALL EXISTING WATER SERVICES WITHIN THIS CONTRACT'S LIMITS.
9. PIPE CAPS ON ACTIVE PIPES SHALL BE MECHANICAL JOINT CAPS WITH ADEQUATE THRUST BLOCKS. CONCRETE PLUGS SHALL BE INSTALLED ON WATER PIPES TO BE ABANDONED. (SEE DETAIL)
10. LOCATION OF UTILITIES SHOWN ON THESE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE WITH THE UTILITY COMPANIES AND ARE NOT WARRANTED AS TO EXACTNESS. CONTRACTOR TO DETERMINE EXACT LOCATION AND DEPTH OF UTILITIES AT ALL CROSSINGS PRIOR TO CONSTRUCTION.
11. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE ALL UTILITIES AND USE CAUTION WHEN DIGGING FOR UTILITIES. EXISTING UTILITIES SHALL BE EXPOSED BY HAND DIGGING AND SUPPORTED TO AVOID DAMAGE. SUPPORTS SHALL BE PROVIDED AT ALL UTILITY CROSSINGS. UTILITY SUPPORT DETAILS SHALL BE REVIEWED AND APPROVED BY THE APPROPRIATE UTILITY OWNER PRIOR TO INSTALLATION.
12. CONTRACTOR TO MAINTAIN 10 FOOT HORIZONTAL SEPARATION BETWEEN THE WATER MAIN AND SANITARY SEWER, WHERE VERTICAL SEPARATION OF 18 INCHES CANNOT BE MAINTAINED. WHERE NEITHER VERTICAL NOR HORIZONTAL SEPARATION CAN BE ACHIEVED CONCRETE ENCASEMENT OR RESTRAINED JOINTS SHALL BE UTILIZED IN ACCORDANCE WITH DETAIL PROVIDED AS DETERMINED BY THE ENGINEER.
13. MINIMUM COVER DEPTH FOR HYDRANT AND WATER SERVICE CONNECTION PIPING SHALL BE NO LESS THAN 4 FEET.
14. CONTRACTOR TO PROVIDE CONCRETE CRADLES BETWEEN ALL UTILITY CROSSINGS WITH LESS THAN 12" OF VERTICAL SEPARATION.
15. GATE VALVE INSTALLATION SHALL INCLUDE GATE VALVE, VALVE BOX AND LID IN ACCORDANCE WITH THE SPECIFICATIONS.
16. CONTRACTOR SHALL CONDUCT ALL NECESSARY TEST PITS TO LOCATE THE EXISTING WATER MAINS AT ALL CONNECTION POINTS, UTILITY CROSSINGS AND IN AREAS WHERE EXISTING UTILITIES ARE IN CONFLICT WITH THE PROPOSED WATER MAINS.
17. ALL ABANDONED OR DISCONNECTED WATER SERVICES SHALL BE CAPPED.
18. IN AREAS WHERE THE PROPOSED PIPING IS IN CONFLICT WITH THE EXISTING UNDERGROUND UTILITIES, THE CONTRACTOR SHALL ARRANGE FOR RELOCATION OF THE UNDERGROUND UTILITY WITH THE UTILITY COMPANY OR PROVIDE ADEQUATE SUPPORT OF THE UTILITY SO THE PROPOSED PIPING CAN BE CONSTRUCTED.
19. ALL WATER MAIN WORK AND/OR ANY SHUTDOWNS OF THE WATER SYSTEM SHALL BE COORDINATED WITH THE OWNER/ENGINEER. (WHERE PERMITTED)
20. CONTRACTOR SHALL MAINTAIN, AT ALL TIMES, FULL SITE ACCESS IN SUPPORT OF THE CITY'S OPERATION, MAINTENANCE AND EMERGENCY RESPONSE ACTIVITIES.
21. CONTRACTOR SHALL NOT LEAVE ANY STOCKPILES OF EXCAVATED MATERIAL OVERNIGHT WITHIN THE LIMITS OF DISTURBANCE. STOCKPILING OF MATERIALS IS ONLY ALLOWED DURING CONSTRUCTION HOURS. THE CONTRACTOR IS RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL MATERIAL ACCUMULATED FROM CONSTRUCTION ACTIVITIES ON A DAILY BASIS.
22. NO EXCAVATION SHALL BE LEFT OVERNIGHT. TRENCHES SHALL BE BACKFILLED AT THE END OF THE DAY WITH DENSE GRADED AGGREGATE TOPPED WITH 2" MINIMUM OF HOT MIX ASPHALT BASE COURSE.
23. TRENCH RESTORATION IS NOT DEPICTED ON THE PLANS FOR WATER SERVICES, PIPE CAPS, ETC., FOR CLARITY OF DRAWINGS BUT IS REQUIRED AS PART OF THIS CONTRACT.
24. THE CONTRACTOR SHALL TAKE RESPONSIBLE CARE AND CAUTION TO PRESERVE AND PROTECT THE SITE(S), ALL EX. PAVEMENT, CURBS, EASEMENT AREAS, TREES AND SHRUBS, SIDEWALK, PRIVATE AND PUBLIC PROPERTY ALONG AND ADJACENT TO THE LINES OF WORK. DESTRUCTION TO ANY OF THE ABOVE ITEMS SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
25. ANY AREAS DISTURBED BY THE CONTRACTOR'S OPERATION OTHER THAN THOSE SCHEDULED IN THE CONTRACT WILL BE PAVED AND/OR TOP SOILED, FERTILIZED, AND SEEDED AND PROVIDED WITH MULCHING AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE. AREAS USED FOR EQUIPMENT STORAGE SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AS SPECIFIED ABOVE AT THE CONTRACTOR'S EXPENSE.
26. THE CONTRACTOR SHALL NOTIFY THE LOCAL FIRE DEPARTMENTS, FIRST AID SQUADS AND ANY OTHER EMERGENCY PUBLIC SERVICES PRIOR TO CONSTRUCTION ON ANY STREET. ACCESS TO VEHICLES AND EQUIPMENT MUST BE MAINTAINED AT ALL TIMES. THE CONTRACTOR SHALL NOT PREVENT, OR IN ANY WAY IMPAIR, THE MOVEMENT OF THESE VEHICLES.
27. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR WILL PREPARE AND DISTRIBUTE TO ALL PROPERTY OWNERS AND TENANTS AFFECTED BY THE PROJECT A LETTER OUTLINING THE PROPOSED IMPROVEMENTS AND THE ANTICIPATED DURATION OF EACH PHASE OF CONSTRUCTION. THIS LETTER WILL BE REVIEWED BY THE ENGINEER PRIOR TO DISTRIBUTION AND WILL BE DISTRIBUTED BY THE CONTRACTOR NOT LESS THAN SEVEN (7) DAYS PRIOR TO THE BEGINNING OF WORK OR WITHIN SUCH OTHER TIME AS THE ENGINEER MAY DIRECT. THE WORK SCHEDULE MUST BE APPROVED BY THE ENGINEER, PRIOR TO ANY NOTIFICATIONS BEING DISTRIBUTED TO HOMEOWNERS/BUSINESS OWNERS.
28. THE CONTRACTOR SHALL SUBMIT A DETAILED COMPLETE CONSTRUCTION SCHEDULE WITHIN TWO WEEKS OF CONTRACT AWARD OUTLINING THE SEQUENCE OF CONSTRUCTION, WATER MAIN REPLACEMENT, SERVICE RECONNECTION, RESTORATION AND CLEANUP, AND SHOP DRAWING SUBMITTAL DATES.
29. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL VIDEO AND TAKE PHOTOGRAPHS OF ALL AREAS WITHIN THE LIMIT OF WORK. THE VIDEO SHALL BE ON STANDARD DVD. PHOTOGRAPHS SHALL BE DIGITAL. PRINTED AND ELECTRONIC COPIES TO BE PROVIDED. THE DVD AND PHOTOS WILL BE PROVIDED TO THE ENGINEER PRIOR TO CONSTRUCTION. THE COST FOR THE DVD AND PHOTOGRAPHS SHALL BE INCLUDED IN THE VARIOUS PAY ITEMS SCHEDULED IN THE PROPOSAL.
30. CONTRACTOR IS TO MAINTAIN A MINIMUM SEPARATION OF 2 FEET BETWEEN EXISTING AND PROPOSED WATER MAIN.
31. ALL INTERCONNECTIONS BETWEEN SIDE STREETS AND EXISTING MAINS (WHICH WILL BE ABANDONED IN WASHINGTON STREET) TO BE CUT AND CAPPED.
32. EXISTING HYDRANTS SCHEDULED TO BE REMOVED SHALL BE DISCONNECTED FROM THE AUXILIARY EXISTING WATER MAIN VALVE. THE EXISTING FIRE HYDRANT, PIPE AND ALL OTHER APPURTENANCES SHALL BE REMOVED. PIPING NOT IN CONFLICT WITH THE PROPOSED WATER MAIN SHALL BE CAPPED AND ABANDONED IN PLACE.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT058_SHT059_CSD_UTL.dwg
LAST SAVED DATE AND TIME: 11 Mar 2016, 7:15PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

ROSARIO R. SANTOS, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. 24GE05060000
03-11-2016

NJEIFP

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

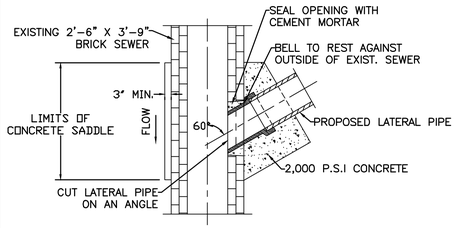
CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

UTILITY CONSTRUCTION DETAILS

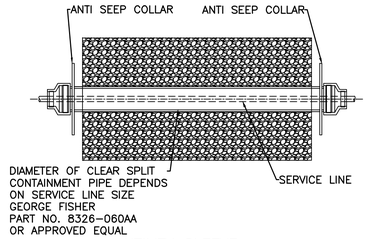
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY	RS
CHECKED BY	SB
DRAWN BY	DN
DATE	03-11-2016
SCALE	AS SHOWN
PROJ. NO.	HOBK-00090

DRAWING CSD-2

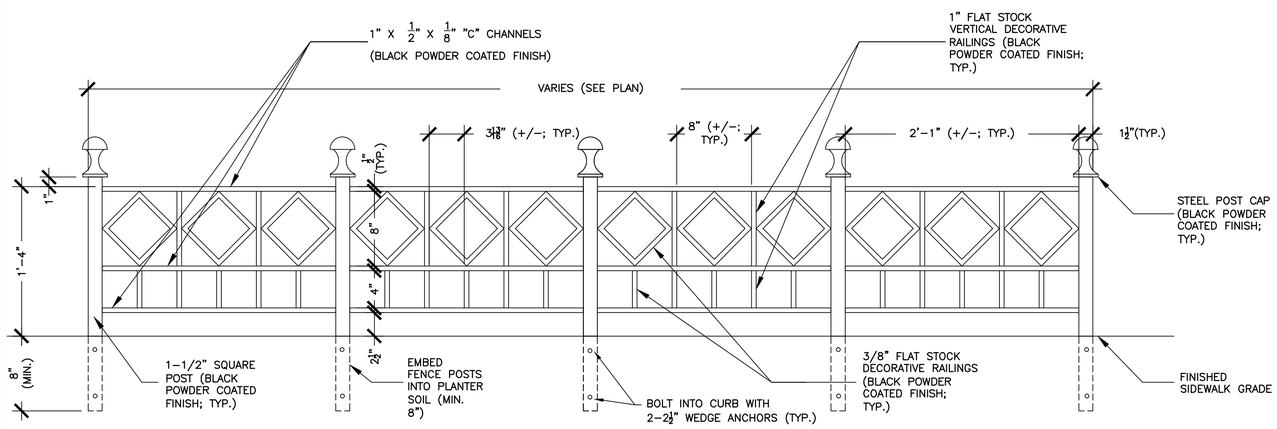


STORM SEWER CONNECTION
NTS

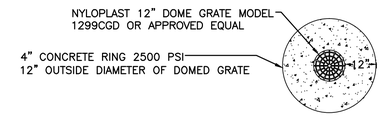


UTILITY SLEEVE
NTS

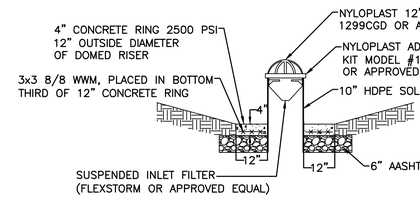
STONE BED UTILITY CROSSING
NTS



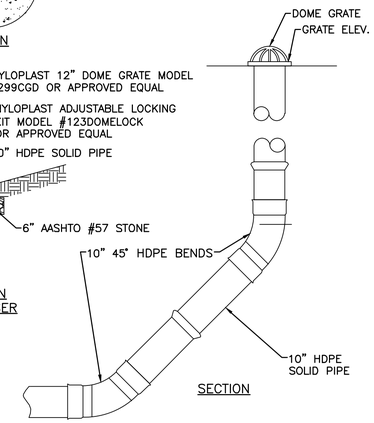
RAIN GARDEN AREA FENCE
NTS



PLAN

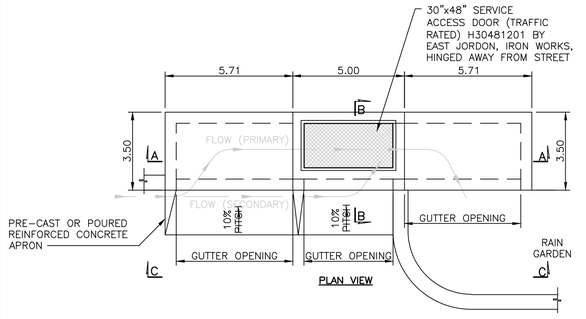


ENLARGED SECTION
TOP OF DOMED RISER

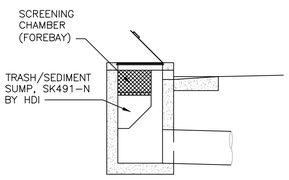


SECTION

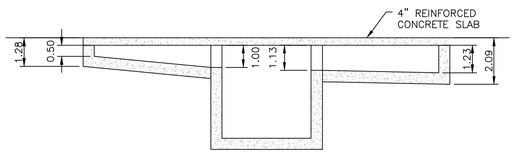
DOMED RISER
NTS



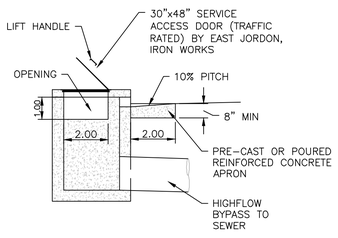
PLAN VIEW



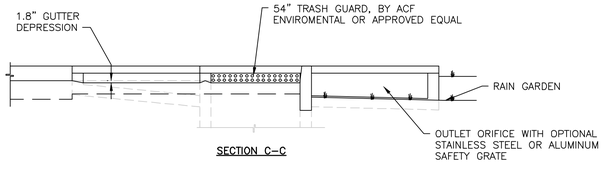
FILTER SYSTEM



SECTION A-A

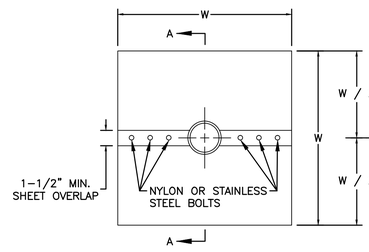


SECTION B-B

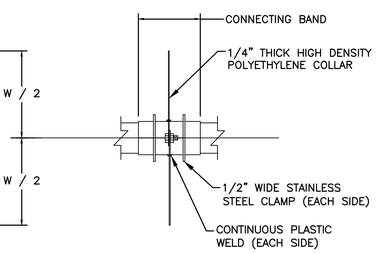


SECTION C-C

MODIFIED CURB INLET DIVERSION/BYPASS/SCREENING (DPS) DETAIL
N.T.S.



UPSTREAM ELEVATION

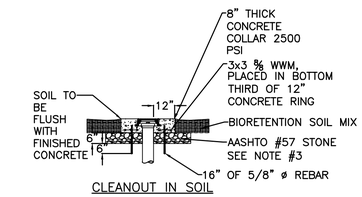


SECTION A-A

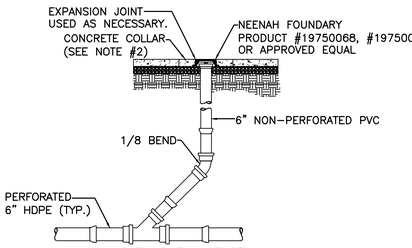
NOTES:
1. CONNECTING BAND SHALL BE SEALED AT BOTH ENDS WITH NON-SHRINK GROUT.
2. COLLAR MATERIAL SHALL BE RIGID POLYETHYLENE SHEET
3. STAINLESS STEEL SHALL BE GRADE 304 OR BETTER.
4. DIMENSION "W" SHALL BE 3 TIMES THE DIAMETER OF THE INTERSECTING PIPE.

ANTI-SEEP COLLAR
NTS

NOTES:
1. 8" HDPE (TYP.) X 6" PVC WYE JOINT FOR INLINE SECTION -OR- 8"-1/8TH BEND AND 8" HDPE TO 6" PVC REDUCER FOR END SECTION.
2. CONCRETE COLLAR TO BE POURED SINGULARLY IN GRASS OR MONOLITHICALLY WITH FOOTWAY. THE CONCRETE COLLAR MUST HAVE STONE FOOTING. EXPANSION JOINT OR CAULK MAY BE USED
3. STORMWATER SOIL AND STONE SUBBASE SURROUNDING CLEANOUT RISER MUST BE COMPACTED TO ENSURE NO LATERAL MOVEMENT PRIOR TO PLACEMENT OF CONCRETE COLLAR.
4. 5/8" DIA. REBAR TO EXTEND MINIMUM OF 4" INTO CONCRETE COLLAR. THREE (3) LENGTHS OF REBAR EVENLY SPACED AROUND COLLAR, SPACED 6" FROM OUTER EDGE.

