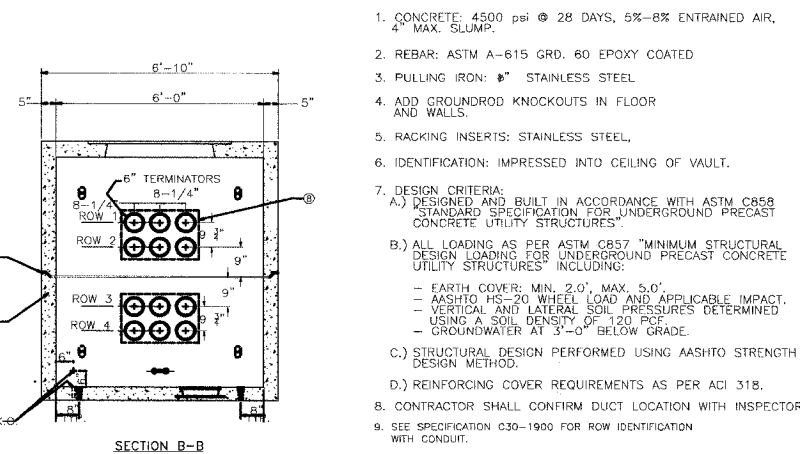
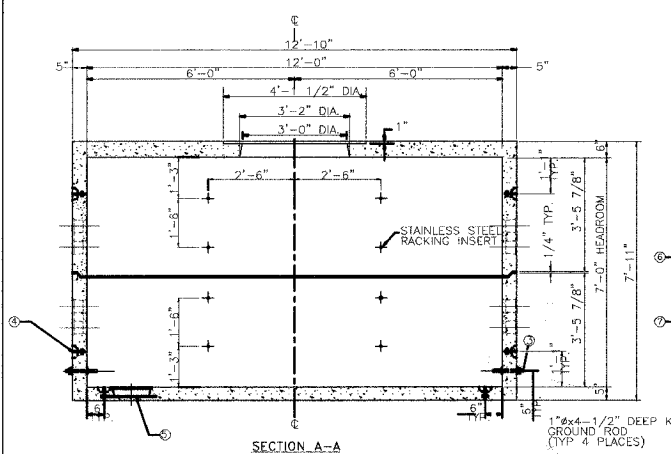


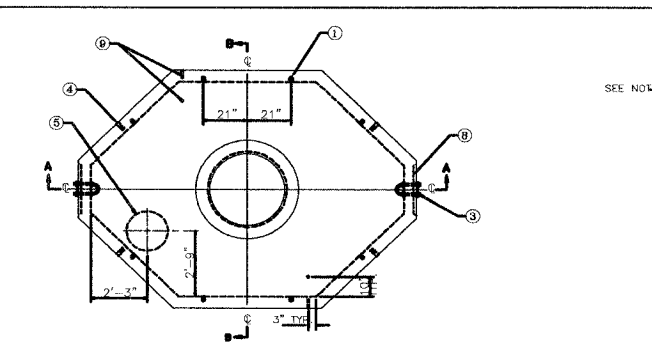
ITEM	DESCRIPTION	QTY	NOTE
	TOTAL MANHOLE WEIGHT	4500 P.S.I. CONC.	27,405 LBS.
①	TOP SECTION WEIGHT	4500 P.S.I. CONC.	14,100 LBS.
	BASE SECTION WEIGHT		13,305 LBS.
②	REBAR: GR. 60, EPOXY COATED		2
③	6" DUCT TERMINATORS	24	
④	1" BUTYL RUBBER JOINT SEALANT	4 ROLLS	
⑤	SUMP GRATE & 12"x12"x1/8" P	1	4
⑥	5" LIFTING ANCHORS	12	
⑦	1" S/S PULLING IRONS	2	
⑧	1/2" $\phi$ x 3" DEEP S/S INSERTS WITH 1/2" $\phi$ x 3" S/S HEX HEAD BOLT AND WASHER.	16	



