

ADDENDUM NO. 3

DATE: September 21, 2017
TO: All Bidders
FROM: ~~Boyce~~ H. Evans, Purchasing Agent
SUBJECT: Addendum No. 3 – North Central Street Streetscapes Project
BIDS TO BE OPENED: September 27, 2017, at 11:00 a.m. (Eastern)

This addendum is being published to make changes to the Contract Documents and specifications as well as respond to questions that the City has received from potential bidders. The City's responses hereby become a part of the Contract Documents and modify the original specifications as noted below.

Changes to the Contract Documents & Specifications:

1. The following plan sheets have been revised: 2, 5, 8, 9, 11, 24, 25, 26, TS6.00-TS6.05, TS7.00, L107, L108
2. The following plan sheets have been added: TS6.06
3. The following pay items have been deleted: 716-02.03, Plastic Pavement Markings (Cross-walk); 725-10.01, Fiber Optic Drop Cable (6 SMFO Cable)
4. The following pay items have been added: 725-23.13, Fiber Optic Drop Cable (12F), 535 L.F.
5. The following pay items have been revised: 716-04.21, Green Textured Bike Lane, 586 S.F.; 716-10.30, Truncated Dome Detectable Warning Mat, 728 S.F.; 920-10.04, Concrete Pad for Bus Shelter, 9 EACH; added footnotes for 716-04.21, 725-10.05, 730-15.07, and 730-15.08.
6. A revised Bid Form is included with this addendum.

Clarifications to the Contract Documents & Specifications:

1. Referring to the Colored Asphalt detail on Sheet L107, the StreetBond and Road Color products are not acceptable alternatives to the Streetprint XD. This is now modified to state "Streetprint XD or approved equal".

Questions Received:

Question #1: What type and style of decorative base is required on the new mast arm poles? They can be rather tall or rather short. The short style was just installed on the Cumberland Avenue Streetscapes project.

Response #1: The mast arm pole base shall match the type used on the recently completed Cumberland Avenue Streetscapes project, which is a black cast aluminum clamshell base cover (Valmont Classic AC1 or approved equal).

Question #2: How are the fiber optic splices figured? Plans show 5. Fiber is 48 strands and there would be many, many more than 5.

Response #2: Sheet TS6.06 has been added to the plans, which shows various fiber splicing details for each intersection. For the pay item, per pages 58 and 59 of the City of Knoxville's Special Provision Section 730K – Traffic Signals, and the added footnote on the Estimated Quantities Sheet, the pay item shall be per each fiber splicing location. Therefore, the quantity will remain at 5.

Question #3: The fiber optic cable shown says to be 48 fibers, Single Mode. This show no Multi-Mode fibers. Again, the Cumberland Avenue Streetscapes project required a combo fiber cable with both single mode and multi-mode, in the same cable.

Response #3: All 48 fibers for this project shall be single mode.

Question #4: Cumberland Avenue Streetscapes required the fiber to be unbroken. It was all underground. This cannot be done with the transition from overhead span mounted fiber to underground installed fiber. Will the City accept splicing the newly installed fiber?

Response #4: Trunk cable fiber splicing will be allowed where needed.

Question #5: Will the splicing, in Question 4 above, need to be included in the #2 splices?

Response #5: Yes.

Question #6: What is the required backfill material for storm piping excavation in traffic and non-traffic areas?

Response #6: Refer to City of Knoxville Standard Detail COK-5.

Question #7: Referencing Sheet 2D: Please clarify if the painted ADA grate is to be used on all Type 42 structures.

Response #7: Yes, this grate is for all proposed Type 42's.

Question #8: Will the contractor be compensated for temporary pavement marking or is this incidental to traffic control?

Response #8: All items required for traffic control, including temporary pavement markings, are paid for under Item 712-01, Traffic Control, L.S. (refer to Footnote 8 on Sheet 2 and the Traffic Control Notes on Sheet 2D).

Question #9: Is any asphalt patching required at storm piping excavations in the street or can we assume these can be topped off with base stone until the entire street is re-paved?

Response #9: Temporary patching of storm pipe excavations will be mineral aggregate base and asphalt binder course. Items 303-01 and 307-01.08 account for these patching quantities.

Question #10: Please confirm all conflicting utilities not specifically shown to construct or relocate will be moved by the utility provider.

Response #10: Conflicting utilities have either already been moved or will be moved prior to construction by KUB.

Question #11: There are several storm structures and pipes that call out to be abandoned and filled with flowable fill concrete. How will this be paid?

Response #11: Under Item 204-08.01, Backfill Material (Flowable Fill).

Question #12: I did not see any erosion control noted on the plans other than the inlet protection which is covered by item 209-09.43. What additional erosion control should be included in the lump sum item 209-01.10?

Response #12: We do not anticipate any other devices will be required to protect the existing storm sewer system and outfalls. Item 209-01.10 is intended for other items that may become necessary to control sediment such as containing a stockpile area for excavated materials.

Question #13: How will excavation be paid?

Response #13: Excavation is not paid for separately on this project. All excavation to install curb, storm sewer, planting soil, etc. is to be included in those items. Some of the excavation may be offset by other items such as Removal of Asphalt Pavement.

Question #14: Is excavation 36" deep to install 36" of planting soil an incidental to the planting soil pay item?

Response #14: See Response #13 above.

Question #15: L108 instructs the contractor to perform a percolation test of the planting areas. What is to be done if the results of this test are unacceptable?

Response #15: If the soil percolates, only one test needs to be completed. If the soil does not percolate, there needs to be another test after remediation. If it is impossible for the soil to percolate we will have to debate as a team the best solution for a particular area. Our notes on Sheet L108 state that excavation beyond 36" needs to be done to a point of percolation. This is paid for under Item 920-10.03, Planting Soil.

Question #16: Please provide additional direction / specification for the following items: Sand blast finish concrete, enhanced concrete pavement.

Response #16: Section 321313, Concrete Paving, covers enhanced concrete, both the sand blasted finish and broom finish. Subsection 2.1B is "Exposed Aggregate" and 2.1C specifies "Fine Aggregates" for the sand. Section 3.7 "Finishing" includes language for a light broom finish, but does not specify the sand blasting. Sand Blasting Notes on Sheet L108 specify "Medium Sand Blast Finish: generally expose coarse aggregate: 3/16" to 1/4" reveal". A plan revision is included with this addendum that removes "HS- Heavy Sand Blast Finish". "MS- Medium Sand Blast Finish" has been revised to "SB-Sand Blasted Concrete" to match the legend and text on the plans. The reveal will remain 3/16"-1/4".

Question #17: What is the Specification of the material for Item 716-04.21 (Green Textured Bike Lane)?

Response #17: Thermoplastic or preformed plastic (same as the other 716- items).

Question #18: Is there a Typical Drawing for the Bike Lane Crossing?

Response #18: Refer to the revised pavement marking sheets being issued with this addendum, which contain additional notes for the bike lane crossings.

Question #19: What is the material for the Dotted White Line on either side of the Bike Lane Crossing shown on Drawing No. 24?

Response #19: See response #17 above.

Question #20: Is there a Bid Item set up for the Dotted White Line on either side of the Bike Lane Crossing?

Response #20: No, the dotted white line is paid for with the Green Textured Bike Lane, Item No. 716-04.21 (refer to Footnote 18 in the revised Bid Form).

Question #21: Is there a Typical Drawing for the Bike Symbol within the Green Bar shown on Drawing No. 24?

Response #21: TDOT Standard Drawing T-M-11, Signing and Pavement Markings for Bicycle Lanes or Routes.

Question #22: There is 716 LF of 716-02.03 (Crosswalk) set up on the project, but it seems that the Pedestrian Crosswalks shown on the Drawings are Longitudinal. Is this quantity correct? If so, where are the locations?

Response #22: Item 716-02.03 has been removed from the Bid Form and Sheet 2.

END OF ADDENDUM NO. 3

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
105-01	CONSTRUCTION STAKES, LINES AND GRADES	L.S.	1
202-01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	1
202-03	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC.	S.Y.	3810
202-03.01	REMOVAL OF ASPHALT PAVEMENT	S.Y.	4250
202-08.10	REMOVAL OF CURB (TYPE A DETACHED)	L.F.	6914
202-08.15	REMOVAL OF CURB AND GUTTER (TYPE 6-30)	L.F.	320
204-08.01	BACKFILL MATERIAL (FLOWABLE FILL)	C.Y.	50
209-01.10	EROSION AND SILTATION CONTROL	L.S.	1
209-09.43	CURB INLET PROTECTION (TYPE 4)	EACH	74
303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	2116
307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	257
403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	14
407-20.05	SAW CUTTING ASPHALT PAVEMENT	L.F.	14200
411-01.10	ACS MIX (PG64-22) GRADING D	TON	2175
411-33.35	STAMPED ASPHALT (CROSSWALK)	S.F.	4150
415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y.	32455
607-02.02	15" CONCRETE PIPE CULVERT (CLASS III)	L.F.	614
607-03.02	18" CONCRETE PIPE CULVERT (CLASS III)	L.F.	2796
607-05.02	24" CONCRETE PIPE CULVERT (CLASS III)	L.F.	44
607-07.02	36" CONCRETE PIPE CULVERT (CLASS III)	L.F.	700
611-01.02	MANHOLES, > 4' - 8' DEPTH	EACH	6
611-01.03	MANHOLES, > 8' - 12' DEPTH	EACH	1
611-09.01	ADJUSTMENT OF EXISTING CATCHBASIN	EACH	2
611-09.02	REWORK CATCHBASIN	EACH	9
611-10.01	CATCH BASINS, TYPE 10, >0' - 4' DEPTH	EACH	5
611-10.02	CATCH BASINS, TYPE 10, > 4' - 8' DEPTH	EACH	11
611-10.03	CATCH BASINS, TYPE 10, > 8' - 12' DEPTH	EACH	2
611-12.01	CATCH BASINS, TYPE 12, >0' - 4' DEPTH	EACH	13
611-12.02	CATCH BASINS, TYPE 12, > 4' - 8' DEPTH	EACH	22
611-12.03	CATCH BASINS, TYPE 12, > 8' - 12' DEPTH	EACH	4
611-42.01	CATCH BASINS, TYPE 42, > 0' - 4' DEPTH	EACH	2
611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	3
701-01.01	CONCRETE SIDEWALK (4")	S.F.	20724
701-01.03	CONCRETE SIDEWALK - 4" (GUTTER PAN)	S.F.	1652
701-02	CONCRETE DRIVEWAY	S.F.	4395
701-02.03	CONCRETE CURB RAMP	S.F.	4296
702-01.02	CONCRETE CURB	L.F.	10500
712-01	TRAFFIC CONTROL	L.S.	1
713-01.10	SIGNING	L.S.	1
713-16.20	SIGNS (REMOVE AND RELOCATE STREET NAME SIGN)	EACH	19
713-16.21	SIGNS (R10-27 MODIFIED - FLASHING YELLOW ARROW SIGN)	EACH	3
716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	205
716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F.	824
716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH	8
716-02.09	PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK)	L.F.	1255
716-04.01	PLASTIC PAVEMENT MARKING (STRAIGHT-TURN ARROW)	EACH	2
716-04.02	PLASTIC PAVEMENT MARKING(DOUBLE TURNING ARROW)	EACH	9
716-04.13	PLASTIC PAVEMENT MARKING (BIKELANE SYMBOL & ARROW)	EACH	51
716-04.15	PLASTIC PAVEMENT MARKING-BIKE SYMBOL/ARROW SHARED	EACH	6
716-04.21	GREEN TEXTURED BIKE LANE	S.Y.	586
716-05.01	PAINTED PAVEMENT MARKINGS (4" LINE)	L.M.	4.42
716-05.08	PAINTED PAVEMENT MARKING (PARKING LINE)	L.F.	1020
716-05.21	PAINTED PAVEMENT MARKING (4" DOTTED LINE)	L.F.	1036
716-10.30	TRUNCATED DOME DETECTABLE WARNING MAT	S.F.	728
717-01	MOBILIZATION	L.S.	1

ESTIMATED ROADWAY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
725-10.03	FIBER OPTIC SPLICE ENCLOSURE	EACH	1
725-10.04	FIBER OPTIC TERMINATION PANEL (12F)	EACH	5
725-10.05	FIBER OPTIC FUSION SPLICE	EACH	5
725-10.06	FIBER OPTIC AERIAL SPLICE ENCLOSURE	EACH	4
725-10.07	FIBER OPTIC STORAGE BRACKET (AERIAL)	EACH	4
725-23.13	FIBER OPTIC DROP CABLE (12F)	LF	535
730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	5
730-02.09	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	32
730-02.30	SIGNAL HEAD ASSEMBLY (3-SECTION FYA WITH BACKPLATE)	EACH	2
730-02.31	SIGNAL HEAD ASSEMBLY (130 W/ BACKPLATE & TUNNEL VISORS)	EACH	8
730-02.32	SIGNAL HEAD ASSEMBLY (3-SECTION FYA W/ BPLATE & T VISORS)	EACH	1
730-02.33	SIGNAL HEAD ASSEMBLY (130 POLE MOUNTED W/ T VISORS)	EACH	3
730-02.34	SIGNAL HEAD ASSEMBLY (3-SEC FYA POLE MOUNT W/ T VISORS)	EACH	1
730-03.21	INSTALL PULL BOX (TYPE B)	EACH	26
730-03.23	INSTALL PULL BOX (FIBER OPTIC - TYPE A)	EACH	10
730-03.24	INSTALL PULL BOX (FIBER OPTIC - TYPE B)	EACH	1
730-05.04	MODIFY EXISTING ELECTRICAL SERVICE CONNECTION	EACH	5
730-08.01	SIGNAL CABLE - 3 CONDUCTOR	LF	4575
730-08.03	SIGNAL CABLE - 7 CONDUCTOR	LF	3370
730-08.05	SIGNAL CABLE - 12 CONDUCTOR	LF	4025
730-08.40	INTERCONNECT CABLE - FIBER OPTIC (48 SMFO CABLE)	LF	3915
730-10.02	MESSENGER CABLE - 1/4" DIAMETER	LF	3155
730-11.01	STEEL CONDUIT RISER ASSEMBLY	EACH	6
730-12.02	CONDUIT 2" DIAMETER (PVC)	LF	5680
730-12.16	CONDUIT (2" DIAMETER HDPE)	LF	995
730-13.07	VEHICLE DETECTOR (SIREN ACTIVATED PRIORITY CONTROL)	EACH	5
730-13.08	VEHICLE DETECTOR (INTERSECTION RADAR DETECTION)	EACH	5
730-15.07	CABINET (EIGHT PHASE BASE MOUNTED ON PAVEMENT)	EACH	3
730-15.08	CABINET (EIGHT PHASE BASE MOUNTED ON GRASS)	EACH	2
730-16.02	EIGHT PHASE ACTUATED CONTROLLER	EACH	5
730-23.30	PEDESTAL POLE (PEDESTRIAN)	EACH	11
730-23.48	CANTILEVER SIGNAL SUPPORT (1 ARM @ 20')	EACH	1
730-23.56	CANTILEVER SIGNAL SUPPORT (1 ARM @ 25')	EACH	1
730-23.64	CANTILEVER SIGNAL SUPPORT (1 ARM @ 30')	EACH	4
730-23.72	CANTILEVER SIGNAL SUPPORT (1 ARM @ 35')	EACH	3
730-23.80	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40')	EACH	3
730-23.96	CANTILEVER SIGNAL SUPPORT (2 @ 55' & 30')	EACH	1
730-23.97	CANTILEVER SIGNAL SUPPORT (1 ARM @ 60')	EACH	1
730-23.98	CANTILEVER SIGNAL SUPPORT (2 @ 60' & 25')	EACH	1
730-26.06	PEDESTRIAN PUSHBUTTON POST	EACH	1
730-26.11	COUNTDOWN PED SGNL HEAD WAUDIBLE PUSH BUTTON & 15IN SIGN	EACH	38
920-10.01	MULCH	S.F.	38500
920-10.03	PLANTING SOIL	C.Y.	4279
920-10.04	CONCRETE PAD FOR BUS STOP SHELTER	EACH	9
920-11.01	FINE GRADING	S.F.	38500
920-11.04	BENCHES	EACH	47
920-12.04	BIKE RACKS	EACH	10
920-13.01	4" ENHANCED CONCRETE (BROOM FINISH)	S.F.	9675
920-14.01	4" ENHANCED CONCRETE (SAND BLAST FINISH)	S.F.	4575
920-15.01	4" ENHANCED CONCRETE (BROOM FINISH CURB RAMP)	S.F.	1500

FOOTNOTES

- INCLUDES BUT NOT LIMITED TO DRAINAGE STRUCTURES, GRATES, AND PIPES.
- INCLUDES SIDEWALK REMOVAL, CONCRETE DRIVEWAY REMOVAL IN SIDEWALK AREA AND CONCRETE DRIVEWAY BEHIND SIDEWALK.
- IN MOST AREAS, INCLUDES REMOVAL OF CONCRETE BASE BELOW PAVEMENT (CONCRETE THICKNESS ~4"-8").
- ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SECTION 209.07 OF THE TDOT STANDARD SPECIFICATIONS.
- INCLUDES BEDDING MATERIAL.
- INCLUDES RECONNECTION OF EXISTING PIPES AS SHOWN ON THE PLANS.
- INCLUDES SOME EXISTING MANHOLES AS SHOWN ON THE PLANS.
- INCLUDES ALL ITEMS REQUIRED FOR MAINTENANCE OF VEHICULAR AND PEDESTRIAN TRAFFIC. REFER TO SHEET 2D FOR GENERAL REQUIREMENTS.
- INCLUDES ALL NEW SIGNS AND RELOCATION OF EXISTING GROUND MOUNTED SIGNS AS SHOWN ON PLANS.
- INCLUDES REMOVAL AND RELOCATION OF SPAN MOUNTED STREET NAME SIGNS TO NEW MAST ARMS, INCLUDING ANY ADDITIONAL HARDWARE NEEDED TO MOUNT THE SIGNS ON THE MAST ARMS.
- THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
- WARNING MATS SHALL BE YELLOW AND SHALL BE ADA SOLUTIONS OR ARMOR-TILE ITEM IS NON-PARTICIPATING.
- INCLUDES REMOVAL OF EXISTING SIGNAL HEADS, WIRING, CABINET AND CABINET CONTENTS. EXISTING SIGNAL POLES SHALL BE REMOVED, EXCEPT WHEN SAID POLES HAVE ADDITIONAL USES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL UTILITY (KUB) TO OBTAIN THE LOCATION AND ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING THE PRICE BID FOR ITEM 730-05.04. ITEM ALSO INCLUDES CONDUIT, CABLE, AND OTHER ITEMS NECESSARY TO MODIFY ELECTRICAL SERVICE/ELECTRICAL SERVICE TO THE SIGNAL CONTROLLER. THESE CHARGES SHALL BE INCLUDED IN CONNECTION FROM EXISTING TRAFFIC SIGNAL TO NEW TRAFFIC SIGNAL.
- ITEM SHALL BE INSTALLED ON MAST ARMS FOR ALL INTERSECTION APPROACHES AND SHALL BE SONEM 2000.
- INCLUDES THE COMPLETE INSTALLATION OF THE DETECTION SYSTEM INCLUDING RADAR DETECTOR UNITS, CABLE, AND 2 CHANNEL RACK CARDS FOR ALL APPROACHES AS SHOWN ON THE PLANS. ALL WIRING AND ANY CONTROL EQUIPMENT NECESSARY FOR A FULLY OPERATIONAL DETECTION SYSTEM SHALL BE INCLUDED IN COST.
- INCLUDES FOUNDATION.
- INCLUDES 2'-2' DASHED WHITE LINE ON SIDES OF GREEN BARS WITHIN INTERSECTIONS.
- INCLUDES ALL FUSION SPLICES REQUIRED IN A SINGLE SPLICE ENCLOSURE. SEE SHEET TS6.06 FOR DETAILS.
- INCLUDES ALL ITEMS LISTED IN TRAFFIC SIGNAL NOTE 28 ON SHEET TS7.00 THAT ARE NOT ALREADY COVERED IN A SEPARATE PAY ITEM.

NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDOT REVIEW COMMENTS
2	7-6-17	ADDED PAY ITEM 611-42.01, REVISED PAY ITEMS 807-03.02, 611-42.02, AND 702-01.02
3	9-21-17	REVISED ITEMS AND FOOTNOTES AS PER ADDENDUM 3



STREETSCAPE IMPROVEMENTS
NORTH CENTRAL STREET
KNOXVILLE, TENNESSEE

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Vaughn & Melton
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TENNESSEE
865-546-5800

NORTH CAROLINA
828-253-2796

SOUTH CAROLINA
864-574-4775

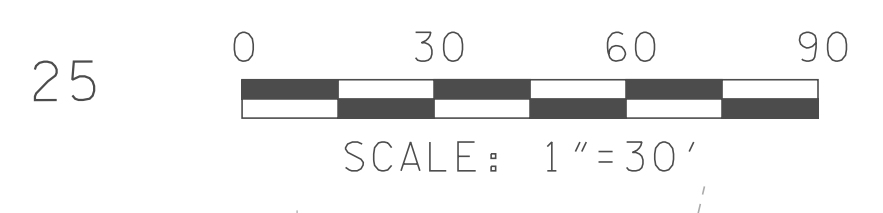
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DRAWN:	J.E.W.
CHECKED:	J.C.E.
JOB NO:	51130-63
SCALE:	N/A
DATE:	APRIL 2017
FILE NAME:	
DRAWING TITLE:	ESTIMATED ROADWAY QUANTITIES
DRAWING NO:	2

Coordinates are NAD/83 (1995), are datum adjusted by the factor of 1.000100 and tied to the TGRN. All elevations are referenced to the NAVD 1988



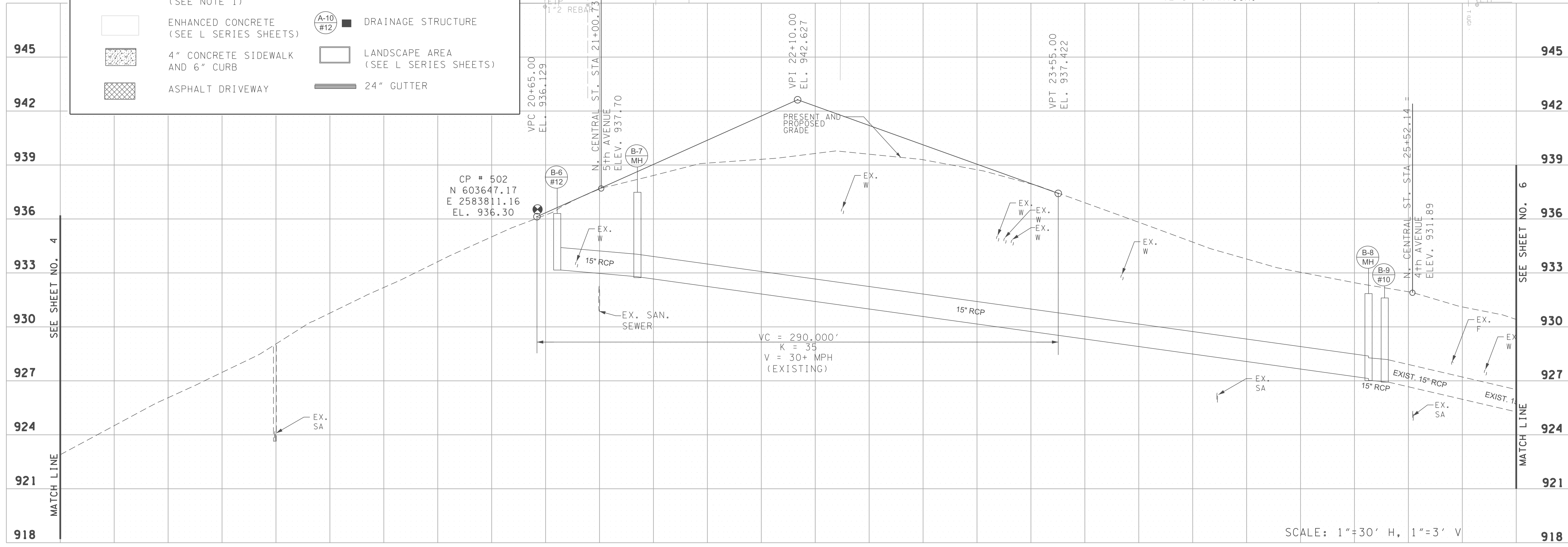
SEE SHEET NO. 4
MATCH LINE STA. 18+00

SEE SHEET NO. 6
MATCH LINE STA. 26+00

LEGEND

	PERPENDICULAR CURB RAMP (SEE NOTE 1)		6" CONCRETE DRIVEWAY
	PARALLEL CURB RAMP (SEE NOTE 1)		KAT SHELTER FOUNDATION
	ENHANCED CONCRETE (SEE L SERIES SHEETS)		DRAINAGE STRUCTURE
	4" CONCRETE SIDEWALK AND 6" CURB		LANDSCAPE AREA (SEE L SERIES SHEETS)
	ASPHALT DRIVEWAY		24" GUTTER

- NOTES:**
- ALL CURB CUT RAMPS SHALL CONFORM TO ADA, COK, AND TDOT STANDARDS INCLUDING TRUNCATED DOME SURFACES. REFER TO STD. DWG'S. COK-13, AND TDOT RP-H-3 THROUGH RP-H-9.
 - RESIDENT ENGINEER SHALL APPROVE ALL DRAINAGE STRUCTURES AND PIPES TO BE ABANDONED OR REMOVED.
 - USE CONTROL INFORMATION CONTAINED IN THIS DOCUMENT ONLY HORIZONTAL AND VERTICAL DATA DOES NOT MATCH CURRENT CITY OF KNOXVILLE CONTROL INFORMATION.



NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDOT REVIEW COMMENTS
2	9-15-17	ADDED DET. WARNING MATS AT BUS STOPS



**STREETSCAPE IMPROVEMENTS
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DRAWN:	C.C.C.
CHECKED:	J.C.E.
JOB NO:	51130-63
SCALE:	1"=30'
DATE:	APRIL 2017
FILE NAME:	
DRAWING TITLE:	PRESENT, PROPOSED AND PROFILE LAYOUT
DRAWING NO:	5

STA. 42+49.72 NORTH CENTRAL STREET =
BEARDEN PLACE
N 605306.7504
E 2582391.2560

STA. 48+11.48 NORTH CENTRAL STREET =
PEARL PLACE
N 605726.1691
E 2582017.8715

STA. 46+35.95 NORTH CENTRAL STREET =
DAMERON AVENUE
N 605593.9206
E 2582133.2885

CITY CONTROL
MONUMENT #0248
ELEVATION 960.61

CITY CONTROL
MONUMENT #1648
ELEVATION 960.89

Coordinates are NAD/83 (1995),
one datum adjusted by the
factor of 1.000100 and
tied to the TGRN. All
elevations are referenced
to the NAVD 1988



SEE SHEET NO. 7

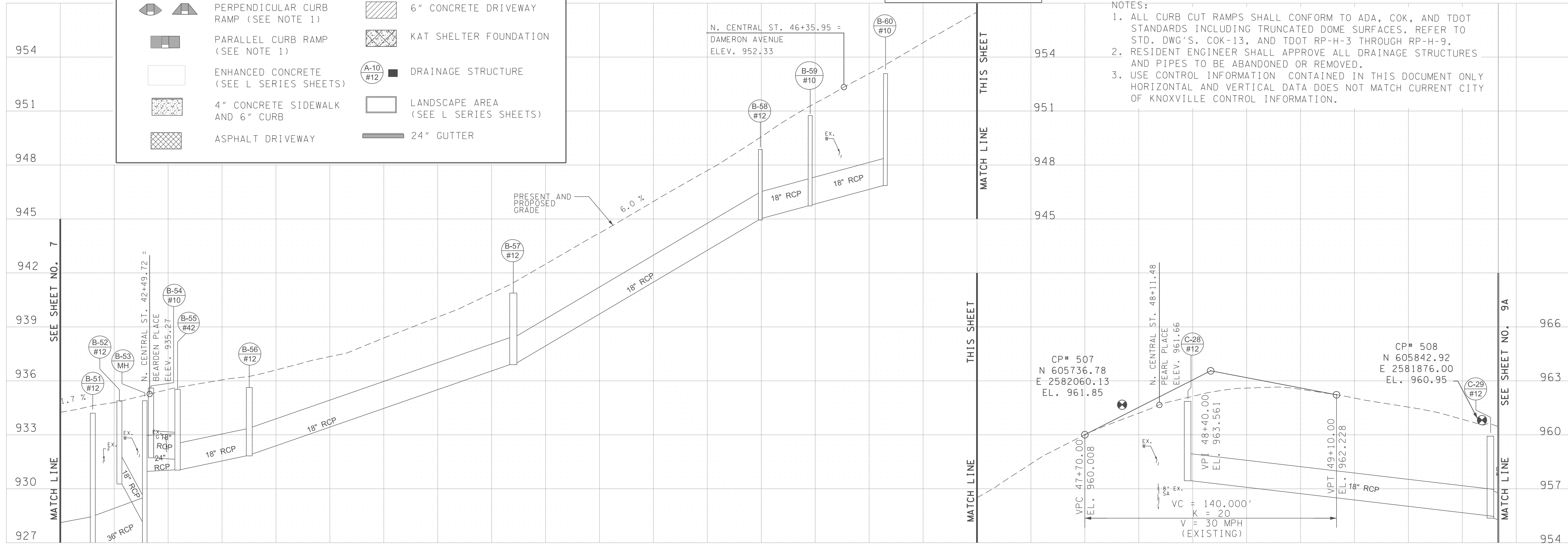
SEE SHEET NO. 9

MATCH LINE STA. 42+00

MATCH LINE STA. 50+00

LEGEND			
	PERPENDICULAR CURB RAMP (SEE NOTE 1)		6" CONCRETE DRIVEWAY
	PARALLEL CURB RAMP (SEE NOTE 1)		KAT SHELTER FOUNDATION
	ENHANCED CONCRETE (SEE L SERIES SHEETS)		DRAINAGE STRUCTURE
	4" CONCRETE SIDEWALK AND 6" CURB		LANDSCAPE AREA (SEE L SERIES SHEETS)
	ASPHALT DRIVEWAY		24" GUTTER

- NOTES:
- ALL CURB CUT RAMPS SHALL CONFORM TO ADA, COK, AND TDOT STANDARDS INCLUDING TRUNCATED DOME SURFACES. REFER TO STD. DWG'S. COK-13, AND TDOT RP-H-3 THROUGH RP-H-9.
 - RESIDENT ENGINEER SHALL APPROVE ALL DRAINAGE STRUCTURES AND PIPES TO BE ABANDONED OR REMOVED.
 - USE CONTROL INFORMATION CONTAINED IN THIS DOCUMENT ONLY HORIZONTAL AND VERTICAL DATA DOES NOT MATCH CURRENT CITY OF KNOXVILLE CONTROL INFORMATION.



42+00 45+00 48+00 SCALE: 1"=30' H, 1"=3' V

REVISIONS	
NO.	DESCRIPTION
1	REVISED AS PER TDOT REVIEW COMMENTS
2	ADDED DET. WARNING MATS AT BUS STOPS



STREETSCAPE IMPROVEMENTS
NORTH CENTRAL STREET
KNOXVILLE, TENNESSEE

V&M
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KENTUCKY
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SOUTH CAROLINA
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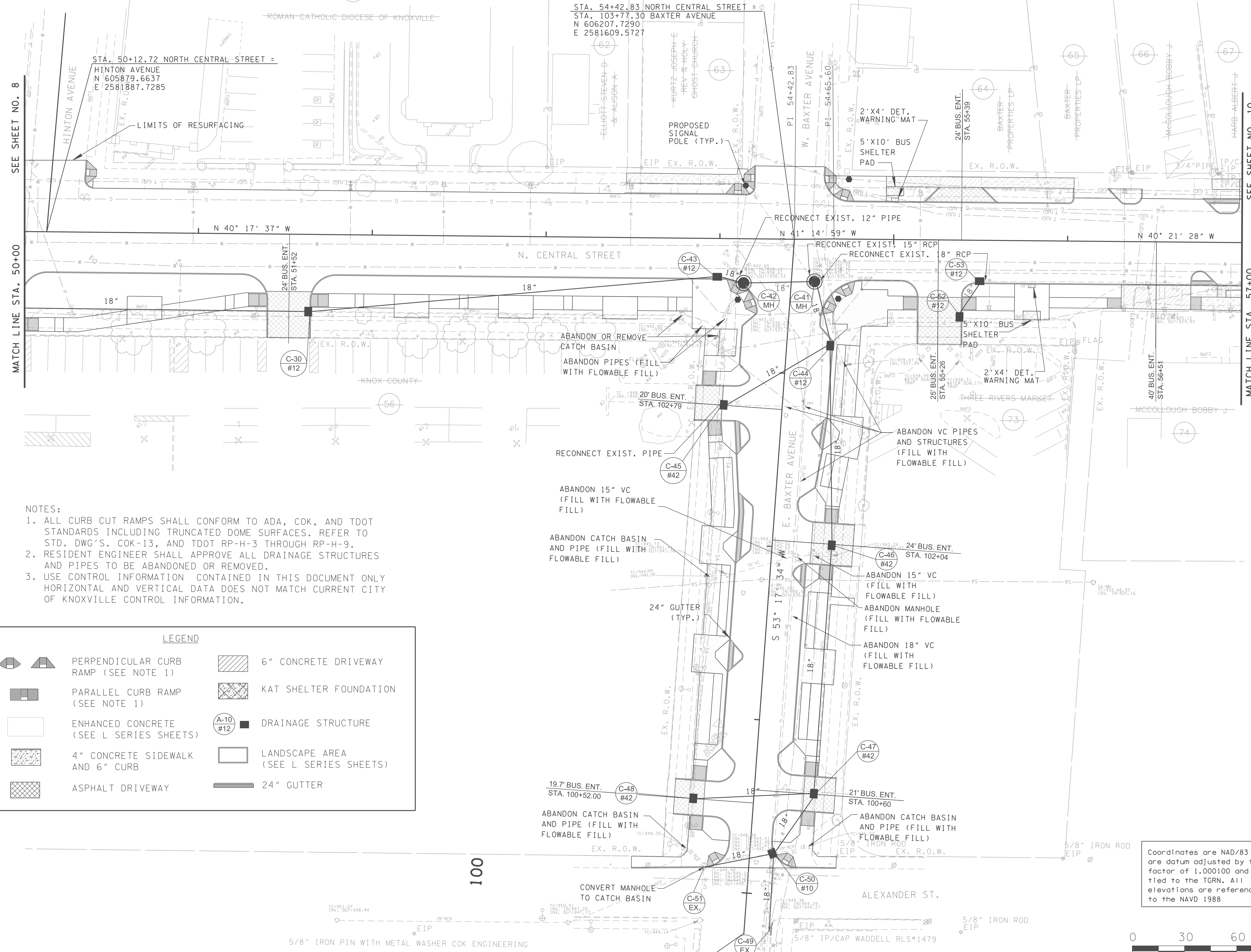
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CHECKED:	J.C.E.
JOB NO.:	51130-63
SCALE:	1"=30'
DATE:	APRIL 2017
FILE NAME:	
DRAWING TITLE:	PRESENT, PROPOSED AND PROFILE LAYOUT
DRAWING NO.:	8

50

55



SEE SHEET NO. 8

SEE SHEET NO. 10

MATCH LINE STA. 50+00

MATCH LINE STA. 57+00

NOTES:

1. ALL CURB CUT RAMPS SHALL CONFORM TO ADA, COK, AND TDOT STANDARDS INCLUDING TRUNCATED DOME SURFACES. REFER TO STD. DWG'S, COK-13, AND TDOT RP-H-3 THROUGH RP-H-9.
2. RESIDENT ENGINEER SHALL APPROVE ALL DRAINAGE STRUCTURES AND PIPES TO BE ABANDONED OR REMOVED.
3. USE CONTROL INFORMATION CONTAINED IN THIS DOCUMENT ONLY HORIZONTAL AND VERTICAL DATA DOES NOT MATCH CURRENT CITY OF KNOXVILLE CONTROL INFORMATION.

