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GUIDELINES FOR AT&T CONDUIT

1. Conduit shall meet AT&T standards and be usable for the purpose intended, that is, it must be of adequate size and properly installed.
2. All new or replacement underground facilities will be protected by orange warning tape-AT&T provided. Tape is to be placed 12 inches below grade or 18 inches above the facilities unless concrete encasement or steel conduit is used. In addition, one or more of the following methods of protection will be used as necessary:
 - Stakes, flags and warning markers
 - Concrete cap
 - Steel plates
 - Fiberglass conduit
 - Placement in deeper trench
 - Colored slurry
3. Only non-metallic conduit shall be used. Rigid plastic is acceptable provided it meets electrical standards such as Western Underground Committee Specifications, Underwriters Laboratory Specifications or General Telephone Specification No. GT80.
4. Only standard manufactured factory bends shall be used.
5. Flexible and non-rigid conduits such as polyethylene pipe are **not acceptable**.
6. Steel conduit 4 inch, 3 inch or 2 inch can be used within the building only. The gauge of the conduit shall meet or exceed the maximum local ordinances.
7. All conduits placed for **commercial** use must be proved and Wall-to-Wall final measurements provided. The final measurement is to be given to the AT&T inspector. Place 3/8 inch polypropylene rope and TruTape or place continuous Mule Tape in all conduits. Secure ropes in splice boxes, enclosures and manholes.

8. Sand inside edge of all conduits entering into splice boxes, enclosures and manholes.
9. Use approved AT&T plastic plugs on ends of conduit. **DO NOT USE TAPE OR RAGS.**

10. Concrete encase all 11 ¼, 22 ½, 45, and 90 degree bends and pole locations with 3 inches of concrete. Allow 3 inch separation between conduit for concrete encasement when placing 2 or more conduits in radius. Use 3 sacks cement per cubic yard of ¼ inch to 3/8 inch aggregate.

APPROVED CONDUIT

2" Conduit Type AT&T PTS-66 Type C or Schedule 40

4" Conduit Type AT&T PTS-77 Type C or Schedule 40

BENDING RADIUS

2" Conduit-Minimum 2-foot radius required for all below ground 11 ¼, 22 ½, 45, and 90 degree curvature angles.

4" Conduit-Minimum 5-foot radius required for all below ground 11 ¼, 22 ½, 45, and 90 degree curvature angles.

NOTE: No more than two (2) 90 degree bends in a conduit run without a splice/pull box. Unless otherwise specified, splice boxes are not rated for traffic.

BUILDING RISERS AND POLE RISERS

2" Conduit-Minimum 2 foot radius 90 degree angle (Type C Schedule 80)

4" Conduit-Minimum 3 foot radius 90 degree angle (Type AT&T PTS-77 Type "E" or Schedule 80)



GUIDELINES FOR SPLICE BOXES, HANDHOLES, SUBSURFACE ENCLOSURES AND MANHOLES

All boxes, enclosures and manholes shall meet AT&T standards as shown on the following pages.

Placement of structure must allow for the final grade of new sidewalk and/or parkways that are not yet constructed. Wherever possible the structures should always be placed **after** final grade has been established.

The base or bottom of splice box handholes and subsurface enclosures should be set level and the top sloped to conform to the ground surface.