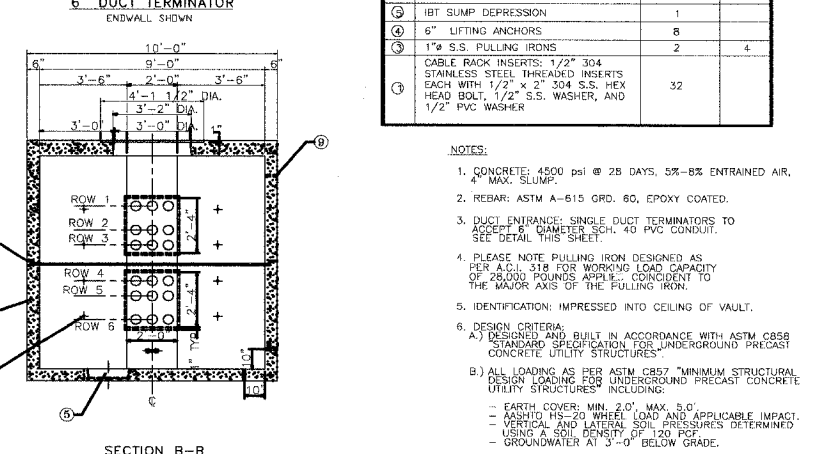
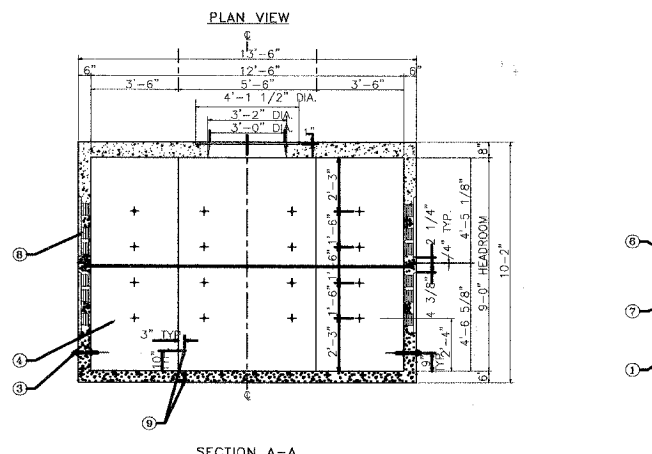
- NOTES:
- CONCRETE: 4500 psi @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
  - REBAR: ASTM A-615 GRD. 60 EPOXY COATED
  - PULLING IRON: 1" STAINLESS STEEL
  - ADD GROUNDROD KNOCKOUTS IN FLOOR AND WALLS.
  - RACKING INSERTS: STAINLESS STEEL.
  - IDENTIFICATION: IMPRESSED INTO CEILING OF VAULT.
  - DESIGN CRITERIA:
    - A.) DESIGNED AND BUILT IN ACCORDANCE WITH ASTM C858 STANDARD SPECIFICATION FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES.
    - B.) ALL LOADING AS PER ASTM C857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" INCLUDING:
      - EARTH COVER: MIN. 2.0', MAX. 5.0'.
      - AASHTO HS-20 WHEEL LOAD AND APPLICABLE IMPACT.
      - VERTICAL AND LATERAL SOIL PRESSURES DETERMINED USING A SOIL DENSITY OF 120 PCF
      - GROUNDWATER AT 3'-0" BELOW GRADE.
    - C.) STRUCTURAL DESIGN PERFORMED USING AASHTO STRENGTH DESIGN METHOD.
    - D.) REINFORCING COVER REQUIREMENTS AS PER ACI 318.
  - CONTRACTOR SHALL CONFIRM DUCT LOCATION WITH INSPECTOR.
  - SEE SPECIFICATION C30-1900 FOR ROW IDENTIFICATION WITH CONDUIT.

ADDING THE MANHOLE CENTER ASSEMBLY CONVERTS TYPE "A" MANHOLE TO TYPE "C" MANHOLE.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	TYPE A MANHOLE	DATE: 12-18-04 M90-1140
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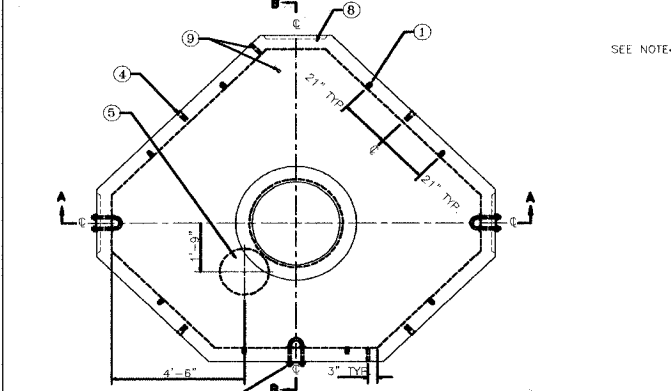
ITEM	DESCRIPTION	QTY	NOTE
	TOTAL MANHOLE WEIGHT	4500 P.S.I. CONC.	43,000 LBS.
①	TOP SECTION WEIGHT	4500 P.S.I. CONC.	22,000 LBS.
	BASE SECTION WEIGHT		21,000 LBS.
②	REBAR, EPOXY COATED		2
③	1" $\phi$ x 5 1/2" GROUND WIRE HOLE, 1/2" KNOCKOUT	4	
④	6" DUCT TERMINATORS	36	3
⑤	1" BUTYL RUBBER JOINT SEALANT	4 ROLLS	
⑥	IBT SUMP DEPRESSION	1	
⑦	6" LIFTING ANCHORS	8	
⑧	1" S/S PULLING IRONS	2	4
⑨	CABLE RACK INSERTS: 1/2" 304 STAINLESS STEEL THREADED INSERTS EACH WITH 1/2" x 2" 304 S.S. HEX HEAD BOLT, 1/2" S.S. WASHER, AND 1/2" PVC WASHER	32	