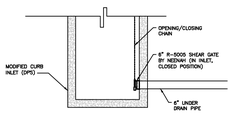


CLEANOUT IN SOIL

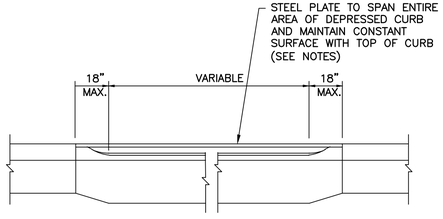


CLEANOUT IN FOOTWAY

CLEANOUT IN SOIL OR FOOTWAY
NTS

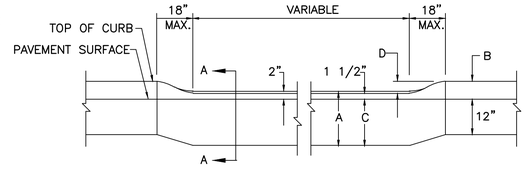


6" SHEAR GATE DETAIL
N.T.S.

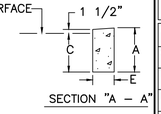


NOTES:
1. STEEL PLATE SHALL HAVE A MINIMUM TENSILE STRENGTH OF 35,000 PSI.
2. BOLTS AND ATTACHMENTS SHALL BE STAINLESS STEEL.

DEPRESSED CURB PLATE DETAIL
NTS



CURB SIZE	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E
9"X 18"	18"	6"	16"	4 1/2"	9"
8"X 20"	20"	8"	18"	6 1/2"	8"



SECTION "A - A"

DEPRESSED CURB DETAIL
NTS

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

CONSTRUCTION DETAILS
DRAINAGE STRUCTURES - 1

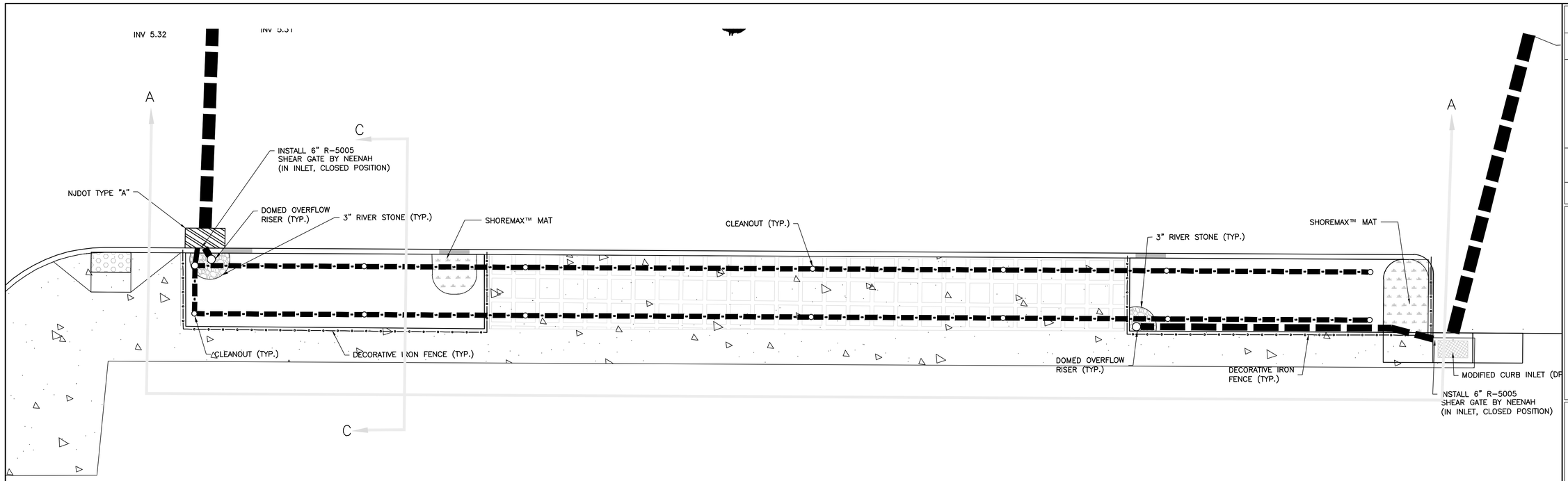
NJEIFP

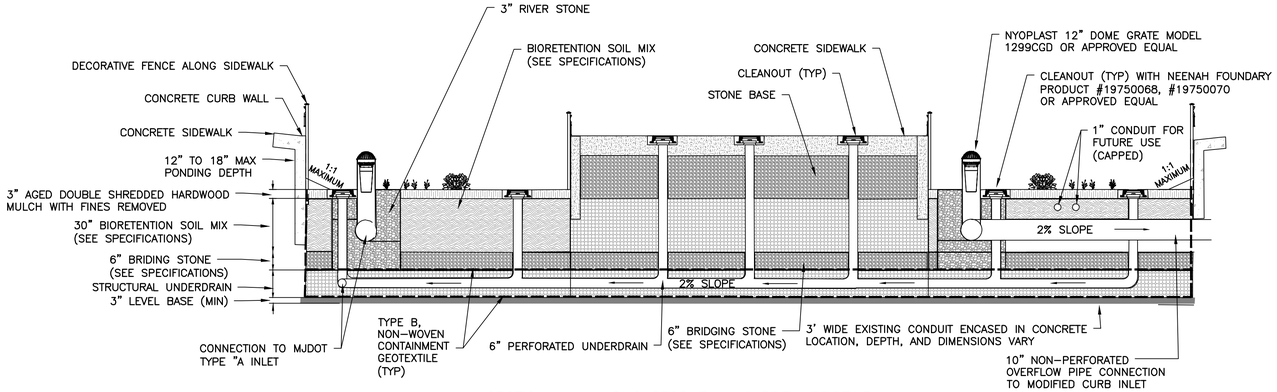
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING CSD-3
CHECKED BY DM	
DRAWN BY DP	SHEET 60
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT060-SHT065_CSD_DRNG.dwg
LAST REVISED ON: Wednesday, June 14 Mar 2016, 2:14PM
LAST SAVE BY: mharleman

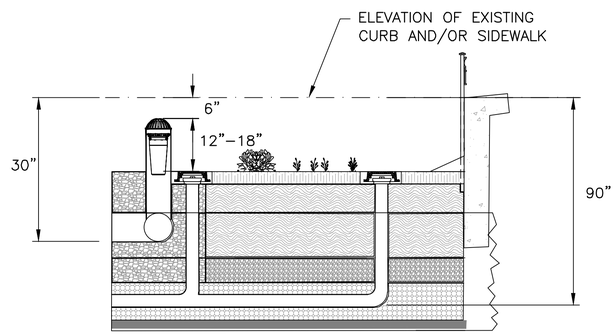
COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS PREPARED, IS PROHIBITED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





SECTION A–A: BUS STOP RAIN GARDEN PROFILE

NTS



DIMENSIONING DETAIL FOR OVERFLOW STRUCTURES AND PERFORATED UNDERDRAIN

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04810800
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

CONSTRUCTION DETAILS
DRAINAGE STRUCTURES - 2

NJEIFP

YOUR GOALS. OUR MISSION.

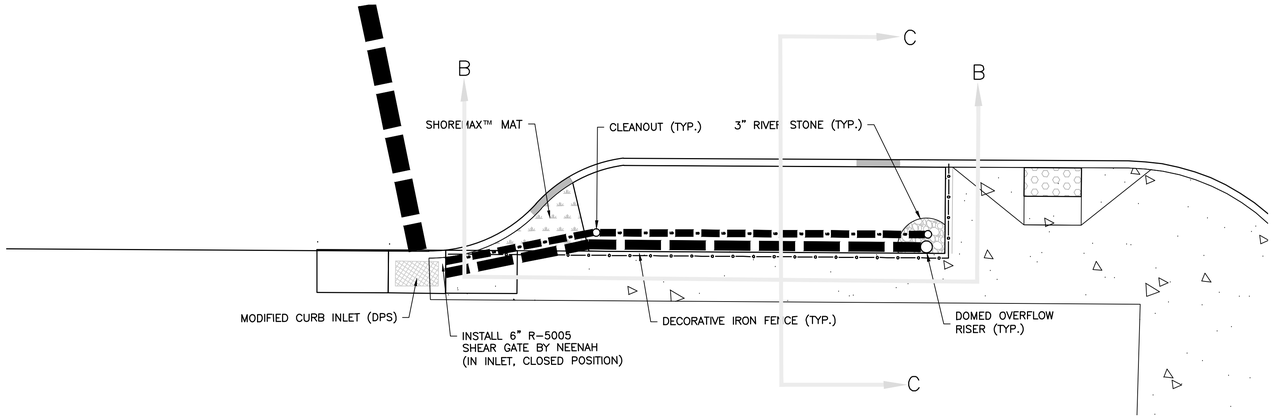
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS
AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

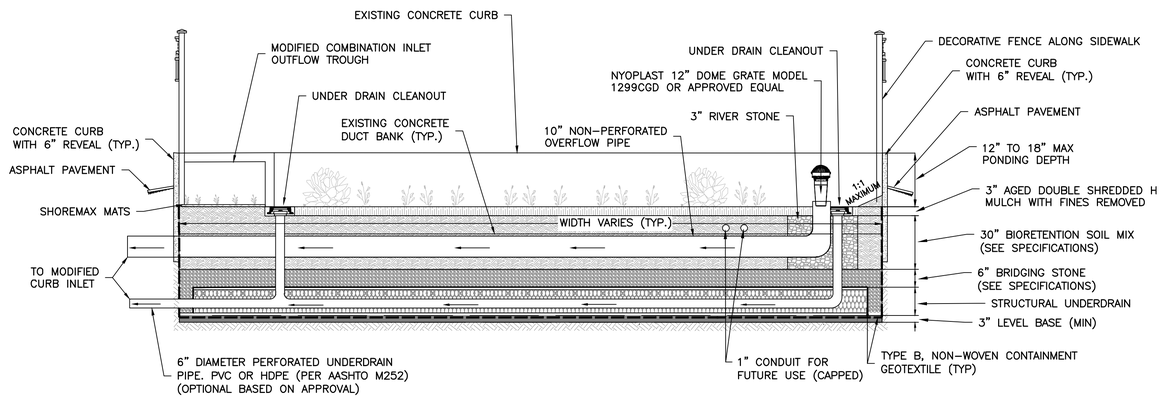
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY,
MASSACHUSETTS, MICHIGAN, NEW JERSEY,
OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING CSD-4
CHECKED BY DM	
DRAWN BY DP, MDH	SHEET 61
DATE 03-11-2016	OF 70
SCALE AS SHOWN	
PROJ. NO. HOBK-00090	

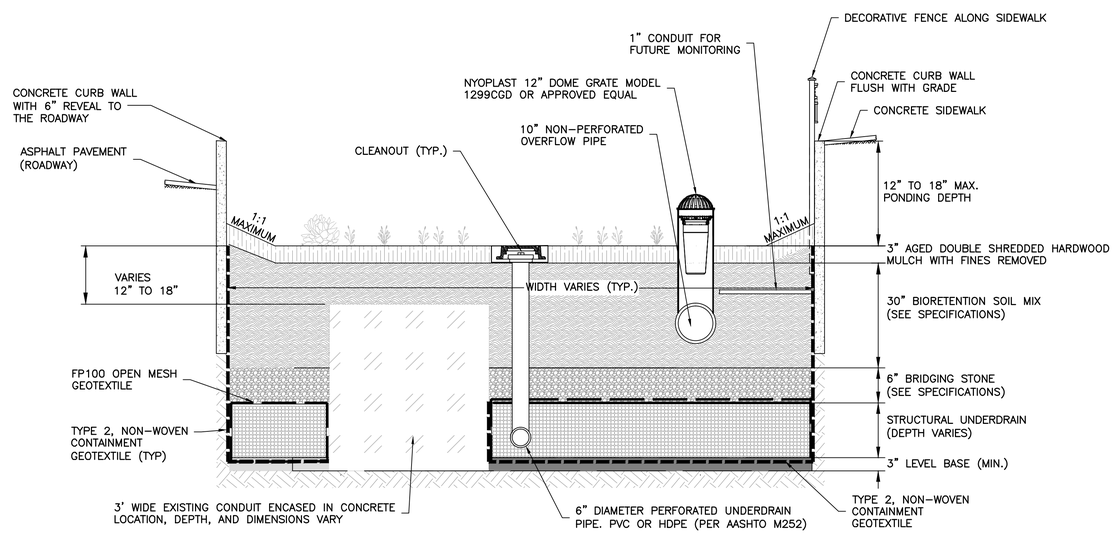
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT065_CSD_DRNG.dwg
LAST SAVED DATE: Tuesday, 14 Mar 2016, 12:41PM
LAST SAVE BY: mhorleman

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.





SECTION B–B: RAINGARDEN PROFILE (TYP.)
NTS



SECTION C–C: RAINGARDEN CROSS SECTION (TYP.)
NTS

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS
DRAINAGE STRUCTURES - 3

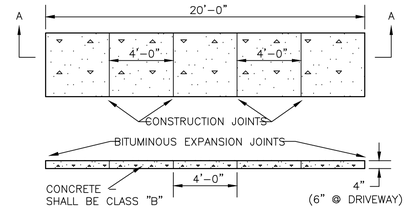
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS
AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY,
MASSACHUSETTS, MICHIGAN, NEW JERSEY,
OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING CSD-5
CHECKED BY DM	
DRAWN BY DP	SHEET 62
DATE 03-11-2016	OF 70
SCALE AS SHOWN	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT065-SHT065_CSD_DRNG.dwg
LAST SAVED: DATE: 8:00 AM, TUE 14 Mar 2016, 7:21:41PM
LAST SAVE BY: mhorlemann

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OF THE OWNER, IS NOT ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



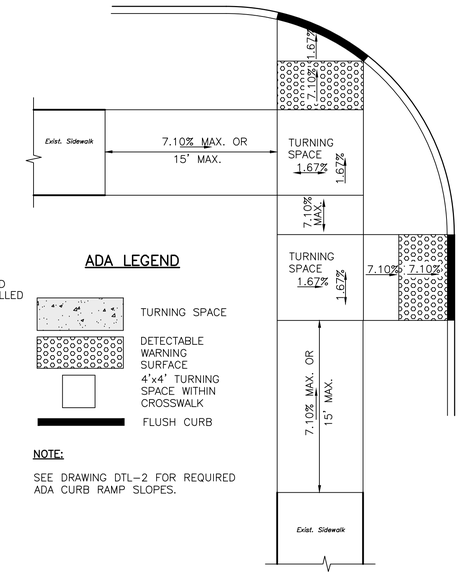
SECTION A–A

CONSTRUCTION NOTES:

1. A PREFORMED, BITUMINOUS EXPANSION JOINT 1/2" THICK, 4" WIDE, AND EXTENDING THE FULL WIDTH OF THE WALK, UNBROKEN, SHALL BE INSTALLED EVERY TWENTY (20) FEET.
2. CONSTRUCTION JOINTS SHALL BE INSTALLED EVERY FOUR (4) FEET THE FULL WALK WIDTH.
3. THERE SHALL BE A FLOAT FINISH WITH THE EDGES FINISHED WITH A SUITABLE TOOL.

SIDEWALK JOINT DETAIL

NOT TO SCALE



ADA LEGEND

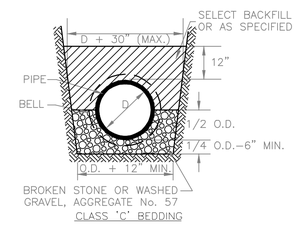
- TURNING SPACE
- DETECTABLE WARNING SURFACE
- 4'x4' TURNING SPACE WITHIN CROSSWALK
- FLUSH CURB

NOTE:

SEE DRAWING DTL–2 FOR REQUIRED ADA CURB RAMP SLOPES.

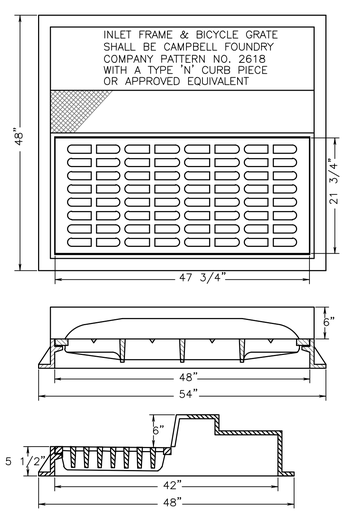
ADA SLOPE DETAILS

NOT TO SCALE



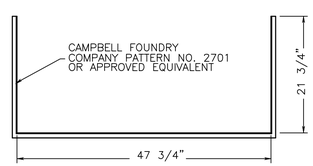
PIPE BEDDING

NOT TO SCALE



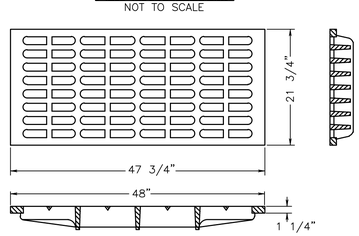
TYPE "B" INLET FRAME & BICYCLE SAFE GRATE

NOT TO SCALE



EXTENSION FRAME

NOT TO SCALE



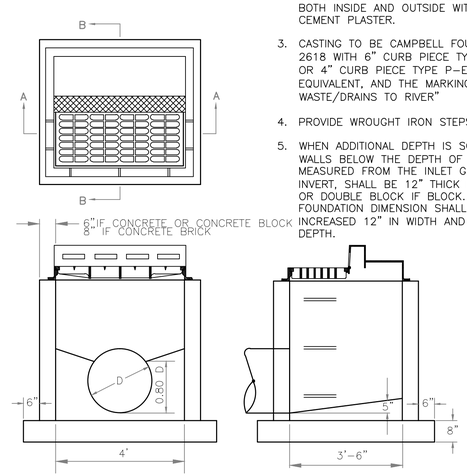
NOTE: GRATE DIMENSIONS TO BE VERIFIED IN THE FIELD.

