

BOARD OF PUBLIC WORKS AND SAFETY (Form B-01-2012)
Agenda Request Form

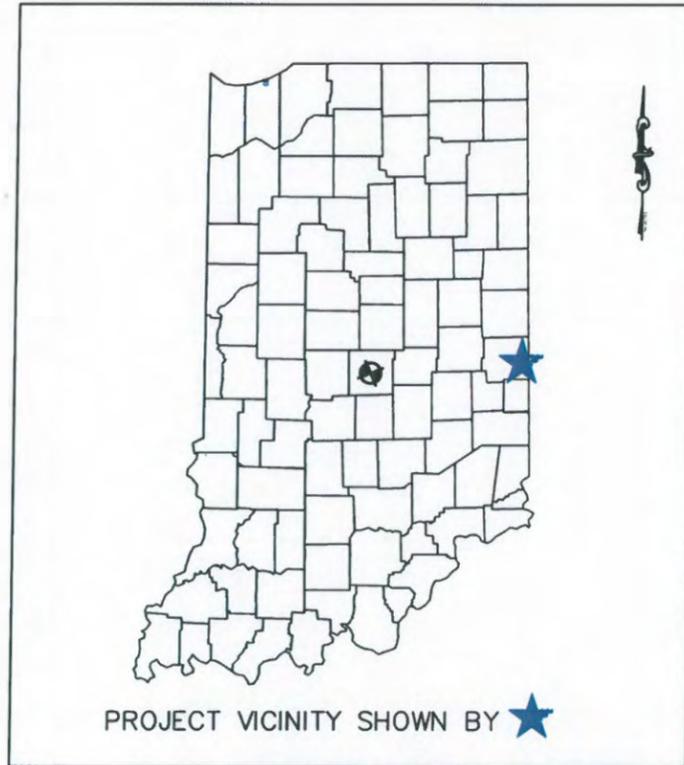
Organizations and individuals are asked to submit a request form and supporting documents to be placed on the agenda. You will be contacted by the City confirming the date of the meeting in which your request will be heard. Please make sure that your contact information is accurate in case we need to get in touch with you. The Board of Works meets on the 1st and 3rd Monday of each month at 5:00 p.m. in City Hall located at 70 E. Monroe Street.

Date Submitted:	8/22/2016	Meeting Date:	9/19/2016
Contact Information:			
Requested by:	Travis Underhill		
On Behalf of Organization or Individual:	Engineering Department		
Telephone:	(317) 736-3631		
Email address:	tunderhill@franklin.in.gov		
Mailing Address:	70 E. Monroe Street Franklin, IN 46131		
Describe Request:			
Approval of street cuts, and pavement repair, in new pavement for Indiana American Water Company Work.			
List Supporting Documentation Provided:			
Plan Markups			
Who will present the request?			
Name:	tunderhill@franklin.in.gov	Telephone:	(317) 736-3631

In order for an individual and/or agency to be considered for new business on the Board of Works agenda, this reservation form and supporting documents must be received in the Mayor's office no later than 4:00 p.m. on the Wednesday before the meeting.

INDIANA-AMERICAN WATER JOHNSON COUNTY OPERATIONS 2016 SMALL DIAMETER WATER MAIN REPLACEMENTS FRANKLIN, INDIANA

*PAVEMENT REPAIR
MARK-UPS*



PROJECT VICINITY SHOWN BY ★

VICINITY MAP
N.T.S.

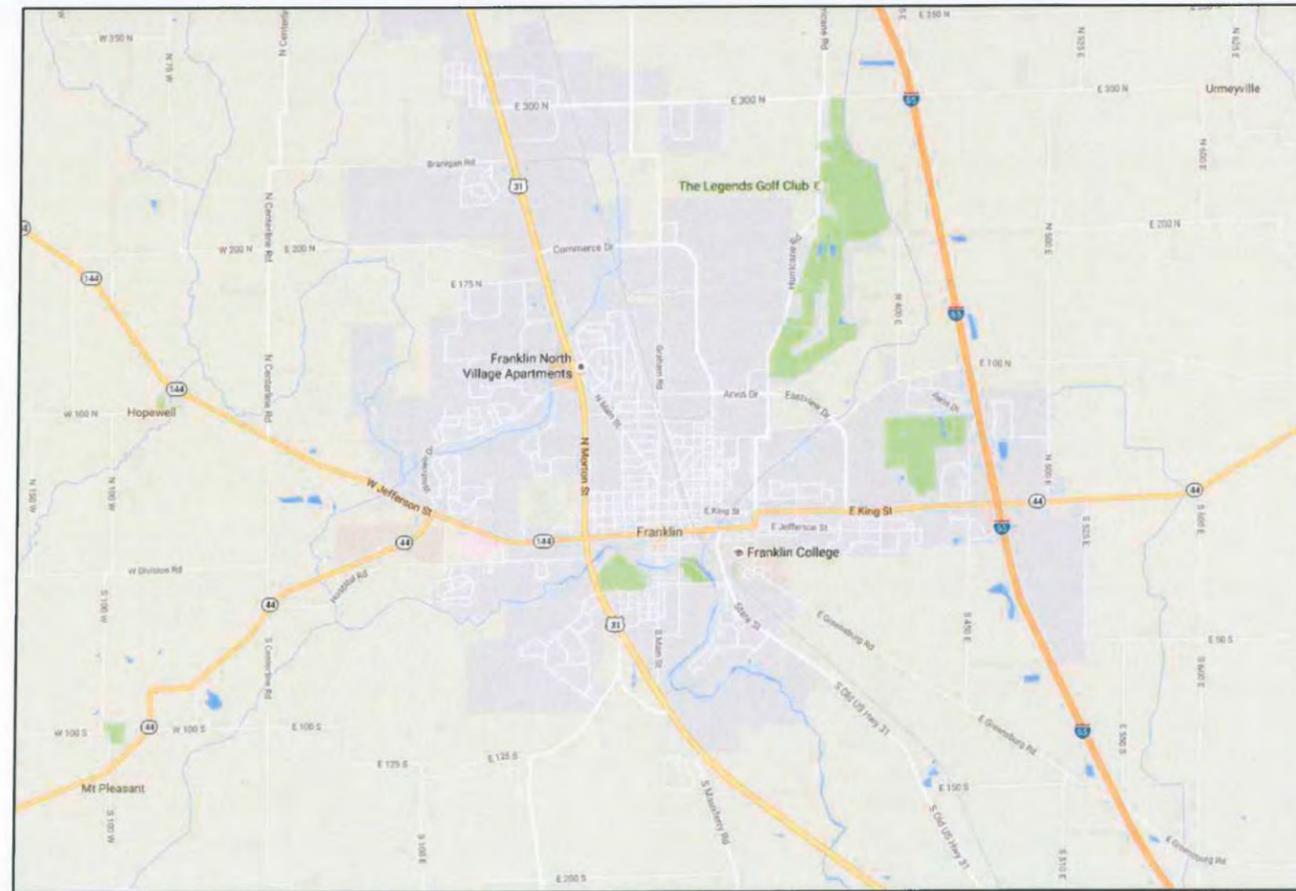


**INDIANA
AMERICAN WATER**

DISTRICT OFFICE
JOHNSON COUNTY OPERATIONS
2501 ENDRESS PLACE
GREENWOOD, INDIANA 46143
PHONE: (317) 881-0270

OPERATIONS SUPERINTENDENT: RON BALLARD
Ron.Ballard@amwater.com

CORPORATE OFFICE
555 E. COUNTY LINE RD. STE 201
GREENWOOD, IN 46143
PHONE: (317) 885-2423
CONTACT: MARK WALLISCHEK
Mark.Wallischeck@amwater.com



LOCATION MAP
N.T.S.

PLAN INDEX	
SHEET #	SUBJECT
1	TITLE SHEET
2	CONTRACTOR NOTES
3-10	WATER MAIN PLANS
11-13	STANDARD DETAILS

DISTRICT OFFICE:	JOHNSON COUNTY OPERATIONS	
	PROJECT:	
PROJECT:	2016 SMALL DIAMETER WATER MAIN REPLACEMENTS	
REV.	DATE	REVISIONS
7		
6		
5		
4		
3		
2		
1		
FILE NAME:	TITLE SHEET	
DATE:	AUGUST, 2016	
DESIGNED BY:	S. FORD	
DRAWN BY:	AS NOTED	
SCALE:	AS NOTED	
SHEET	1	

**INDIANA
AMERICAN WATER**
ENGINEERING DEPARTMENT
555 E. COUNTY LINE ROAD
GREENWOOD, INDIANA 46143

CONTRACTOR NOTES

1. CONTRACTOR TO FIELD LOCATE ALL UTILITIES WITHIN PROJECT AREA PRIOR TO LAYOUT OF PROPOSED WATER MAIN.
2. CONTRACTOR TO EXCAVATE AND EXPOSE EXISTING WATER MAIN, THEN VALIDATE CONDITION OF MAIN WITH INDIANA-AMERICAN WATER COMPANY REPRESENTATIVE.
3. CONTRACTOR TO RED-LINE PROPOSED ROUTE, AND ALL EXISTING UTILITIES, THEN SUBMIT FOR APPROVAL TO INDIANA-AMERICAN WATER COMPANY WATER MAIN PROJECT ENGINEER PRIOR TO ANY CONSTRUCTION ACTIVITIES.
4. CONTRACTOR TO HAVE A REGISTERED LAND SURVEYOR STAKE RIGHT-OF-WAY PRIOR TO ANY CONSTRUCTION ACTIVITIES.
5. CONTRACTOR TO INSTALL WATER MAINS WITH A RESTORED COVER OF NO LESS THAN 54 INCHES.
6. CONTRACTOR SHALL FIELD VERIFY LOCATION AND SIZE OF ALL WATER SERVICES. ALL AFFECTED FACILITIES MUST BE CONNECTED TO THE PROPOSED WATER MAIN.
7. IF REQUIRED, CONTRACTOR TO INSTALL NEW METER PIT AND WATER METERS WITH ALL ¾" OR 1" DOMESTIC SERVICE CONNECTIONS. INSTALL DUAL METER PITS AT PROPERTY LINES WHERE REQUIRED.
8. CONTRACTOR IS RESPONSIBLE FOR RED LINE AS-BUILT DRAWINGS.
9. RECEIVING PITS ARE ASSUMED TO BE 5'x35'. RESTORATION IS 20 SYS.
9. CONTRACTOR TO DETERMINE NUMBER, AND LOCATIONS OF RECEIVING PITS. THE CONTRACTOR WILL ONLY RECEIVE PAYMENT FOR NUMBER OF APPROVED RECEIVING PITS.
10. TAPPING SLEEVE, CONNECTIONS (TIE-INS), CUT & CAPS ARE TO BE 6'x6', UNLESS OTHERWISE NOTED. RESTORATION IS 4 SYS.
11. THRUST BLOCKS ARE REQUIRED AT ALL CUT & CAPS. SEE STANDARD DETAIL SHEET.
12. PROTECT AND MAINTAIN ACCESS TO DRIVEWAYS, AND MAILBOXES THROUGHOUT CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR ALL DAMAGE.