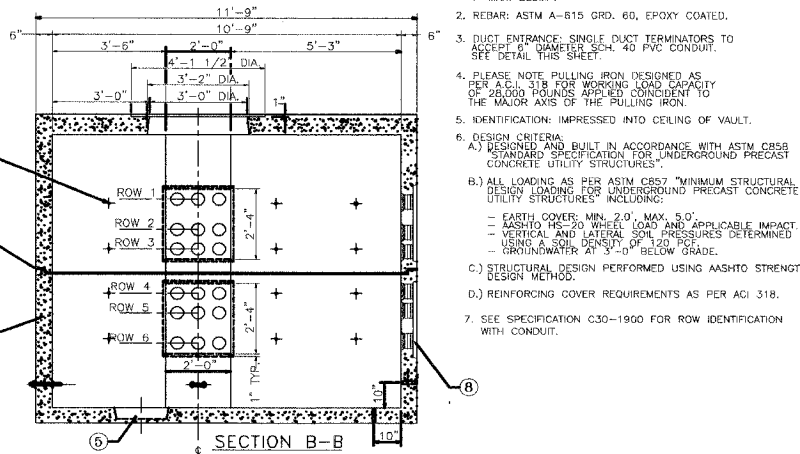
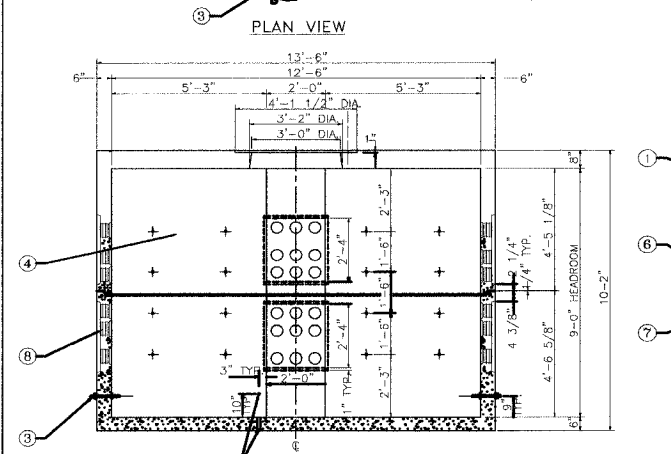
- NOTES:
- CONCRETE: 4500 psi @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
  - REBAR: ASTM A-615 GRD. 60, EPOXY COATED.
  - DUCT ENTRANCE: SINGLE DUCT TERMINATORS TO ACCEPT 6" DIAMETER SCH. 40 PVC CONDUIT. SEE DETAIL THIS SHEET.
  - PLEASE NOTE PULLING IRON DESIGNED AS PER A.C.I. 318 FOR WORKING LOAD CAPACITY OF 28,000 POUNDS APPLIED CONCURRENT TO THE MAJOR AXIS OF THE PULLING IRON.
  - IDENTIFICATION: IMPRESSED INTO CEILING OF VAULT.
  - DESIGN CRITERIA:
    - A.) DESIGNED AND BUILT IN ACCORDANCE WITH ASTM C858 STANDARD SPECIFICATION FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES.
    - B.) ALL LOADING AS PER ASTM C857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" INCLUDING:
      - EARTH COVER: MIN. 2.0', MAX. 5.0'.
      - AASHTO HS-20 WHEEL LOAD AND APPLICABLE IMPACT.
      - VERTICAL AND LATERAL SOIL PRESSURES DETERMINED USING A SOIL DENSITY OF 120 PCF
      - GROUNDWATER AT 3'-0" BELOW GRADE.
    - C.) STRUCTURAL DESIGN PERFORMED USING AASHTO STRENGTH DESIGN METHOD.
    - D.) REINFORCING COVER REQUIREMENTS AS PER ACI 318.
  - SEE SPECIFICATION C30-1900 FOR ROW IDENTIFICATION WITH CONDUIT.