BICYCLE SAFE GRATE

NOT TO SCALE

GENERAL NOTES

1. FOOTER AND INVERT TO BE NJDOT CLASS "B" CONCRETE.
2. IF WALL CONSTRUCTION OTHER THAN CONCRETE THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
3. CASTING TO BE CAMPBELL FOUNDRY NO. 2618 WITH 6" CURB PIECE TYPE 'N–ECO' OR 4" CURB PIECE TYPE P–ECO, OR EQUIVALENT, AND THE MARKING "DUMP NO WASTE/DRAINS TO RIVER"
4. PROVIDE WROUGHT IRON STEPS 18" O.C.
5. WHEN ADDITIONAL DEPTH IS SCHEDULED WALLS BELOW THE DEPTH OF 8'–0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK IF CONCRETE OR DOUBLE BLOCK IF BLOCK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.



SECTION A–A

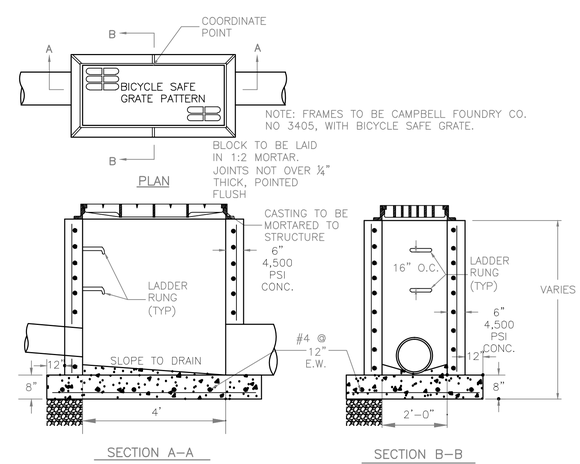
THROUGH INVERT DETAIL

SECTION B–B

TERMINAL INVERT DETAIL

TYPE "B" INLET

NOT TO SCALE



SECTION A–A

SECTION B–B

TYPE A INLET

NOT TO SCALE

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN HUDSON COUNTY NEW JERSEY

CONSTRUCTION DETAILS

DRAINAGE STRUCTURES - 4

NJEIFP

YOUR GOALS. OUR MISSION.

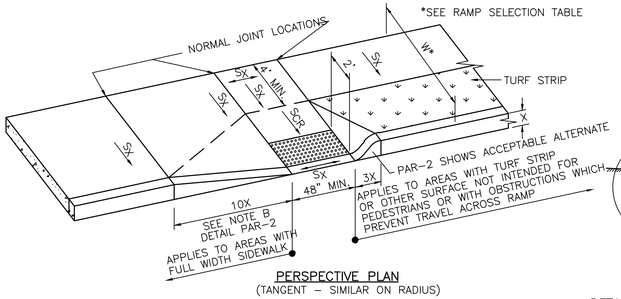
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

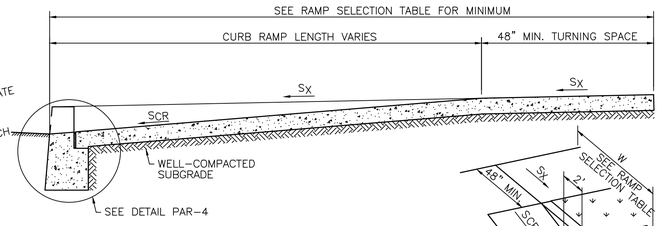
DESIGNED BY GD	DRAWING CSD–6
CHECKED BY DM	
DRAWN BY DP	SHEET 63
DATE 03-11-2016	OF 70
SCALE AS SHOWN	
PROJ. NO. HOBK-00090	

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT063_CSD_DRNG.dwg
LAST SAVED: Thu Mar 03, 2016 14 Mar 2016, 12:14PM
LAST SAVE BY: mharleman

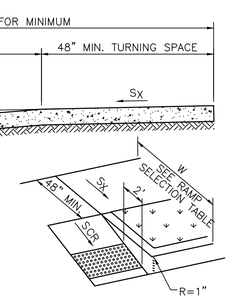


PERSPECTIVE PLAN
(TANGENT – SIMILAR ON RADIUS)

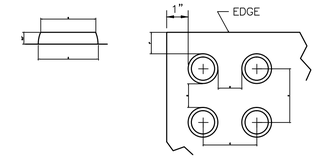


TYPICAL SECTION

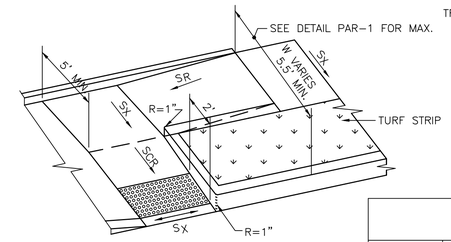
DETAIL PAR-1
PERPENDICULAR PUBLIC SIDEWALK CURB RAMP
NOT TO SCALE



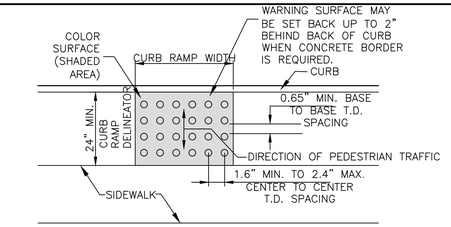
DETAIL PAR-1A
ALTERNATIVE CURB TRANSITION
WHERE SHOWN OR DIRECTED
NOT TO SCALE



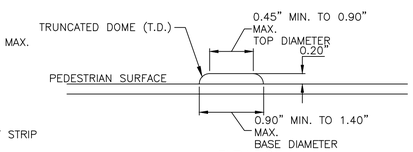
DETAIL – DETECTABLE WARNING
(SEE GENERAL NOTE 11)
NOT TO SCALE



DETAIL PAR-2A
ALTERNATIVE CURB TRANSITION
WHERE SHOWN OR DIRECTED
NOT TO SCALE

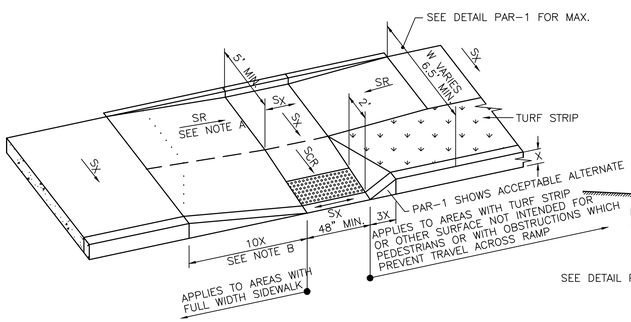


PLAN VIEW

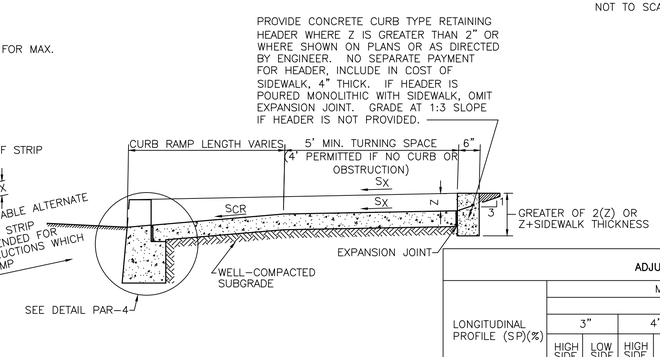


ELEVATION

DETECTABLE WARNING SURFACE



PERSPECTIVE PLAN
(TANGENT – SIMILAR ON RADIUS)



TYPICAL SECTION

DETAIL PAR-2
COMBINATION (PERPENDICULAR AND PARALLEL) PUBLIC SIDEWALK CURB RAMP
(APPLIES TO RAMPS WHERE DETAILS PAR-1 AND PAR-3 DO NOT APPLY)
NOT TO SCALE

NOTES:

A. TYPICAL MINIMUM RAMP LENGTH USING DESIGN (NOMINAL) OR MAXIMUM S_R FOR CURB HEIGHT (X) OF 6" OR LESS (SHOWN WITH DOTTED LINE). HOWEVER, FOR EASE OF CONSTRUCTION AND IMPROVED APPEARANCE BEGIN SLOPE AT EXPANSION JOINT OPPOSITE BEGINNING OF CURB TRANSITION UNLESS OTHERWISE DIRECTED BY ENGINEER. SLOPE WILL USUALLY BE MUCH LESS THAN 1:12. CONSULT ENGINEER WHEN IT IS NOT.

B. MAXIMUM SLOPE OF A SIDE FLARE WHERE PEDESTRIAN CIRCULATION IS POSSIBLE IS 10:1 MEASURED ALONG THE CURB LINE; NOT RELATIVE TO A LEVEL LINE.

RAMP SELECTION TABLE

CURB FACE (X) (INCHES)	W NOT MORE THAN 6.5'	W (FEET) 8.0 9.0 10.0 11.0 12.0 13.0 14.0 15.0 16.0 17.0 18.0 19.0
3	DETAIL PAR-3 APPLIES	
4		8.5
5		10.0
6		11.75
7		13.25
8		14.75
9		16.25
10		17.75 19.25

DETAIL PAR-1 APPLIES
DETAIL PAR-2 APPLIES

ADJUSTMENT FOR LONGITUDINAL PROFILE TABLE

LONGITUDINAL PROFILE (SP)(%)	MINIMUM LENGTH OF 14H : 1V CURB TRANSITION (FEET/INCHES) — CURB HEIGHT (FACE) (INCHES) 3" HIGH SIDE (L_H)	3" LOW SIDE (L_L)	4" HIGH SIDE (L_H)	4" LOW SIDE (L_L)	5" HIGH SIDE (L_H)	5" LOW SIDE (L_L)	6" HIGH SIDE (L_H)	6" LOW SIDE (L_L)	7" HIGH SIDE (L_H)	7" LOW SIDE (L_L)	8" HIGH SIDE (L_H)	8" LOW SIDE (L_L)	9" HIGH SIDE (L_H)	9" LOW SIDE (L_L)	10" HIGH SIDE (L_H)	10" LOW SIDE (L_L)
SEE NOTE 2	3'6"	3'6"	4'9"	4'9"	5'10"	5'10"	7'0"	7'0"	8'2"	8'2"	9'5"	9'5"	10'6"	10'6"	11'8"	11'8"
0.2	3'7"	3'5"	4'10"	4'6 3/4"	6'0"	5'8"	7'2"	6'10"	8'4"	7'11"	9'7"	9'1"	10'10"	10'2 1/2"	12'0"	11'4"
0.3	3'8"	3'4"	4'10 1/4"	4'4 1/2"	6'1"	4'7"	7'4"	6'8 1/2"	8'6"	7'10"	9'9"	8'11"	10'11"	10'1"	12'2"	11'2"
0.4	3'8 1/2"	3'3 1/4"	4'11"	4'5"	6'2"	5'6"	7'5"	6'7 1/2"	8'8"	7'9"	9'11"	8'10"	11'2"	9'11"	12'4"	11'0"
0.5	3'9"	3'3"	5'0"	4'4"	6'3"	5'5"	7'6"	6'6 1/2"	8'9"	7'7 1/2"	10'0"	8'9"	11'3"	9'10"	12'6"	10'11"
0.75	3'11"	3'2 1/2"	5'2 1/2"	4'3"	6'6"	5'4"	7'10"	6'5"	9'1 1/2"	7'6"	10'5"	8'6 1/2"	11'9"	9'7 1/2"	13'0"	10'8"
1.00	4'1"	3'1"	5'5"	4'1"	6'9 1/2"	5'1 1/2"	8'2"	6'1 1/2"	9'6"	7'2"	10'10"	8'2"	12'2"	9'2"	13'7"	10'2"
1.50	4'5"	2'11"	5'11"	3'10"	7'4"	4'10	8'10"	5'9 1/2"	10'4"	6'9"	11'10"	7'8 1/2"	13'4"	8'8"	14'9"	9'7"
2.00	4'10"	2'9"	6'6"	3'7 1/2"	8'1"	4'7"	9'8 1/2"	5'5 1/2"	11'4"	6'4 1/2"	12'11"	7'3 1/2"	14'7"	8'2"	15'*	9'1 1/2"
2.50 (NOTE 3)	5'4 1/2"	2'7"	7'2"	3'5 1/2"	9'0"	4'4"	10'9"	5'2"	12'6"	6'0 1/2"	14'4"	6'11"	15'*	7'7 1/2"		8'3"
3.00 "	6'0"	2'5 1/2"	8'0"	3'3 1/2"	10'0"	4'1 1/2"	12'0"	4'11"	14'1"	5'9"	15'*	6'7"		7'1"		7'10"
3.50 "	6'10"	2'4"	9'2"	3'1 1/2"	11'5"	3'11"	13'8"	4'8"	15'*	5'6"		6'3"		7'0 1/2"		7'6"
4.00 "	7'11"	2'3"	10'7"	3'0"	13'3"	3'9"	15'*	4'6"		5'3"		6'0"		6'9"		7'2"
4.50 "	9'5"	2'2"	12'7"	2'10 1/2"	15'*	3'7"		4'3 1/2"		5'0"		5'8 1/2"		6'5"		6'10"
5.00 "	11'7"	2'0 1/2"	15'*	2'9"		3'5"		4'1 1/2"		4'10"		5'6"		6'2"		6'7"
5.50 "	15'*	1'11 1/2"		2'7 1/2"		2'7 1/2"		3'11 1/2"		4'7 1/2"		5'3"		5'11"		

*MAXIMUM RAMP LENGTH IS 15'. SEE NOTE 2, SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE.

NOTES:
1. INTERPOLATE BETWEEN SLOPES SHOWN AS REQUIRED.
2. NO ADJUSTMENT FOR PROFILE SLOPES LESS THAN 0.2%.
3. CROSS SLOPE OF PUBLIC SIDEWALK CURB RAMP AT GUTTER SHOULD NOT BE GREATER THAN 2% (1:50) OR AS DIRECTED BY ENGINEER.
4. CONSULT ENGINEER FOR PROFILE SLOPES GREATER THAN 5.5%.

SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE

SYMBOL	DESCRIPTION	SLOPES (NOTE 1) DESIGN (NOMINAL)	MINIMUM	MAXIMUM
S_X	CROSS SLOPE OF PUBLIC SIDEWALK OR CROSS SLOPE OF CURB RAMP	1:60 1.67% 3/4" PER 4' 3/16" PER 1' (NOTE 3)	1:72 1.4% 5/8" PER 4' <3/16" PER 1' (NOTE 3)	1:50 2% (NOTE 3)
S_{CR}	LONGITUDINAL (RUNNING) SLOPE OF PUBLIC SIDEWALK CURB RAMP	1:14 7.1% 3 1/2" PER 4' (APPROX 7/8" PER 1')	1:50 2%	1:12.05 8.3% (NOTE 2)
S_R	LONGITUDINAL (RUNNING) SLOPE OF PARALLEL SIDEWALK CURB RAMP	1:14 7.1% 3 1/2" PER 4' (APPROX 7/8" PER 1')	1:50 2%	1:12.05 8.3% (NOTE 2)

NOTES:

1. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CONSTRUCTION WHICH DOES NOT CONFORM TO THE TOLERANCES SPECIFIED (ie. WHICH EXCEEDS THE MAXIMUM OR IS LESS THAN THE MINIMUM) WILL BE REMOVED AND REPLACED WITHOUT COST TO THE OWNER.

2. THE MAXIMUM LENGTH FOR A PARALLEL PUBLIC SIDEWALK CURB RAMP SHALL BE 15 FEET. MAXIMUM LONGITUDINAL (RUNNING) SLOPE LIMITS (S_R) DO NOT APPLY IF LENGTH IS 15 FEET OR GREATER.

3. CROSS SLOPE OF CURB RAMP (S_X) TO MATCH ROADWAY PROFILE SLOPES (S_P) OF 1:50 (2%) OR LESS. IF S_P EXCEEDS 1:50 (2%), A TRANSITION MUST BE PROVIDED AT CURB RAMPS TO MAINTAIN S_X EQUAL TO OR LESS THAN 1:50 (2%). EXCEPTION: THIS DOES NOT APPLY AT MID-BLOCK CROSSINGS WHERE S_X AT CURB RAMPS MAY MATCH S_P, EVEN IF GREATER THAN 1:50 (2%).

GENERAL NOTES:

1. CONCRETE FOR CURBS, SIDEWALKS, CURB RAMPS AND MONOLITHIC CURB RAMP CRADLES SHALL BE NJDOT CLASS B.

2. CURB AND MONOLITHIC CURB RAMP CRADLES SHALL BE POURED IN A SEPARATE OPERATION FROM SIDEWALKS AND CURB RAMPS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.