UTILITY INFORMATION

UTILITY	MARKED ON SITE	MAPS PROVIDED	EXIST IN REAR OF LOTS	NOTES (OVERHEAD/UNDERGROUND)
WATER				
GAS				
ELECTRIC				
TELEPHONE				
CABLE				
FIBER OPTIC				
TRAFFIC SIGNAL (SENSORS, ETC.)				
SANITARY SEWER MAIN & INLETS WITH INVERT ELEVATIONS.				
SANITARY LATERALS				
STORM SEWER MAIN & INLETS WITH INVERT ELEVATIONS.				
DRAINAGE CULVERTS				

INDIANA 811 LOCATE TICKET NUMBER(S):

GENERAL NOTES

1. THERE WAS NO SURVEY PERFORMED FOR THIS PROJECT.
2. DO NOT SCALE DIMENSIONS FROM THIS PLAT.
3. CALL 811 FOR FIELD LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO LAYOUT OF PROPOSED WATER MAIN.
4. BOUNDARY INFORMATION SHOWN HEREON, IF ANY EXISTS, IS FOR GRAPHICAL DEPICTION ONLY.



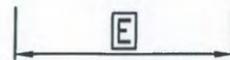
DISTRICT OFFICE: **JOHNSON COUNTY OPERATIONS**
 PROJECT: **2016 SMALL DIAMETER WATER MAIN REPLACEMENTS**

REV. #	DATE	REVISIONS
7		
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INDIANA AMERICAN WATER
 ENGINEERING DEPARTMENT
 505 E. COUNTY LINE ROAD
 GREENWOOD, INDIANA 46143

CONTRACTOR NOTES (APPLICABLE TO ALL JOBS)
 DATE: AUGUST, 2016
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET: 2

RESTORATION LEGEND

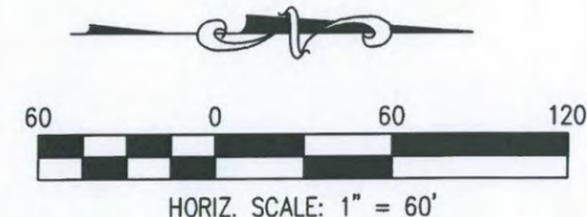
-  CONCRETE SIDEWALK REPLACEMENT PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  ASPHALT DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  CONCRETE DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
C	700 LFT
E	10 LFT
F	80 LFT

SERVICE CONNECTIONS

ITEM	QTY.
LONG SIDE	10 EA.
SHORT SIDE	9 EA.
METER PIT	19 EA.

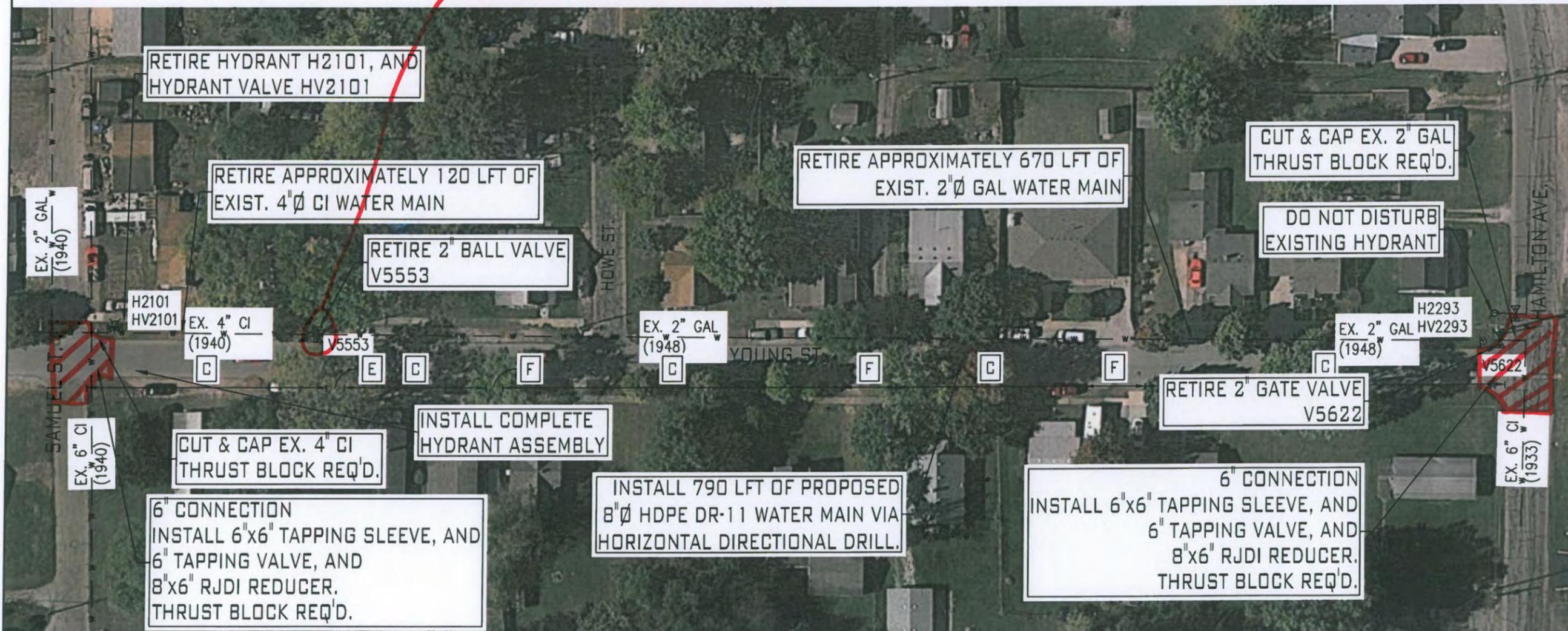


 = 1.5" MILL/OVERLAY w/ FULL DEPTH PATCH

- sidewalk replaced as needed due to open cut

- open cut services must follow repairs in Ord. 15-03

→ Pavement REPAIR PER ORD. 15-03



DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
 PROJECT: YOUNG STREET
 HAMILTON AVENUE TO SAMUEL STREET
 2016 SMALL DIAMETER
 WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
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 AMERICAN WATER
 ENGINEERING DEPARTMENT
 550 E. COUNTY LINE ROAD
 GREENWOOD, INDIANA 46143

WATER MAIN PLAN
 YOUNG STREET
 DATE: AUGUST, 2016
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET 3

RESTORATION LEGEND

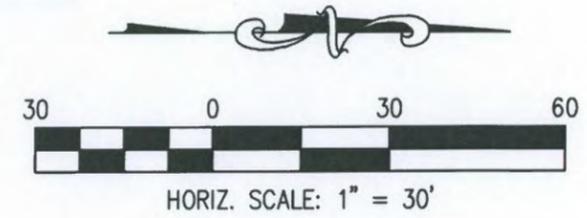
- A** PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
- D** LAWN/LANDSCAPE RESTORATION PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
- E** ASPHALT DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
- G** GRAVEL DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

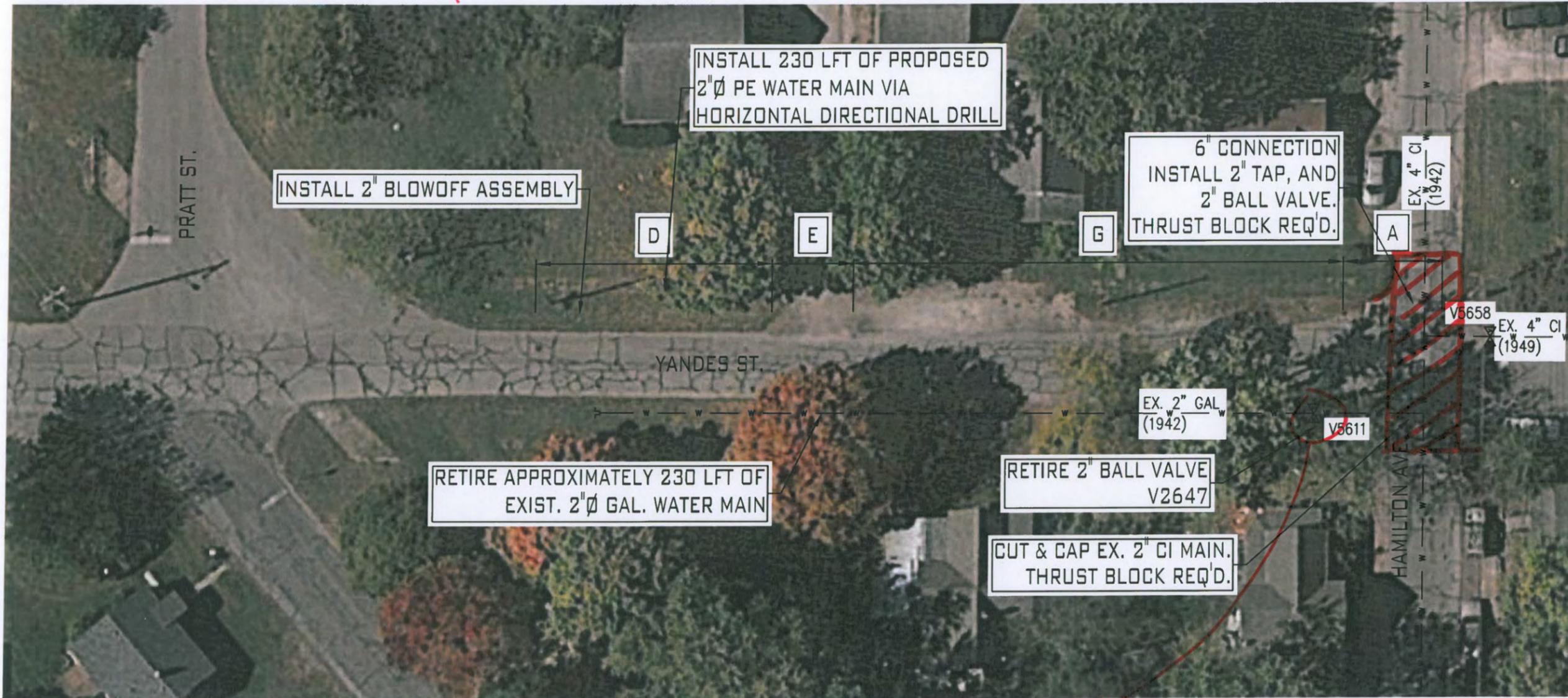
ITEM	QTY.
A	30 LFT
D	70 LFT
E	25 LFT
G	140 LFT

SERVICE CONNECTIONS

ITEM	QTY.
LONG SIDE	2 EA.
SHORT SIDE	3 EA.
METER PIT	5 EA.