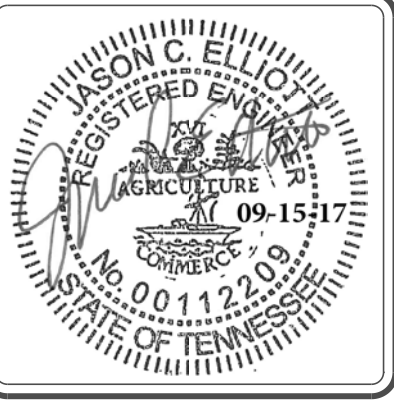
LEGEND

	PERPENDICULAR CURB RAMP (SEE NOTE 1)		6" CONCRETE DRIVEWAY
	PARALLEL CURB RAMP (SEE NOTE 1)		KAT SHELTER FOUNDATION
	ENHANCED CONCRETE (SEE L SERIES SHEETS)		DRAINAGE STRUCTURE
	4" CONCRETE SIDEWALK AND 6" CURB		LANDSCAPE AREA (SEE L SERIES SHEETS)
	ASPHALT DRIVEWAY		24" GUTTER

Coordinates are NAD/83 (1995), are datum adjusted by the factor of 1.000100 and tied to the TGRN. All elevations are referenced to the NAVD 1988



NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDOT REVIEW COMMENTS
2	7-6-17	ADDED PIPE FROM C-49 TO C-50
3	9-15-17	ADDED DET. WARNING MATS AT BUS STOPS



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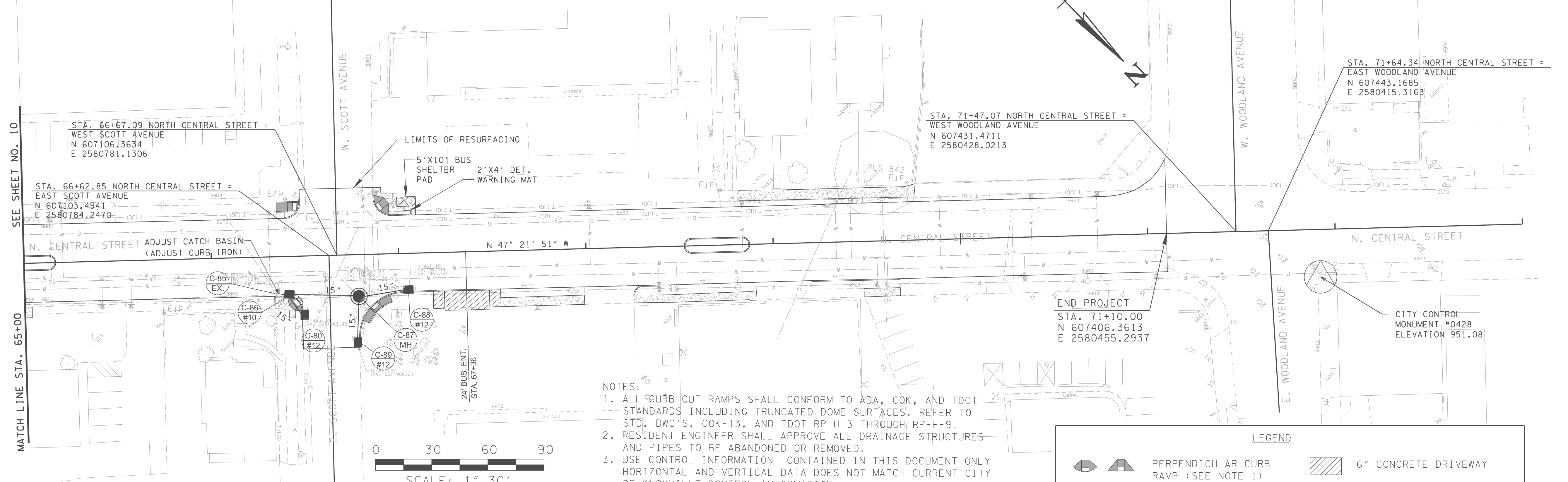
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SCALE:	1"=30'
DATE:	APRIL 2017
FILE NAME:	
DRAWING TITLE:	

PRESENT AND PROPOSED LAYOUT

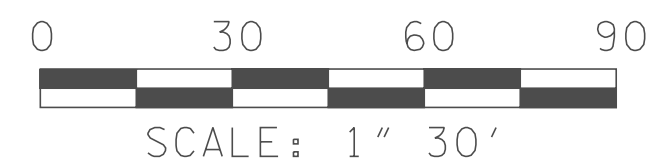
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65

70

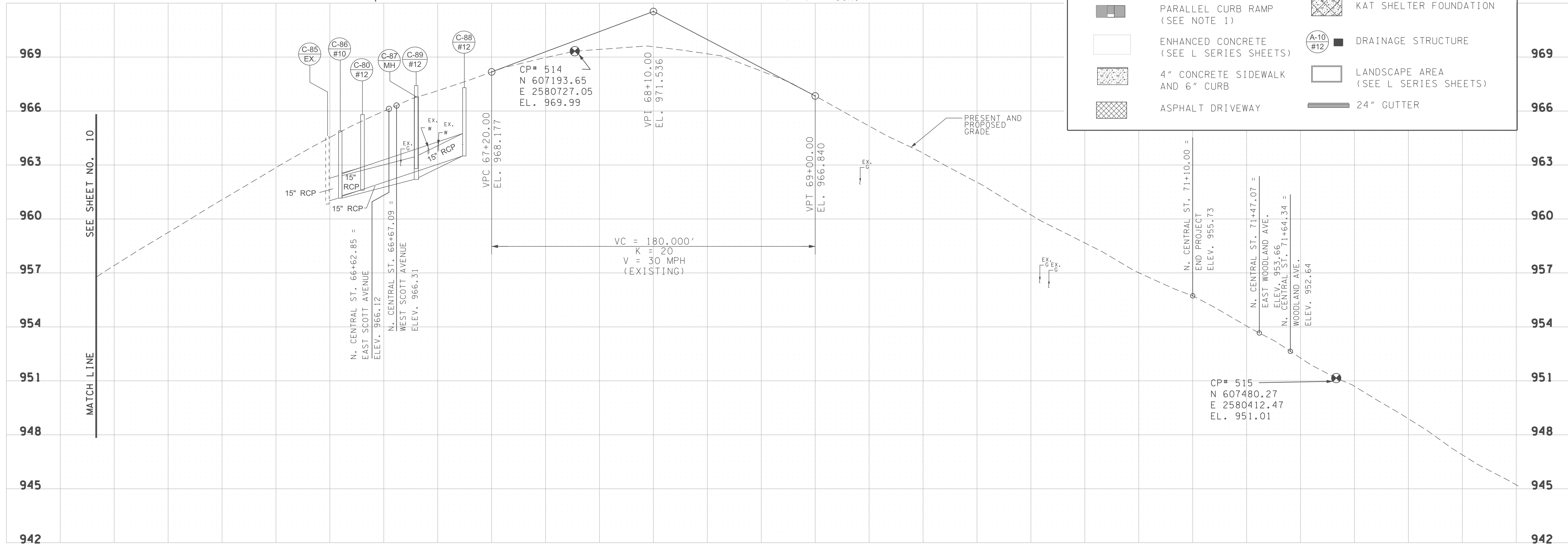


- NOTES:
1. ALL CURB CUT RAMPS SHALL CONFORM TO ADA, COK, AND TDOT STANDARDS INCLUDING TRUNCATED DOME SURFACES, REFER TO STD. DWG'S. COK-13, AND TDOT RP-H-3 THROUGH RP-H-9.
 2. RESIDENT ENGINEER SHALL APPROVE ALL DRAINAGE STRUCTURES AND PIPES TO BE ABANDONED OR REMOVED.
 3. USE CONTROL INFORMATION CONTAINED IN THIS DOCUMENT ONLY HORIZONTAL AND VERTICAL DATA DOES NOT MATCH CURRENT CITY OF KNOXVILLE CONTROL INFORMATION.



LEGEND

	PERPENDICULAR CURB RAMP (SEE NOTE 1)		6" CONCRETE DRIVEWAY
	PARALLEL CURB RAMP (SEE NOTE 1)		KAT SHELTER FOUNDATION
	ENHANCED CONCRETE (SEE L SERIES SHEETS)		DRAINAGE STRUCTURE
	4" CONCRETE SIDEWALK AND 6" CURB		LANDSCAPE AREA (SEE L SERIES SHEETS)
	ASPHALT DRIVEWAY		24" GUTTER



66+00

69+00

72+00 SCALE: 1"=30' H, 1"=3' V

NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDOT REVIEW COMMENTS
2	9-15-17	ADDED DET. WARNING MATS AT BUS STOP



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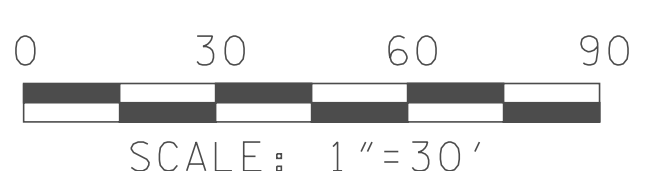
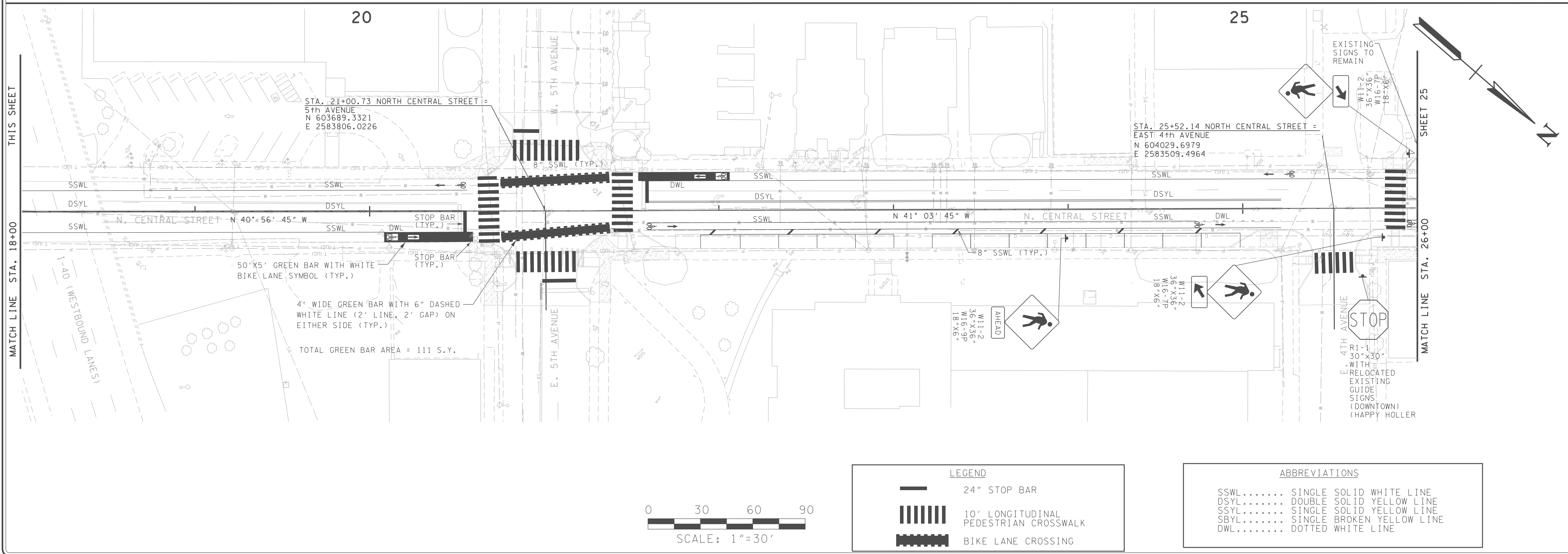
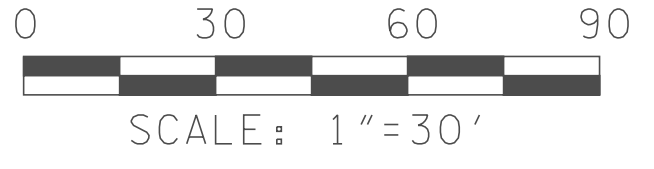
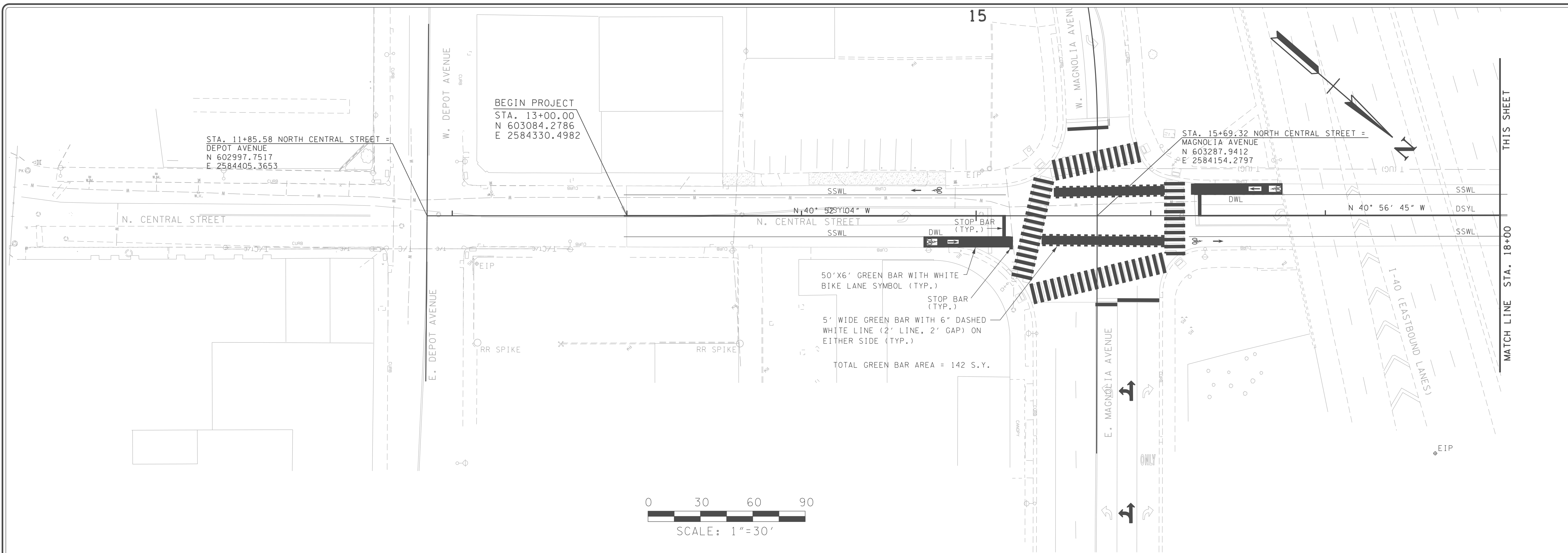
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FILE NAME:	
DRAWING TITLE:	PRESENT, PROPOSED AND PROFILE LAYOUT
DRAWING NO.:	11



LEGEND

	24" STOP BAR
	10' LONGITUDINAL PEDESTRIAN CROSSWALK
	BIKE LANE CROSSING

ABBREVIATIONS

SSWL.....	SINGLE SOLID WHITE LINE
DSYL.....	DOUBLE SOLID YELLOW LINE
SSYL.....	SINGLE SOLID YELLOW LINE
SBYL.....	SINGLE BROKEN YELLOW LINE
DWL.....	DOTTED WHITE LINE

REVISIONS

NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDDOT REVIEW COMMENTS
2	9-15-17	MODIFIED GREEN BIKE LANE DESCRIPTIONS



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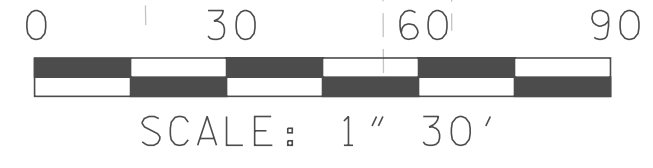
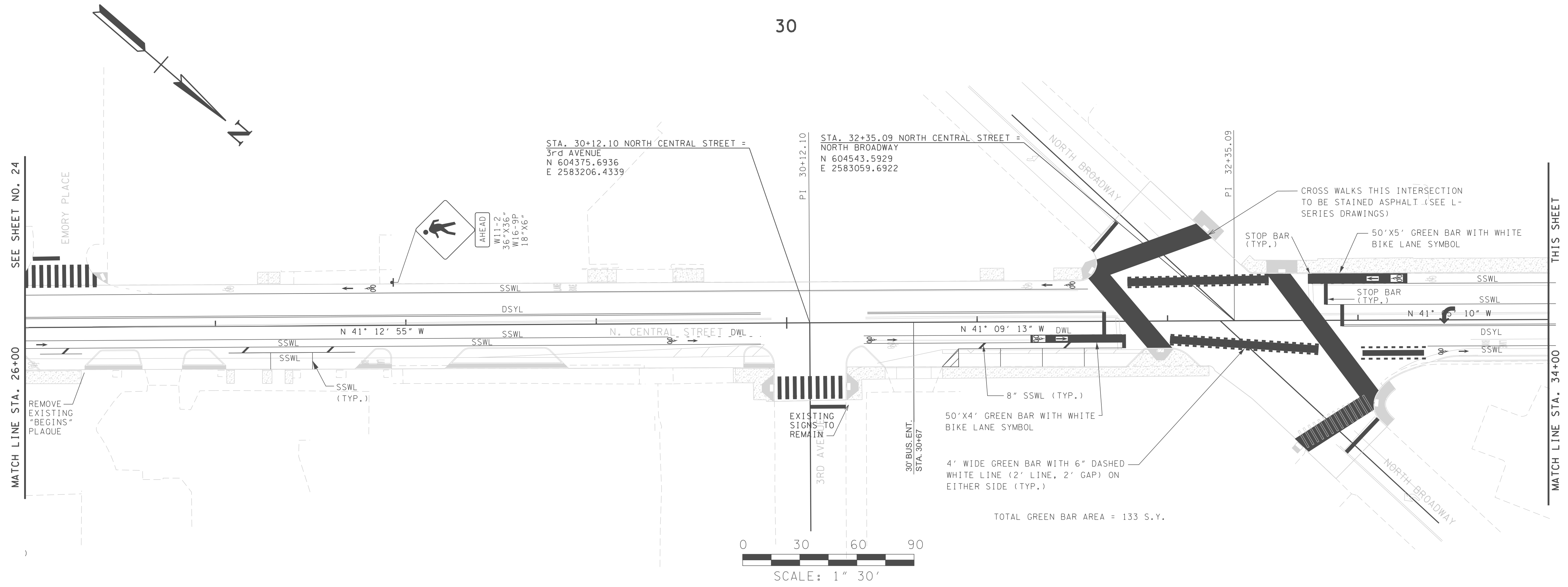
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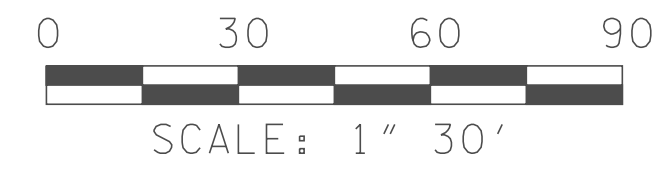
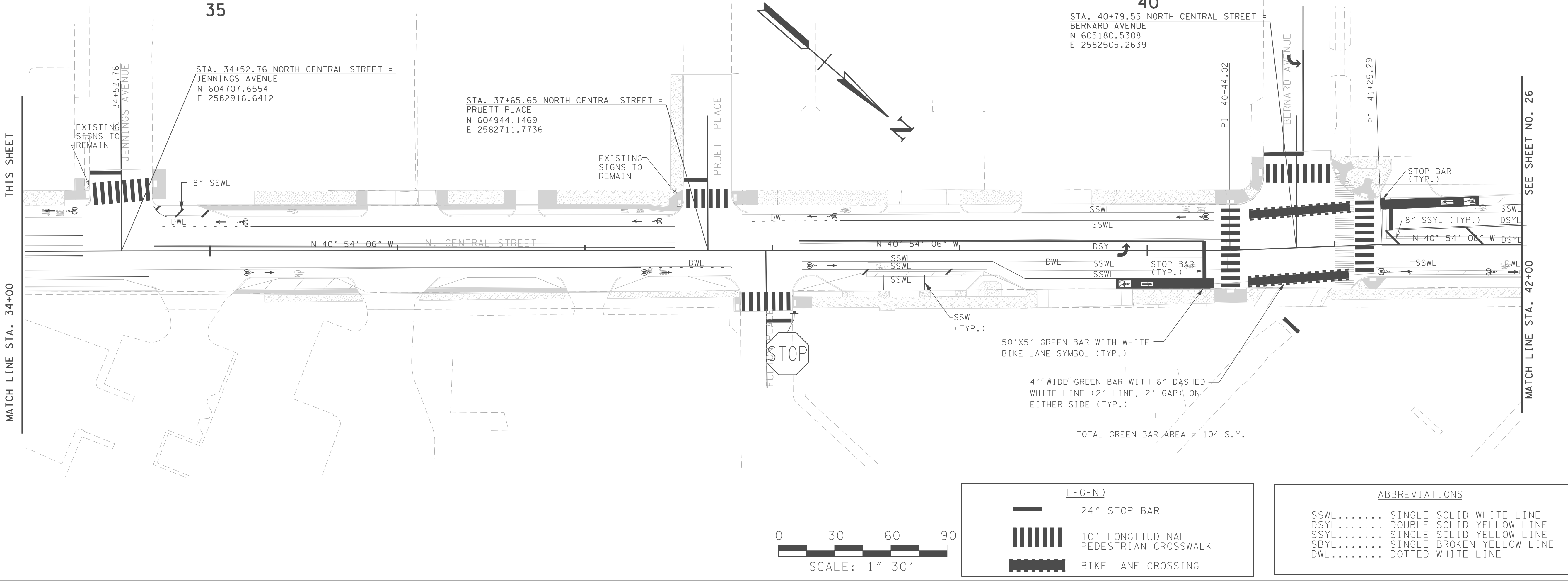
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CHECKED:	J.C.E.
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SCALE:	1"=30'
DATE:	APRIL 2017
FILE NAME:	
DRAWING TITLE:	PAVEMENT MARKING AND SIGNING
DRAWING NO:	24