3. EXPANSION JOINTS WITH PREFORMED EXPANSION JOINT FILLER CONFORMING TO AASHTO M33, PREFORMED EXPANSION JOINT FILLER FOR CONCRETE (BITUMINOUS TYPE), SHALL BE PROVIDED AS FOLLOWS:

   3.1 1/2" THICK AT LONGITUDINAL INTERVALS OF APPROXIMATELY TWENTY FEET (20') AND BETWEEN ALL SIDEWALK CURB RAMPS AND MONOLITHIC CURB RAMP CRADLES.

   3.2 1/4" THICK BETWEEN CURB AND SIDEWALK, AROUND ALL STRUCTURES OR APPURTENANCES, SUCH AS MANHOLES, JUNCTION BOXES AND UTILITY POLES, AND ADJACENT TO ANY FIXED STRUCTURE.

4. EXPANSION JOINT MATERIAL SHALL BE TRIMMED AS TO BE SLIGHTLY BELOW THE SURFACE OF THE CONCRETE.

5. JOINT SEALER WHERE SHOWN OR REQUIRED SHALL CONFORM TO NJDOT SPECIFICATION 914. HOT-POURED JOINT SEALER SHALL CONFORM TO ASTM D 6690. COLD-APPLIED JOINT SEALER SHALL CONFORM TO ASTM D 5893, TYPE SL OR TYPE NS.

6. TOOLED JOINTS SHALL BE PROVIDED WITH A GROOVING TOOL SO AS TO DIVIDE THE CONCRETE SURFACE INTO BLOCKS AS CLOSELY APPROACHING A SQUARE AS PRACTICABLE. GROOVES SHALL BE CUT TO A DEPTH OF AT LEAST 1/2 INCH AND SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/4 INCH.

7. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, EXPANSION AND TOOLED JOINTS IN CONCRETE SURFACES SHALL BE ALIGNED WITH JOINTS IN CURBS.

8. WELDED WIRE FABRIC SHALL BE 6X6-6X6 (OLD DESIGNATION), 6X6-W2.9XW2.9 (NEW DESIGNATION) IN ACCORDANCE WITH ASTM A-185.

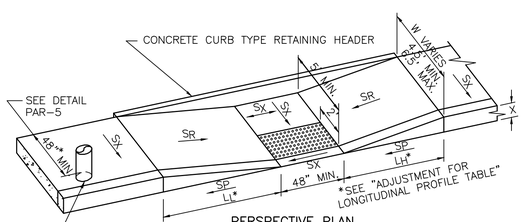
9. PUBLIC SIDEWALK CURB RAMPS, TURNING SPACES, BLENDED TRANSITIONS AND CLEAR SPACES WITHIN THE PEDESTRIAN ACCESS ROUTE SHALL NOT CONTAIN GRATINGS, COVERS, UTILITY BOXES OR SIMILAR OBSTRUCTIONS. OUTSIDE OF THE ABOVE AREAS, GRATINGS IN PUBLIC SIDEWALKS MAY HAVE OPENINGS NO GREATER THAN 1/2 INCH WIDE MEASURED PARALLEL TO DIRECTION OF TRAVEL.

10. ALL PUBLIC SIDEWALK CURB RAMPS SHALL BE PROVIDED WITH A SLIP-RESISTANT BROOM FINISH ORIENTED PERPENDICULAR TO THE TRAVEL DIRECTION.

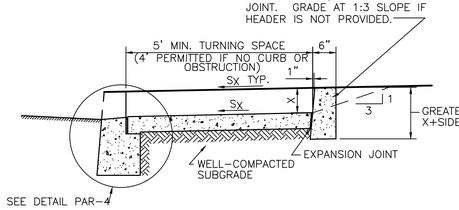
11. DETECTABLE WARNING SURFACES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 606 OF THE SPECIFICATIONS AND THE SPECIAL PROVISIONS WHICH INCLUDE A LIST OF ACCEPTABLE SYSTEMS. UNLESS A SPECIFIC DETECTABLE WARNING SYSTEM IS REQUIRED BY THE SPECIAL PROVISIONS, THE CONTRACTOR MAY SELECT THE SYSTEM TO BE USED. ONLY ONE SYSTEM MAY BE USED ON ANY PROJECT. THE COLOR OF THE DETECTABLE WARNING SYSTEM SHALL BE AS REQUIRED BY THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.

12. IF NO CURB IS PROVIDED, THE EDGE OF THE DETECTABLE WARNING SURFACE SHALL BE AT LEAST 6" BUT NOT MORE THAN 8" FROM THE EDGE OF THE RAMP. THIS SHALL APPLY TO THE CORNERS OF THE DETECTABLE WARNING FOR RAMPS ON A RADIUS.

13. DETECTABLE WARNING SIZE, GEOMETRY AND SPACING TO CONFORM TO SECTION 705 OF DEPARTMENT OF JUSTICE STANDARDS FOR ACCESSIBLE DESIGN (2010) OR SECTION R305 OF ACCESSIBILITY GUIDELINES FOR PEDEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY.

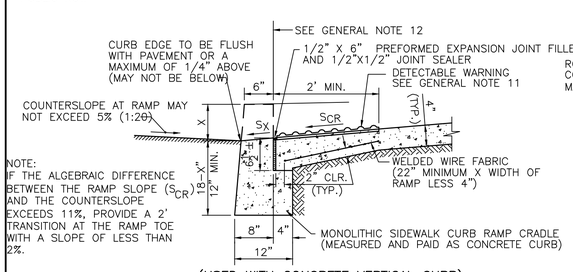


PERSPECTIVE PLAN
(TANGENT – SIMILAR ON RADIUS)



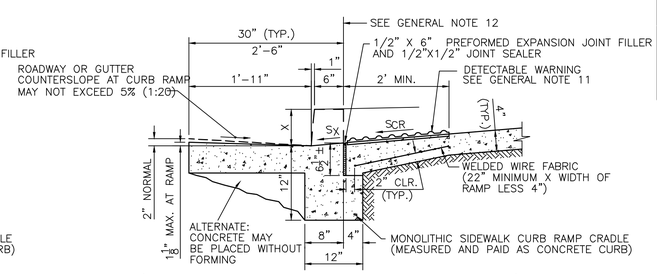
TYPICAL SECTION

DETAIL PAR-3
PARALLEL PUBLIC SIDEWALK CURB RAMP
(NO TURF SEPARATION STRIP)
NOT TO SCALE



NOTE:
IF THE ALGEBRAIC DIFFERENCE BETWEEN THE RAMP SLOPE (S_{CR}) AND THE COUNTERSLOPE EXCEEDS 11%, PROVIDE A 2' TRANSITION AT THE RAMP TOE WITH A SLOPE OF LESS THAN 2%.

(USED WITH CONCRETE VERTICAL CURB)



(USED WITH CONCRETE COMBINATION CURB AND GUTTER)

DETAIL PAR-4
MONOLITHIC SIDEWALK CURB RAMP CRADLE

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

CONSTRUCTION DETAILS

DRAINAGE STRUCTURES - 5

NJEIFP

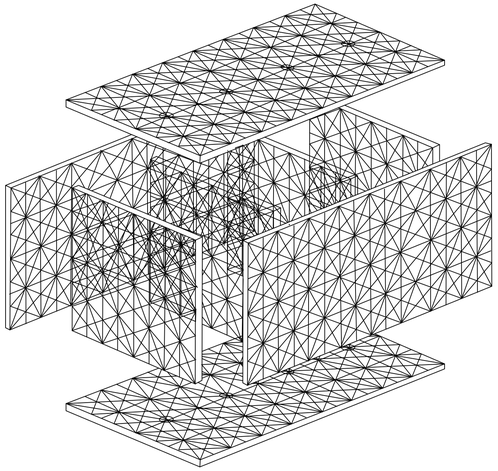
YOUR GOALS. OUR MISSION.

11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

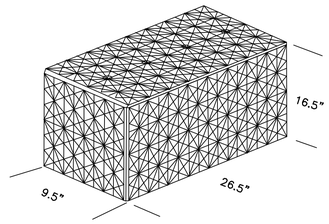
DESIGNED BY	GD
CHECKED BY	DM
DRAWN BY	DP
DATE	03-11-2016
SCALE	AS SHOWN
PROJ. NO.	HOBK-00090
DRAWING	CSD-7
SHEET	64 OF 70

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT064-SHT065_CSD_DRNG.dwg
PLOT SCALE: 1:1 PLOT DATE: Friday, March 11, 2016, 12:47PM
LAST SAVE BY: mharleman

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR WHICH IT WAS SPECIFICALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



ISOMETRIC
COMPONENTS

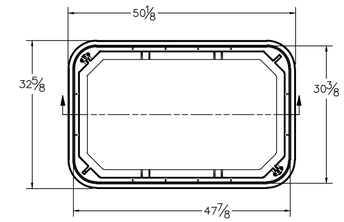


ISOMETRIC

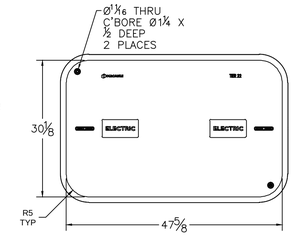
SMALL AQUABLOX®
MODEL: #29491
WEIGHT: 11 LBS
VOLUME: 17 GALLONS

NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
5. CONTRACTOR'S NOTE: FOR PRODUCT AND COMPANY INFORMATION VISIT www.CADdetails.com/info AND ENTER REFERENCE NUMBER 037-108.

AQUASCAPE AQUABLOX
NTS



BOX – TOP VIEW



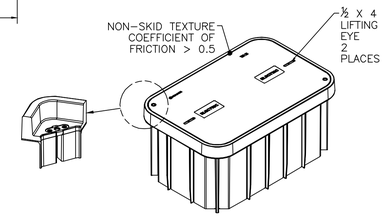
LID – TOP VIEW

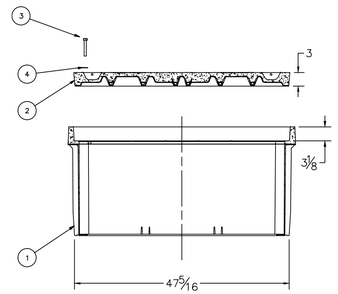
MATERIAL PROPERTIES

THE FOLLOWING MATERIAL PROPERTIES FOR DUO-MOULD HDPC WERE ESTABLISHED THROUGH INDEPENDENT THIRD PARTY TESTING:

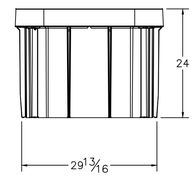
COMPRESSIVE STRENGTH	ASTM C 170	≥ 17,000 PSI
MODULUS OF RUPTURE	ASTM C 99	≥ 5,800 PSI
WATER ABSORPTION	ASTM C 97	≤ 0.31%
IMPACT RESISTANCE	ASTM D 2444	≥ 70 FT-LB
FRICTION COEFFICIENT	ASTM C 1028	≥ 0.5
CHEMICAL RESISTANCE	ASTM D 543	RESISTANT, > 75% RETENTION PHYSICAL PROPERTIES

THIS UNIT (BODY & LID) MEETS OR EXCEEDS THE REQUIREMENTS OF ANSI/SCTE 77-2013, TIER-22 PERFORMANCE





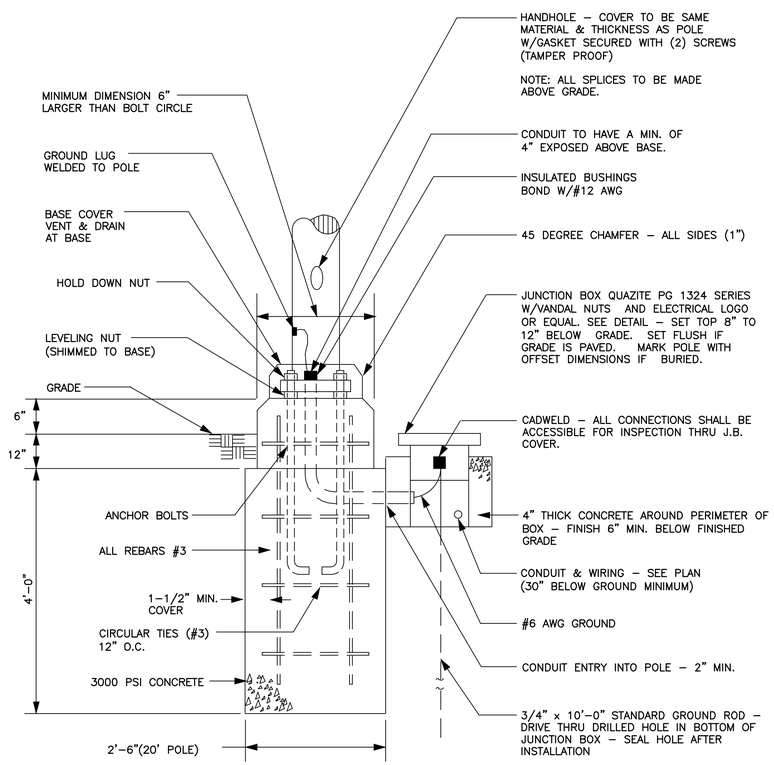
SECTION A–A WITH LID AND HARDWARE SHOWN



END VIEW

MATERIAL: HIGH DENSITY POLYMER CONCRETE – DUO-MOLD

ITEM	QTY	SKU	DESCRIPTION
4	2	HWH-F11	WASHER, FLAT SST .531 ID x 1.062 OD .095 THICK
3	2	HBT-P65	BOLT, PENTAHEAD, SST, 1/2-13 x 3-1/2
2	1	31300221	LID, SYN 3048 T – ELECTRIC
1	1	38104610	BOX, SYN3048 T 24 DUO
Ports List			



TYPICAL NEW POLE BASE DETAIL
NTS

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT060-SHT065_CSD_DPNG.dwg
LAST SAVED DATE: Mon, 14 Mar 2016, 12:14PM
LAST SAVE BY: mharleman

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE FOR WHICH IT WAS INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04810800
03-11-2016

CITY OF HOBOKEN

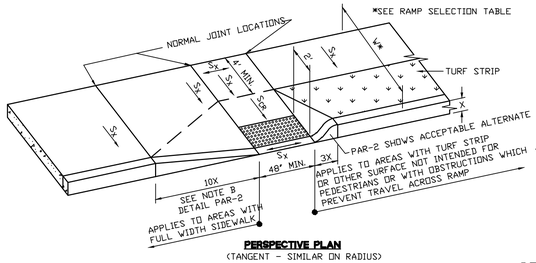
WASHINGTON STREET REDESIGN
CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS
DRAINAGE STRUCTURES - 6

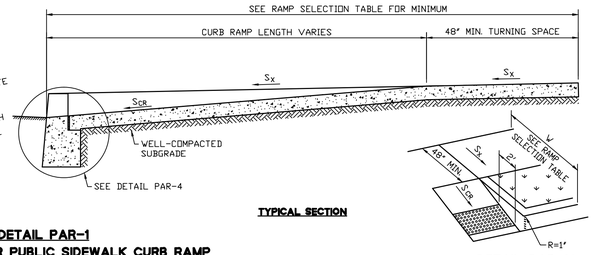
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY GD	DRAWING CSP-8
CHECKED BY DM	
DRAWN BY DP	SHEET 65
DATE 03-11-2016	
SCALE AS SHOWN	OF 70
PROJ. NO. HOBK-00090	



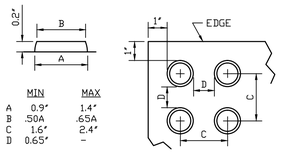
PERSPECTIVE PLAN
(TANGENT - SIMILAR ON RADIUS)