= 1.5" MELT/OVERLAY w/ FULL DEPTH PATCH AT CUT



Pavement Repair Per ORD 15-05

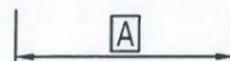
DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
 PROJECT: YANDES STREET
 HAMILTON AVENUE TO PRATT STREET
 2016 SMALL DIAMETER
 WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
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INDIANA AMERICAN WATER
 ENGINEERING DEPARTMENT
 555 E. COUNTY LINE ROAD
 GREENWOOD, INDIANA 46143

WATER MAIN PLAN
 YANDES STREET
 DATE: AUGUST, 2016
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET 4

RESTORATION LEGEND

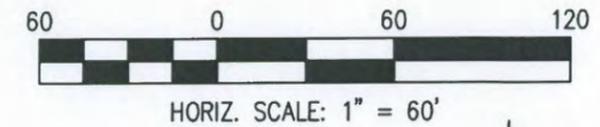
-  PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  CONCRETE SIDEWALK REPLACEMENT PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  CONCRETE DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
A	30 LFT
C	600 LFT
F	30 LFT

SERVICE CONNECTIONS

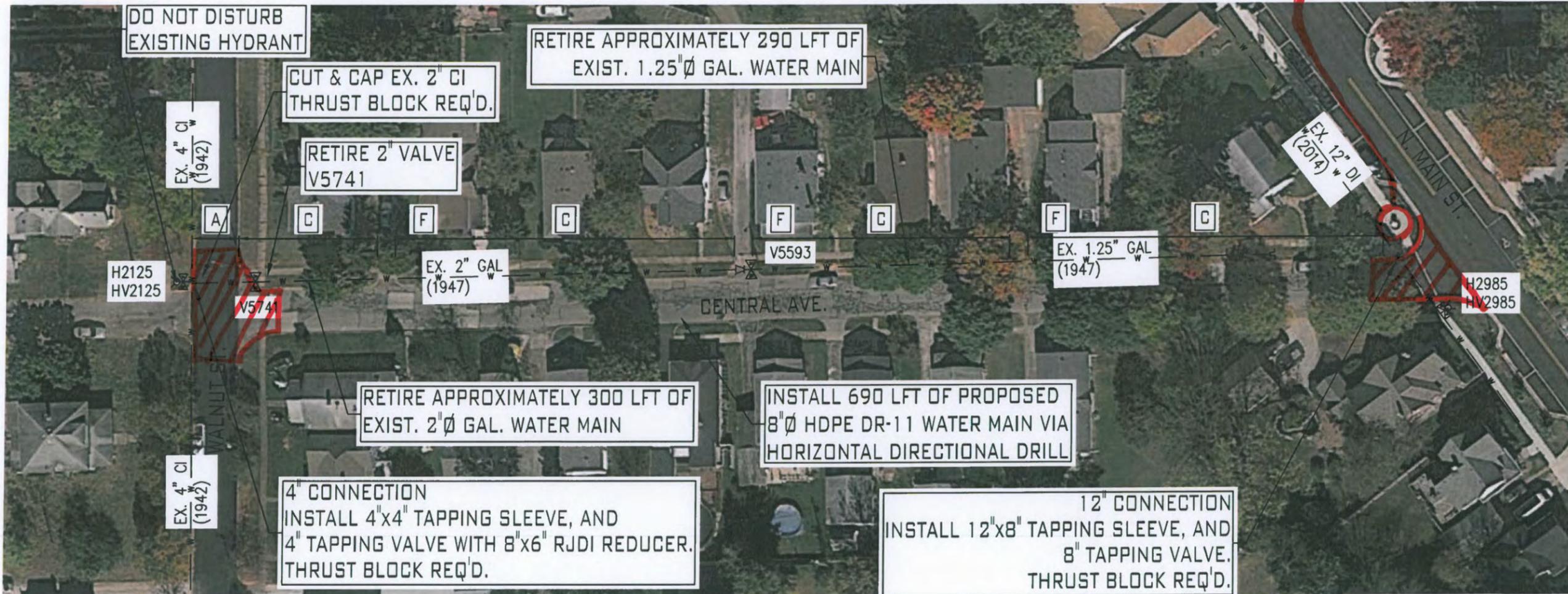
ITEM	QTY.
LONG SIDE	7 EA.
SHORT SIDE	9 EA.
METER PIT	16 EA.



 = 1.5" MSLL & OVERLAY w/ Full DEPTH PATCH AT CUT

- WALNUT NEW PAVEMENT 2015
- N. MAIN NEW ROAD 2014/2015
- CENTRAL FDR 2016

PROTECT MONUMENT



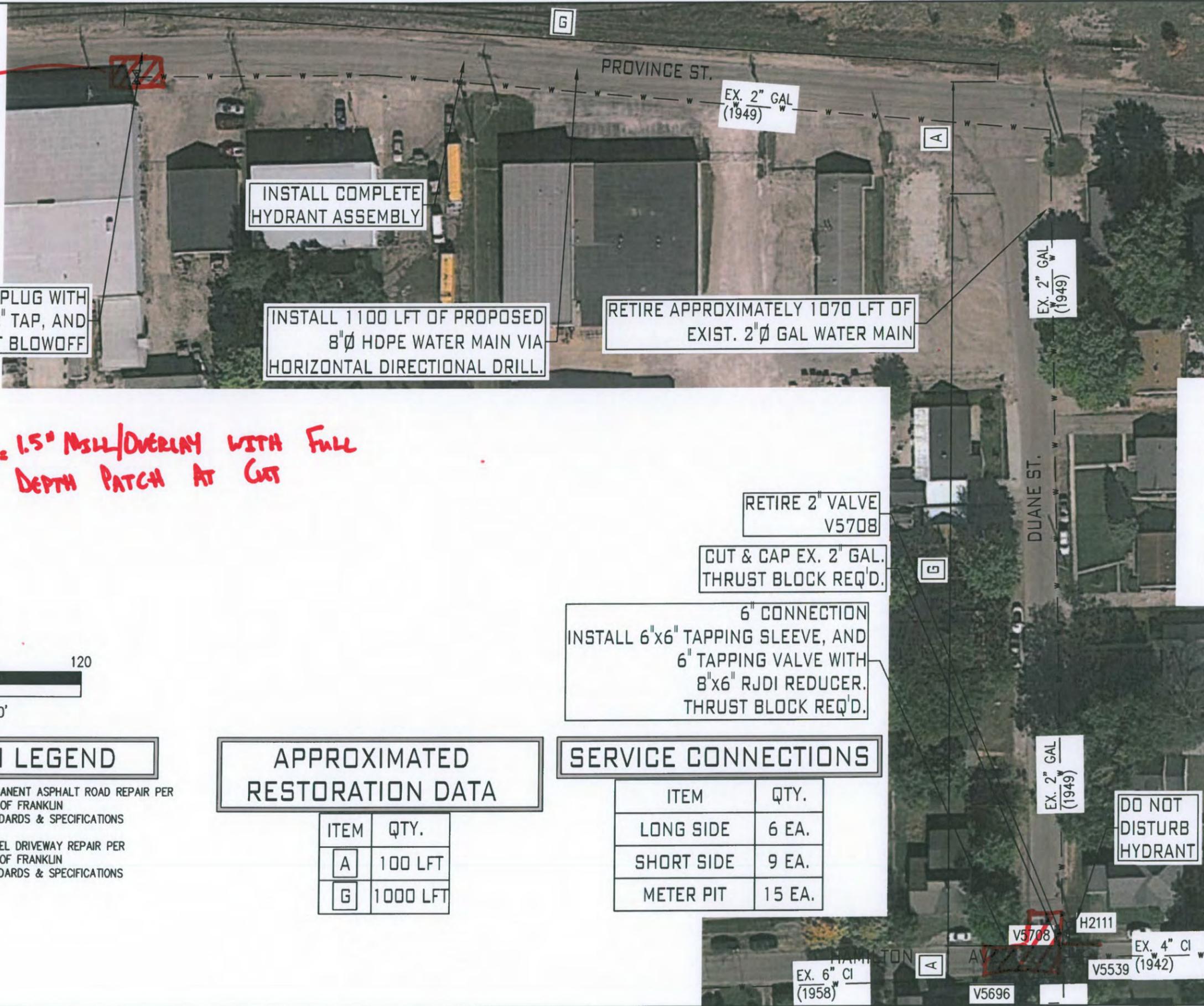
DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
 PROJECT: CENTRAL AVENUE
 WALNUT STREET TO N. MAIN STREET
 2016 SMALL DIAMETER WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
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WATER MAIN PLAN
 CENTRAL AVENUE
 DATE: AUGUST, 2016
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET 5

See ORD.15-02



INSTALL 8" PLUG WITH 2" TAP, AND PERMANENT BLOWOFF

INSTALL COMPLETE HYDRANT ASSEMBLY

INSTALL 1100 LFT OF PROPOSED 8"Ø HDPE WATER MAIN VIA HORIZONTAL DIRECTIONAL DRILL.

RETIRE APPROXIMATELY 1070 LFT OF EXIST. 2"Ø GAL WATER MAIN

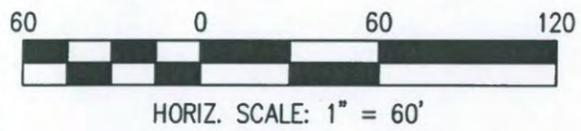
= 1.5" MSLL/OVERLAY WITH FULL DEPTH PATCH AT CUT

RETIRE 2" VALVE V5708

CUT & CAP EX. 2" GAL. THRUST BLOCK REQ'D.

6" CONNECTION
INSTALL 6"x6" TAPPING SLEEVE, AND 6" TAPPING VALVE WITH 8"x6" RJD REDUCER. THRUST BLOCK REQ'D.

DO NOT DISTURB HYDRANT



RESTORATION LEGEND

- PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
- GRAVEL DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
A	100 LFT
G	1000 LFT

SERVICE CONNECTIONS

ITEM	QTY.
LONG SIDE	6 EA.
SHORT SIDE	9 EA.
METER PIT	15 EA.

DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS

PROJECT: DUANE STREET
HAMILTON AVENUE TO PROVINCE STREET TO WEST
2016 SMALL DIAMETER
WATER MAIN REPLACEMENTS

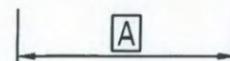
REV. #	DATE	REVISIONS
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INDIANA AMERICAN WATER
ENGINEERING DEPARTMENT
505 E. COUNTY LINE ROAD
GREENWOOD, INDIANA 46143

WATER MAIN PLAN
DUANE STREET

DATE: AUGUST, 2016
DESIGNED BY: S. FORD
DRAWN BY: AS NOTED
SCALE: AS NOTED
SHEET: 6

RESTORATION LEGEND

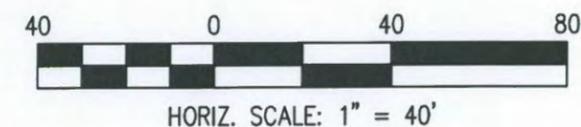
-  PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  LAWN AND LANDSCAPE REPAIR PER CITY OF FRANKLIN, AND OWNER'S STANDARDS & SPECIFICATIONS
-  GRAVEL DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  SIDEWALK RAMP REPLACEMENT PER INDIANA DEPARTMENT OF TRANSPORTATION STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
A	10 LFT
D	180 LFT
G	165 LFT
HR	1 EA.