30



TOTAL GREEN BAR AREA = 133 S.Y.

35

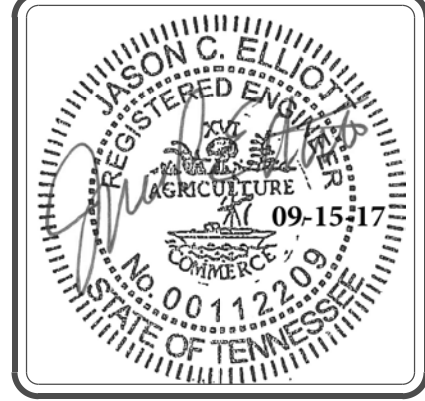


TOTAL GREEN BAR AREA = 104 S.Y.

LEGEND	
	24" STOP BAR
	10' LONGITUDINAL PEDESTRIAN CROSSWALK
	BIKE LANE CROSSING

ABBREVIATIONS	
SSWL.....	SINGLE SOLID WHITE LINE
DSYL.....	DOUBLE SOLID YELLOW LINE
SSYL.....	SINGLE SOLID YELLOW LINE
SBYL.....	SINGLE BROKEN YELLOW LINE
DWL.....	DOTTED WHITE LINE

REVISIONS		
NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDDOT REVIEW COMMENTS
2	9-15-17	MODIFIED GREEN BIKE LANE DESCRIPTIONS



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FILE NAME:	
DRAWING TITLE:	PAVEMENT MARKING AND SIGNING
DRAWING NO:	25

45

50

STA. 42+49.72 NORTH CENTRAL STREET =
BEARDEN PLACE
N 605306.7504
E 2582391.2560

STA. 48+11.48 NORTH CENTRAL STREET =
PEARL PLACE
N 605726.1691
E 2582017.8715

STA. 46+35.95 NORTH CENTRAL STREET =
DAMERON AVENUE
N 605593.9206
E 2582133.2885



SEE SHEET NO. 25

MATCH LINE STA. 42+00

THIS SHEET

MATCH LINE STA. 50+00

50

55

STA. 54+42.83 NORTH CENTRAL STREET =
BAXTER AVENUE
N 606207.7290
E 2581609.5727

STA. 50+12.72 NORTH CENTRAL STREET =
HINTON AVENUE
N 605879.6637
E 2581887.7285

TOTAL GREEN BAR AREA = 96 S.Y.

4' WIDE GREEN BAR WITH 6" DASHED
WHITE LINE (2' LINE, 2' GAP) ON
EITHER SIDE (TYP.)

CROSS WALKS THIS INTERSECTION
TO BE STAINED ASPHALT (SEE L-
SERIES DRAWINGS)

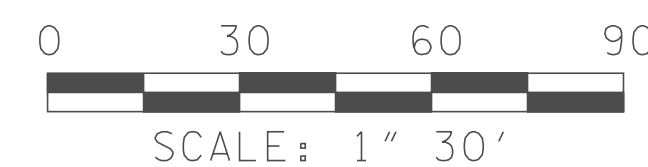
50'X5'- GREEN BAR WITH WHITE
BIKE LANE SYMBOL (TYP.)

MATCH LINE STA. 103+00

SEE SHEET NO. 27

SEE SHEET NO. 27

MATCH LINE STA. 57+00



LEGEND	
	24" STOP BAR
	10' LONGITUDINAL PEDESTRIAN CROSSWALK
	BIKE LANE CROSSING

ABBREVIATIONS	
SSWL.....	SINGLE SOLID WHITE LINE
DSYL.....	DOUBLE SOLID YELLOW LINE
SSYL.....	SINGLE SOLID YELLOW LINE
SBYL.....	SINGLE BROKEN YELLOW LINE
DWL.....	DOTTED WHITE LINE

REVISIONS		
NO.	DATE	DESCRIPTION
1	5-5-17	REVISED AS PER TDDT REVIEW COMMENTS
2	9-15-17	MODIFIED GREEN BIKE LANE DESCRIPTIONS



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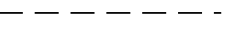
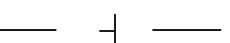

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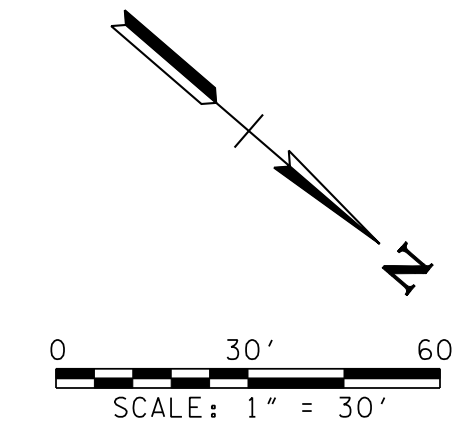
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SCALE:	1"=30'
DATE:	APRIL 2017
FILE NAME:	
DRAWING TITLE:	PAVEMENT MARKING AND SIGNING
DRAWING NO:	26

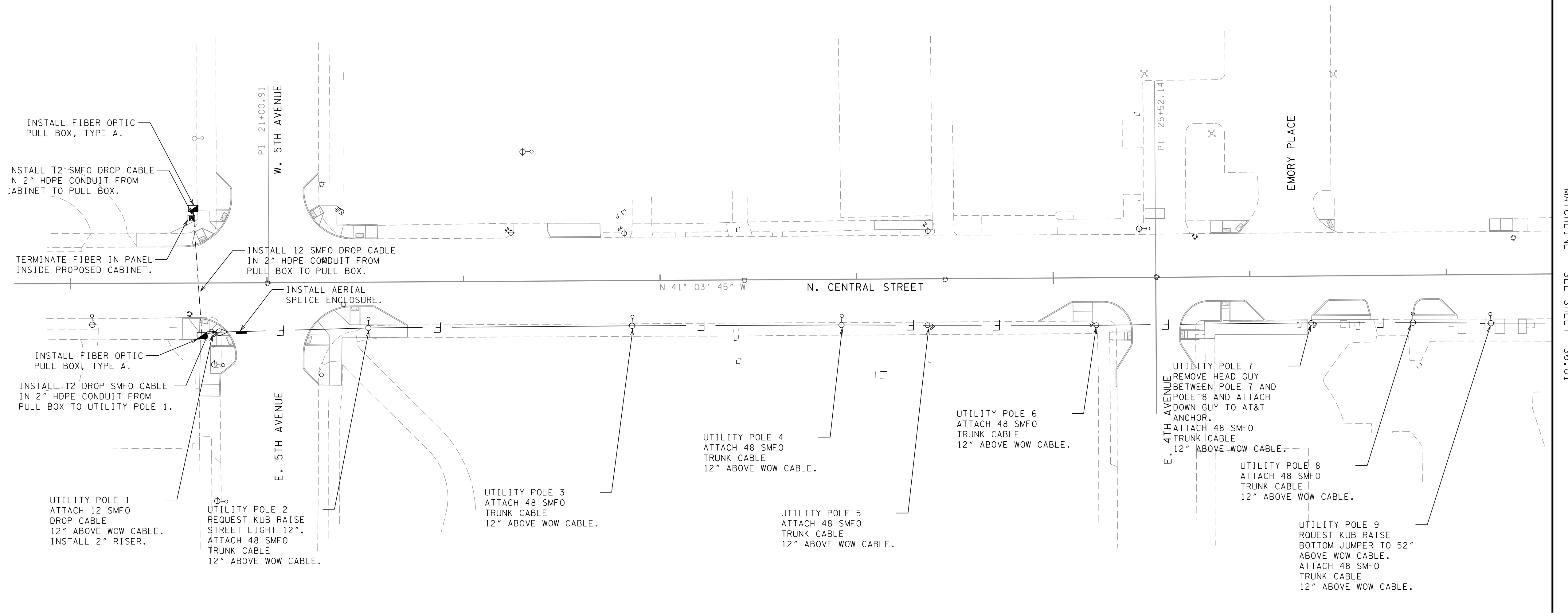
LEGEND

-  PROPOSED BASE MOUNTED CONTROLLER CABINET
-  FIBER OPTIC PULL BOX
-  PROPOSED 2" PVC CONDUIT
-  PROPOSED AERIAL FIBER
-  EXISTING UTILITY POLE



20

25



MATCHLINE - SEE SHEET TS6.01

REVISIONS	DATE
CHANGED FIBER DROP CABLE FROM 6 SM TO 12 SM	09-18-17
REVISED AS PER TOOT REVIEW COMMENTS	05-06-17

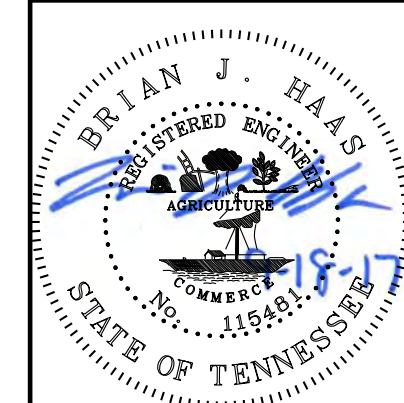
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PROJECT:
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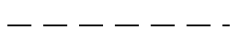


SIGNAL INTERCONNECT PLAN

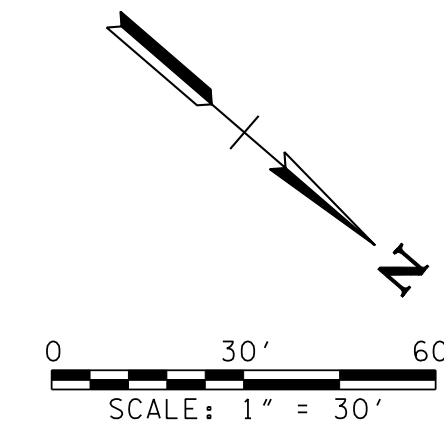
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DATE	04-06-17
P.M.	ALC
DRAWN	BJH
O.C.	ALC



TS6.00

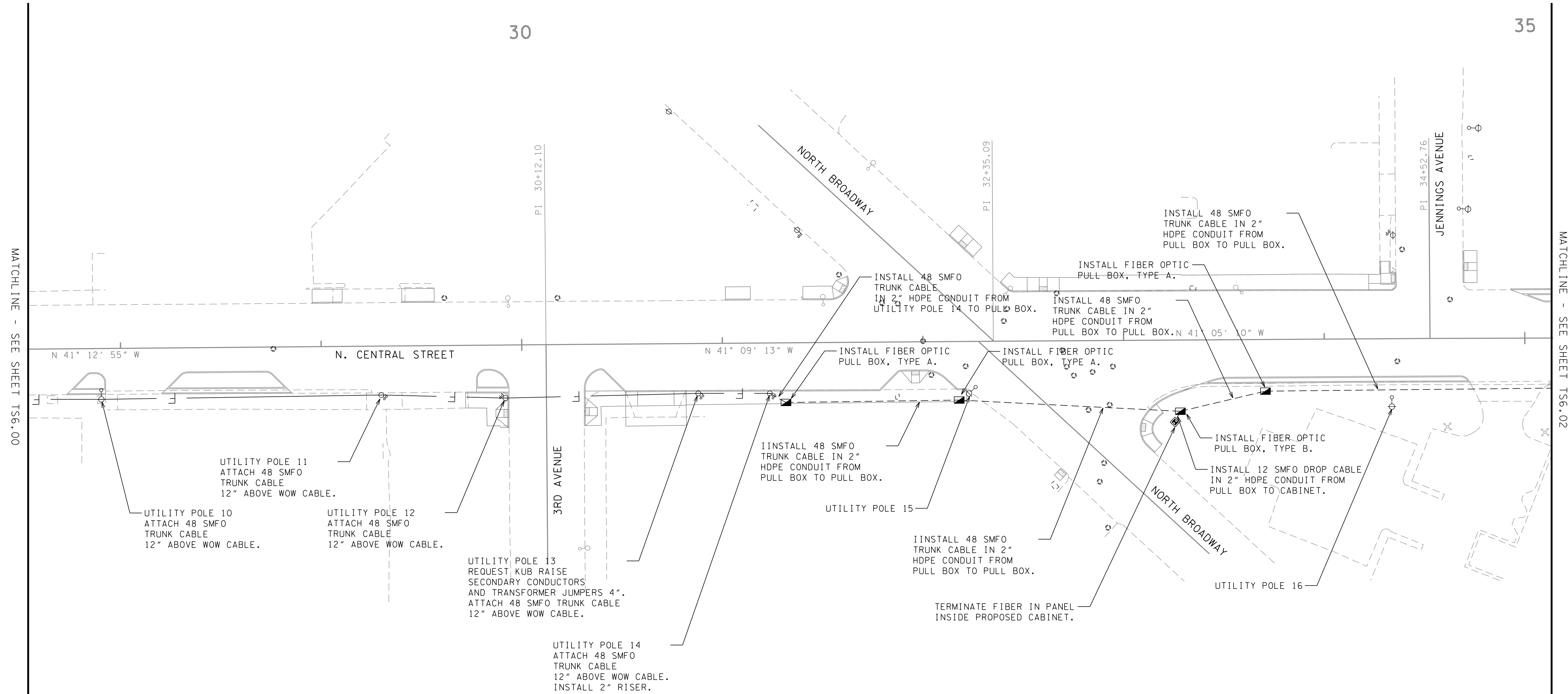
LEGEND

-  PROPOSED BASE MOUNTED CONTROLLER CABINET
-  FIBER OPTIC PULL BOX
-  PROPOSED 2" PVC CONDUIT
-  PROPOSED AERIAL FIBER
-  EXISTING UTILITY POLE



30

35



CHANGED FIBER DROP CABLE FROM 6 SM TO 12 SM	09-18-17
REVISED AS PER TOOT REVIEW COMMENTS	05-06-17
REVISIONS	DATE

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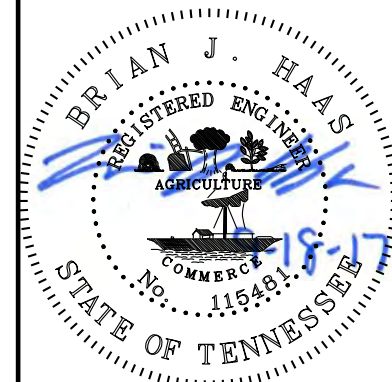
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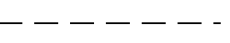


SIGNAL INTERCONNECT PLAN

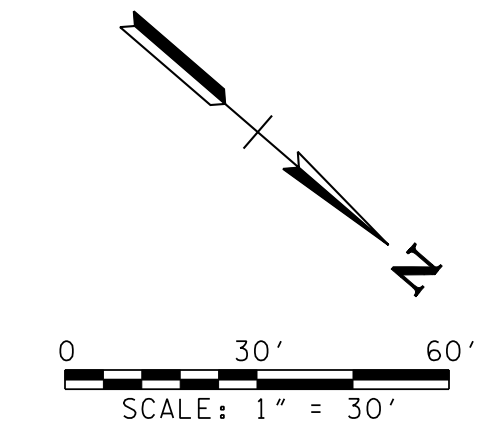
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DRAWN	BJH
O.C.	ALC