TYPICAL SECTION

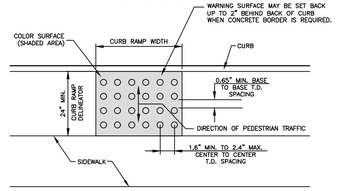
DETAIL PAR-1
PERPENDICULAR PUBLIC SIDEWALK CURB RAMP
NOT TO SCALE

DETAIL PAR-1A
ALTERNATIVE CURB TRANSITION
WHERE SHOWN OR DIRECTED
NOT TO SCALE

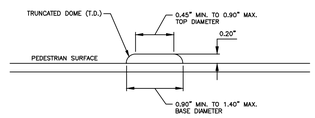


	MIN	MAX
A	0.9"	1.4"
B	.50A	.65A
C	1.6"	2.4"
D	0.65"	-

DETAIL - DETECTABLE WARNING
(SEE GENERAL NOTE 11)
NOT TO SCALE



PLAN VIEW



ELEVATION

DETECTABLE WARNING SURFACE

NOTES FOR DESIGNER: NO PLOT

ADJUSTMENT FOR LONGITUDINAL PROFILE TABLE

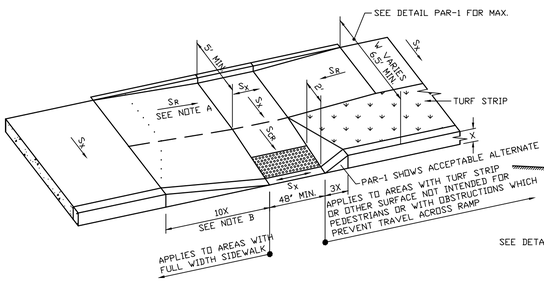
LONGITUDINAL PROFILE (%)(%)	MINIMUM LENGTH OF 14H : 1V CURB TRANSITION (FEET/INCHES) — CURB HEIGHT (FACE) (INCHES) 3" HIGH SIDE (L_H)	3" LOW SIDE (L_L)	4" HIGH SIDE (L_H)	4" LOW SIDE (L_L)	5" HIGH SIDE (L_H)	5" LOW SIDE (L_L)	6" HIGH SIDE (L_H)	6" LOW SIDE (L_L)	7" HIGH SIDE (L_H)	7" LOW SIDE (L_L)	8" HIGH SIDE (L_H)	8" LOW SIDE (L_L)	9" HIGH SIDE (L_H)	9" LOW SIDE (L_L)	10" HIGH SIDE (L_H)	10" LOW SIDE (L_L)
SEE NOTE 2	3'6"	3'6"	4'9"	4'9"	5'10"	5'10"	7'0"	7'0"	8'2"	8'2"	9'5"	9'5"	10'6"	10'6"	11'8"	11'8"
0.2	3'7"	3'5"	4'10"	4'6 1/2"	6'0"	5'8"	7'2"	6'10"	8'4"	7'11"	9'7"	9'1"	10'10"	10'2 1/2"	12'0"	11'4"
0.3	3'8"	3'4"	4'10 1/2"	4'6"	6'1"	4'7"	7'4"	6'8 1/2"	8'6"	7'10"	9'9"	8'11"	10'11"	10'1"	12'2"	11'2"
0.4	3'8 1/2"	3'3 1/2"	4'11"	4'5"	6'2"	5'6"	7'5"	6'7 1/2"	8'8"	7'9"	9'11"	8'10"	11'2"	9'11"	12'4"	11'0"
0.5	3'9"	3'3"	5'0"	4'4"	6'3"	5'5"	7'6"	6'6 1/2"	8'9"	7'7 1/2"	10'0"	8'9"	11'3"	9'10"	12'6"	10'11"
0.75	3'11"	3'2 1/2"	5'2 1/2"	4'3"	6'6"	5'4"	7'10"	6'5"	9'1 1/2"	7'6"	10'5"	8'6 1/2"	11'9"	9'7 1/2"	13'0"	10'8"
1.00	4'1"	3'1"	5'5"	4'1"	6'9 1/2"	5'1 1/2"	8'2"	6'1 1/2"	9'6"	7'2"	10'10"	8'2"	12'2"	9'2"	13'7"	10'2"
1.50	4'5"	2'11"	5'11"	3'10"	7'4"	4'10"	8'10"	5'9 1/2"	10'4"	6'9"	11'10"	7'8 1/2"	13'4"	8'8"	14'9"	9'7"
2.00	4'10"	2'9"	6'6"	3'7 1/2"	8'1"	4'7"	9'8 1/2"	5'5 1/2"	11'4"	6'4 1/2"	12'11"	7'3 1/2"	14'7"	8'2"	15'9"	9'1 1/2"
2.50 (NOTE 3)	5'4 1/2"	2'7"	7'2"	3'5 1/2"	9'0"	4'4"	10'9"	5'2"	12'6"	6'0 1/2"	14'4"	6'11"	15'*	7'9"		8'7 1/2"
3.00 "	6'0"	2'5 1/2"	8'0"	3'3 1/2"	10'0"	4'1 1/2"	12'0"	4'11"	14'1"	5'9"	15'*	6'7"		7'4 1/2"		8'3"
3.50 "	6'10"	2'4"	9'2"	3'1 1/2"	11'5"	3'11"	13'8"	4'8"	15'*	5'6"		6'3"		7'0 1/2"		7'10"
4.00 "	7'11"	2'3"	10'7"	3'0"	13'3"	3'9"	15'*	4'6"		5'3"		6'0"		6'9"		7'6"
4.50 "	9'5"	2'2"	12'7"	2'10 1/2"	15'*	3'7"		4'3 1/2"		5'0"		5'8 1/2"		6'5"		7'2"
5.00 "	11'7"	2'0 1/2"	15'*	2'9"		3'5"		4'1 1/2"		4'10"		5'6"		6'2"		6'10"
5.50 "	15'*	1'11 1/2"		2'7 1/2"		2'7 1/2"		3'11 1/2"		4'7 1/2"		5'3"		5'11"		6'7"

*MAXIMUM RAMP LENGTH IS 15'. SEE NOTE 2, SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE.

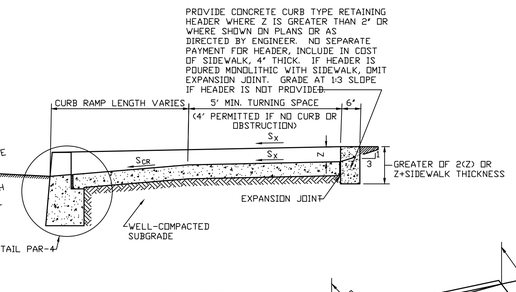
NOTES:
1. INTERPOLATE BETWEEN SLOPES SHOWN AS REQUIRED.
2. NO ADJUSTMENT FOR PROFILE SLOPES LESS THAN 0.2%.
3. CROSS SLOPE OF PUBLIC SIDEWALK CURB RAMP AT GUTTER SHOULD NOT BE GREATER THAN 2% (1:50) OR AS DIRECTED BY ENGINEER.
4. CONSULT ENGINEER FOR PROFILE SLOPES GREATER THAN 5.5%.

GENERAL NOTES:

1. CONCRETE FOR CURBS, SIDEWALKS, CURB RAMPS AND MONOLITHIC CURB RAMP CRADLES SHALL BE NJDOT CLASS B.
2. CURB AND MONOLITHIC CURB RAMP CRADLES SHALL BE POURED IN A SEPARATE OPERATION FROM SIDEWALKS AND CURB RAMPS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
3. EXPANSION JOINTS WITH PREFORMED EXPANSION JOINT FILLER CONFORMING TO AASHTO M33, PREFORMED EXPANSION JOINT FILLER FOR CONCRETE (BITUMINOUS TYPE), SHALL BE PROVIDED AS FOLLOWS:
   - 3.1 1/2" THICK AT LONGITUDINAL INTERVALS OF APPROXIMATELY TWENTY FEET (20') AND BETWEEN ALL SIDEWALK CURB RAMPS AND MONOLITHIC CURB RAMP CRADLES.
   - 3.2 1/4" THICK BETWEEN CURB AND SIDEWALK, AROUND ALL STRUCTURES OR APPURTENANCES, SUCH AS MANHOLES, JUNCTION BOXES AND UTILITY POLES, AND ADJACENT TO ANY FIXED STRUCTURE.
4. EXPANSION JOINT MATERIAL SHALL BE TRIMMED AS TO BE SLIGHTLY BELOW THE SURFACE OF THE CONCRETE.
5. JOINT SEALER WHERE SHOWN OR REQUIRED SHALL CONFORM TO NJDOT SPECIFICATION 914. HOT-POURED JOINT SEALER SHALL CONFORM TO ASTM D 6690. COLD-APPLIED JOINT SEALER SHALL CONFORM TO ASTM D 5893, TYPE SL OR TYPE NS.
6. TOOLED JOINTS SHALL BE PROVIDED WITH A GROOVING TOOL SO AS TO DIVIDE THE CONCRETE SURFACE INTO BLOCKS AS CLOSELY APPROACHING A SQUARE AS PRACTICABLE. GROOVES SHALL BE CUT TO A DEPTH OF AT LEAST 1/2 INCH AND SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/4 INCH.
7. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, EXPANSION AND TOOLED JOINTS IN CONCRETE SURFACES SHALL BE ALIGNED WITH JOINTS IN CURBS.
8. WELDED WIRE FABRIC SHALL BE 6X6-6X6 (OLD DESIGNATION), 6X6-W2.9XW2.9 (NEW DESIGNATION) IN ACCORDANCE WITH ASTM A-185.
9. PUBLIC SIDEWALK CURB RAMPS, TURNING SPACES, BLENDED TRANSITIONS AND CLEAR SPACES WITHIN THE PEDESTRIAN ACCESS ROUTE SHALL NOT CONTAIN GRATINGS, COVERS, UTILITY BOXES OR SIMILAR OBSTRUCTIONS. OUTSIDE OF THE ABOVE AREAS, GRATINGS IN PUBLIC SIDEWALKS MAY HAVE OPENINGS NO GREATER THAN 1/2 INCH WIDE MEASURED PARALLEL TO DIRECTION OF TRAVEL.
10. ALL PUBLIC SIDEWALK CURB RAMPS SHALL BE PROVIDED WITH A SLIP-RESISTANT BROOM FINISH ORIENTED PERPENDICULAR TO THE TRAVEL DIRECTION.
11. DETECTABLE WARNING SURFACES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 606 OF THE SPECIFICATIONS AND THE SPECIAL PROVISIONS WHICH INCLUDE A LIST OF ACCEPTABLE SYSTEMS. UNLESS A SPECIFIC DETECTABLE WARNING SYSTEM IS REQUIRED BY THE SPECIAL PROVISIONS, THE CONTRACTOR MAY SELECT THE SYSTEM TO BE USED. ONLY ONE SYSTEM MAY BE USED ON ANY PROJECT. THE COLOR OF THE DETECTABLE WARNING SYSTEM SHALL BE AS REQUIRED BY THE SPECIAL PROVISIONS OR AS DIRECTED BY THE ENGINEER.
12. IF NO CURB IS PROVIDED, THE EDGE OF THE DETECTABLE WARNING SURFACE SHALL BE AT LEAST 6" BUT NOT MORE THAN 8" FROM THE EDGE OF THE RAMP. THIS SHALL APPLY TO THE CORNERS OF THE DETECTABLE WARNING FOR RAMPS ON A RADIUS.
13. DETECTABLE WARNING SIZE, GEOMETRY AND SPACING TO CONFORM TO SECTION 705 OF DEPARTMENT OF JUSTICE STANDARDS FOR ACCESSIBLE DESIGN (2010) OR SECTION R305 OF ACCESSIBILITY GUIDELINES FOR PEDEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY.



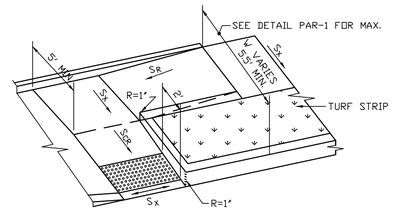
PERSPECTIVE PLAN
(TANGENT - SIMILAR ON RADIUS)



TYPICAL SECTION

DETAIL PAR-2
COMBINATION (PERPENDICULAR AND PARALLEL) PUBLIC SIDEWALK CURB RAMP
(APPLIES TO RAMPS WHERE DETAILS
PAR-1 AND PAR-3 DO NOT APPLY)
NOT TO SCALE

NOTES:
A. TYPICAL MINIMUM RAMP LENGTH USING DESIGN (NOMINAL) OR MAXIMUM S* FOR CURB HEIGHT (X) OF 6" OR LESS (SHOWN WITH DOTTED LINE). HOWEVER, FOR EASE OF CONSTRUCTION AND IMPROVED APPEARANCE BEGIN SLOPE AT EXPANSION JOINT OPPOSITE BEGINNING OF CURB TRANSITION UNLESS OTHERWISE DIRECTED BY ENGINEER. SLOPE WILL USUALLY BE MUCH LESS THAN 1:12. CONSULT ENGINEER WHEN IT IS NOT.
B. MAXIMUM SLOPE OF A SIDE FLARE WHERE PEDESTRIAN CIRCULATION IS POSSIBLE IS 10:1 MEASURED ALONG THE CURB LINE; NOT RELATIVE TO A LEVEL LINE.



DETAIL PAR-2A
ALTERNATIVE CURB TRANSITION
WHERE SHOWN OR DIRECTED
NOT TO SCALE

NOTES FOR DESIGNER: NO PLOT

RAMP SELECTION TABLE

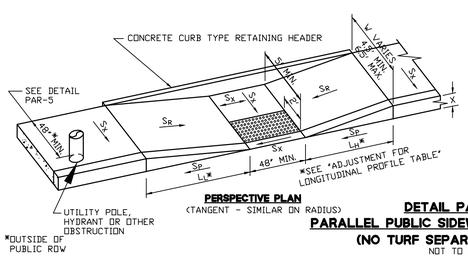
CURB FACE (X) (INCHES)	W NOT MORE THAN 6.5'	W (FEET) 6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
3	DETAIL PAR-3 APPLIES		3.0							
4			3.0	10.0						
5				10.0	11.75					
6					11.75	13.25				
7						13.25	14.75			
8							14.75	16.25		
9								16.25	17.75	
10									17.75	19.25

DETAIL PAR-1 APPLIES

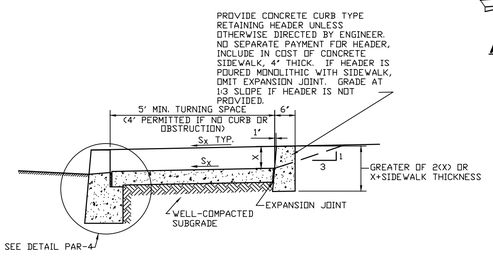
DETAIL PAR-2 APPLIES

SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE

SYMBOL	DESCRIPTION	SLOPES (NOTE 1) DESIGN (NOMINAL)	MINIMUM	MAXIMUM
S_X	CROSS SLOPE OF PUBLIC SIDEWALK OR CROSS SLOPE OF CURB RAMP	1:60 1.67% 3/4" PER 4' 3/16" PER 1' (NOTE 3)	1:72 1.4% 5/8" PER 4' (3/16" PER 1' (NOTE 3)	1:50 2% (NOTE 3)
S_{CR}	LONGITUDINAL (RUNNING) SLOPE OF PUBLIC SIDEWALK CURB RAMP	1:14 7.1% 3 1/2" PER 4' (APPROX 7/8" PER 1')	1:50 2%	1:12.05 8.3% (NOTE 2)
S_R	LONGITUDINAL (RUNNING) SLOPE OF PARALLEL SIDEWALK CURB RAMP	1:14 7.1% 3 1/2" PER 4' (APPROX 7/8" PER 1')	1:50 2%	1:12.05 8.3% (NOTE 2)



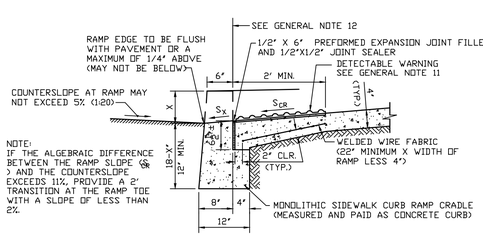
PERSPECTIVE PLAN
(TANGENT - SIMILAR ON RADIUS)



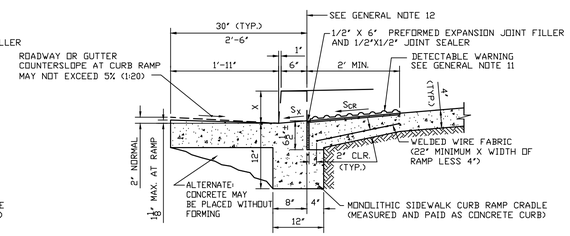
TYPICAL SECTION

DETAIL PAR-3
PARALLEL PUBLIC SIDEWALK CURB RAMP
(NO TURF SEPARATION STRIP)
NOT TO SCALE

NOTES:
1. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CONSTRUCTION WHICH DOES NOT CONFORM TO THE TOLERANCES SPECIFIED (ie. WHICH EXCEEDS THE MAXIMUM OR IS LESS THAN THE MINIMUM) WILL BE REMOVED AND REPLACED WITHOUT COST TO THE OWNER.
2. THE MAXIMUM LENGTH FOR A PARALLEL PUBLIC SIDEWALK CURB RAMP SHALL BE 15 FEET. MAXIMUM LONGITUDINAL (RUNNING) SLOPE LIMITS (S_R) DO NOT APPLY IF LENGTH IS 15 FEET OR GREATER.
3. CROSS SLOPE OF CURB RAMP (S_X) TO MATCH ROADWAY PROFILE SLOPES (S_P) OF 1:50 (2%) OR LESS. IF S_P EXCEEDS 1:50 (2%), A TRANSITION MUST BE PROVIDED AT CURB RAMPS TO MAINTAIN S_X EQUAL TO OR LESS THAN 1:50 (2%). EXCEPTION: THIS DOES NOT APPLY AT MID-BLOCK CROSSINGS WHERE S_X AT CURB RAMPS MAY MATCH S_P, EVEN IF GREATER THAN 1:50 (2%).