SERVICE CONNECTIONS

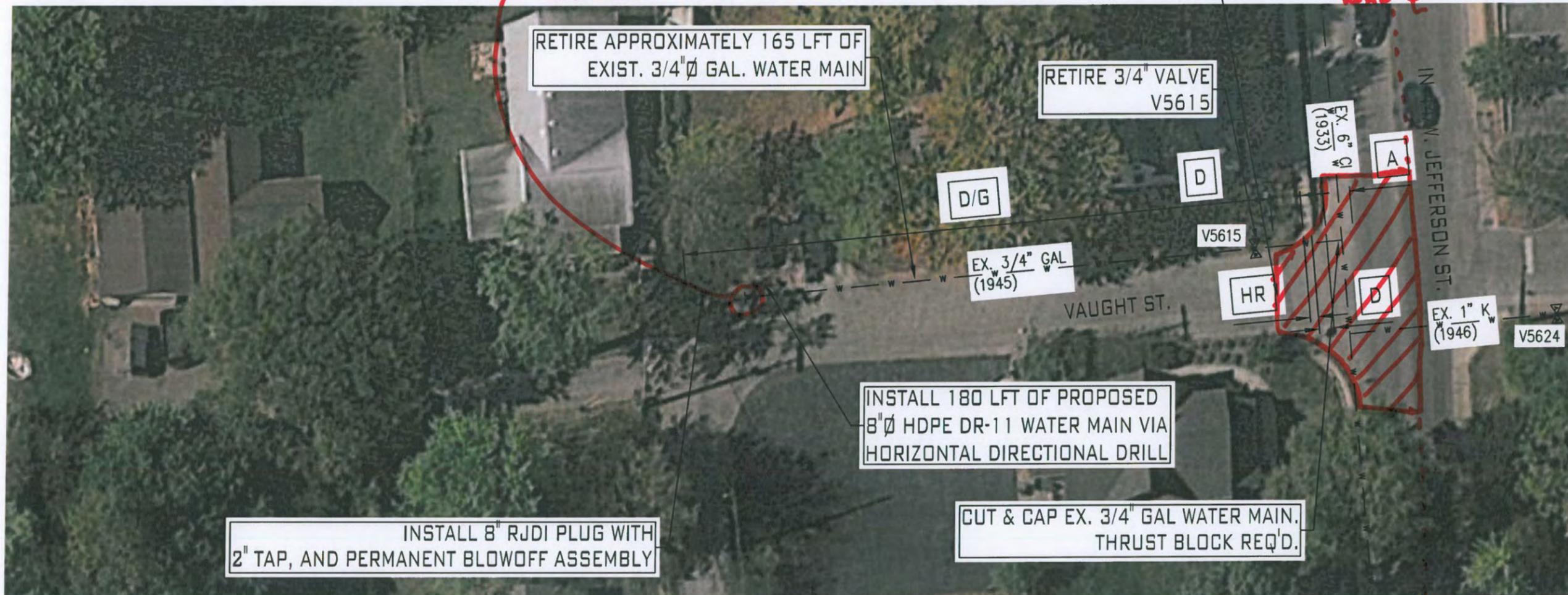
ITEM	QTY.
LONG SIDE	7 EA.
SHORT SIDE	9 EA.
METER PIT	16 EA.



 = 1.5" MILL/OVERLAY WITH FULL DEPTH PATCH AT COST

REPLACE SIDEWALK AND/OR PAVEMENT PGR ORD. 15-00

6" CONNECTION
INSTALL 6"x6" TAPPING SLEEVE, AND 6" TAPPING VALVE WITH 8"x6" RJD1 REDUCER. THRUST BLOCK REQ'D.



-VAUGHT NEW PAVEMENT JOB

-JEFFERSON RECONSTRUCTION 2017

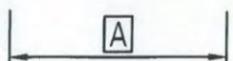
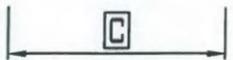
DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
PROJECT: VAUGHT STREET
SR 44 TO DEAD END
2016 SMALL DIAMETER
WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
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WATER MAIN PLAN
VAUGHT STREET
DATE: AUGUST, 2016
DESIGNED BY: S. FORD
DRAWN BY: AS NOTED
SCALE: AS NOTED
SHEET: 7

RESTORATION LEGEND

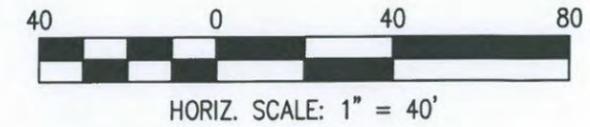
-  PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  CONCRETE SIDEWALK REPLACEMENT PER CITY OF FRANKLIN, AND OWNER'S STANDARDS & SPECIFICATIONS
-  CONCRETE DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  SIDEWALK RAMP REPLACEMENT PER INDIANA DEPARTMENT OF TRANSPORTATION STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
A	40 LFT
C	380 LFT
F	15 LFT
HR	2 EA.

SERVICE CONNECTIONS

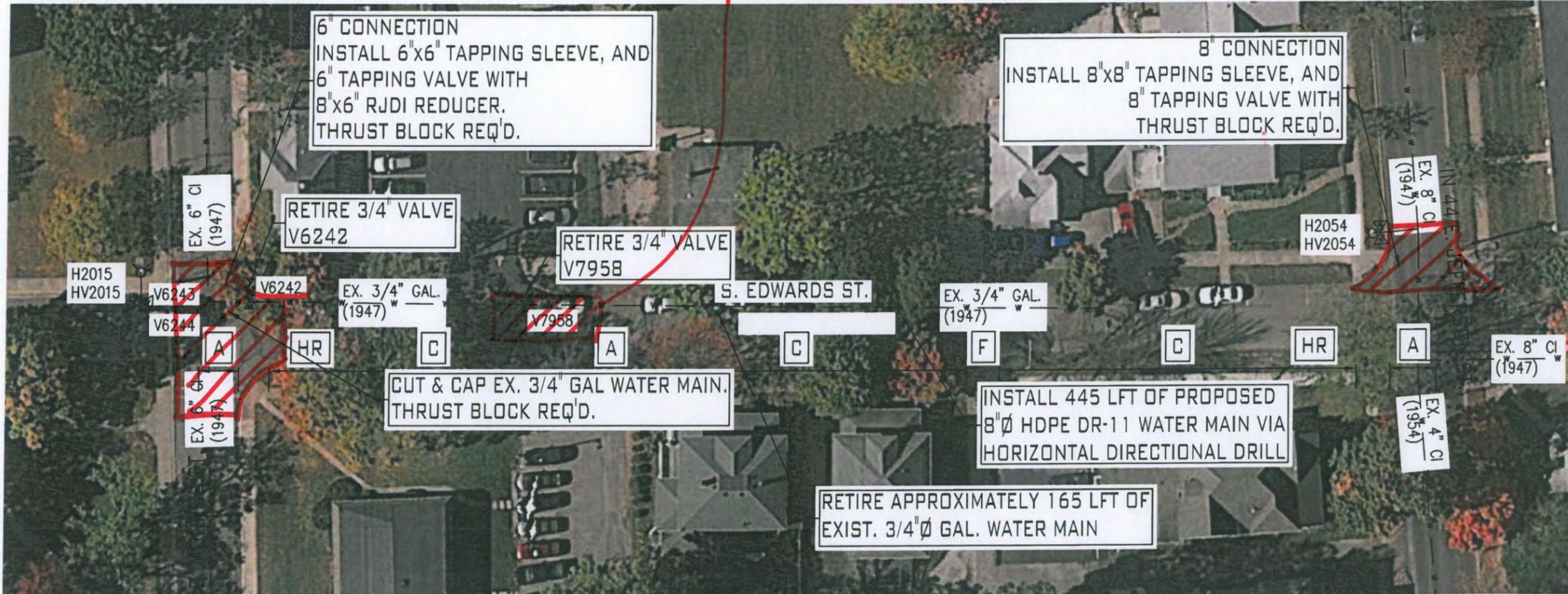
ITEM	QTY.
LONG SIDE	3 EA.
SHORT SIDE	2 EA.
METER PIT	5 EA.



 = 1.5" MSL/OVERLAY WITH FULL DEPTH PATCH AT CUT.

- REPLACE SIDEWALK AS NECESSARY

↑ PER ORD. 15-03



DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
 PROJECT: S. EDWARDS STREET
 E. JEFFERSON STREET (SR 44) TO MONROE STREET
 2016 SMALL DIAMETER WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
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WATER MAIN PLAN
 S. EDWARDS STREET
 DATE: AUGUST, 2016
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET 8

RESTORATION LEGEND

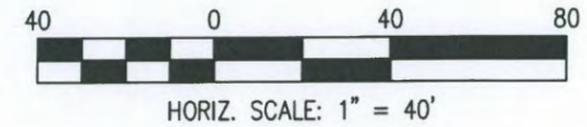
- PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
- CONCRETE SIDEWALK REPLACEMENT PER CITY OF FRANKLIN, AND OWNER'S STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
A	45 LFT
C	320 LFT