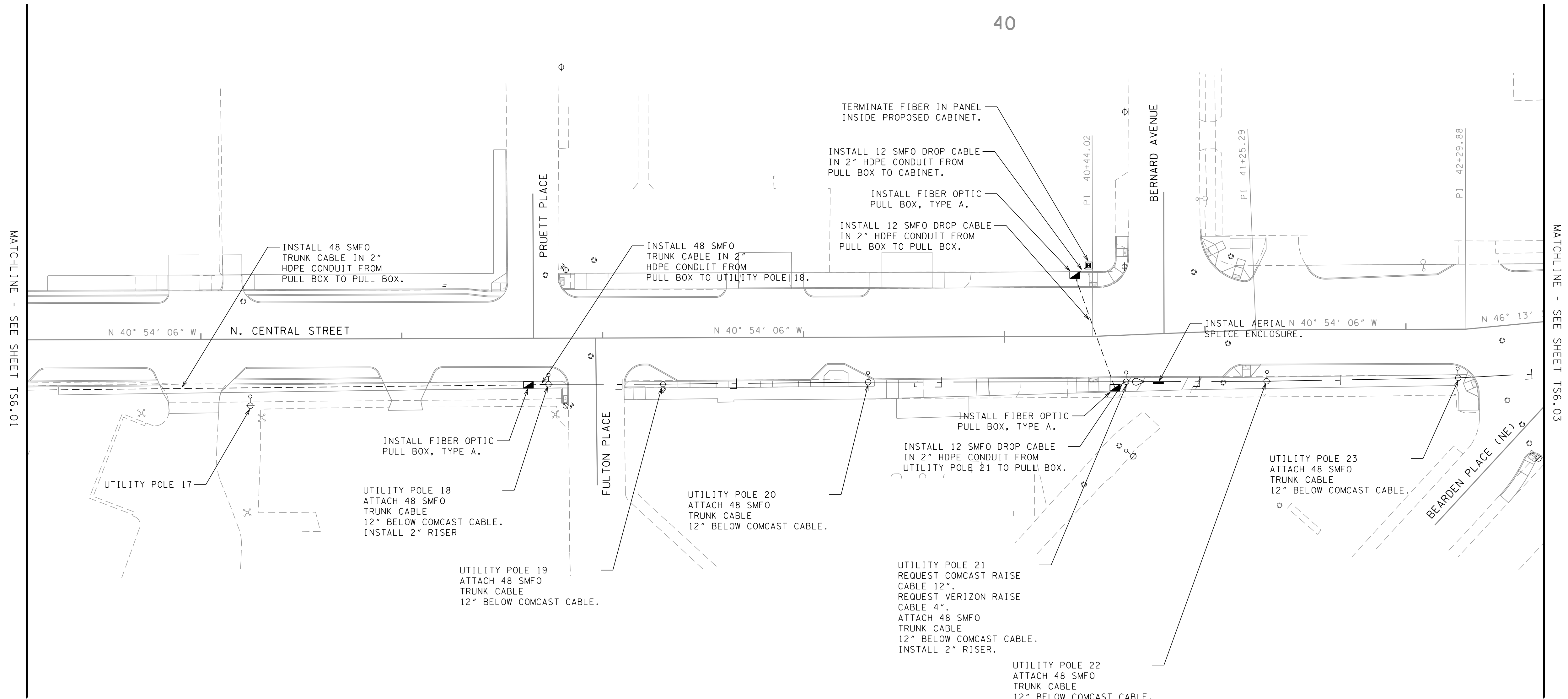
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LEGEND

-  PROPOSED BASE MOUNTED CONTROLLER CABINET
-  FIBER OPTIC PULL BOX
-  PROPOSED 2" PVC CONDUIT
-  PROPOSED AERIAL FIBER
-  EXISTING UTILITY POLE



40



MATCHLINE - SEE SHEET TS6.01

MATCHLINE - SEE SHEET TS6.03

CHANGED FIBER DROP CABLE FROM 6 SM TO 12 SM	09-18-17
REVISED AS PER TOOT REVIEW COMMENTS	05-06-17
REVISIONS	DATE

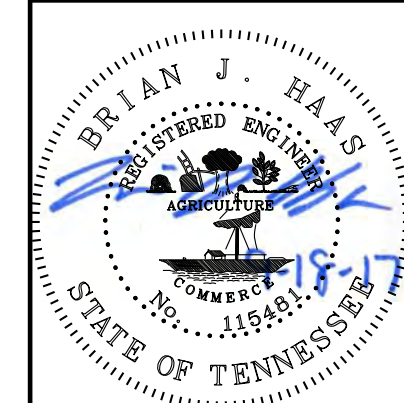
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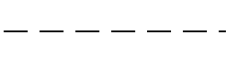


SIGNAL INTERCONNECT PLAN

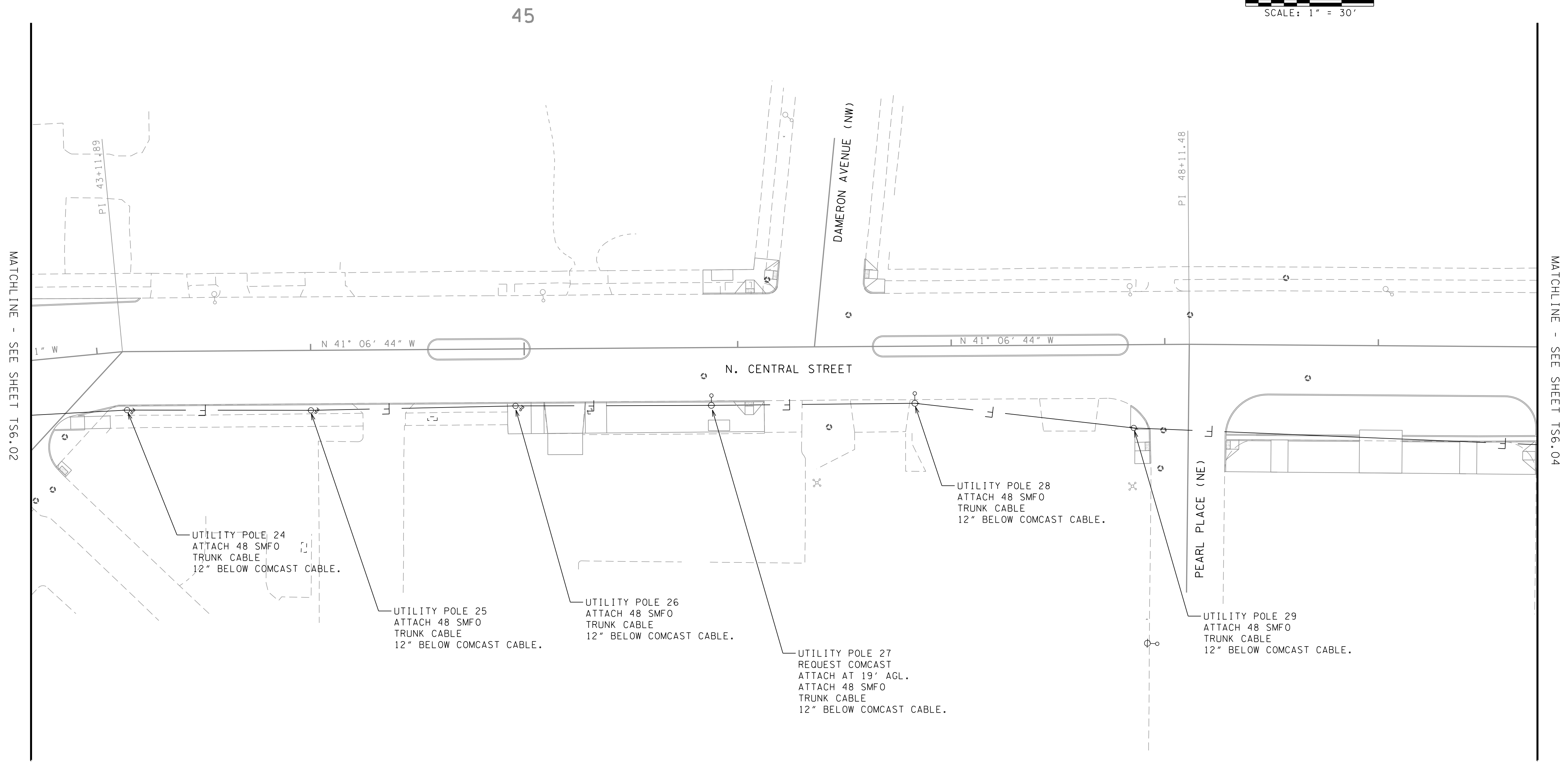
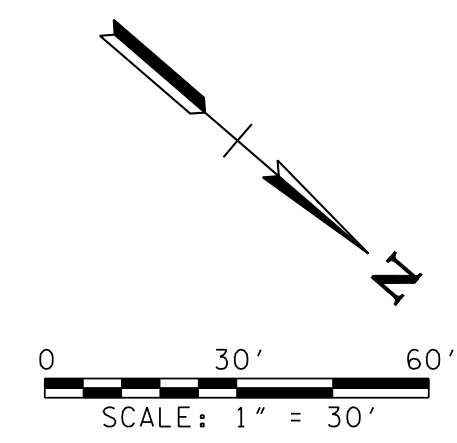
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TS6.02

LEGEND

-  PROPOSED BASE MOUNTED CONTROLLER CABINET
-  FIBER OPTIC PULL BOX
-  PROPOSED 2" PVC CONDUIT
-  PROPOSED AERIAL FIBER
-  EXISTING UTILITY POLE



REVISIONS	DATE
CHANGED FIBER DROP CABLE FROM 6 SM TO 12 SM	09-18-17
REVISED AS PER TOOT REVIEW COMMENTS	05-06-17

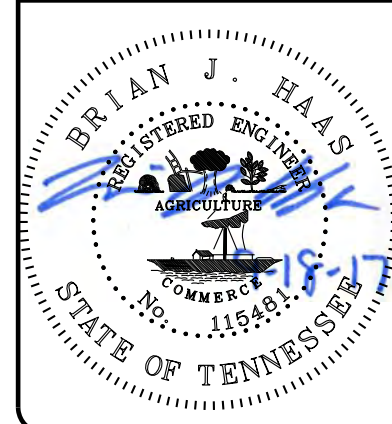
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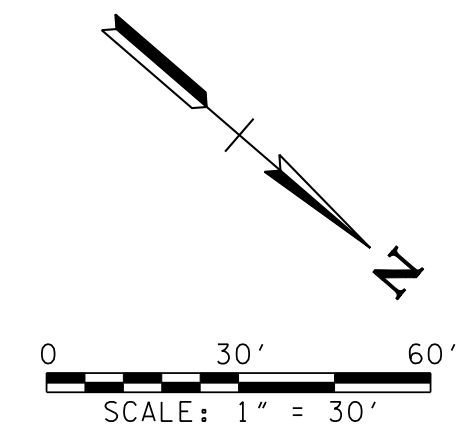
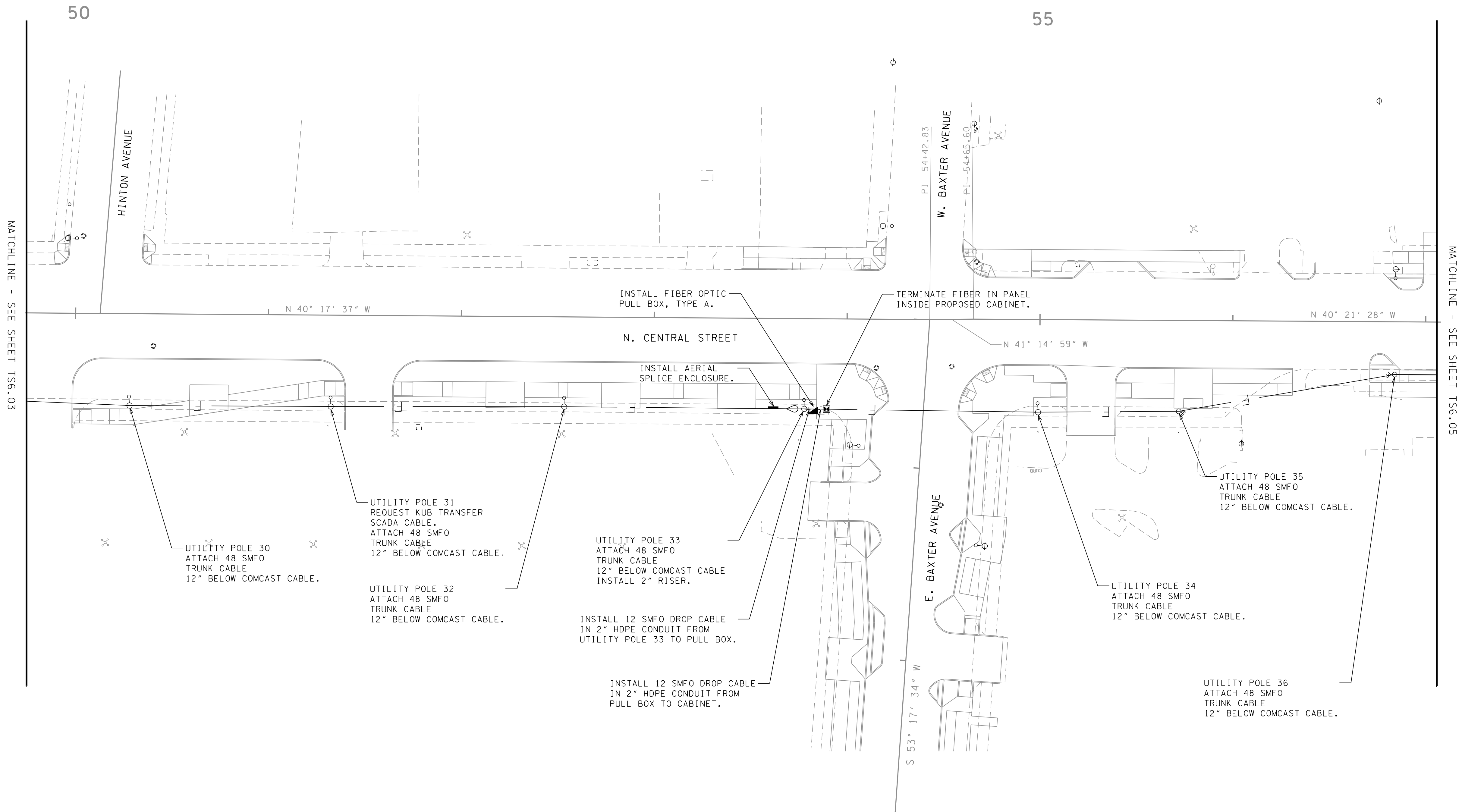
PROJECT:
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SIGNAL INTERCONNECT PLAN

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TS6.03



LEGEND

- PROPOSED BASE MOUNTED CONTROLLER CABINET
- FIBER OPTIC PULL BOX
- PROPOSED 2" PVC CONDUIT
- PROPOSED AERIAL FIBER
- EXISTING UTILITY POLE

CHANGED FIBER DROP CABLE FROM 6 SM TO 12 SM	09-18-17
REVISED AS PER TOOT REVIEW COMMENTS	05-06-17
REVISIONS	DATE

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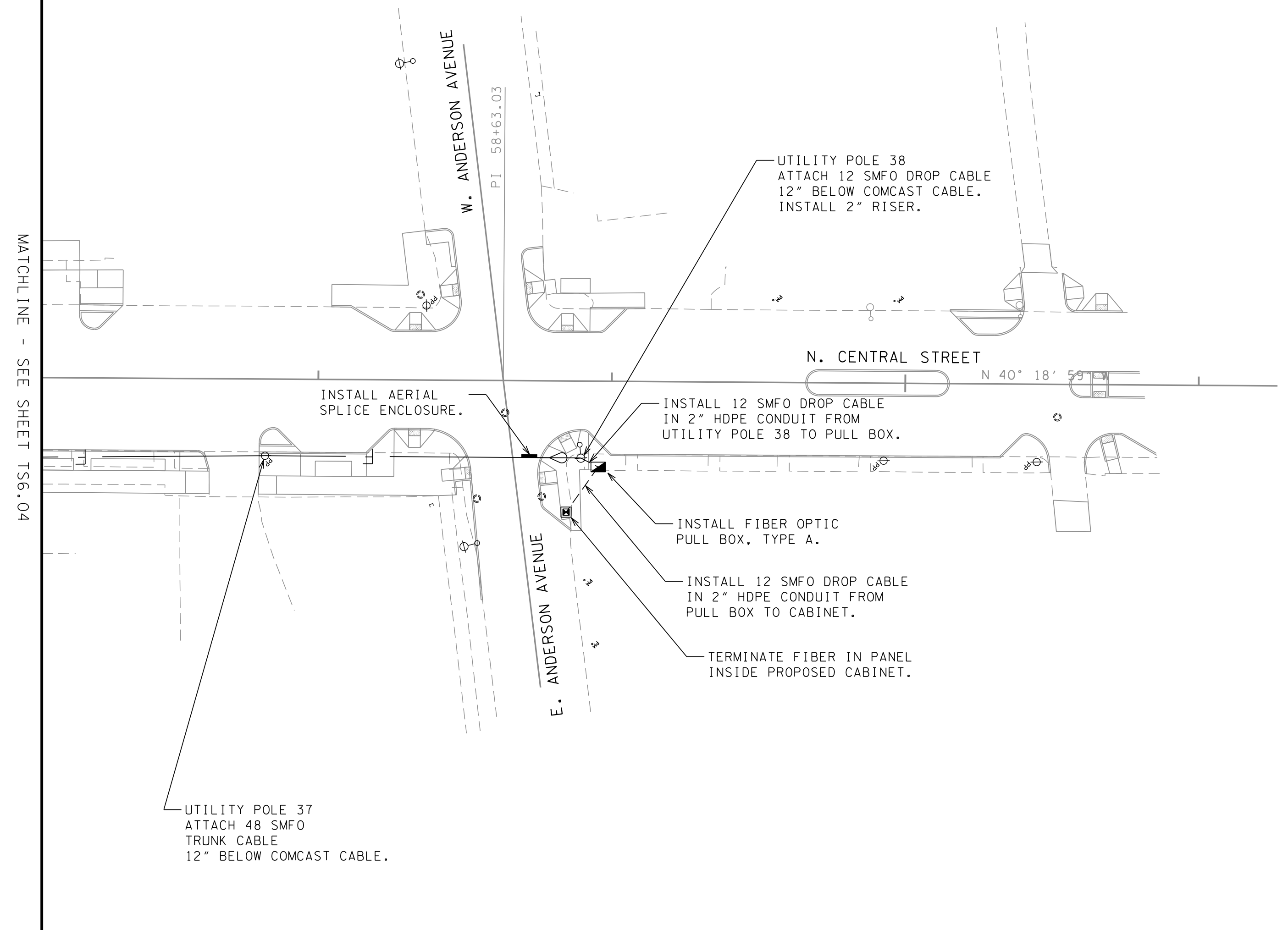
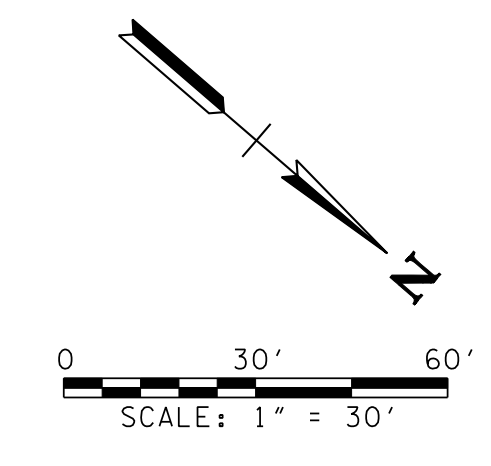
PROJECT:
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SIGNAL INTERCONNECT PLAN