(USED WITH CONCRETE VERTICAL CURB)



(USED WITH CONCRETE COMBINATION CURB AND GUTTER)

DETAIL PAR-4
MONOLITHIC SIDEWALK CURB RAMP CRADLE

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS

SIDEWALKS & CURB RAMPS IN PUBLIC RIGHT-OF-WAY

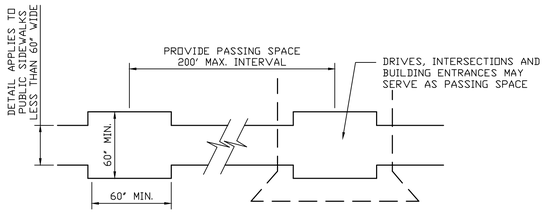
NJEIFP

T&M AND
YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY NSV	DRAWING CSD-9
CHECKED BY DM	
DRAWN BY JLS	SHEET 66
DATE 03-11-2016	OF 70
SCALE 1"=20'	
PROJ. NO. HOBK-00090	

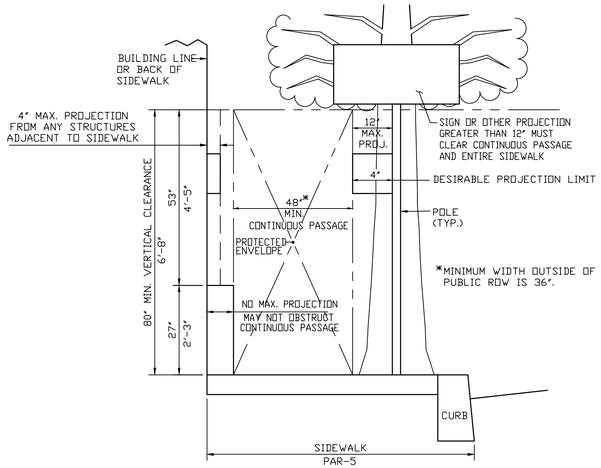
PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT066-SHT068_ADA.dwg
PLOT SCALE: 1:1 PLOT DATE: Wed, Mar 09 2016, 6:22PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT FOR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



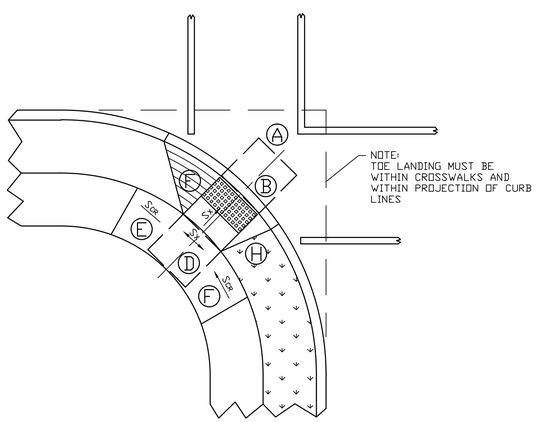
PASSING SPACE – PUBLIC SIDEWALK DETAIL

NOT TO SCALE

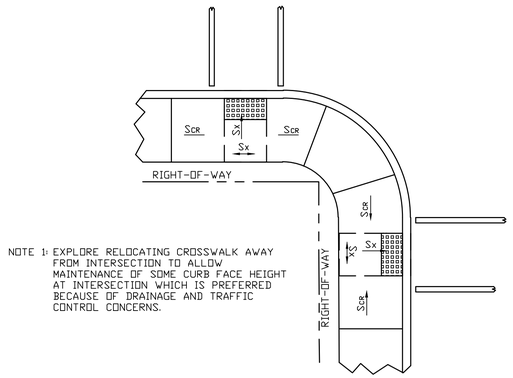


PROTECTED ENVELOPE – PUBLIC SIDEWALK DETAIL

NOT TO SCALE



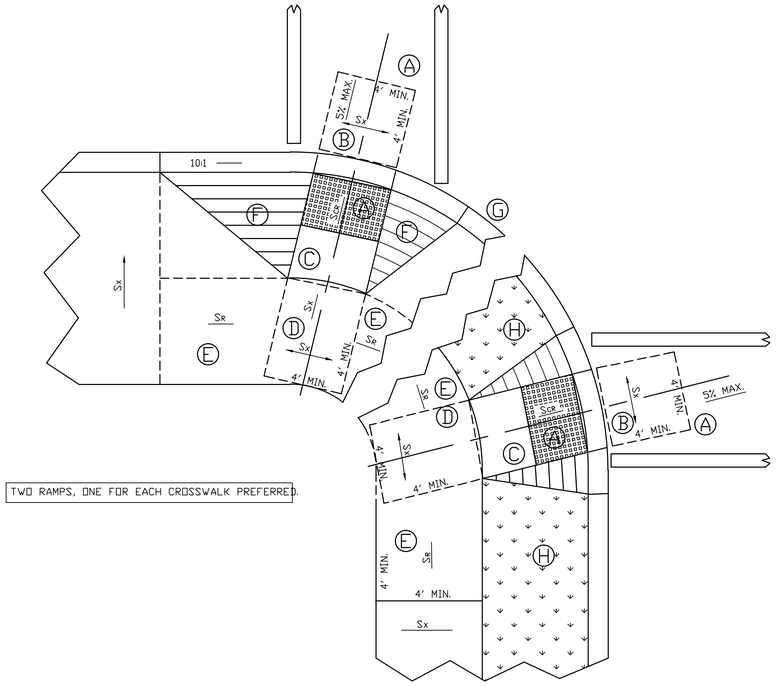
SINGLE DIAGONAL CURB RAMP



NOTE 1: EXPLORE RELOCATING CROSSWALK AWAY FROM INTERSECTION TO ALLOW MAINTENANCE OF SOME CURB FACE HEIGHT AT INTERSECTION WHICH IS PREFERRED BECAUSE OF DRAINAGE AND TRAFFIC CONTROL CONCERNS.

TYPICAL ARRANGEMENTS FOR PARALLEL RAMPS ROW RESTRICTED

NOT TO SCALE



PUBLIC SIDEWALK CURB RAMPS LAYOUT PRINCIPLES

CONTRACTOR SHALL CONSTRUCT ALL PUBLIC SIDEWALK CURB RAMPS IN ACCORDANCE WITH THESE PRINCIPLES. WHEN CONDITIONS DO NOT PERMIT COMPLIANCE, CONSULT ENGINEER.

(A) LOCATE A 4' X 4' CLEAR SPACE WITHIN CROSSWALK AT TOE OF RAMP CROSS SLOPE S_x 1:50 (2%). MAXIMUM COUNTERSLOPE S_{CR} AT TOE OF RAMP 1:20 (5%) MAXIMUM.

(B) RAMP TO BE PERPENDICULAR (RADIAL) TO CURB LINE (OR ROADWAY EDGE), NO LIP AT STREET – CURB TOP TO BE FLAT.

(C) OBSERVE S_{CR} LIMITS: 1:50 (2%) MINIMUM, (8.3%) MAXIMUM IN NEW CONSTRUCTION. OBSERVE S_x LIMITS: 1:50 (2%) MAXIMUM. SEE SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE. PROVIDE DETECTABLE WARNING SURFACE.

(D) PROVIDE A 4' X 4' TURNING SPACE AT TOP. OBSERVE S_x LIMITS 1:50 (2%) MAXIMUM IN ANY DIRECTION. SEE SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE.

(E) PROVIDE TRANSITION RAMPS AS REQUIRED. OBSERVE S_x LIMITS. SEE SIDEWALK DESIGN SLOPE AND TOLERANCES TABLE.

(F) WHEN PEDESTRIAN TRAVEL ACROSS RAMP IS POSSIBLE, PROVIDE 10:1 MAXIMUM TRANSITION AT CURB LINE (OR ROADWAY EDGE).

(G) PROVIDE CURB FACE ON RADIUS AT INTERSECTION TO THE EXTENT POSSIBLE IN PREFERENCE TO DEPRESSING ENTIRE RADIUS.

(H) WHEN PEDESTRIAN TRAVEL ACROSS RAMP IS OBSTRUCTED BY TURF OR OTHER ELEMENTS, PROVIDE 18" LONG CURB TRANSITION. SEE DETAIL PAR-2.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
03-11-2016
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS

SIDEWALKS & CURB RAMPS IN PUBLIC RIGHT-OF-WAY

NJEIFP

YOUR GOALS. OUR MISSION.

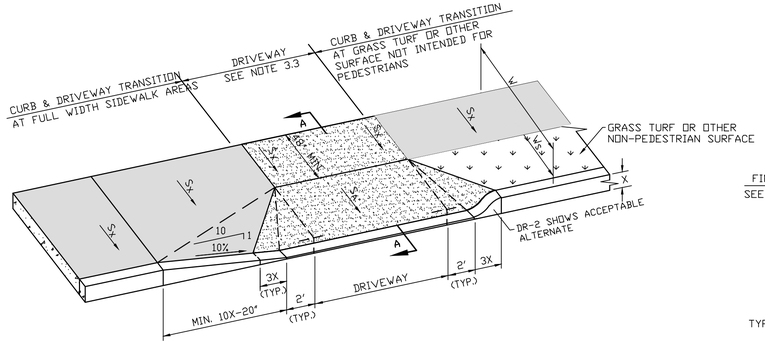
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500

OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY NSV	DRAWING CSD-10
CHECKED BY DM	
DRAWN BY JLS	SHEET 67
DATE 03-11-2016	
SCALE 1"=20'	OF 70
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT066-SHT068_ADA.dwg
LAYOUT: D-67-CSD-10 DATE: Mar 11, 2016, 4:26PM
LAST SAVE BY: mvlenzuela

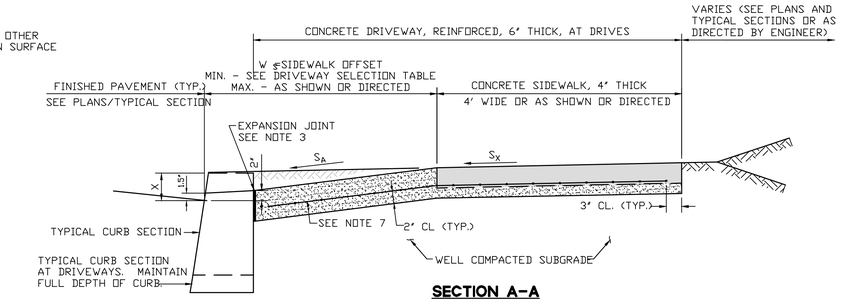
COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.



PERSPECTIVE PLAN

CONCRETE SIDEWALK, 4" THICK

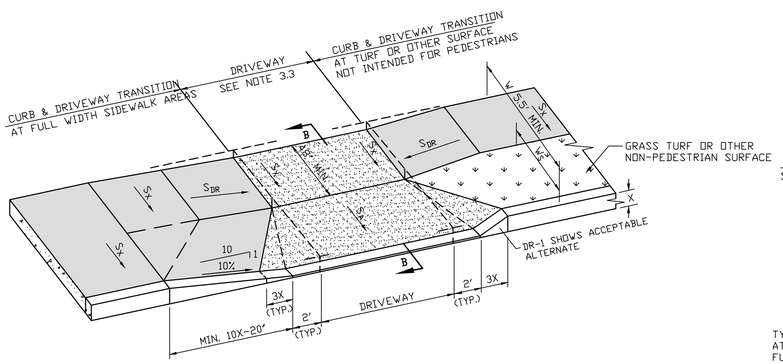
CONCRETE DRIVEWAY, REINFORCED, 6" THICK



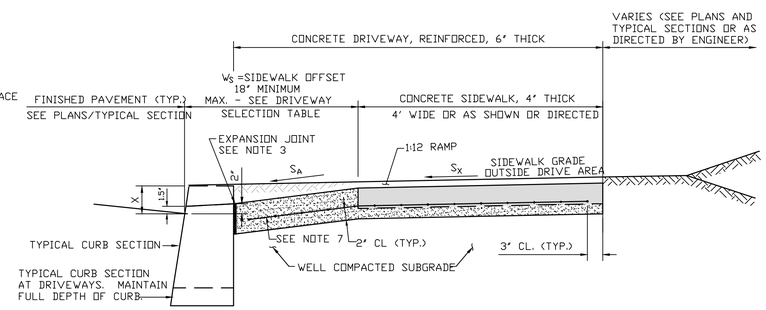
SECTION A-A

DETAIL DR-1
CONCRETE DRIVEWAY TYPE 1 - LARGE SIDEWALK OFFSET

NOT TO SCALE



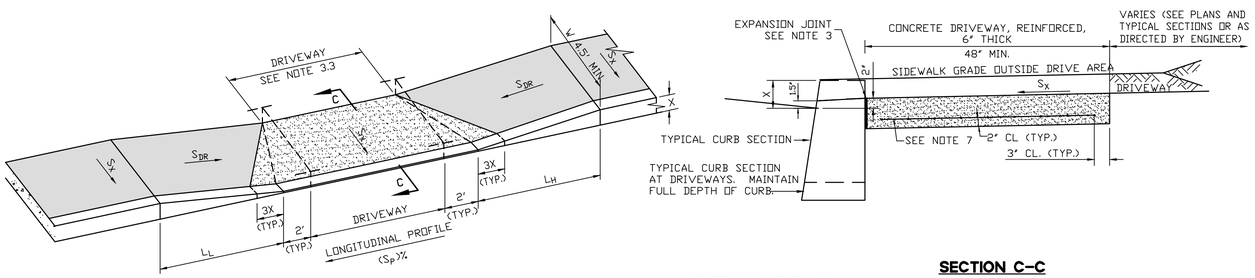
PERSPECTIVE PLAN



SECTION B-B

DETAIL DR-2
CONCRETE DRIVEWAY TYPE 2 - INTERMEDIATE SIDEWALK OFFSET

NOT TO SCALE



PERSPECTIVE PLAN

SECTION C-C

DETAIL DR-3
CONCRETE DRIVEWAY TYPE 3 - MINIMUM SIDEWALK OFFSET

NOT TO SCALE

GENERAL NOTES:

1. CONCRETE FOR CURBS, DRIVEWAYS AND SIDEWALKS SHALL BE NJDOT CLASS B. DRIVEWAY CONCRETE SHALL ATTAIN A STRENGTH OF NOT LESS THAN 3000 PSI WITHIN 3 DAYS OF PLACEMENT.
2. CURB, DRIVEWAYS AND SIDEWALKS SHALL BE CAST IN SEPARATE OPERATIONS UNLESS OTHERWISE PERMITTED BY THE ENGINEER.
3. EXPANSION JOINTS WITH PREFORMED EXPANSION JOINT FILLER CONFORMING TO AASHTO M33, PREFORMED EXPANSION JOINT FILLER FOR CONCRETE (BITUMINOUS TYPE), SHALL BE PROVIDED AS FOLLOWS:
   - 3.1 1/2" THICK AT LONGITUDINAL INTERVALS OF APPROXIMATELY TWENTY FEET (20');
   - 3.2 1/4" THICK BETWEEN CURB AND SIDEWALK OR DRIVEWAYS, AROUND ALL STRUCTURES OR APPURTENANCES, SUCH AS MANHOLES, JUNCTION BOXES AND UTILITY POLES, AND ADJACENT TO ANY FIXED STRUCTURE;
   - 3.3 AT LONGITUDINAL CENTERLINE OF ANY DRIVE WHICH EXCEEDS TWELVE FEET (12') IN WIDTH OR AS DIRECTED BY ENGINEER.
4. EXPANSION JOINT MATERIAL SHALL BE TRIMMED AS TO BE SLIGHTLY BELOW THE SURFACE OF THE CONCRETE.
5. TOOLED JOINTS SHALL BE PROVIDED WITH A GROOVING TOOL SO AS TO DIVIDE THE CONCRETE SURFACE INTO BLOCKS AS CLOSELY APPROACHING A SQUARE AS PRACTICABLE. GROOVES SHALL BE CUT TO A DEPTH OF AT LEAST 1/2 INCH AND SHALL BE FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/4 INCH.
6. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, EXPANSION AND TOOLED JOINTS IN CONCRETE SURFACES SHALL BE ALIGNED WITH JOINTS IN CURBS.
7. WELDED WIRE FABRIC IN DRIVEWAYS SHALL BE 6X6-6X6 (OLD DESIGNATION), 6X6-W2.9XW2.9 (NEW DESIGNATION) IN ACCORDANCE WITH ASTM A-185.

DRIVEWAY DESIGN SLOPE AND TOLERANCES TABLE

SYMBOL	DESCRIPTION	SLOPES (NOTE 1) DESIGN (NOMINAL)	MINIMUM	MAXIMUM
S_X	CROSS SLOPE OF PUBLIC SIDEWALK	1:60 1.67% 3/4" PER 4' 3/16" PER 1'	1:72 1.4% 5/8" PER 4' (3/16" PER 1'	1:50 2%
S_{DR}	LONGITUDINAL (RUNNING) SLOPE OF DRIVEWAY TRANSITION RAMP	NORMAL RANGE MINIMUM 1:36 2.8% 1 1/4" PER 4' 5/16" PER 1' NORMAL RANGE MAXIMUM 1:14 7.1% 3/4" PER 4' APPROX 7/8" PER 1' (NOTE 2)	1:50 2%	1:12 8.3% (NOTE 2)
S_A	LONGITUDINAL (RUNNING) SLOPE OF DRIVEWAY APRON	1:10 10% 1 1/4" PER 1'	1:50 2%	1:8 12.5% 1 1/2" PER 1'

NOTES:

1. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, CONSTRUCTION WHICH DOES NOT CONFORM TO THE TOLERANCES SPECIFIED (ie. WHICH EXCEEDS THE MAXIMUM OR IS LESS THAN THE MINIMUM) WILL BE REMOVED AND REPLACED WITHOUT COST TO THE OWNER.
2. IF S_{DR} EXCEEDS 1:20 (5%), THE MAXIMUM VERTICAL RISE PERMITTED IS 6". WHEN THIS CANNOT BE ACHIEVED IN THE ALTERATION OF EXISTING FACILITIES, CONSULT THE ENGINEER.

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

CONSTRUCTION DETAILS
CONCRETE DRIVEWAYS & APRONS

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY NSV	DRAWING CSD-11
CHECKED BY DM	
DRAWN BY JLS	SHEET 68 OF 70
DATE 03-11-2016	
SCALE AS SHOWN	
PROJ. NO. HOBK-00090	

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT068-SHT068_AGA.dwg
LAYOUT: DR-2, DR-3, DR-1 TYPE: 11 Mar 2016, 5:28PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES – ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSES ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION

ESTABLISHMENT OF PERMANENT VEGETATIVE COVER ON EXPOSED SOILS WHERE PERENNIAL VEGETATION IS NEEDED FOR LONG-TERM PROTECTION.