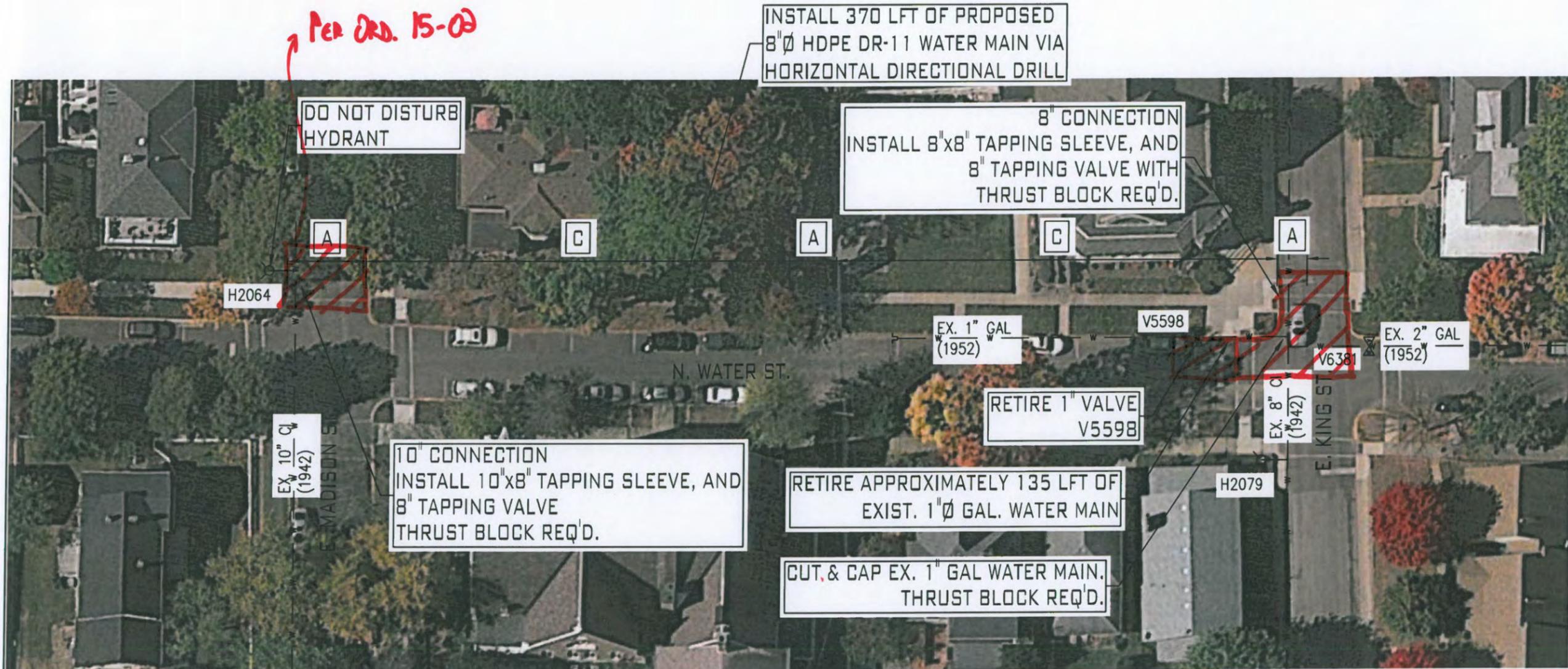
SERVICE CONNECTIONS

ITEM	QTY.
LONG SIDE	3 EA.
SHORT SIDE	1 EA.
METER PIT	4 EA.



= 1.5" MSL/OVERLAY w/ FULL DEPTH PATCH AT CUT

PER ORD. 15-03



- WATER NEW PAVEMENT 2014
- KING NEW PAVEMENT 2015
- MADISON NEW PAVEMENT 2015

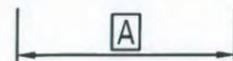
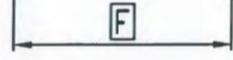
DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
 PROJECT: N. WATER STREET
 E. KING STREET TO E. MADISON STREET
 2016 SMALL DIAMETER WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
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WATER MAIN PLAN
 N. WATER STREET
 DATE: AUGUST, 2016
 DESIGNED BY:
 DRAWN BY: S. FORD
 SCALE: AS NOTED
 SHEET: 9

RESTORATION LEGEND

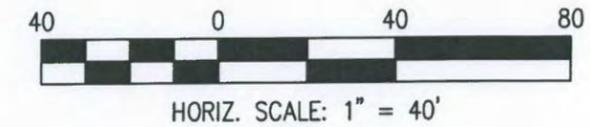
-  PERMANENT ASPHALT ROAD REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  CONCRETE SIDEWALK REPLACEMENT PER CITY OF FRANKLIN, AND OWNER'S STANDARDS & SPECIFICATIONS
-  ASPHALT DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS
-  CONCRETE DRIVEWAY REPAIR PER CITY OF FRANKLIN STANDARDS & SPECIFICATIONS

APPROXIMATED RESTORATION DATA

ITEM	QTY.
A	50 LFT
C	150 LFT
E	80 LFT
F	100 LFT

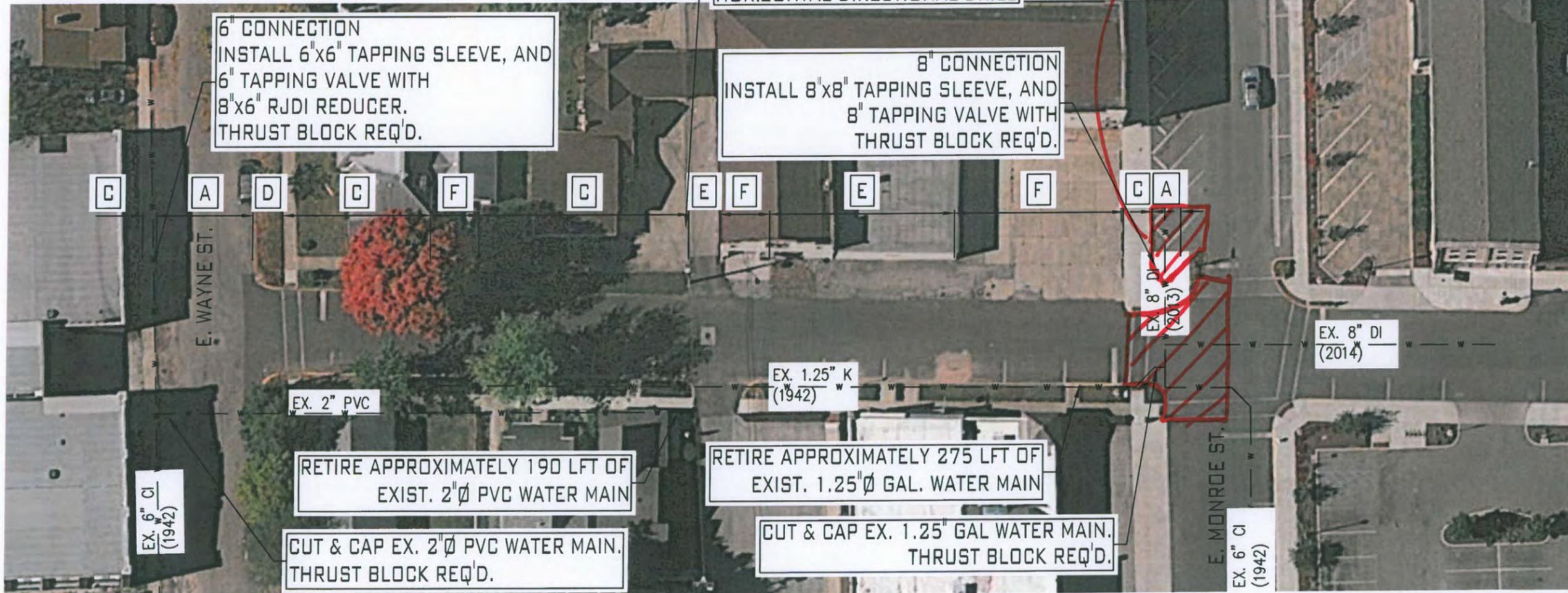
SERVICE CONNECTIONS

ITEM	QTY.
LONG SIDE	2 EA.
SHORT SIDE	2 EA.
METER PIT	4 EA.



 = 1.5" MSL/OVERLAY WITH FULL DEPTH REPAIR AT CUT

RESTORE PARKING BUMPERS
RESTORE SIDEWALK



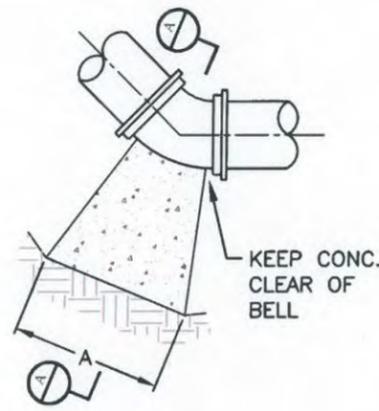
- WATER STREET NEW PAVEMENT 2014
- MONROE STREET NEW PAVEMENT 2013/2014
- WAYNE STREET NEW ROAD 2016

DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
PROJECT: S. WATER STREET
E. MONROE STREET TO E. WAYNE STREET
2016 SMALL DIAMETER WATER MAIN REPLACEMENTS

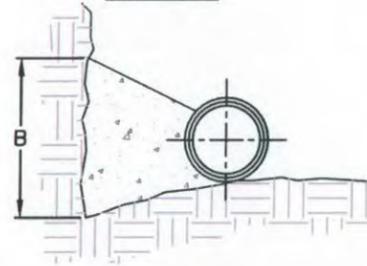
REV. #	DATE	REVISIONS
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WATER MAIN PLAN
S. WATER STREET
DATE: AUGUST, 2016
DESIGNED BY:
DRAWN BY: S. FORD
SCALE: AS NOTED
SHEET 10

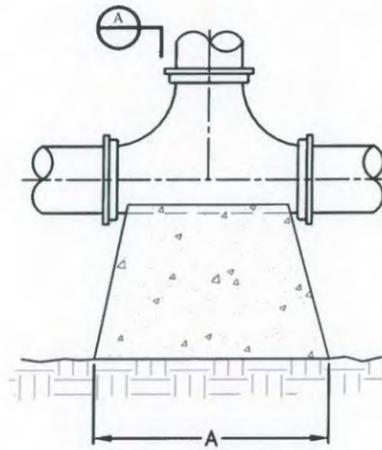
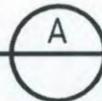


BENDS

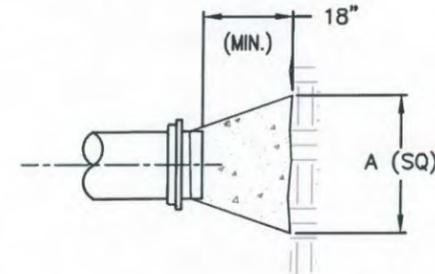


SECTION

BENDS, TEES & CROSSES



TEES



PLUGS

NOTES:

1. COVER OVER TOP OF PIPE SHALL BE BELOW FROST LINE OR 30" MINIMUM, 72" MAXIMUM ACCORDING TO REGULATORY REQUIREMENTS. IF GRADING PLANS RECEIVED BY THE ENGINEER/OWNER WITH THE REQUEST FOR WATER MAIN LAYOUT, INDICATE ADJUSTMENTS TO EXISTING GRADE, THEN PIPE SHALL BE INSTALLED TO MEET MINIMUM AND MAXIMUM COVER FROM PROPOSED GRADES SHOWN ON SAID PLANS.
2. THRUST BLOCKS SHALL BE BUILT AGAINST UNDISTURBED SOIL WITH ADEQUATE BACKING TO PREVENT MOVEMENT OF FITTING.
3. NO THRUST BLOCKS TO BE PLACED IN SEWER LATERAL DITCHES.
4. THRUST BLOCKING MUST FIT IN EASEMENT, IN SOME CASES ADDITIONAL RESTRAINT MAY BE REQUIRED.
5. BASED ON 200 PSI (150 PSI STATIC PRESSURE PLUS 50 PSI WATER HAMMER) AND 2000 PSF SOIL BEARING.
6. POLYETHYLENE ENCASEMENT ON ALL D.I. PIPE AND FITTINGS.
7. PIPE JOINTS AND BOLTS MUST BE ACCESSIBLE.
8. ALLOW SUFFICIENT CLEARANCE BETWEEN CONCRETE AND BOLTS FOR FUTURE MAINTENANCE.
9. ALL ANCHOR BOLTS SHALL BE COR-BLUE, MINIMUM 1/2" DIAMETER. COAT EXPOSED ROD WITH ASPHALT CEMENT AFTER CONCRETE HAS SET.
10. ALL M.J. AND FLG. FITTINGS TO RECEIVE THRUST BLOCKS SHALL HAVE THE FASTENER AREAS FELT WRAPPED AND TAPED PRIOR TO THE CONCRETE POUR TO ALLOW FUTURE ACCESS TO THE FASTENERS AT THE JOINTS.
11. THRUST BLOCKING DETAILS ARE SHOWN HERE FOR TYPICAL INSTALLATIONS. IN SOME CASES, ADDITIONAL RESTRAINT MAY BE REQUIRED.
12. PORTLAND CEMENT CONCRETE USED FOR THRUST BLOCKS SHALL BE MIN 3000 PSI CONCRETE.
13. FOR UNSTABLE SOIL CONDITIONS, CHECK WITH ENGINEER FOR THRUST BLOCK DIMENSIONS.
14. FOR MAIN SIZES GREATER THAN 16", SEE ENGINEER FOR THRUST BLOCK DIMENSIONS.