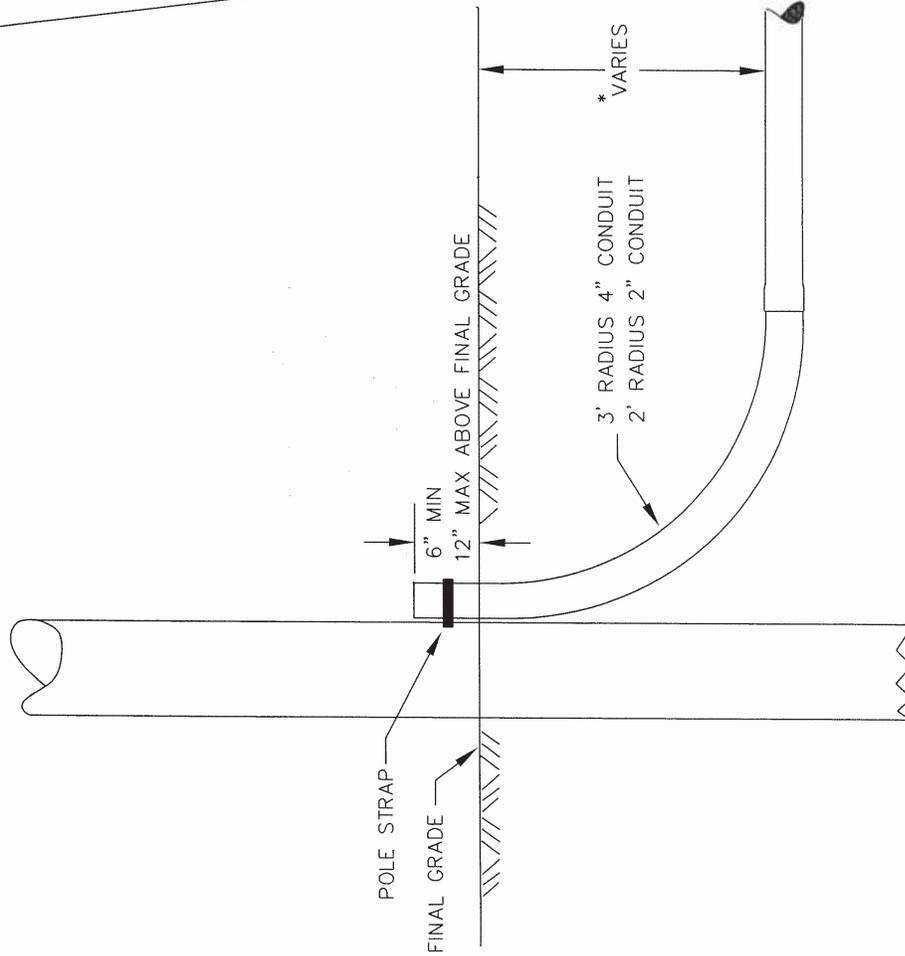
A minimum of six (6) inches of sand is required under all handholes and splice boxes **and** an additional six (6) inches of pea gravel or crushed rock is required under all FCA- 3048, 3060 and 4896 splice boxes and manholes. This is to insure uniform distribution of soil pressure on the floor of all subsurface enclosures.

All conduits should be cut flush with the inside of the structure and mortared when using concrete boxes. When using the NewBasis polymer boxes, finish conduits with appropriate conduit terminators. (See attached example) Conduits should **never** enter handhole at the center of the wall nor through the bottom. Structures shall be free of mud, debris or dirt.

Mortar the joints between all the parts of any service box. Seal up all the unused ports and openings in the service box. Also, seal around ducts and buried cable. Use cement mortar, water plug cement or other approved prepared mortars on concrete boxes. On NewBasis polymer boxes, use approved sealing method.