PURPOSE

TO PERMANENTLY STABILIZE THE SOIL, ENSURING CONSERVATION OF SOIL AND WATER, AND TO ENHANCE THE ENVIRONMENT. WATER QUALITY ENHANCEMENT
SLOWS THE OVER-LAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE A POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

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://NJ'PAES.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. SELECT A MIXTURE FROM TABLE 4-3 OR USE A MIXTURE RECOMMENDED BY RUTGERS COOPERATIVE EXTENSION OR NATURAL RESOURCES CONSERVATION SERVICE WHICH IS APPROVED BY THE SOIL CONSERVATION DISTRICT. SEED GERMINATION SHALL HAVE BEEN TESTED WITHIN 12 MONTHS OF THE PLANTING DATE. NO SEED SHALL BE ACCEPTED WITH A GERMINATION TEST DATE MORE THAN 12 MONTHS OLD UNLESS RETESTED.

1. SEEDING RATES SPECIFIED ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO A REPORT OF COMPLIANCE INSPECTION. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVERAGE WITH THE SPECIFIED SEED MIXTURE FOR THE SEEDED AREA AND MOWED ONCE.

2. WARM-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT HIGH TEMPERATURES, GENERALLY 850 F AND ABOVE. SEE TABLE 4-3 MIXTURES 1 TO 7. PLANTING RATES FOR WARM-SEASON GRASSES SHALL BE THE AMOUNT OF PURE LIVE SEED (PLS) AS DETERMINED BY GERMINATION TESTING RESULTS.

3. COOL-SEASON MIXTURES ARE GRASSES AND LEGUMES WHICH MAXIMIZE GROWTH AT TEMPERATURES BELOW 850F. MANY GRASSES BECOME ACTIVE AT 650F. SEE TABLE 4-3, MIXTURES 8-20. ADJUSTMENT OF PLANTING RATES TO COMPENSATE FOR THE AMOUNT OF PLS IS NOT REQUIRED FOR COOL SEASON GRASSES.

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. SHORT-FIBERED 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, TO BE APPLIED AT THE RATE OF 1-1/2 TO 2 TONS PER ACRE (70 TO 90 POUNDS PER 1,000 SQUARE FEET), EXCEPT THAT WHERE A CRIMPER IS USED INSTEAD OF A LIQUID MULCH-BINDER (TACKIFYING OR ADHESIVE AGENT), THE RATE OF APPLICATION 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 AT LEAST 85% OF THE SOIL SURFACE IS 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, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTINGS - STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING COULTER TOOL) - A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH-BINDERS - MAY BE USED TO ANCHOR SALT HAY, HAY OR STRAW MULCH.

A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

B. USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER-BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURF GRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND, FOLLOWING APPLICATION OF MULCH, DRYING AND CURING, SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. BINDER SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

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

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 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.

5. IRRIGATION (WHERE FEASIBLE)

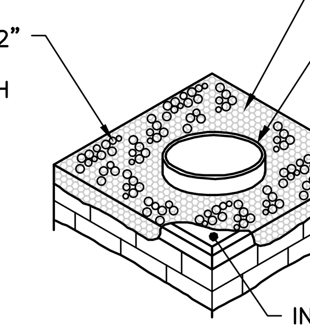
IF SOIL MOISTURE IS DEFICIENT SUPPLY NEW SEEDING WITH ADEQUATE WATER (A MINIMUM OF 1/4 INCH APPLIED UP TO TWICE A DAY UNTIL VEGETATION IS WELL ESTABLISHED). THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE IN ABNORMALLY DRY OR HOT WEATHER OR ON DROUGHTY SITES.

6. TOPDRESSING

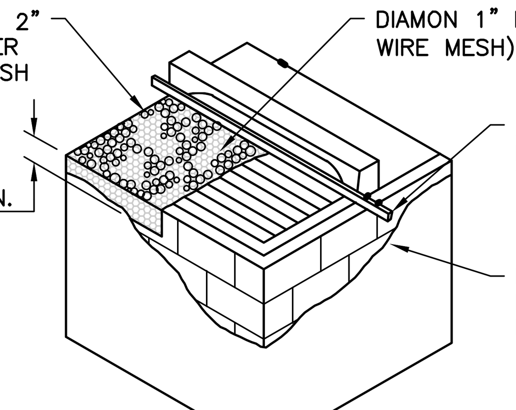
SINCE SOIL ORGANIC MATTER CONTENT AND SLOW RELEASE NITROGEN FERTILIZER (WATER INSOLUBLE) ARE PRESCRIBED IN SECTION 2A - SEEDBED PREPARATION IN THIS STANDARD, NO FOLLOW-UP OF TOPDRESSING IS MANDATORY. AN EXCEPTION MAY BE MADE WHERE GROSS NITROGEN DEFICIENCY EXISTS IN THE SOIL TO THE EXTENT THAT TURF FAILURE MAY DEVELOP. IN THAT INSTANCE, TOPDRESS WITH 10-10-10 OR EQUIVALENT AT 300 POUNDS PER ACRE OR 7 POUNDS PER 1,000 SQUARE FEET EVERY 3 TO 5 WEEKS UNTIL THE GROSS NITROGEN DEFICIENCY IN THE TURF IS AMELIORATED.

7. ESTABLISHING PERMANENT VEGETATIVE STABILIZATION

THE QUALITY OF PERMANENT VEGETATION RESTS WITH THE CONTRACTOR. THE TIMING OF SEEDING, PREPARING THE SEEDBED, APPLYING NUTRIENTS, MULCH AND OTHER MANAGEMENT ARE ESSENTIAL. THE SEED APPLICATION RATES IN TABLE 4-3 ARE REQUIRED WHEN A REPORT OF COMPLIANCE IS REQUESTED PRIOR TO ACTUAL ESTABLISHMENT OF PERMANENT VEGETATION. UP TO 50% REDUCTION IN APPLICATION RATES MAY BE USED WHEN PERMANENT VEGETATION IS ESTABLISHED PRIOR TO REQUESTING A REPORT OF COMPLIANCE FROM THE DISTRICT. THESE RATES APPLY TO ALL METHODS OF SEEDING. ESTABLISHING PERMANENT VEGETATION MEANS 80% VEGETATIVE COVER (OF THE SEEDED SPECIES) AND MOWED ONCE. NOTE THIS DESIGNATION OF MOWED ONCE DOES NOT GUARANTEE THE PERMANENCY OF THE TURF SHOULD OTHER MAINTENANCE FACTORS BE NEGLECTED OR OTHERWISE MISMANAGED. ULCH SHALL NOT BE MIXED IN THE TANK WITH SEED. USE IS LIMITED TO FLATTER SLOPES AND DURING OPTIMUM SEEDING PERIODS IN SPRING AND FALL.



1. CONTRACTOR TO CLEAN INLET FILTER AFTER EVERY STORM.
2. FILTER FABRIC, WOOD PIECE OR PVC PIPE TO BE REMOVED AFTER PAVING OR FINAL GRADING AND ESTABLISHMENT OF VEGETATION.

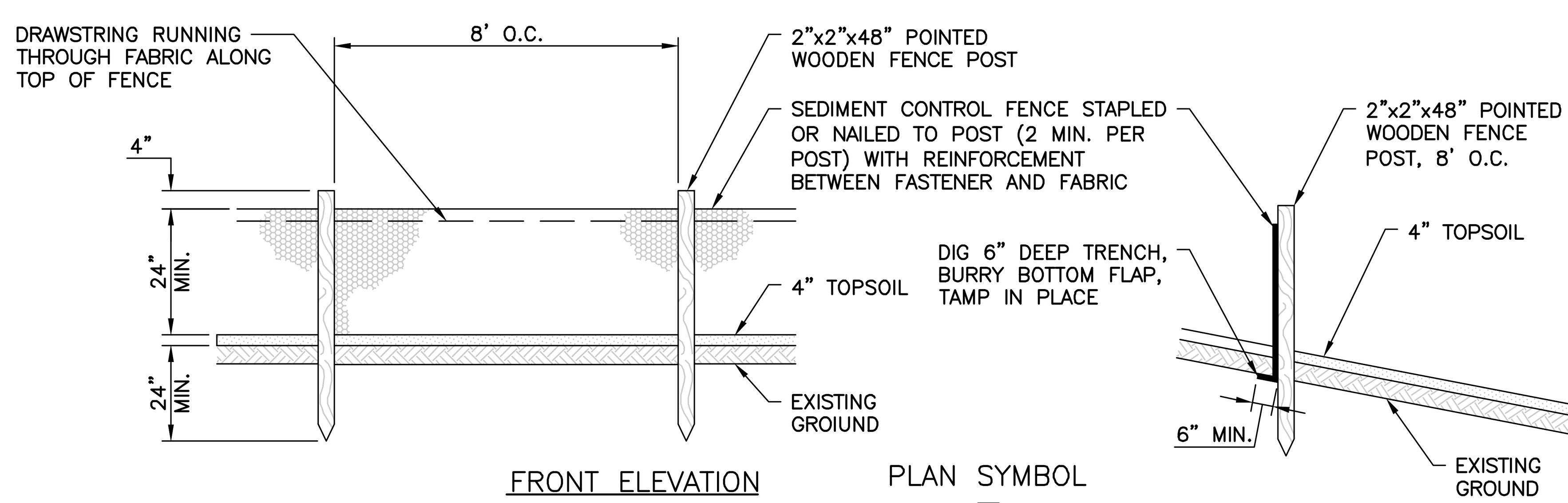


PLAN SYMBOL

A1 INLET W/ CURB PIECE

A2 FLAT GRATE INLETS

INLET FILTER
N.T.S.



PLAN SYMBOL

C1 SILT FENCE

SEDIMENT CONTROL FENCE
N.T.S.

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. All soil erosion and sediment control practices on this plan will be constructed in accordance with the "New Jersey Standards for Soil Erosion and Sediment Control" 7th Edition last revised January 2014. These measures will be installed prior to any major soil disturbance or in their proper sequence and maintained until permanent protection is established.

2. All soil to be exposed or stockpiled for a period of greater than 14 days, and not under active construction, will be temporarily seeded and hay mulched or otherwise provided with vegetative cover. This temporary cover shall be maintained until such time whereby permanent restabilization is established.

3. Seeding Dates: The following seeding dates are recommended to best establish permanent vegetative cover within most locations in the HEPSCD: Spring - 3/1-5/15 and Fall - 8/15 - 10/1

4. Sediment fences are to be properly trenched and maintained until permanent vegetative cover is established

5. All storm drainage inlets shall be protected by one of the practices accepted in the Standards, and protection shall remain until permanent stabilization has been established. Storm drainage outlet points shall be protected as required before they become functional.

6. Mulch materials shall be un-rotted small grain straw applied at the rate of 70 to 90 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.

7. All erosion control devices shall be periodically inspected, maintained and corrected by the contractor. Any damage incurred by erosion shall be rectified immediately.

8. The Hudson-Essex-Passaic Soil Conservation District will be notified in writing at least 48 hours prior to any soil disturbing activities. Fax - (862) 333-4507 OR email - INFORMATION@HEPSCD.ORG

9. The applicant must obtain a District issued Report-of-Compliance prior to applying for the Certificate of Occupancy or Temporary Certificate of Occupancy from the respective municipality, NJ - DCA or any other controlling agency. Contact the District at 862-333-4505 to request a Final Inspection, giving advanced notice upon completion of the restabilization measures. A performance deposit may be posted with the District when winter weather or snow cover prohibits the proper application of seed, mulch, fertilizer or hydro-seed.

10. Paved roadways must be kept clean at all times. Do not utilize a fire or garden hose to clean roads unless the runoff is directed to a properly designed and functioning sediment basin. Water pumped out of the excavated areas contains sediments that must be removed prior to discharging to receiving bodies of water using removable pumping stations, sump pits, portable sedimentation tanks and/or silt control bags.

11. All surfaces having lawn or landscaping as final cover are to be provided topsoil prior to re-seeding, sodding or planting. A depth of 5 inches (unsettled) is recommended.

12. All plan revisions must be submitted to the District for proper review and approval.

13. A crushed stone wheel cleaning tracking-pad is to be installed at all site exits using 2 ½ -1"crushed angular stone (ASTM 2 or 3) to a minimum length of 50 feet and minimum depth of 6". All driveways must be provided with crushed stone until paving is complete.

14. Steep slopes incurring disturbance may require additional stabilization measures. These "special" measures shall be designed by the applicant's engineer and be approved by the Soil Conservation District.

15. The Hudson-Essex-Passaic Soil Conservation District shall be notified, in writing, for the sale of any portion of the project or for the sale of individual lots. New owners' information shall be provided. Additioanl measures deemed necessary by District officials shall be implemented as conditions warrant.

THE TOTAL ESTIMATED TIME OF CONSTRUCTION IS 90* DAYS
*SCHEDULE TO BE CONFIRMED BY CONTRACTOR

	PROPOSED CONSTRUCTION SEQUENCE	APPROX. DURATION
1	APPLICATION OF PROPER MEASURES FOR THE CONTROL OF SOIL EROSION & SEDIMENT CONTROL	2 DAY
2	CLEARING OF THE SITE. REMOVAL OF ON-SITE SOIL AT VARIOUS LOCATIONS	5 DAYS
3	TEMPORARY STABILIZATION OF AREAS INITIALLY DISTRUBED. STABILIZATION TO BE ACCOMPLISHED BY USE OF TEMPOARY SEEDING AND/OR STRAW MULCHING OR EQUIVALENT MATERIAL AT A RATE OF TWO TONS PER ACRE, ACCORDING TO STATE STANDARDS.	2 DAY
4	CONSTRUCT PROPOSED IMPROVEMENTS	45 DAYS
6	MAINTENANCE OF SOIL EROSION PROCEEDURES.	2 DAY
7	INSTALLATION OF TOPSOILING, FERTILIZING, SEEDING AND MULCHING.	2 DAY
8	REMOVAL OF SOIL EROSION AND SEDIMENT CONTROL DEVICES AFTER ESTABLISHED VEGETATIVE GROWTH HAS OCCURED.	2 DAY
	TOTAL	60 DAYS

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN , HUDSON COUNTY , NEW JERSEY

SOIL EROSION AND SEDIMENT CONTROL

NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY	PB
CHECKED BY	XXX
DRAWN BY	NSV
DATE	03-11-2016
SCALE	AS SHOWN
PROJ. NO.	HOBK-00090
DRAWING	CSD-12
SHEET	69 OF 70

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT069_SED-1.dwg
LAST SAVED DATE AND TIME: 11 Mar 2016, 8:27PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.

STANDARD FOR TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION

DEFINITION

ESTABLISHMENT OF TEMPORARY VEGETATIVE COVER ON SOILS EXPOSED FOR PERIODS OF TWO TO 6 MONTHS WHICH ARE NOT BEING GRADED, NOT UNDER ACTIVE CONSTRUCTION OR NOT SCHEDULED FOR PERMANENT SEEDING WITHIN 60 DAYS.

PURPOSE

TO TEMPORARILY STABILIZE THE SOIL AND REDUCE DAMAGE FROM WIND AND WATER EROSION UNTIL PERMANENT STABILIZATION IS ACCOMPLISHED.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY PROTECTION AGAINST THE IMPACTS OF WIND AND RAIN, SLOWS THE OVER LAND MOVEMENT OF STORMWATER RUNOFF, INCREASES INFILTRATION AND RETAINS SOIL AND NUTRIENTS ON SITE, PROTECTING STREAMS OR OTHER STORMWATER CONVEYANCES.

WHERE APPLICABLE

ON EXPOSED SOILS THAT HAVE THE POTENTIAL FOR CAUSING OFF-SITE ENVIRONMENTAL DAMAGE.

METHODS AND MATERIALS

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. APPLY LIMESTONE AT THE RATE OF 2 TONS/ACRE UNLESS SOIL TESTING 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 RETILLED 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. SELECT SEED FROM RECOMMENDATIONS IN TABLE 7-2

TEMPORARY VEGETATIVE STABILIZATION GRASSES, SEEDING RATES, DATES AND DEPTH

SEED SELECTIONS	SEEDING RATES 1/ (pounds)		OPTIMUM SEEDING DATE 2/ Based on Plant Hardiness Zone 3/			OPTIMUM SEED DEPTH 4/ (Inches)
	Per Acre	Per 1,000 Sq. Ft.	Zone 5b, 6s	Zone 6b	Zone 7a, b	
COOL SEASON GRASSES						
Perennial ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10-15	0.5
***Spring Oats	86	2.0	3/15-6/1 8/1-9/15	3/1-5/15 8/15-10/1	2/15-5/1 8/15-10/15	1.0
Winter Barley	96	2.0	8/1-9/15	8/15-10/1	8/15-10/15	1.0
Annual Ryegrass	100	1.0	3/15-6/1 8/1-9/15	3/15-6/1 8/1-9/15	2/15-5/1 8/15-10/15	0.5
Winter Cereal Rye	112	2.8	8/1-11/1	8/1-11/15	8/1-12/15	1.0
WARM SEASON GRASSES						
Pearl millet	20	0.5	6/1-8/1	5/15-8/15	5/1-9/1	1.0
Millet (German or Hungarian)	30	0.7	6/1-8/1	5/15-8/15	5/1-9/1	1.0

1 SEEDING RATE FOR WARM SEASON GRASS, SELECTIONS 5 - 7 SHALL BE ADJUSTED TO REFLECT THE AMOUNT OF PURE LINE SEED (PLS) AS DETERMINED BY A GERMINATION TEST RESULT. NO ADJUSTMENT IS REQUIRED FOR COOL SEASON GRASSES.