REQUIRED BEARING AREA ON UNDISTURBED SOIL AND TYPICAL DIMENSIONS

PIPE SIZE	90 DEGREE BENDS			45 DEGREE BENDS			11.25 DEGREE BENDS			22.5 DEGREE BENDS			TEES/PLUGS		
	AREA (sq ft)	"A"	"B"	AREA (sq ft)	"A"	"B"	AREA (sq ft)	"A"	"B"	AREA (sq ft)	"A"	"B"	AREA (sq ft)	"A"	"B"
6	5.3	43"	18"	2.9	23"	18"	0.7	6"	18"	1.5	12"	18"	3.7	30"	18"
8	9.2	55"	24"	5.0	30"	24"	1.3	8"	24"	2.5	15"	24"	6.4	39"	24"
10	13.8	66"	30"	7.5	36"	30"	1.9	9"	30"	3.8	18"	30"	9.7	46"	30"
12	19.4	78"	36"	10.6	42"	36"	2.7	11"	36"	5.3	21"	36"	13.8	55"	36"
14	26.0	89"	42"	14.0	48"	42"	3.6	12"	42"	7.2	25"	42"	18.5	63"	42"
16	33.7	101"	48"	18.3	55"	48"	4.7	14"	48"	9.4	28"	48"	23.9	72"	48"

Area in square feet "A" and "B" in inches
 Bearing table area is based on 200 psi maximum with soil bearing capacity of 2000 lbs/square foot.
 For higher water pressures or lower soil pressures, consult Engineer for adjustments.
 Bearing table area does not include a safety factor.
 A safety factor and additional bearing area may be required as directed by the Engineer.

THRUST BLOCKING

NO SCALE

DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
 PROJECT: 2016 SMALL DIAMETER WATER MAIN REPLACEMENTS

REV. #	DATE	REVISIONS
7		
6		
5		
4		
3		
2		
1		



FILE NAME: STANDARD DETAILS
 DATE: AUGUST, 2016
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET: 11

REQUIRED SEPARATION BETWEEN WATER MAINS AND SEWERS

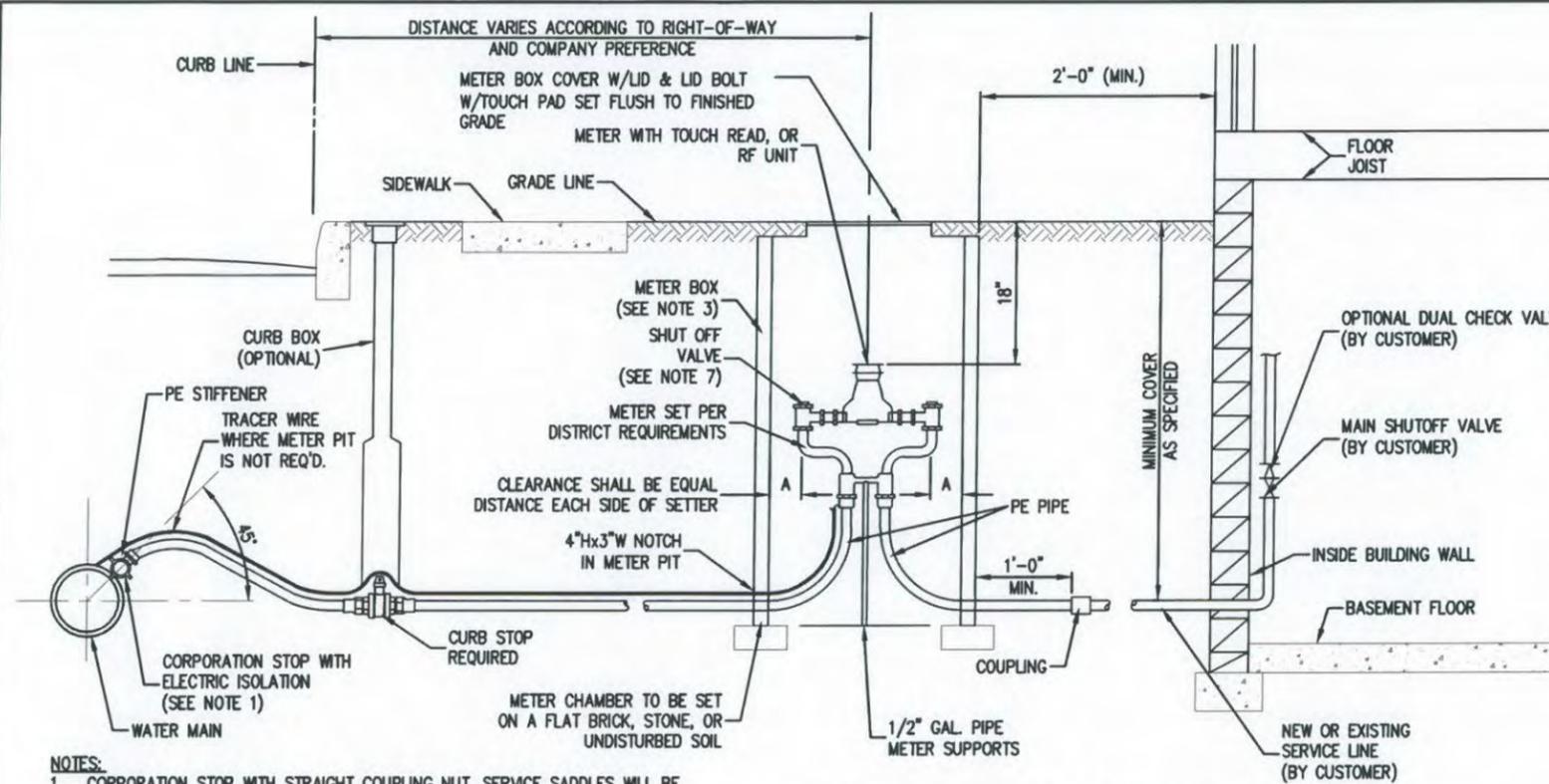
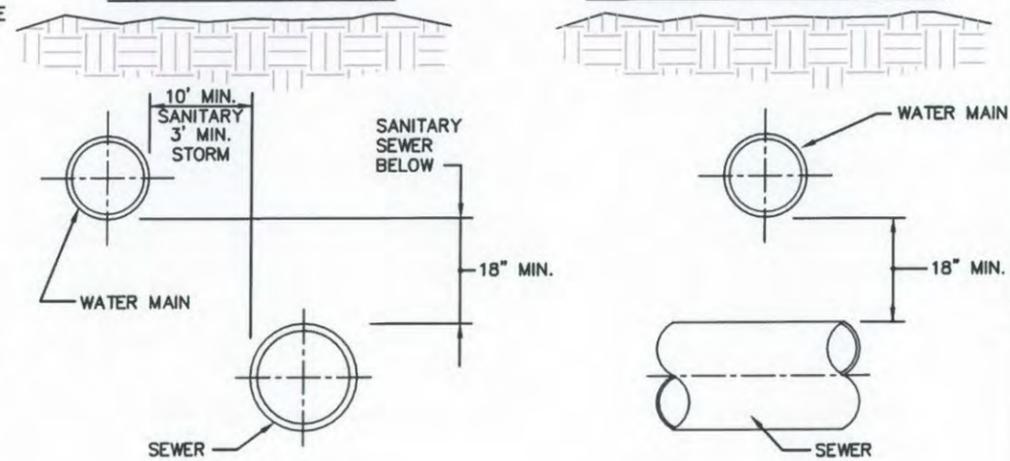
BASIC SEPARATION REQUIREMENTS:
 WATER MAINS AND SEWERS SHOULD BE SEPARATED AS FAR AS IS REASONABLE IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS WITH SEWERS LOWER THAN WATER MAINS.

PARALLEL CONSTRUCTION: THE HORIZONTAL DISTANCE BETWEEN PRESSURE WATER MAINS AND SANITARY SEWERS SHALL BE AT LEAST 10 FEET

PERPENDICULAR CONSTRUCTION (CROSSING): PRESSURE WATER MAINS SHALL HAVE AT LEAST 18" BETWEEN SEWERS WHERE THESE LINES MUST CROSS.