	CCI PROJECT NO.	00723-0001
	DATE	04-06-17
	P.M.	ALC
	DRAWN	BJH
	O.C.	ALC

TS6.04

60



MATCHLINE - SEE SHEET TS6.04

LEGEND

- PROPOSED BASE MOUNTED CONTROLLER CABINET
- FIBER OPTIC PULL BOX
- PROPOSED 2" PVC CONDUIT
- PROPOSED AERIAL FIBER
- EXISTING UTILITY POLE

REVISIONS	DATE
CHANGED FIBER DROP CABLE FROM 6 SM TO 12 SM	09-18-17
REVISED AS PER TOOT REVIEW COMMENTS	05-06-17

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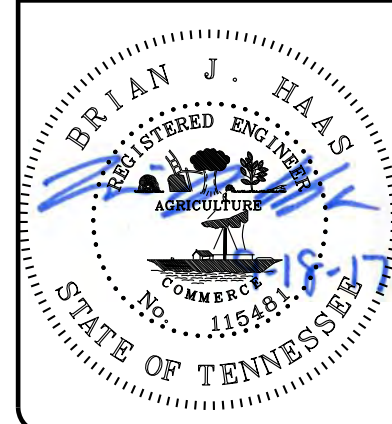
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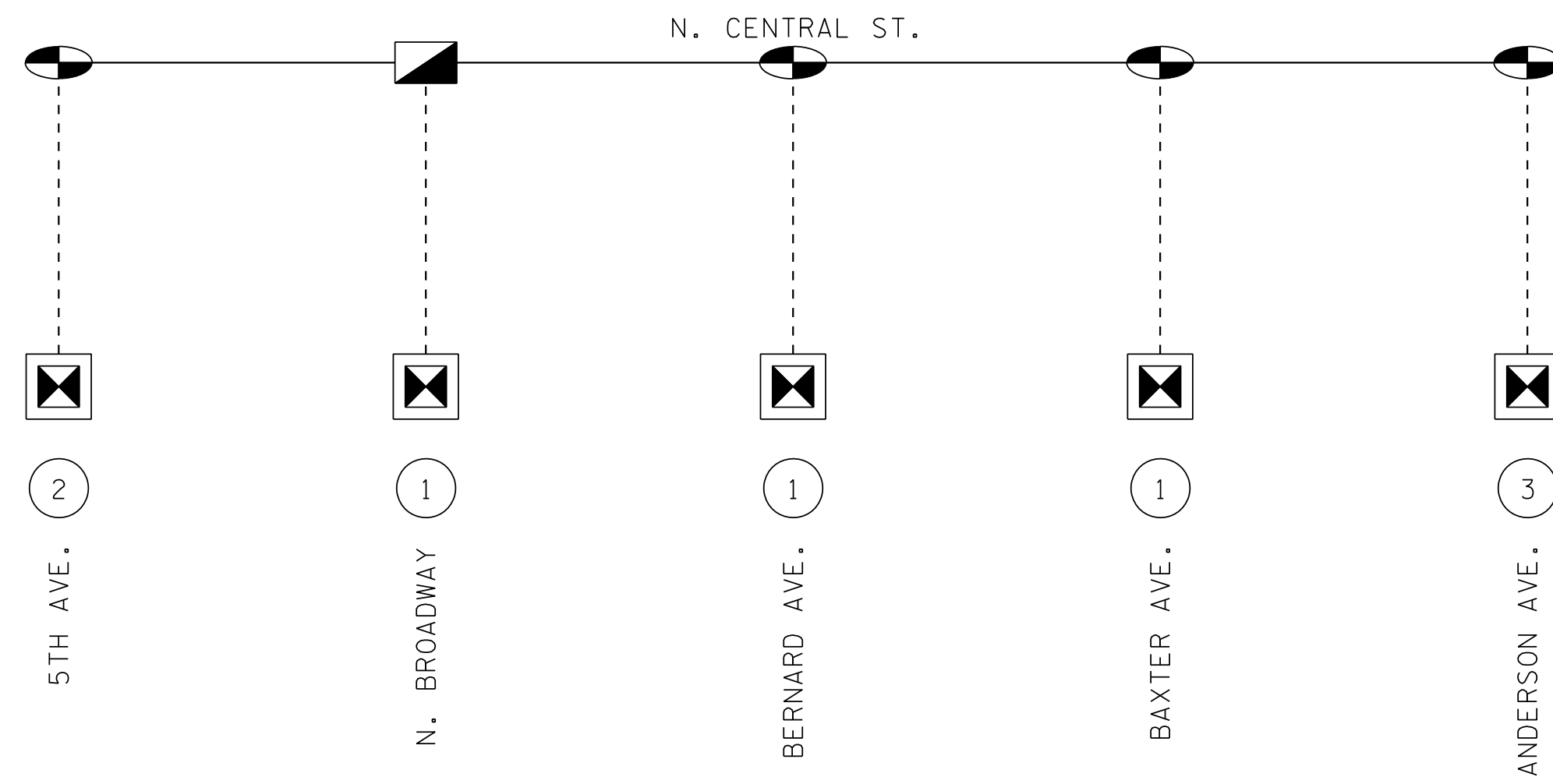
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O.C.	ALC



TS6.05

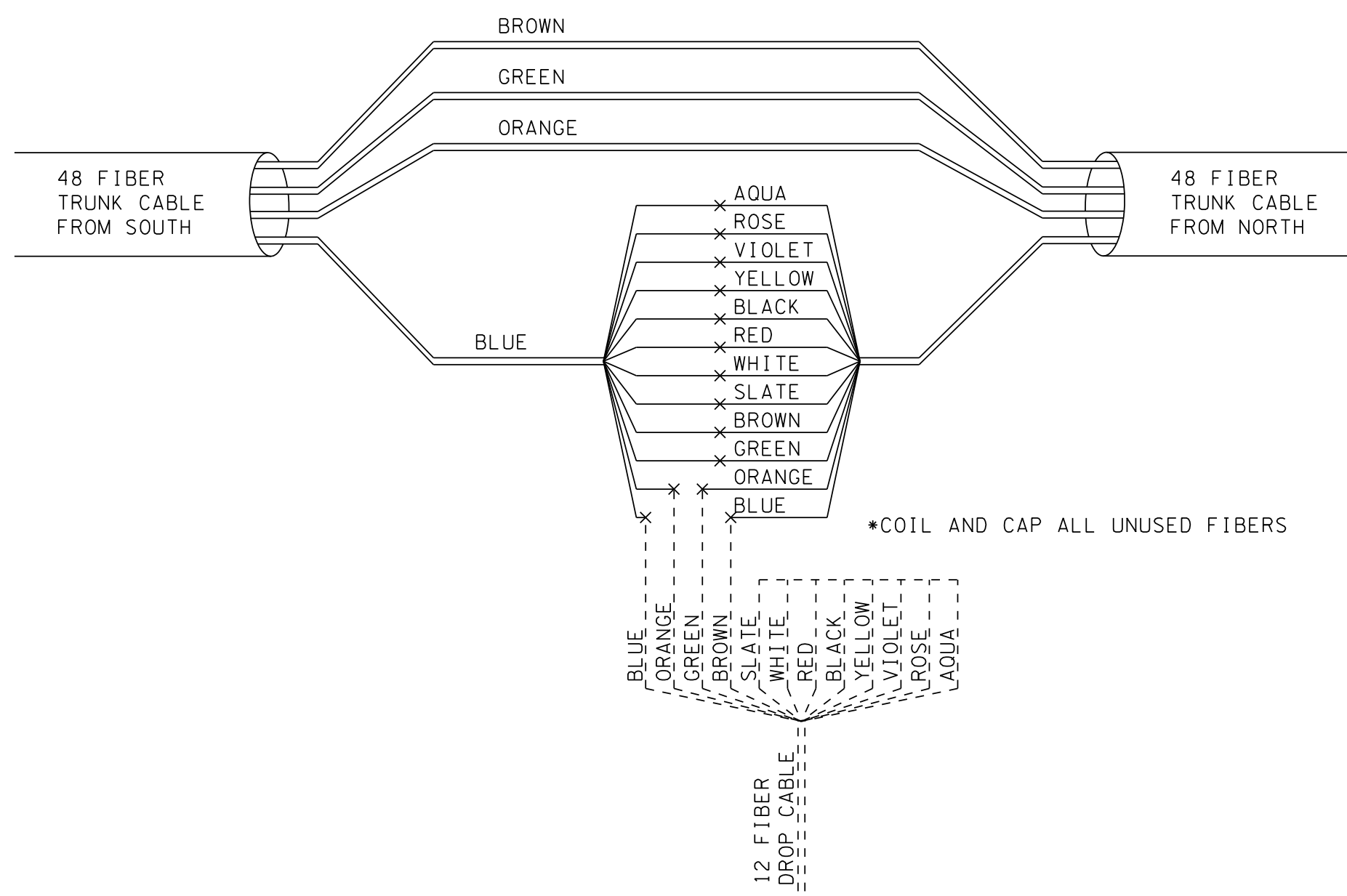
COMMUNICATION SCHEMATIC



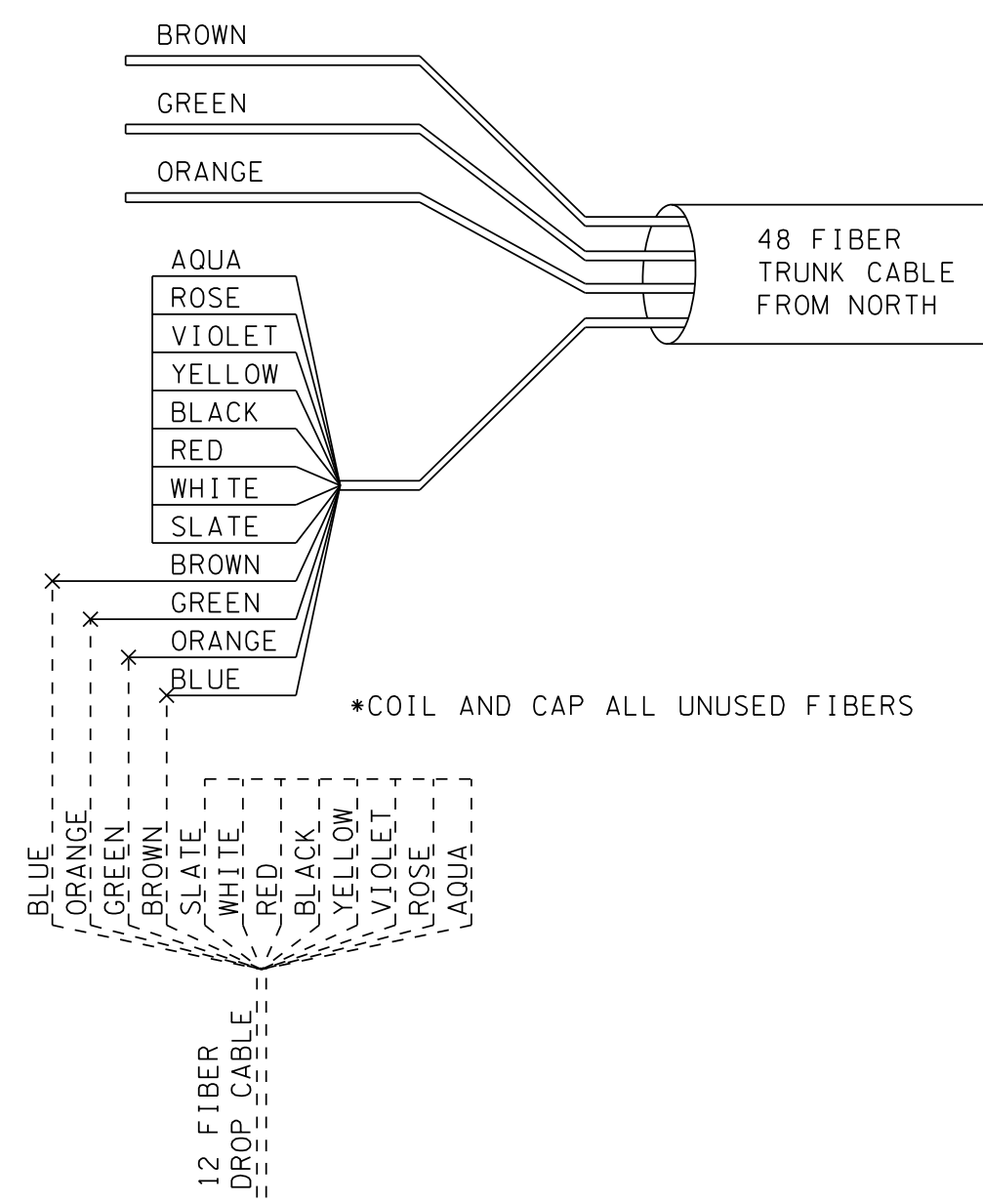
LEGEND

- PROPOSED TRAFFIC SIGNAL CABINET
- PROPOSED PULL BOX SPLICE ENCLOSURE
- PROPOSED AERIAL SPLICE ENCLOSURE
- PROPOSED FIBER OPTIC TRUNK CABLE
- PROPOSED FIBER OPTIC DROP CABLE
- SPLICE DETAIL NUMBER

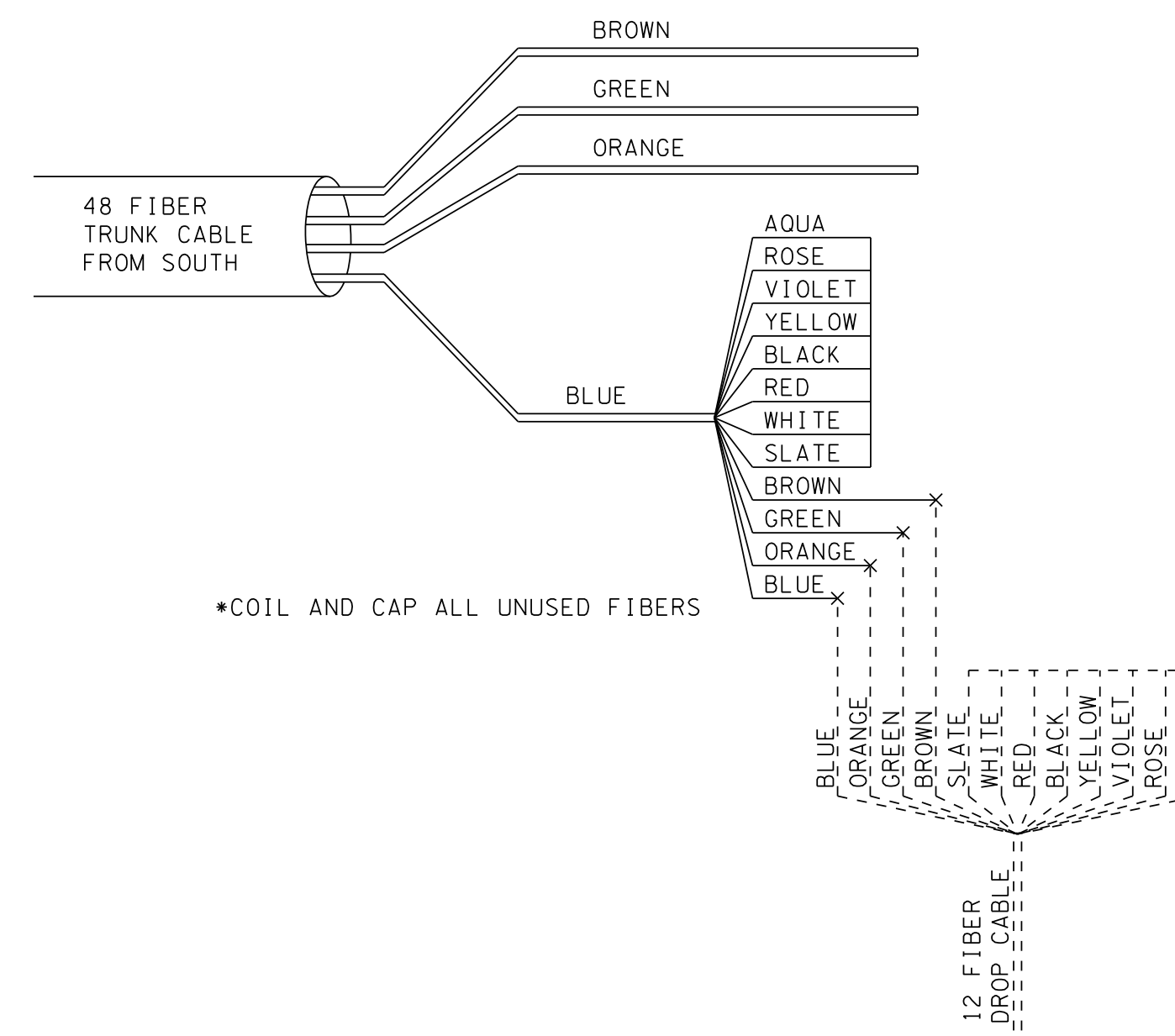
SPLICE DETAIL 1



SPLICE DETAIL 2



SPLICE DETAIL 3




ADDED SHEET	09-18-17
REVISIONS	DATE
CANNON & CANNON INC. CONSULTING ENGINEERS · FIELD SURVEYORS	
TEL 865.670.8535 8550 Kingston Pike WWW.CANNON-CANNON.COM Knoxville, TN 37919	
CLIENT:	CITY OF KNOXVILLE
PROJECT:	DOWNTOWN NORTH STREETSCAPE
COMMUNICATION SCHEMATIC AND DETAILS	
	CCI PROJECT NO. 00723-0001
	DATE 04-06-17
	P.M. ALC
	DRAWN BJH
O.C. ALC	TS6.06