2 MAY BE PLANTED THROUGHOUT SUMMER IF SOIL MOISTURE IS ADEQUATE OR SEEDED AREA CAN BE IRRIGATED.

3 PLANT HARDINESS ZONE (SEE FIGURE 7-1, PG. 7-4.)

4 TWICE THE DEPTH FOR SANDY SOILS.

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, DEPENDING UPON THE SIZE OF THE AREA, STEEPNESS OF SLOPES, AND COSTS.

1. PEG AND TWINE. DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRIS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

2. MULCH NETTINGS. STAPLE PAPER, JUTE, COTTON, OR PLASTIC NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

3. CRIMPER (MULCH ANCHORING TOOL). A TRACTOR-DRAWN IMPLEMENT, SOMEWHAT LIKE A DISC HARROW, ESPECIALLY DESIGNED TO PUSH OR CUT SOME OF THE BROADCAST LONG FIBER MULCH 3 TO 4 INCHES INTO THE SOIL SO AS TO ANCHOR IT AND LEAVE PART STANDING UPRIGHT. THIS TECHNIQUE IS LIMITED TO AREAS TRAVERSABLE BY A TRACTOR, WHICH MUST OPERATE ON THE CONTOUR OF SLOPES. STRAW MULCH RATE MUST BE 3 TONS PER ACRE. NO TACKIFYING OR ADHESIVE AGENT IS REQUIRED.

4. LIQUID MULCH-BINDERS. - MAY BE USED TO ANCHOR HAY OR STRAW MULCH.

A. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND MAY CATCH THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. THE REMAINDER OF THE AREA SHOULD BE UNIFORM IN APPEARANCE.

B. USE ONE OF THE FOLLOWING:

(1) ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS WHEN MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANED NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTOTOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. USE AT RATES AND WEATHER CONDITIONS AS RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH MATERIALS. MANY NEW PRODUCTS ARE AVAILABLE, SOME OF WHICH MAY NEED FURTHER EVALUATION FOR USE IN THIS STATE.

(2) SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

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

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 PONDS 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, FORMA 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 0.4INCHES OF WATER. THIS MATERIAL HAS BEE 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.

NOTE:
ALL PAGE NUMBERS AND STANDARDS REFERENCES REFER TO "STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY", JANUARY 2014, BY THE NEW JERSEY STATE SOIL CONSERVATION COMMITTEE.

STANDARD FOR SOIL STABILIZATION WITH MULCH ONLY

DEFINITION

STABILIZING EXPOSED SOILS WITH NON-VEGETATIVE MATERIALS EXPOSED FOR PERIODS LONGER THAN 14 DAYS.

PURPOSE

TO PROTECT EXPOSED SOIL SURFACES FROM EROSION DAMAGE AND TO REDUCE OFFSITE ENVIRONMENTAL DAMAGE.

WATER QUALITY ENHANCEMENT

PROVIDES TEMPORARY MECHANICAL PROTECTION AGAINST WIND OR RAINFALL INDUCED SOIL EROSION UNTIL PERMANENT VEGETATIVE COVER MAY BE ESTABLISHED.

WHERE APPLICABLE

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO EROSION, WHERE THE SEASON AND OTHER CONDITIONS MAY NOT BE SUITABLE FOR GROWING AN EROSION-RESISTANT COVER OR WHERE STABILIZATION IS NEEDED FOR A SHORT PERIOD UNTIL MORE SUITABLE PROTECTION CAN BE APPLIED.

METHODS AND MATERIALS

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, DEPENDING UPON THE SIZE OF THE AREA AND STEEPNESS OF SLOPES.

A. PEG AND TWINE - DRIVE 8 TO 10 INCH WOODEN PEGS TO WITHIN 2 TO 3 INCHES OF THE SOIL SURFACE EVERY 4 FEET IN ALL DIRECTIONS. STAKES MAY BE DRIVEN BEFORE OR AFTER APPLYING MULCH. SECURE MULCH TO SOIL SURFACE BY STRETCHING TWINE BETWEEN PEGS IN A CRISS-CROSS AND A SQUARE PATTERN. SECURE TWINE AROUND EACH PEG WITH TWO OR MORE ROUND TURNS.

B. MULCH NETTINGS - STAPLE PAPER, COTTON, OR PLASTIC NETTINGS OVER MULCH. USE DEGRADABLE NETTING IN AREAS TO BE MOWED. NETTING IS USUALLY AVAILABLE IN ROLLS 4 FEET WIDE AND UP TO 300 FEET LONG.

C. CRIMPER MULCH ANCHORING COULTER TOOL - A TRACTOR-DRAWN IMPLEMENT ESPECIALLY DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE. THIS PRACTICE AFFORDS MAXIMUM EROSION CONTROL, BUT ITS USE IS LIMITED TO THOSE SLOPES UPON WHICH THE TRACTOR CAN OPERATE SAFELY. SOIL PENETRATION SHOULD BE ABOUT 3 TO 4 INCHES. ON SLOPING LAND, THE OPERATION SHOULD BE ON THE CONTOUR.

D. LIQUID MULCH-BINDERS

1. APPLICATIONS SHOULD BE HEAVIER AT EDGES WHERE WIND CATCHES THE MULCH, IN VALLEYS, AND AT CRESTS OF BANKS. REMAINDER OF AREA SHOULD BE UNIFORM IN APPEARANCE.

2. USE ONE OF THE FOLLOWING:

A. ORGANIC AND VEGETABLE BASED BINDERS - NATURALLY OCCURRING, POWDER BASED, HYDROPHILIC MATERIALS THAT MIXED WITH WATER FORMULATES A GEL AND WHEN APPLIED TO MULCH UNDER SATISFACTORY CURING CONDITIONS WILL FORM MEMBRANE NETWORKS OF INSOLUBLE POLYMERS. THE VEGETABLE GEL SHALL BE PHYSIOLOGICALLY HARMLESS AND NOT RESULT IN A PHYTO-TOXIC EFFECT OR IMPEDE GROWTH OF TURFGRASS. VEGETABLE BASED GELS SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER.

B. SYNTHETIC BINDERS - HIGH POLYMER SYNTHETIC EMULSION, MISCIBLE WITH WATER WHEN DILUTED AND FOLLOWING APPLICATION TO MULCH, DRYING AND CURING SHALL NO LONGER BE SOLUBLE OR DISPERSIBLE IN WATER. IT SHALL BE APPLIED AT RATES AND WEATHER CONDITIONS RECOMMENDED BY THE MANUFACTURER AND REMAIN TACKY UNTIL GERMINATION OF GRASS.

STANDARD FOR MANAGEMENT OF HIGH ACID-PRODUCING SOILS

DEFINITION

HIGH ACID-PRODUCING SOILS ARE SOILS WITH A PH OF 4.0 OR LESS OR CONTAIN IRON SULFIDE.

PURPOSE

TO PREVENT OR LIMIT EXPOSURE AREA, TIME, AND SPREADING BY EQUIPMENT OR RAINFALL ON- AND OFF-SITE AND TO MINIMIZE EROSION, SEDIMENTATION AND ACID LEACHATE-RELATED DAMAGES. HIGH ACID-PRODUCING SOIL MAY BE EXPOSED DURING EXCAVATION AND LAND GRADING ACTIVITIES, OR MAY BE INTRODUCED IN DREDGED SEDIMENT, SOILS AND SEDIMENT CONTAINING IRON SULFIDE, CHARACTERIZED BY PYRITE OR MARCASITE NUGGETS OR GREENSANDS, ARE CHEMICALLY OXIDIZED WHEN EXPOSED TO AIR, PRODUCING SULFURIC ACID AND RESULT IN SOIL PH LEVELS FALLING TO PH 4.0 AND LOWER. MOST VEGETATION IS INCAPABLE OF GROWTH AT THIS PH LEVEL. ADJACENT LAND AND RECEIVING WATERS WILL BE NEGATIVELY IMPACTED BY THE ACID LEACHATE. CALCIUM-CONTAINING MATERIALS SUCH AS SIDEWALKS, CULVERTS AND OTHER STRUCTURES AND SOME METALLIC MATERIALS ARE ALSO SUSCEPTIBLE TO DEGRADATION. AGRICULTURAL LIMESTONE MATERIALS APPLIED AT RATES OF 8 TONS PER ACRE HAVE RESULTED IN ONLY A TEMPORARY BUFFERING EFFECT, AND "LIMING-ONLY" IS THEREFORE NOT CONSIDERED AN ACCEPTABLE MITIGATION PRACTICE.

WATER QUALITY ENHANCEMENT

PROTECTS ONSITE SOILS AND OFFSITE STREAMS AND LAKES FROM SULFURIC ACID LEACHATE THAT CREATES SOIL PH CONDITIONS UNSUITABLE FOR GROWTH OF VEGETATION.

WHERE APPLICABLE

THIS PRACTICE IS APPLICABLE TO ANY HIGH ACID-PRODUCING SOIL MATERIALS. SUCH MATERIALS HAVE BEEN FOUND IN THE COASTAL PLAIN AREAS OF BURLINGTON, CAMDEN, CUMBERLAND, GLOUCESTER, MERCER, MIDDLESEX, MONMOUTH, OCEAN, SALEM AND SOMERSET COUNTIES.

PLANNING CRITERIA

EARLY RECOGNITION AND BURIAL, REMOVAL OR DISPOSAL OF HIGH ACID-PRODUCING SOILS IS ESSENTIAL FOR LIMITING THE AMOUNT OF ACIDIC MATERIAL PRODUCED.
REVIEW A SURFACE GEOLOGY MAP FOR THE PROPOSED SITE TO INVESTIGATE THE PRESENCE OF GEOLOGIC FORMATIONS WHICH COMMONLY CONTAIN HIGH ACID-PRODUCING DEPOSITS. THE GEOLOGIC FORMATIONS ARE AS FOLLOWS:

CHEESEQUAKE	MANASQUAN	RED BANK, SANDY HOOK MEMBER
ENGLISHTOWN SAND	MARSHALLTOWN	SHARK RIVER
HORNERSTOWN	MERCHANTVILLE	TINTON
KIRKWOOD	NAVESINK	WENONAH
MAGOTHY	RARITAN	WOODBURY CLAY

FIGURE 1-1 SHOWS AREAS WHERE THESE DEPOSITS MAY BE PRESENT.

CONTACT THE LOCAL SOIL CONSERVATION DISTRICT TO DETERMINE THE HISTORICAL PRESENCE OF HIGH ACID-PRODUCING SOILS IN THE VICINITY OF THE PROPOSED DEVELOPMENT SITE.

HIGH ACID-PRODUCING SOILS MAY BE PRESENT IN UNDISTURBED SOILS AT VARYING DEPTHS, INCLUDING NEAR THE SOIL SURFACE TO EXCAVATIONS OR DEEP DISTURBANCES. ITS PRESENCE ON A SITE MAY BE SIGNIFICANT OR LIMITED IN THE SOIL PROFILE. HIGH ACID-PRODUCING SOILS ARE COMMONLY BLACK, DARK BROWN, GRAY OR GREENISH WITH SILVERY PYRITE OR MARCASITE NUGGETS OR FLAKES. ALTERNATIVELY, SANDY SOILS OR REDDISH, YELLOWISH OR LIGHT TO MEDIUM BROWN SOIL MATERIALS ARE USUALLY FREE OF HIGH ACID-PRODUCING DEPOSITS.

METHODS AND MATERIALS

1. LIMIT THE EXCAVATION AREA AND EXPOSURE TIME WHEN HIGH ACID-PRODUCING SOILS ARE ENCOUNTERED.

2. TOPSOIL STRIPPED FROM THE SITE SHALL BE STORED SEPARATELY FROM TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOILS.

3. STOCKPILES OF HIGH ACID-PRODUCING SOIL SHOULD BE LOCATED ON LEVEL LAND TO MINIMIZE ITS MOVEMENT, ESPECIALLY WHEN THIS MATERIAL HAS A HIGH CLAY CONTENT.

4. TEMPORARILY STOCKPILED HIGH ACID-PRODUCING SOIL MATERIAL TO BE STORED MORE THAN 48 HOURS SHOULD BE COVERED WITH PROPERLY ANCHORED, HEAVY GRADE SHEETS OF POLYETHYLENE WHERE POSSIBLE. IF NOT POSSIBLE, STOCKPILES SHALL BE COVERED WITH A MINIMUM OF 3 TO 6 INCHES OF WOOD CHIPS TO MINIMIZE EROSION OF THE STOCKPILE. SILT FENCE SHALL BE INSTALLED AT THE TOE OF THE SLOPE TO CONTAIN MOVEMENT OF THE STOCKPILED MATERIAL. TOPSOIL SHALL NOT BE APPLIED TO THE STOCKPILES TO PREVENT TOPSOIL CONTAMINATION WITH HIGH ACID-PRODUCING SOIL.

5. HIGH ACID-PRODUCING SOILS WITH A PH OF 4.0 OR LESS OR CONTAINING IRON SULFIDE (INCLUDING BORROW FROM CUTS OR DREDGED SEDIMENT) SHALL BE ULTIMATELY PLACED OR BURIED WITH LIMESTONE APPLIED AT THE RATE OF 10 TONS PER ACRE (OR 450 POUNDS PER 1,000 SQUARE FEET OF SURFACE AREA) AND COVERED WITH A MINIMUM OF 12 INCHES OF SETTLED SOIL WITH A PH OF 5.0 OR MORE EXCEPT AS FOLLOWS:

A. AREAS WHERE TREES OR SHRUBS ARE TO BE PLANTED SHALL BE COVERED WITH A MINIMUM OF 24 INCHES OF SOIL WITH A PH OR 5 OR MORE.

B. DISPOSAL AREAS SHALL NOT BE LOCATED WITHIN 24 INCHES OF ANY SURFACE OF A SLOPE OR BANK, SUCH AS BERMS, STREAM BANKS, DITCHES, AND OTHERS, TO PREVENT POTENTIAL LATERAL LEACHING DAMAGES.

6. EQUIPMENT USED FOR MOVEMENT OF HIGH ACID-PRODUCING SOILS SHOULD BE CLEANED AT THE END OF EACH DAY TO PREVENT SPREADING OF HIGH ACID-PRODUCING SOIL MATERIALS TO OTHER PARTS OF THE SITE, INTO STREAMS OR STORMWATER CONVEYANCES, AND TO PROTECT MACHINERY FROM ACCELERATED RUSTING.

7. NON-VEGETATIVE EROSION CONTROL PRACTICES (STONE TRACKING PADS, STRATEGICALLY PLACED LIMESTONE CHECK DAM, SEDIMENT BARRIER, WOOD CHIPS) SHOULD BE INSTALLED TO LIMIT THE MOVEMENT OF HIGH ACID-PRODUCING SOILS FROM, AROUND, OR OFF THE SITE.

8. FOLLOWING BURIAL OR REMOVAL OF HIGH ACID-PRODUCING SOIL, TOPSOILING AND SEEDING OF THE SITE (SEE TEMPORARY VEGETATIVE COVER FOR SOIL STABILIZATION, PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND TOPSOILING), MONITORING MUST CONTINUE FOR A MINIMUM OF 6 MONTHS TO ENSURE THERE IS ADEQUATE STABILIZATION AND THAT NO HIGH ACID-PRODUCING SOIL PROBLEMS EMERGE. IF PROBLEMS STILL EXIST, THE AFFECTED AREA MUST BE TREATED AS INDICATED ABOVE TO CORRECT THE PROBLEM.

FROM TABLE 4-3

PERMANENT VEGETATIVE MIXTURE NO. 15, PLANTING RATE PLANTING DATES

	LBS. 1,000 SF	ZONE 6b
HARD FESCUE	3	3/1 thru 10/15
CHEWINGS FESCUE	1	
STRON CREEPING RED FESCUE	1	
PERENNIAL RYE GRASS	0.25	

NO.	DATE	REVISIONS	BY	CHKD

JACLYN J. FLOR, P.E., P.P., C.M.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE04542600
03-11-2016

PETER F. BONDAR, P.E.
CONSULTING ENGINEER
LICENSED PROFESSIONAL ENGINEER
STATE OF NJ LICENSE No. GE48108
03-11-2016

CITY OF HOBOKEN

WASHINGTON STREET REDESIGN

CITY OF HOBOKEN, HUDSON COUNTY, NEW JERSEY

SOIL EROSION AND SEDIMENT CONTROL
NJEIFP

YOUR GOALS. OUR MISSION.
11 TINDALL ROAD
MIDDLETOWN, NJ 07748
TEL 732-671-6400
FAX 732-671-7365
www.tandmassociates.com
NEW JERSEY BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS
CERTIFICATE OF AUTHORIZATION 24GA27987500
OFFICES LOCATED IN:
DELAWARE, INDIANA, KENTUCKY, MASSACHUSETTS, MICHIGAN, NEW JERSEY, OHIO AND PENNSYLVANIA

DESIGNED BY	NSV
CHECKED BY	DM
DRAWN BY	JLS
DATE	03-11-2016
SCALE	AS SHOWN
PROJ. NO.	HOBK-00090

DRAWING CSD-13

PROJECT INFORMATION:
FILE PATH: H:\HOBK\00090\Plans\
FILE NAME: HOBK00090_SHT070_SED-2.dwg
LAST SAVED DATE AND TIME: 11 Mar 2016, 8:27PM
LAST SAVE BY: nvalenzuela

COPYRIGHT 2016, T&M ASSOCIATES - ALL RIGHTS RESERVED. THE COPYING OR REUSE OF THIS DOCUMENT OR PORTIONS THEREOF, FOR OTHER THAN THE ORIGINAL PROJECT OR THE PURPOSE ORIGINALLY INTENDED, WITHOUT THE WRITTEN PERMISSION OF T&M ASSOCIATES IS PROHIBITED.