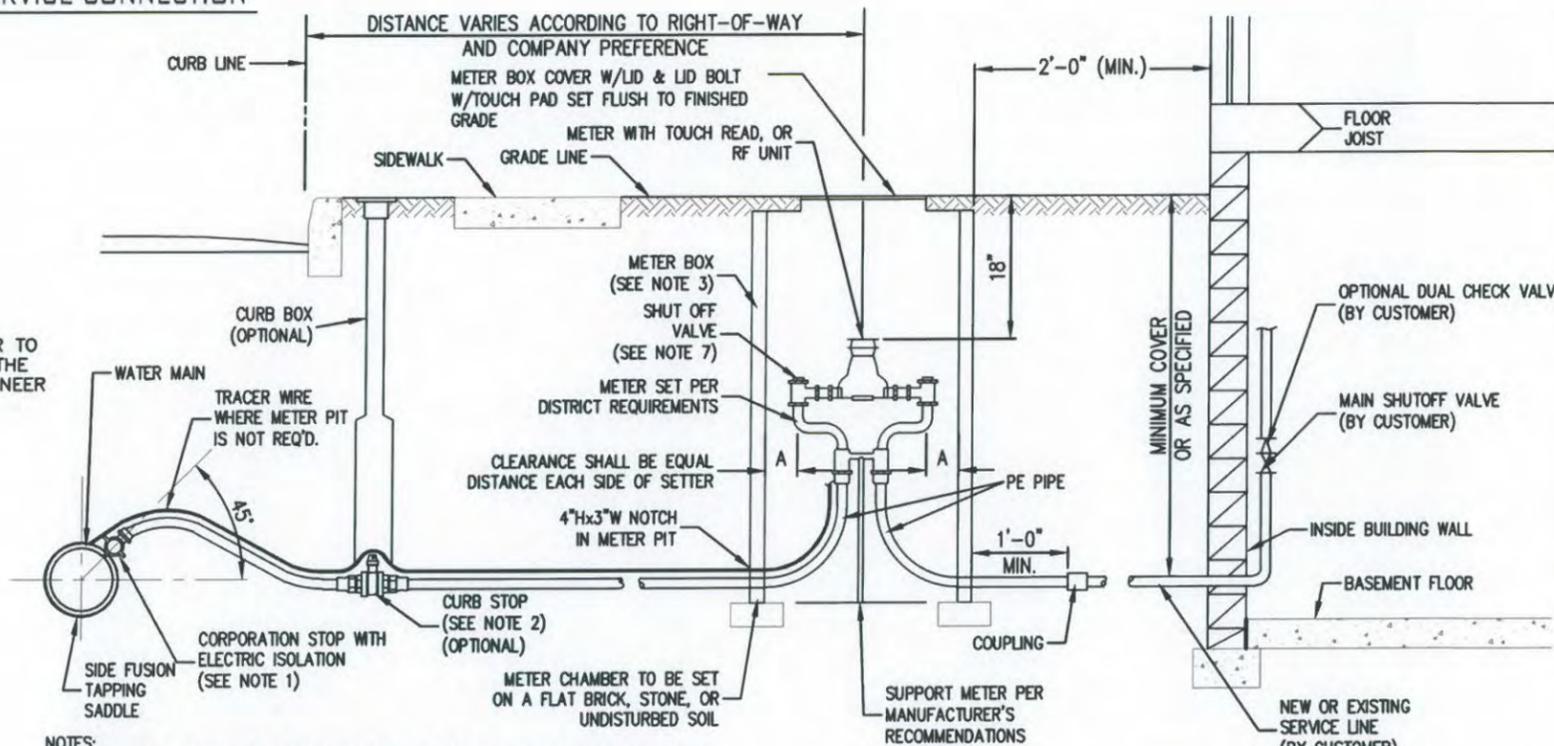
PARALLEL CONSTRUCTION

PERPENDICULAR CONSTRUCTION



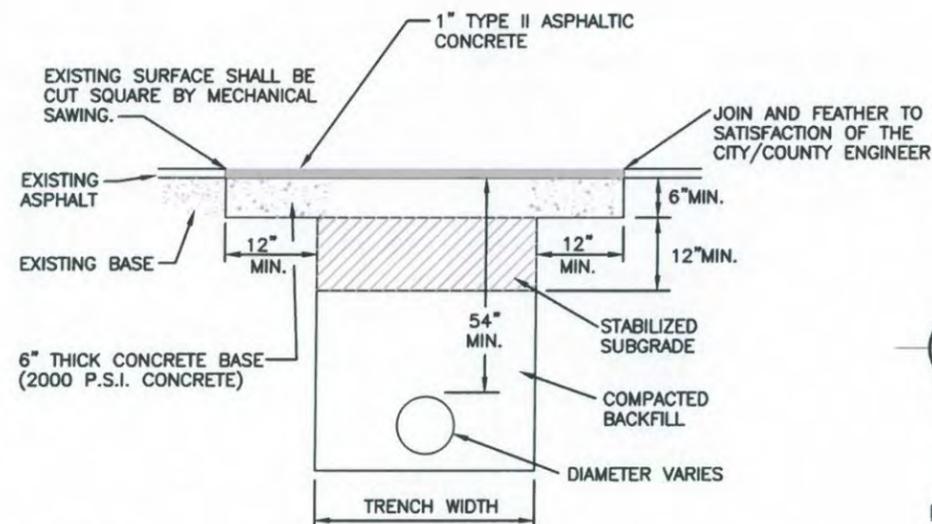
SINGLE WATER SERVICE CONNECTION

- NOTES:
- CORPORATION STOP WITH STRAIGHT COUPLING NUT. SERVICE SADDLES WILL BE USED FOR ALL TAPS IN A/C, PVC OR CONCRETE MAINS.
 - MATERIAL UTILIZED SHOULD BE HDPE.
 - METER PITS PER LOCAL PREFERENCE. CONTACT ENGINEER FOR SPECIFIC REQUIREMENTS.
 - METER BOX LOCATION TO BE DETERMINED BY LOCAL AUTHORITY AND AWW.
 - SERVICE LINE AND METER BOX OWNERSHIP VARIES BY LOCAL TARIFF.
 - CONNECTIONS BETWEEN PIPE LENGTHS SHALL BE COMPRESSION OR FLARE AND MAY DEPEND ON LOCAL PLUMBING REQUIREMENT.
 - RECONNECTION TO EXISTING METER ON SHORT SIDE SERVICES TO EXTEND INTO PIT SHUT OFF VALVE.



SINGLE WATER SERVICE CONNECTION FROM HDPE MAIN

- NOTES:
- CORPORATION STOP WITH STRAIGHT COUPLING NUT. SIDE FUSION SADDLES WILL BE USED FOR ALL TAPS IN A/C, PVC OR CONCRETE MAINS.
 - MATERIAL UTILIZED SHOULD BE HDPE.
 - METER PITS PER LOCAL PREFERENCE. CONTACT ENGINEER FOR SPECIFIC REQUIREMENTS.
 - METER BOX LOCATION TO BE DETERMINED BY LOCAL AUTHORITY AND AWW.
 - SERVICE LINE AND METER BOX OWNERSHIP VARIES BY LOCAL TARIFF.
 - CONNECTIONS BETWEEN PIPE LENGTHS SHALL BE COMPRESSION OR FLARE AND MAY DEPEND ON LOCAL PLUMBING REQUIREMENT.
 - RECONNECTION TO EXISTING METER ON SHORT SIDE SERVICES TO EXTEND INTO PIT SHUT OFF VALVE.



ALL BACKFILLING SHALL BE DONE WITH SUITABLE MATERIAL, TAMPED IN LAYERS NOT TO EXCEED 6", IN ACCORDANCE WITH DIVISION OF TRANSPORTATION'S SPECIFICATIONS.

PAVEMENT REPAIR DETAIL

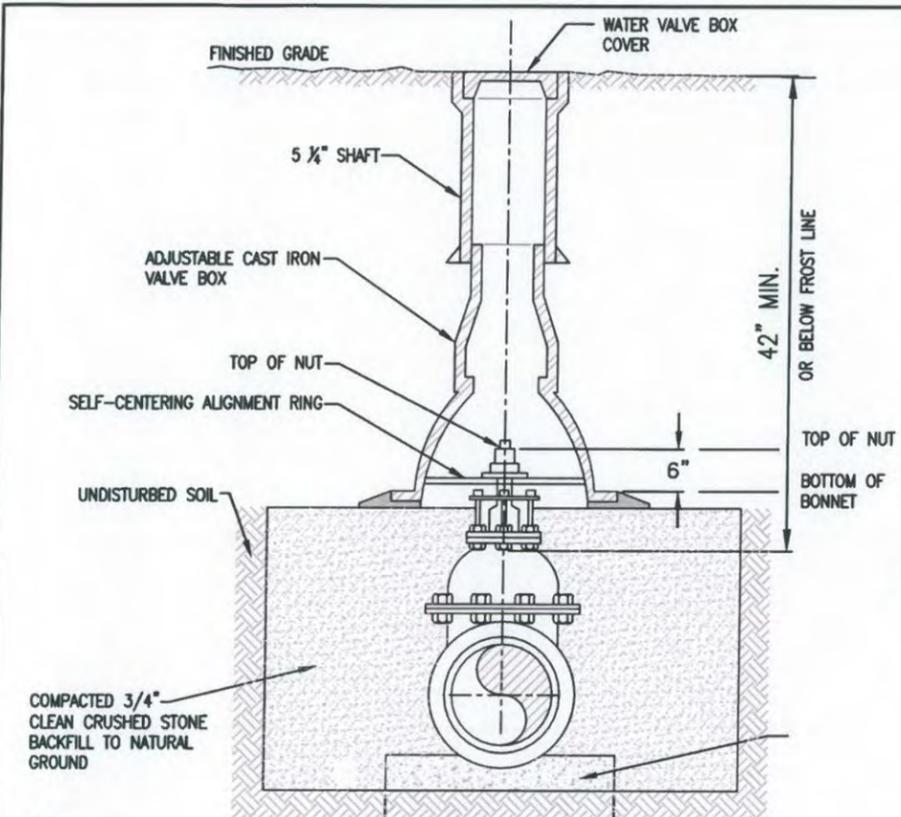
NO SCALE

DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS
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REV. #	DATE	REVISIONS
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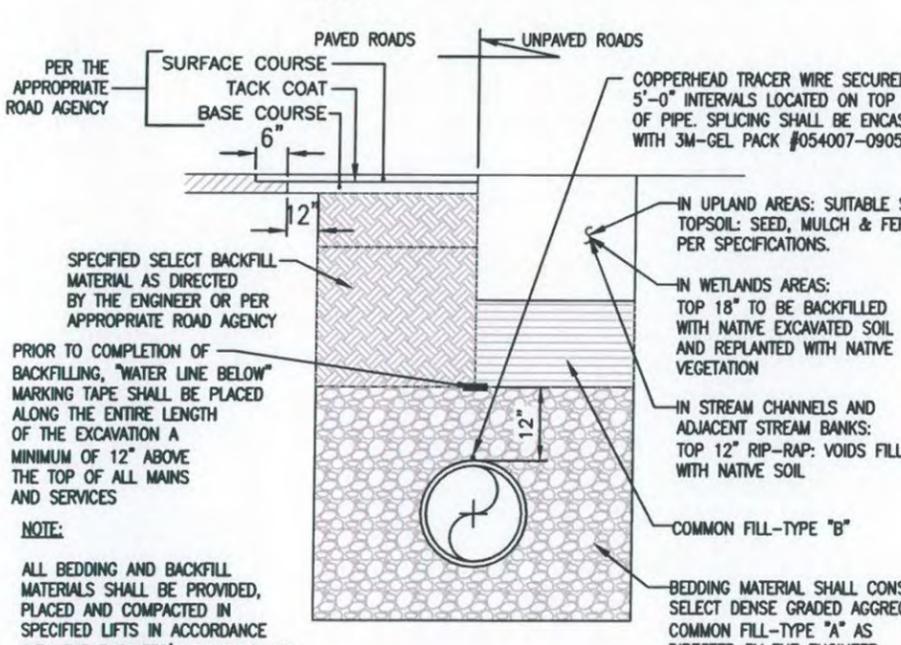