TRAFFIC SIGNAL NOTES

- (1) THESE TRAFFIC SIGNALIZATION PLANS CONSIST OF TRAFFIC SIGNAL UPGRADES AT THE FOLLOWING FIVE INTERSECTIONS: CENTRAL STREET AT FIFTH AVENUE, CENTRAL STREET AT BROADWAY, CENTRAL STREET AT BERNARD AVENUE, CENTRAL STREET AT BAXTER AVENUE, AND CENTRAL STREET AT ANDERSON AVENUE. THE UPGRADES INCLUDE BUT ARE NOT LIMITED TO REPLACING THE EXISTING SPAN WIRE TRAFFIC SIGNALS WITH MAST ARMS WITH NEW TRAFFIC SIGNAL DISPLAYS, AUDIBLE PEDESTRIAN SIGNALS, RADAR DETECTION, EMERGENCY VEHICLE PREEMPTION, AND FIBER OPTIC INTERCONNECT.
- (2) EXISTING SIGNAL HEADS, WIRING, CABINET AND CABINET CONTENTS SHALL BE REMOVED. EXISTING SIGNAL POLES SHALL BE REMOVED, EXCEPT WHERE SAID POLES HAVE ADDITIONAL USES.
- (3) EQUIPMENT AND INSTALLATION SHALL COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE FOLLOWING TENNESSEE DEPARTMENT OF TRANSPORTATION (TDOT) PUBLICATIONS:
 - A. "SPECIAL PROVISIONS REGARDING SECTION 730K - TRAFFIC SIGNALS"
 - B. "SPECIAL SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (JANUARY 1, 2015)
 - C. "STANDARD ROADWAY DESIGN, STRUCTURES, AND TRAFFIC OPERATIONS DRAWINGS"
- (4) ALL PAVEMENT MARKINGS SHOWN ON THE PLANS, E.G., STOP BARS, LANE LINES, ETC. SHALL BE IN PLACE PRIOR TO ACTIVATION OF THE TRAFFIC SIGNAL START UP FLASH SEQUENCE.
- (5) ANY SIGNAL HEADS, WHEN VISIBLE TO DRIVERS BUT NOT OPERATIONAL, SHALL BE COMPLETELY COVERED UNTIL SIGNAL IS OPERATIONAL.
- (6) THE CONRACTOR SHALL COORDINATE WITH ERNIE PIERCE, CITY OF KNOXVILLE, 865-215-6114 AT 3131 MORRIS AVENUE, KNOXVILLE, TN 37909.
- (7) ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED IN FULL COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD, FEDERAL REGISTER 36 CFR PARTS 1190 AND 1191.
- (8) CONTRACTOR SHALL NOTIFY THE CITY IN WRITING WHEN SIGNAL INSTALLATION IS COMPLETE FOR ACCEPTANCE.
- (9) THE CONTRACTOR SHALL MAINTAIN EXISTING SIGNAL OPERATION DURING THE INSTALLATION OF THE NEW SIGNAL EQUIPMENT.
- (10) ALL TRAFFIC SIGNAL HEADS SHALL BE 12-INCH INCANDESCENT LOOK COLOR LED (LIGHT EMITTING DIODE) DISPLAYS.
- (11) ALL SIGNAL HEAD HOUSING SHALL BE BLACK IN COLOR WITH ALUMINUM TOP SECTION AND ALL OTHER SECTIONS POLYCARBONATE WITH POLYCARBONATE VISORS AND BLACK VACUUM FORMED POLYCARBONATE BACKPLATES WITH LOUVERS.
- (12) BACKPLATES SHALL INCLUDE A 1-INCH MINIMUM YELLOW REFLECTIVE BORDER AROUND THE PERIMETER OF THE FACE OF THE BACKPLATE.
- (13) ALL BANDING FOR SIGNAL HEADS AND SIGNS SHALL BE BLACK IN COLOR.
- (14) INCANDESCENT OR SCREW-IN LED MODULES ARE NOT ACCEPTABLE.
- (15) ALL PEDESTRIAN SIGNAL HEADS SHALL HAVE BLACK COLOR HOUSINGS AND LED TYPE DISPLAYS CONFORMING TO CURRENT ITE STANDARDS, WITH WALK/DON'T WALK SYMBOLS DISPLAYED IN THE SAME FACE WITH COUNTDOWN TIMER. THE SYMBOLS SHALL BE FULLY POPULATED.
- (16) PED HEAD MOUNTING ON NEW STRAIN POLES SHALL UTILIZE DRILLED ATTACHMENT (BAND MOUNTING NOT ALLOWED).
- (17) PEDSTRIAN FEATURES SHALL BE FULLY ACCESSIBLE AND COMPLIANT WITH ALL REQUIREMENTS OF THE MUTCD, ADA, AND PROWAG.
- (18) PUSHBUTTONS SHALL BE AUDIBLE, PROVIDING VERBAL MESSAGES TO PEDESTRIANS.
- (19) ALL TRAFFIC SIGNALS PULL BOXES SHALL MEET THE SPECIFICATIONS REFERENCED IN THESE PLANS AND TDOT STANDARD DRAWINGS AND HAVE A "TRAFFIC" LOGO ON THE COVER. FIBER OPTIC PULL BOXES SHALL HAVE "FIBER OPTICS" ON THE COVER.
- (20) ALL UTILITY LOCATIONS, AS SHOWN, ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR CONTACTING LOCAL UTILITY COMPANIES TO LOCATE UNDERGROUND UTILITIES BEFORE CONSTRUCTION BEGINS.
- (21) THE RADAR DETECTION SYSTEM SHALL BE WAVETRONIX MATRIX STOP BAR SYSTEM.
- (22) THE RADAR DETECTORS UNITS SHALL BE PLACED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- (23) THE CONTRACTOR SHALL SUBMIT THE RADAR DETECTION SYSTEM SPECIFICATIONS FOR APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.
- (24) EACH RADAR SHALL HAVE A SEPARATE CONTINUOUS LEAD-IN CABLE TO THE CONTROLLER CABINET. ALL LEAD-IN CABLES SHALL BE LABELED WITH THE APPROPRIATE PHASE AND APPROACH TO WHICH THEY ARE ATTACHED BOTH IN THE PULL BOX AND CONTROLLER CABINET.
- (25) THE TRAFFIC CONTROLLER CABINET SHALL BE A TS-2 TYPE 2 CABINET WITH ADVANCED TRAFFIC CONTROLLER AND ETHERNET READY.
- (26) THE CABINET SHALL HAVE A BLACK POWDER COAT FINISH WITH WHITE POWDER COAT SHELVES.
- (27) THE CABINET SHALL BE ORIENTED SUCH THAT SOMEONE FACING THE FRONT DOOR OF THE CABINET IS FACING TOWARD THE INTERSECTION.
- (28) THE CABINET SHAL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - A. A TS-2 TYPE 2 EIGHT PHASE CABINET,
 - B. A TRAFFICWARE 980ATC CONTROLLER WITH FLASH MEMORY AND ETHERNET PORTS,
 - C. A TRAFFICWARE MMU 516L-E SIGNAL MONITOR WITH ETHERNET PORTS AND CABLE,
 - D. EIGHT LOAD SWITCHES,
 - E. EIGHT TRANSFER RELAYS,
 - F. RADAR DETECTION SYSTEM WITH EQUIPMENT FOR FOUR APPROACHES (OR AS APPROPRIATE FOR THE NUMBER OF MOVEMENTS FOR EACH INTERSECTION),
 - G. FLAHSER AND ANY OTHER EQUIPMENT NECESSARY TO MAKE AN OPERATIONAL TRAFFIC SIGNAL BASED ON THE DESIGN PLANS PROVIDED,
 - H. CLOSED LOOP SIDE PANEL,
 - I. TRAFFIC SYSTEMS SONEM 2000 EMERGENCY VEHICLE PREEMPTION UNIT WITH RECEIVERS FOR ALL APPROACHES.
 - J. LAYER 2 ETHERNET SWTICH.
- (29) ALL EQUIPMENT SHALL MEET ALL NATIONAL ELECTRICAL MANUFACTURER ASSOCIATION (NEMA) STANDARDS. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH COPIES OF THE PAID INVOICES FOR ALL TRAFFIC SIGNAL EQUIPMENT INSTALLED ON THIS PROJECT.
- (30) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING AND DELIVIERING THE CONTROLLER AND SIGNAL MONITOR TO THE CITY OF KNOXVILLE, ERNIE PIERCE AT 865-215-6114 FOR TESTING AND PROGRAMMING A MINIMUM OF FOURTEEN (14) WORKING DAYS PRIOR TO PLACING THE SIGNAL IN THE INITIAL START-UP FLASH SEQUENCE.
- (31) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF KNOXVILLE, ERNIE PIERCE AT 865-215-6114 TO OBTAIN WIRING COLOR-CODE FOR 12 POSITION QUICK DISCONNECTS REQUIRED BY THE CITY.
- (32) ALL SIGNAL CABLE SHALL BE INTERNATIONAL MUNICIPAL SIGNAL ASSOCIATION (IMSA) APPROVED CABLE:
 - A. TRAFFIC SIGNAL CABLE SHALL BE IMSA SPECIFICATION 20-1, 12 CONDUCTOR STRANDED WIRE.
 - B. PEDESTRIAN SIGNAL CABLE SHALL BE IMSA SPECIFICATION 20-1, 7 CONDUCTOR STRANDED WIRE.
 - C. PEDESTRIAN PUSHBUTTON CABLE SHALL BE IMSA SPECIFICATION 50-2, 3 CONDUCTOR STRANDED WIRE.
 - D. RADAR DETECTION CABLE SHALL BE PER MANUFACTURER SPECIFICATIONS.
 - E. PREEMPT CABLE SHALL BE PER MANUFACTURER SPECIFICATIONS.
- (33) ALL CONDUIT FOR SIGNAL CABLES SHALL BE SCHEDULE 80 PVC. ALL CONDUIT FOR FIBER OPTIC CABLE SHALL BE ORANGE HDPE. ALL CONDUIT SHALL BE LAID AT A MINIMUM OF 24 INCHES BELOW FINISHED GRADE AND SHALL COMPLY WITH TDOT TRENCHING DETAILS AND CONDUIT PLACEMENT. ALL CONDUIT, WITH OR WITHOUT CABLES, SHALL CONTAIN A TRACE WIRE. CONDUIT FOR FIBER SHALL USE LARGE RADIUS BENDS (MIN. 6 INCH). NO ELBOW JOINTS ALLOWED FOR FIBER.
- (34) THE CONTRACTOR SHALL SEAL ALL ENTRANCE HOLES, WITH OR WITHOUT CABLES, WITH CONDUIT DUCT SEAL PUTTY. WHERE CABLES ENTER CONDUIT, THE SEALANT SHALL BE APPLIED AFTER INSTALLING THE CABLE. THESE LOCATIONS SHALL CONSIST OF CONDUIT ENDS AND PULL BOXES, CABINET BASES AND WEATHERHEADS.
- (35) ALL EQUIPMENT CUT SHEETS SHALL BE SUBMITTED TO THE CITY OF KNOXVILLE, ERNIE PIERCE, 865-215-6114 FOR REVIEW AND ACCEPTANCE BEFORE INSTALLATION.
- (36) THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE CITY OF KNOXVILLE, ERNIE PIERCE, 865-215-6114 TO OBTAIN THE SIGNAL TIMING AT LEAST THIRTY (30) DAYS PRIOR TO THE INSTALLATION OF THE SIGNAL TIMING INTO THE CONTROLLER.
- (37) THE CONTRACTOR IS RESPONSIBLE PROGRAMMING THE TRAFFIC CONTROLLER WITH THE PHASING AND SIGNAL TIMING PROVIDED ON THESE PLANS AND BY THE CITY.
- (38) ELECTRICAL SERVICE CONNECTION SHALL INCLUDE A MINIMUM 1-INCH STEEL CONDUIT RISER WITH WEATHERHEAD. ALL ELECRICAL PERMITS REQUIRED BY CITY ORDANICES SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR AFTER COMPLETION OF THE WORK. THE ENGINEER SHALL BE FURNISHED A CERTIFICATE OF FINAL INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT OF THE CITY OF KNOXVILLE.
- (39) THE CONTRACTOR SHALL PROVIDE A COMPLETE ELECTRICAL SERVICE AND SHALL COORDINATE THIS ACTIVITY WITH THE LOCAL UTILITY, INCLUDING THE PROVISION FOR ANY REQUIRED METERING OR OTHER SPECIAL EQUIPMENT. THE SIGNAL CONTRACTOR WILL NOT CONTACT THE CITY OF KNOXVILLE TO REQUEST SERVICE HOOKUP UNTIL THE SIGNAL IS READY TO BE PLACED INTO OPERATION AND READY FOR FINAL INSPECTION BY THE CITY OF KNOXVILLE.
- (40) TRAFFIC SIGNAL SUPPORT POLES SHALL BE TDOT STANDARD ROUND, TAPERED, GALVANIZED STEEL MAST ARM POLES IN ACCORDANCE WITH TDOT STANDARD DRAWINGS. THE POLES SHALL HAVE A BLACK POWDER-COAT FINISH ELECTROSTATICALLY APPLIED BY THE POLE MANUFACTURER AND A BLACK CAST ALUMINUM CLAMSHELL BASE COVER.
- (41) THE PROPOSED LOCATIONS FOR THE SIGNAL SUPPORT POLES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE. SOME FIELD ADJUSTMENT MAY BE REQUIRED IN ORDER TO AVOID CONFLICT WITH EITHER OVERHEAD OR UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND STAKING THE OPTIMUM LOCATION FOR THESE POLES AND FOR RECEIVING APPROVAL FROM THE ENGINEER AND APPROPRIATE UTILITIES BEFORE INSTALLATION BEGINS. PROPER ROADSIDE CLEAR ZONES SHALL BE OBSERVED.
- (42) SHAFTS FOR FOOTINGS SHALL BE DRILLED THROUGH FIRM, UNDISTURBED, UNSATURATED SOIL AND SHALL BE VISUALLY INSPECTED BY THE ENGINEER OR ENGINEERING REPRESENTATIVE PRIOR TO PLACEMENT OF REINFORCEMENT. THE ENGINEER OR ENGINEERING REPRESENTATIVE SHALL BE ADVISED BY THE CONTRACTOR OF ANY GROUND WATER OR LOOSE SOIL ENCOUNTERED DURING DRILLING. FOOTINGS SHALL COMPLY WITH TDOT STANDARD DRAWINGS.
- (43) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF POLE AND FOUNDATION AS SPECIFIED IN TDOT STANDARD DRAWINGS.
- (44) EACH POLE SHALL BE PROVIDED WITH A GROUND ROD WITH THE GROUND WIRE VISIBLE IN THE PULL BOX ADJACENT TO THE POLE.
- (45) SEE TDOT STANDARD DRAWING T-SG-5 FOR CONTROL CABINET BASE DESIGN

ADDED SUBNOTE J UNDER NOTE 28	09-18-17
REVISED AS PER TDOT REVIEW COMMENTS	06-01-17
REVISED AS PER TDOT REVIEW COMMENTS	05-06-17
REVISIONS	DATE



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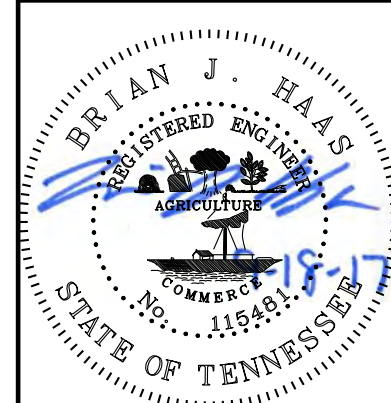
TEL 865.670.8555 | 8550 Kingston Pike
WWW.CANNON-CANNON.COM | Knoxville, TN 37919

CLIENT: **CITY OF KNOXVILLE**

PROJECT: **DOWNTOWN NORTH STREETScape**

TRAFFIC SIGNAL NOTES

CCI PROJECT NO.	00723-0001
DATE	04-06-17
P.M.	ALC
DRAWN	BJH
O.C.	ALC



TS7.00



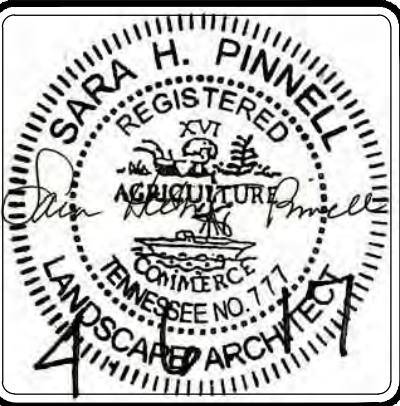
Colored Asphalt

- By: StreetprintXD or equivalent
 - Color: White cross bars with light grey behind
 - Stamp Pattern: Diagonal Herringbone
 - Thickness: 150 mils thick
 - Quantity: 4150 SF
- Install as per manufacturer's instructions.

www.alternative-paving.com www.streetbond.com www.patternpaving.com
 866-697-4338 877-304-1136 888-434-8611

- Notes:
- 1) Contractor to submit color sample to Owner for review and approval
 - 2) Contractor to provide as many as (3) 5' x 5' mockups for approval by Owner prior to installation.