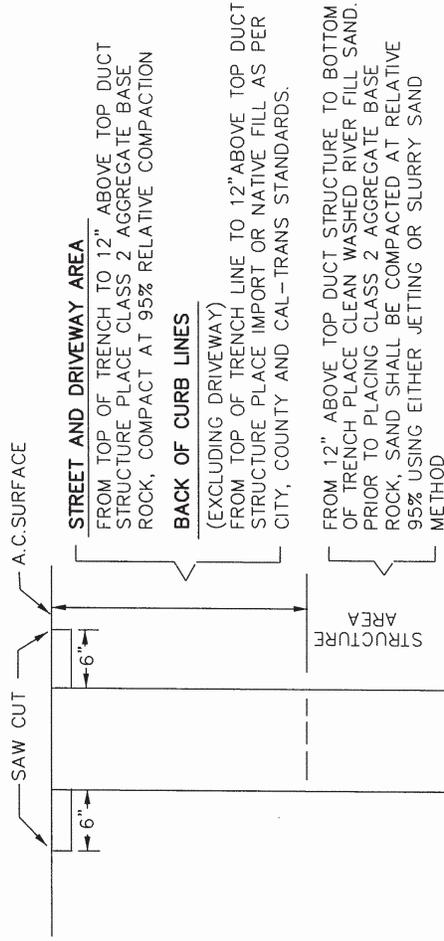


TYPICAL RISER POLE DETAIL



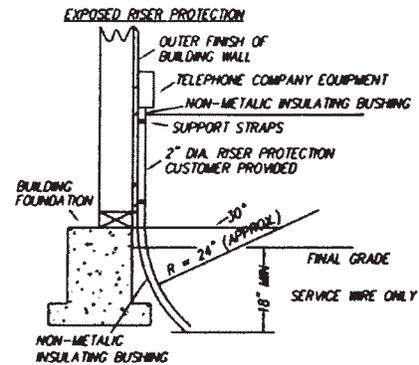
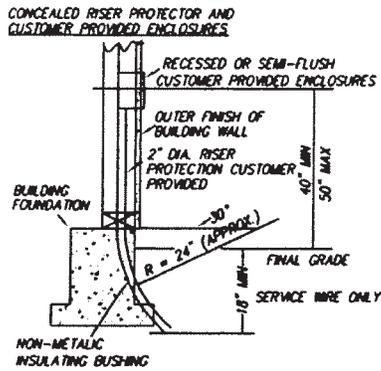
ALL RISER CONDUIT TO BE SCHEDULE 80.
CONCRETE ENCASE RISER BENDS.

TYPICAL BACKFILL REQUIREMENTS



CONTRACTOR NOTE:
DO NOT USE BEACH SAND FOR FILL SAND

NOTE:
A MIN OF 6" SAND IS REQUIRED UNDER ALL HANDHOLES AND SPLICE BOXES AND 6" OF 1 1/2" MINUS OR LESS BASE ROCK IS REQUIRED UNDER ALL PTS-3660, 3672 & PTS-4878 AND MANHOLES. THIS IS TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE ON THE FLOOR OF ALL SUBSURFACE ENCLOSURES.



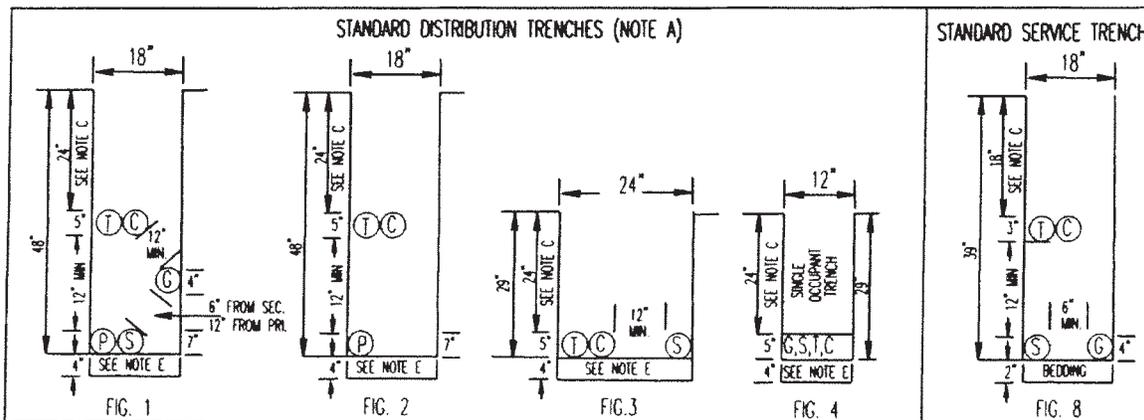
NOTES:

- A. TYPICAL TRENCH SECTION ARE DESIGNED FOR INSTALLATIONS WHERE EACH OCCUPANT IS UTILIZING THEIR ENTIRE SPACE ALLOCATION, OTHER SECTIONS, OR REDUCED DIMENSIONS, MAY BE USED PROVIDED THAT MINIMUM COVER AND CLEARANCES ARE MAINTAINED AS LISTED ABOVE.
- B. TRENCH MAY BE LOCATED UNDER, PARTLY UNDER, OR CLEAR OF SIDEWALK.
- C. ALL DEPTHS MEASURED FROM FINAL GRADE, INCREASE COVER TO 30" IN STREET AREA.
- D. USE SELECT BACKFILL IF REQUIRED TO ACHIEVE COMPACTION.
- E. FOR PG&E REQUIREMENTS ADD 4" TO DEPTH OF TRENCH FOR SAND BEDDING.
- F. COVER ON GAS SERVICE FACILITIES MAY BE REDUCED TO 18" WHEN INSTALLING STEEL SERVICES.