NOTE:  
1) EXISTING MANHOLES USUALLY SINGLE OPENING MANHOLES

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	TYPE B MANHOLE	DATE: 12-24-04 M90-1160
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ITEM	DESCRIPTION	QTY	NOTE
	TOTAL MANHOLE WEIGHT	4500 P.S.I. CONC.	46,000 LBS.
①	TOP SECTION WEIGHT	4500 P.S.I. CONC.	24,000 LBS.
	BASE SECTION WEIGHT		22,000 LBS.
②	REBAR, EPOXY COATED		2
③	1" $\phi$ x 5 1/2" GROUND WIRE HOLE, 1/2" KNOCKOUT	4	
④	6" DUCT TERMINATORS	54	3
⑤	1" BUTYL RUBBER JOINT SEALANT	4 ROLLS	
⑥	IBT SUMP DEPRESSION	1	
⑦	6" LIFTING ANCHORS	8	
⑧	1" S/S PULLING IRONS	3	4
⑨	CABLE RACK INSERTS: 1/2" 304 STAINLESS STEEL THREADED INSERTS EACH WITH 1/2" x 2" 304 S.S. HEX HEAD BOLT, 1/2" S.S. WASHER, AND 1/2" PVC WASHER	32	



- NOTES:
- CONCRETE: 4500 psi @ 28 DAYS, 5%-8% ENTRAINED AIR, 4" MAX. SLUMP.
  - REBAR: ASTM A-615 GRD. 60, EPOXY COATED.
  - DUCT ENTRANCE: SINGLE DUCT TERMINATORS TO ACCEPT 6" DIAMETER SCH. 40 PVC CONDUIT. SEE DETAIL THIS SHEET.
  - PLEASE NOTE PULLING IRON DESIGNED AS PER A.C.I. 318 FOR WORKING LOAD CAPACITY OF 28,000 POUNDS APPLIED CONCURRENT TO THE MAJOR AXIS OF THE PULLING IRON.
  - IDENTIFICATION: IMPRESSED INTO CEILING OF VAULT.
  - DESIGN CRITERIA:
    - A.) DESIGNED AND BUILT IN ACCORDANCE WITH ASTM C858 STANDARD SPECIFICATION FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES.
    - B.) ALL LOADING AS PER ASTM C857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES" INCLUDING:
      - EARTH COVER: MIN. 2.0', MAX. 5.0'.
      - AASHTO HS-20 WHEEL LOAD AND APPLICABLE IMPACT.
      - VERTICAL AND LATERAL SOIL PRESSURES DETERMINED USING A SOIL DENSITY OF 120 PCF
      - GROUNDWATER AT 3'-0" BELOW GRADE.
    - C.) STRUCTURAL DESIGN PERFORMED USING AASHTO STRENGTH DESIGN METHOD.
    - D.) REINFORCING COVER REQUIREMENTS AS PER ACI 318.
  - SEE SPECIFICATION C30-1900 FOR ROW IDENTIFICATION WITH CONDUIT.

ADDING THE MANHOLE CENTER ASSEMBLY CONVERTS TYPE "A" MANHOLE TO TYPE "C" MANHOLE.

NAPERVILLE PUBLIC UTILITIES DEPARTMENT ELECTRIC STANDARDS	TYPE C MANHOLE	DATE: 12-24-04 M90-1170
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WF# INFORMATION		CITY OF NAPERVILLE/DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC			
WF# 59481 WASHINGTON ST. 75TH TO OLYMPUS DR. EAST SIDE	JOB 1 EU-73	PROJECT TITLE 75TH ST. AND WASHINGTON ST. ROAD IMPROVEMENTS		MAP NO.:	CAD FILE: D05627001D31.DWG
WF# 59482 75TH WASHINGTON ST. TO OLYMPUS DR. NORTH SIDE	JOB 2 EU-73	PROJECT DESCRIPTION TRENCH SECTION DETAILS		DRWN BY: JK, PM	PROJECT NO.:
WF# 59484 75TH WASHINGTON ST. TO CLYDE DR. SOUTH SIDE	JOB 3 EU-73	DATE 4-01-08	ISSUED	WORK REQUEST NO. 56270	COMPLETED BY:
WF# 59485 WASHINGTON ST. 75TH TO BAILEY RD. EAST SIDE	JOB 4 EU-73	ENGINEER RPS	REVISION	APPRV:	SCALE: NTS
				SHEET 31 OF 73	