NO.	DATE	DESCRIPTION
1	5.26.2017	Revised as per TDOT review comments
2	9.20.2017	Revised Colored Asphalt detail



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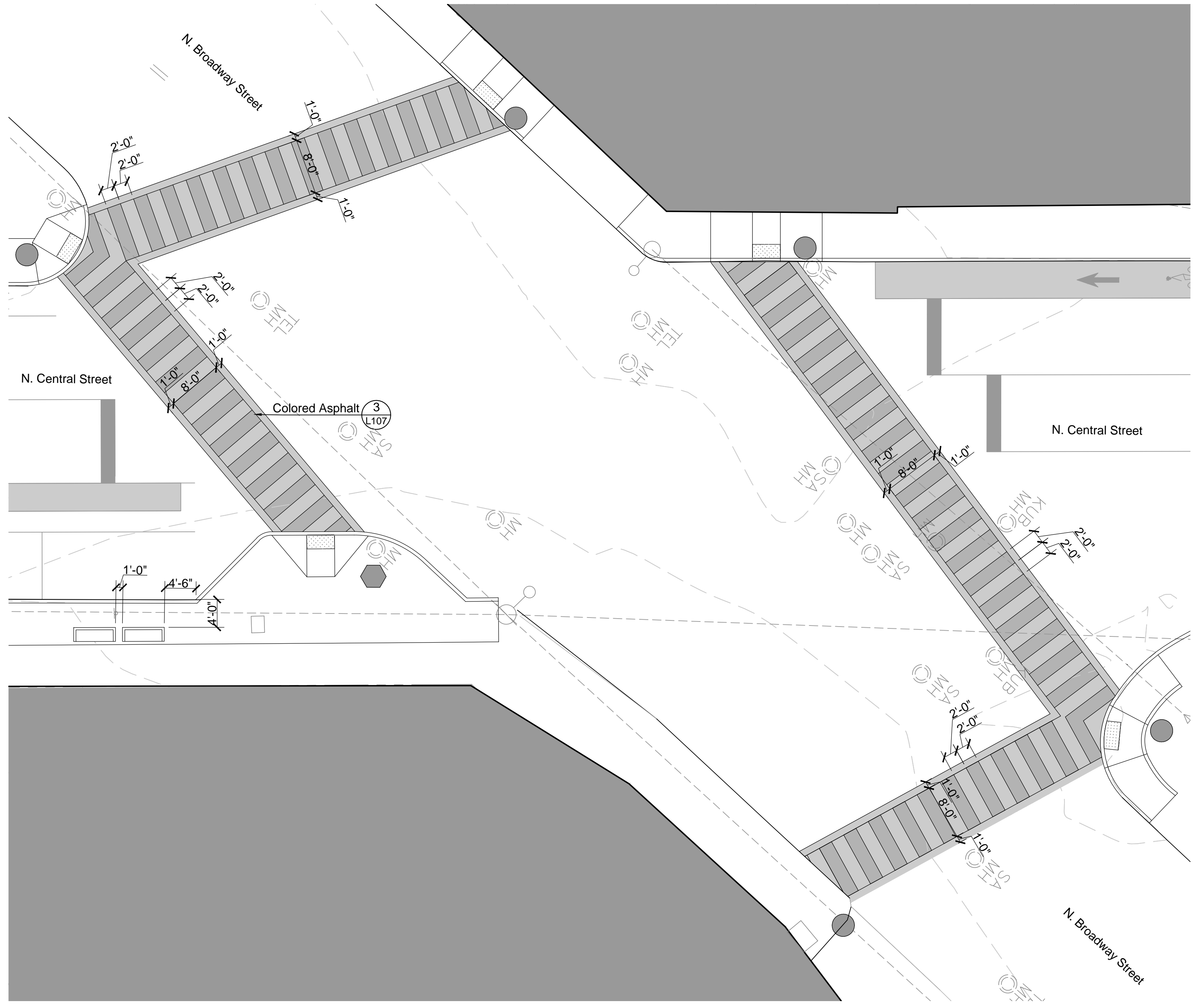
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864-574-4775

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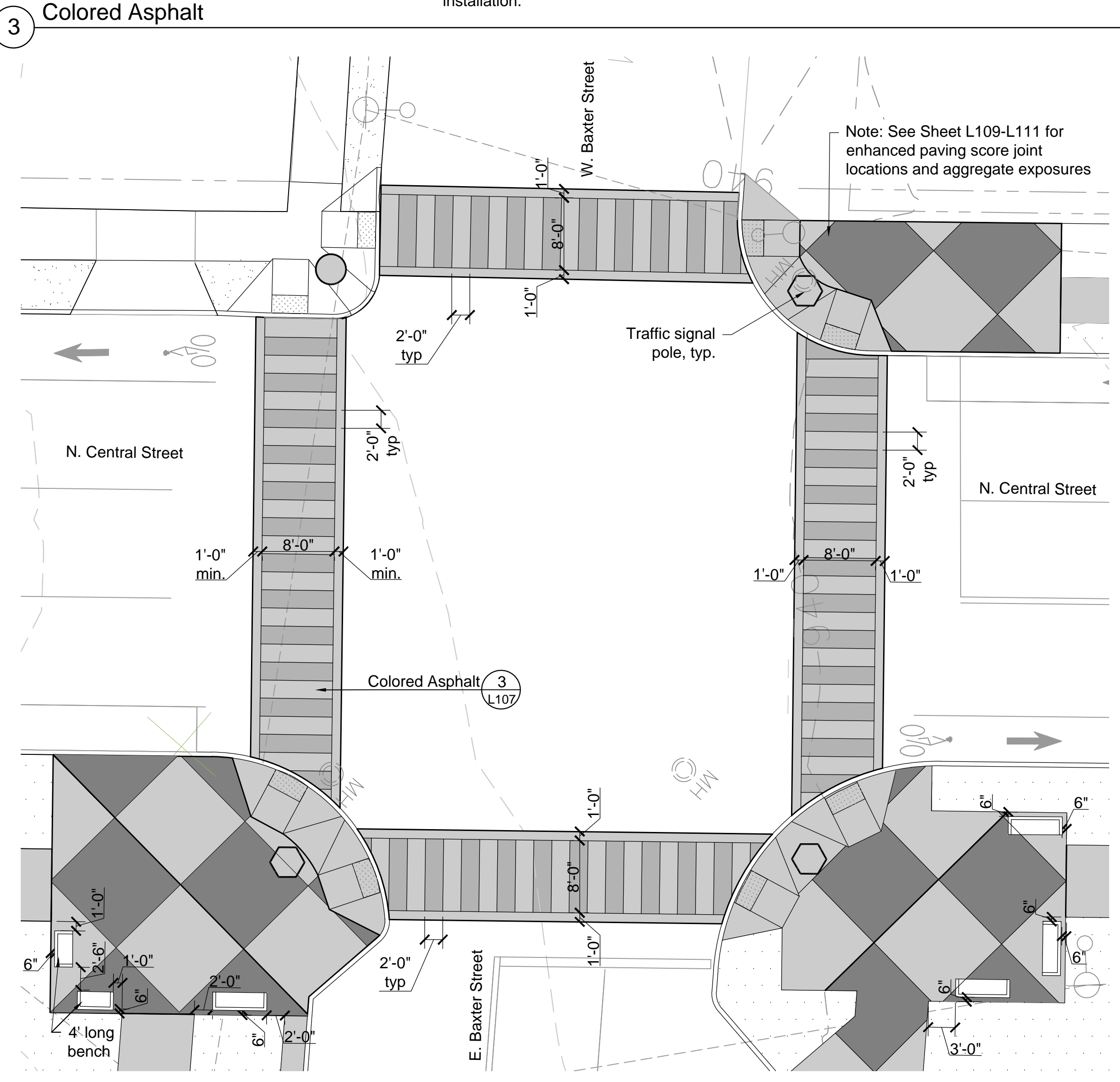
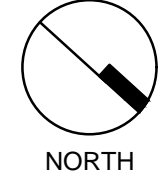
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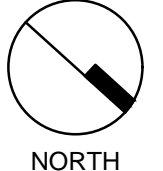
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CHECKED:	ABS
JOB NO.:	51130-63
SCALE:	AS SHOWN
DATE:	06 APRIL 2017
FILE NAME:	
DRAWING TITLE:	Crosswalk Enlargements
DRAWING NO.:	L107



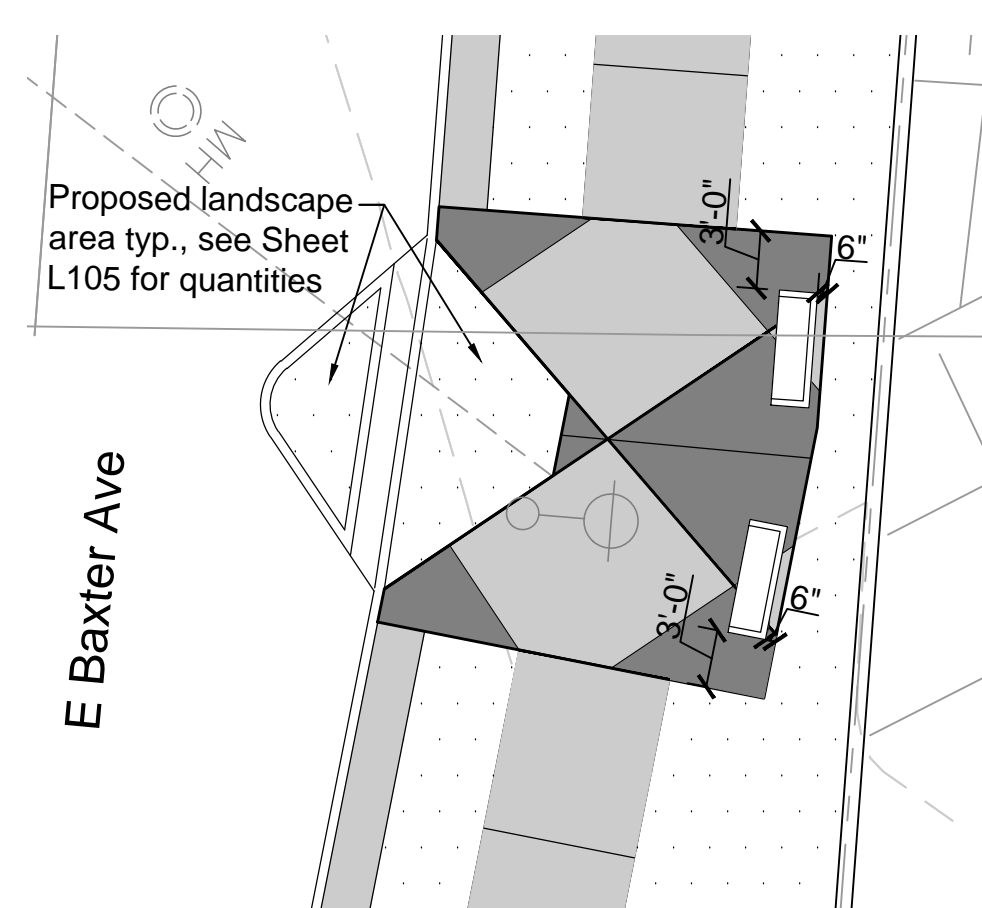
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 Scale: 1" = 10'-0"



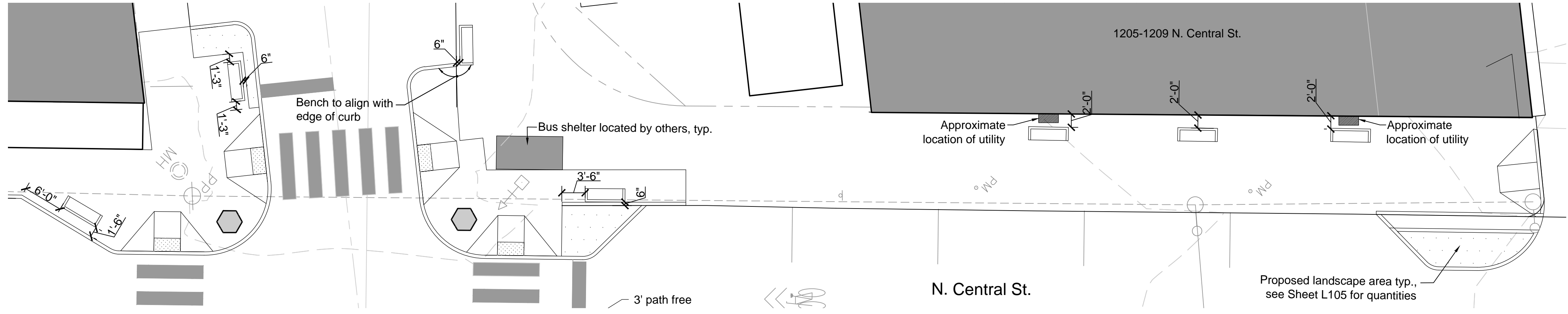
2 Enlargement: Baxter and Central Intersection
 Scale: 1" = 10'-0"



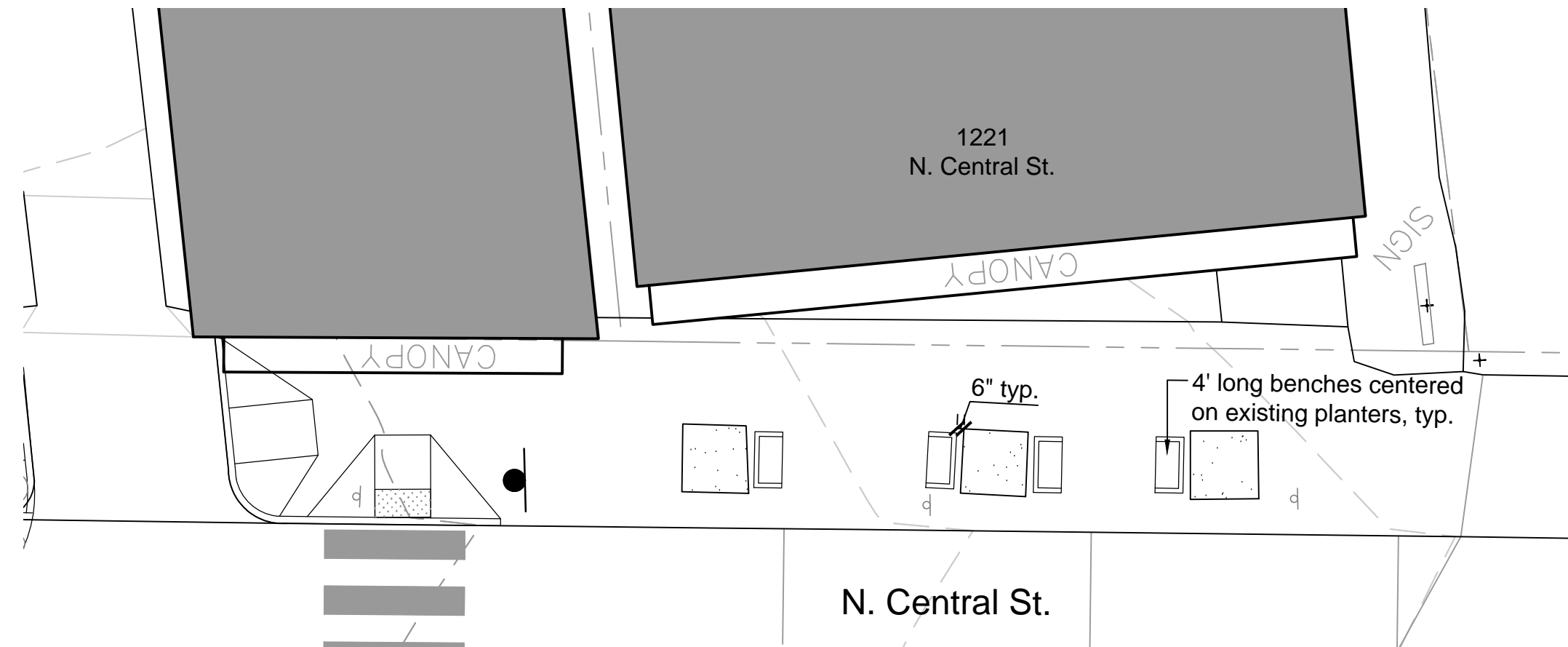
Note: See Sheet L109-L111 for enhanced paving score joint locations and aggregate exposures



1 Site Furnishing Layout
Scale: 1" = 10'-0"


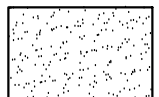
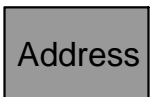
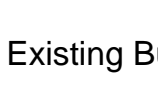






2 Site Furnishing Layout
Scale: 1" = 10'-0"



3 Site Furnishing Layout
Scale: 1" = 10'-0"

Legend

	Proposed Landscape Area Quantity: See Sheet L104 & L105		Existing Landscape Area to remain		Address		Existing Buildings
	Enhanced Paving		Sand Blasted Concrete				
	Bench Quantity: see Sheet L104 & L105 for quantities		Bike rack Quantity: see Sheet L104 & L105 for quantities				

- General Notes:**
- Top of mulch shall be 1" below curb in all proposed landscape areas.
 - Existing landscape areas are not to receive any new soil.
 - Proposed landscape area to receive minimum 36" depth planting soil See Detail 1, Sheet L200.
Note: If excavation is not even or if soils do not percolate, this depth may vary.
 - Soil quantities area not actual quantities. Actual quantities shall be determined once percolation tests have been performed
 - See Sheet L108 for finish description & mock-ups for sand blasting.

Percolation Test Notes

- Fill excavated area with water to 12" depth and let drain for several hours. Ideally let the hole pre-wet over night and test the following day.
- Refill hole to a 12" depth.
- To aid in measurement, place a stick across the top of the hole and use a second stick to mark periodic drops in water level; mark side of hole; or mark soil on side of hole with nail or stick.
- Measure drop in water level after 30 minutes and one hour. If possible measure drop in water level the next day.
- Determine drop in water level per hour. If water level in hole drops more than one inch per hour, it is well drained and suitable for all plant species.

Layout and Materials Notes

- All lines and dimensions are parallel or perpendicular to the lines from which they are measured, unless otherwise noted.
- Contractor shall verify all conditions in the field and report discrepancies between plans and actual conditions to the landscape architect or owner's representative immediately.
- All dimensions are from face of curb, wall or building, unless otherwise noted.
- Contractor shall stake the corners of all seating areas in the field for Landscape Architect or Owner's Representative's approval prior to beginning work.
- Where new paving or earthwork meets existing paving or earthwork, smoothly blend line of existing with new.

Sand Blasting Notes

- Finish Description
EP- Enhanced Paving, provide light broom finish.
SB- Sand Blasted Concrete: generally expose coarse aggregate: $\frac{3}{16}$ " to $\frac{1}{4}$ " reveal.
- Mock-Up Descriptions
Provide (3) mock-ups for each finish with jointing for enhanced paving. Mock-up size is to be 4' x 4' in size & include materials and methods used to produce each finish for review & approval. Review will be for color, texture, and jointing. Approved samples will become the control sample.

NO.	DATE	DESCRIPTION
1	5.26.2017	Revised as per TDOT review comments
2	9.20.2017	Revised Layout/Material & Sand Blasting Notes



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KNOXVILLE, TENNESSEE

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DRAWN:	LGG
CHECKED:	ABS
JOB NO:	51130-63
SCALE:	AS SHOWN
DATE:	06 APRIL 2017
FILE NAME:	
DRAWING TITLE:	Site Furnishing Layout & Notes
DRAWING NO:	L108