FILE NAME: STANDARD DETAILS
 DATE: AUGUST, 2010
 DESIGNED BY: S. FORD
 DRAWN BY: AS NOTED
 SCALE: AS NOTED
 SHEET: 12



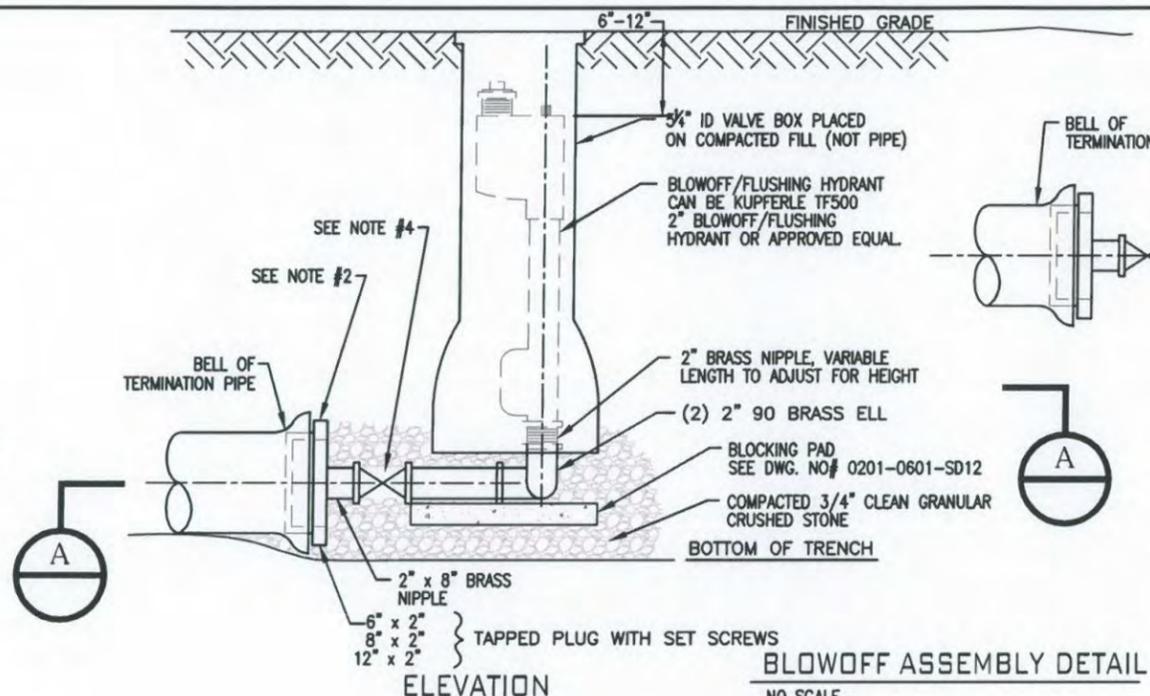
VALVE BOX INSTALLATION FOR FROST AREAS
NO SCALE

NOTE:
6"x6" WOOD BLOCK MAY BE USED AS VALVE PAD WHERE APPROVED BY ENGINEER.



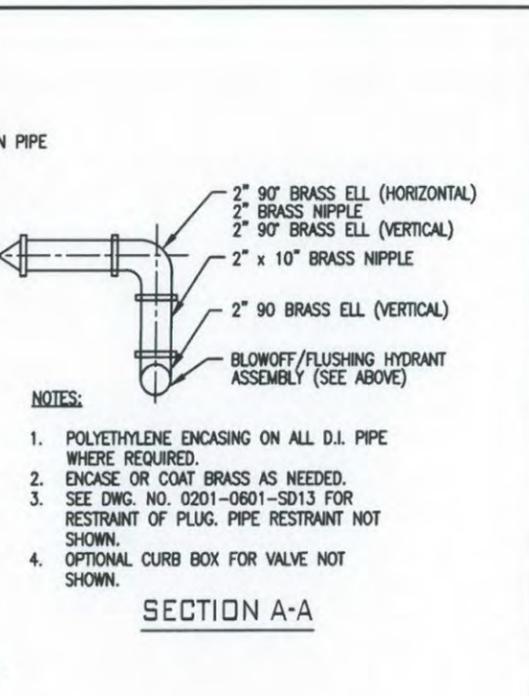
TRENCH RESTORATION DETAIL
NO SCALE

NOTE:
ALL BEDDING AND BACKFILL MATERIALS SHALL BE PROVIDED, PLACED AND COMPACTED IN SPECIFIED LIFTS IN ACCORDANCE WITH THE ENGINEER'S DIRECTION OR THE REQUIREMENTS OF THE REGULATING AGENCY HAVING JURISDICTION IF MORE STRINGENT

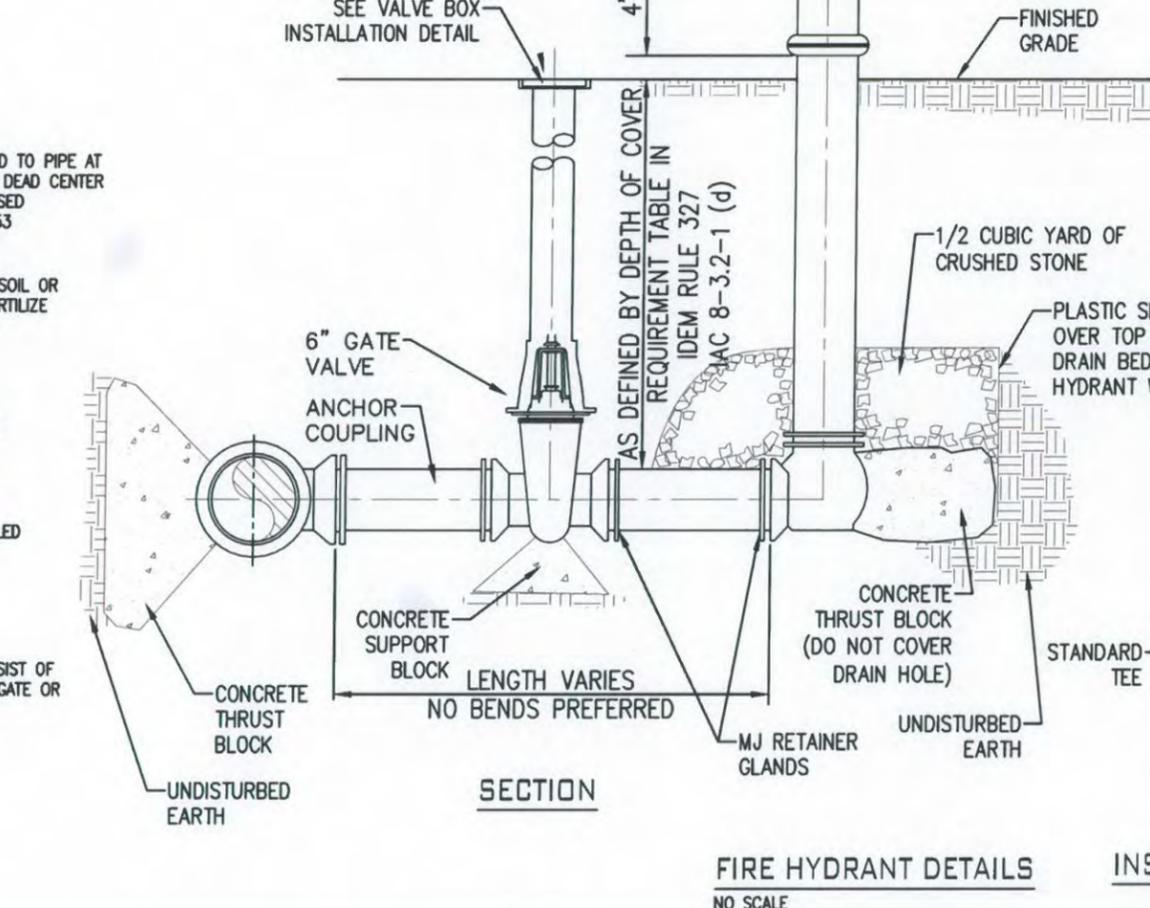


BLOWOFF ASSEMBLY DETAIL
NO SCALE

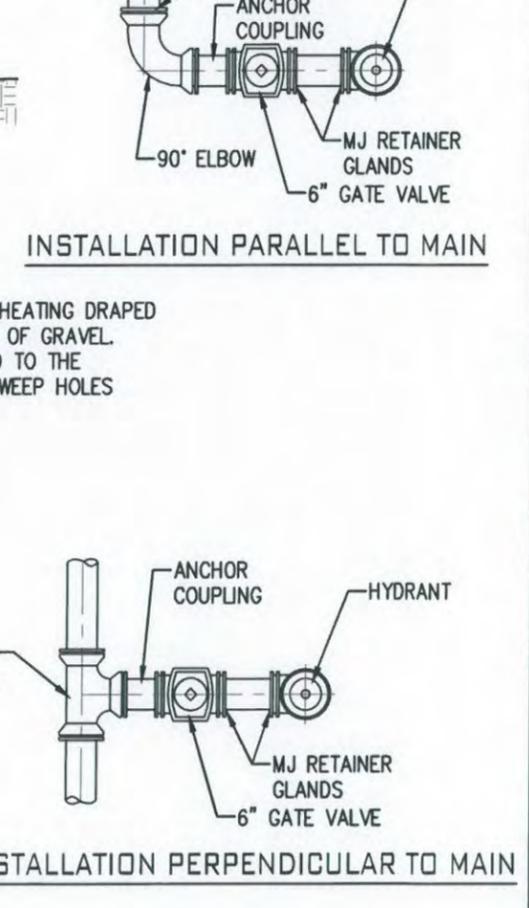
SEE NOTE #2
SEE NOTE #4



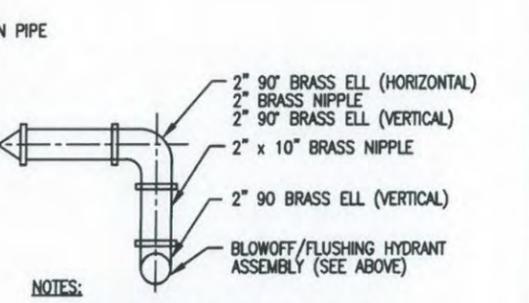
INSTALLATION PARALLEL TO MAIN



FIRE HYDRANT DETAILS
NO SCALE



INSTALLATION PERPENDICULAR TO MAIN



- NOTES:**
- POLYETHYLENE ENCASING ON ALL D.I. PIPE WHERE REQUIRED.
 - ENCASE OR COAT BRASS AS NEEDED.
 - SEE DWG. NO. 0201-0601-SD13 FOR RESTRAINT OF PLUG. PIPE RESTRAINT NOT SHOWN.
 - OPTIONAL CURB BOX FOR VALVE NOT SHOWN.

SECTION A-A

DISTRICT OFFICE: JOHNSON COUNTY OPERATIONS	
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FILE NAME:	STANDARD DETAILS
DATE:	AUGUST, 2016
DESIGNED BY:	S. FORD
DRAWN BY:	AS NOTED
SCALE:	
SHEET:	13