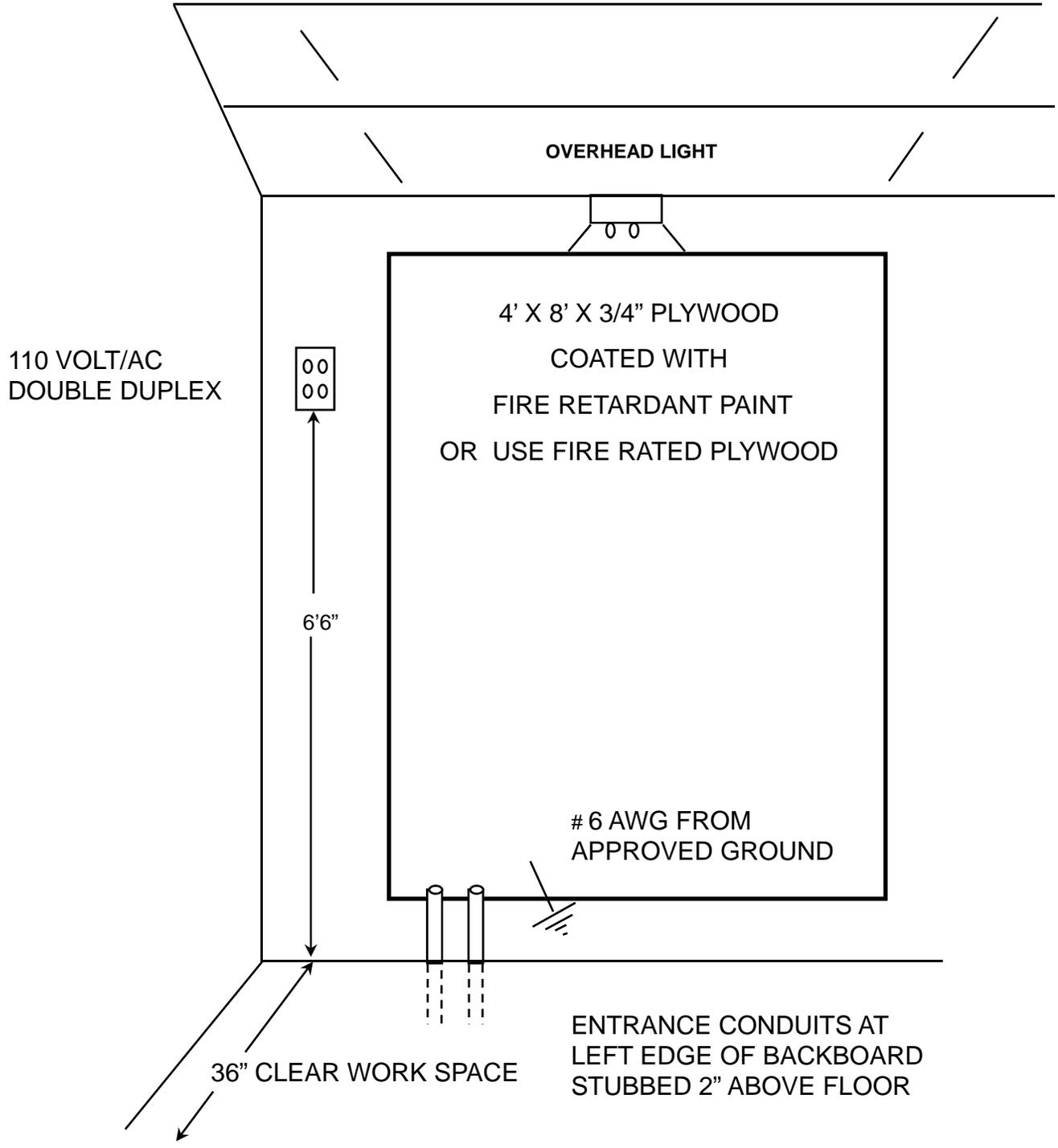
MINIMUM COVER AND CLEARANCES

	Min. Separation From					Minimum Cover
	G	T	C	S	P	
G (Gas)	-	12"	12"	6"	12"	24" (See Note F)
T (Telephone)	12"	1"	1"	12"	12"	24" * 30" in street
C (CATV)	12"	1"	1"	12"	12"	24" *
S (Elect. Second)	6"	12"	12"	-	3"	24" 30" in street
P (Elect. Primary)	12"	12"	12"	3"	-	30"

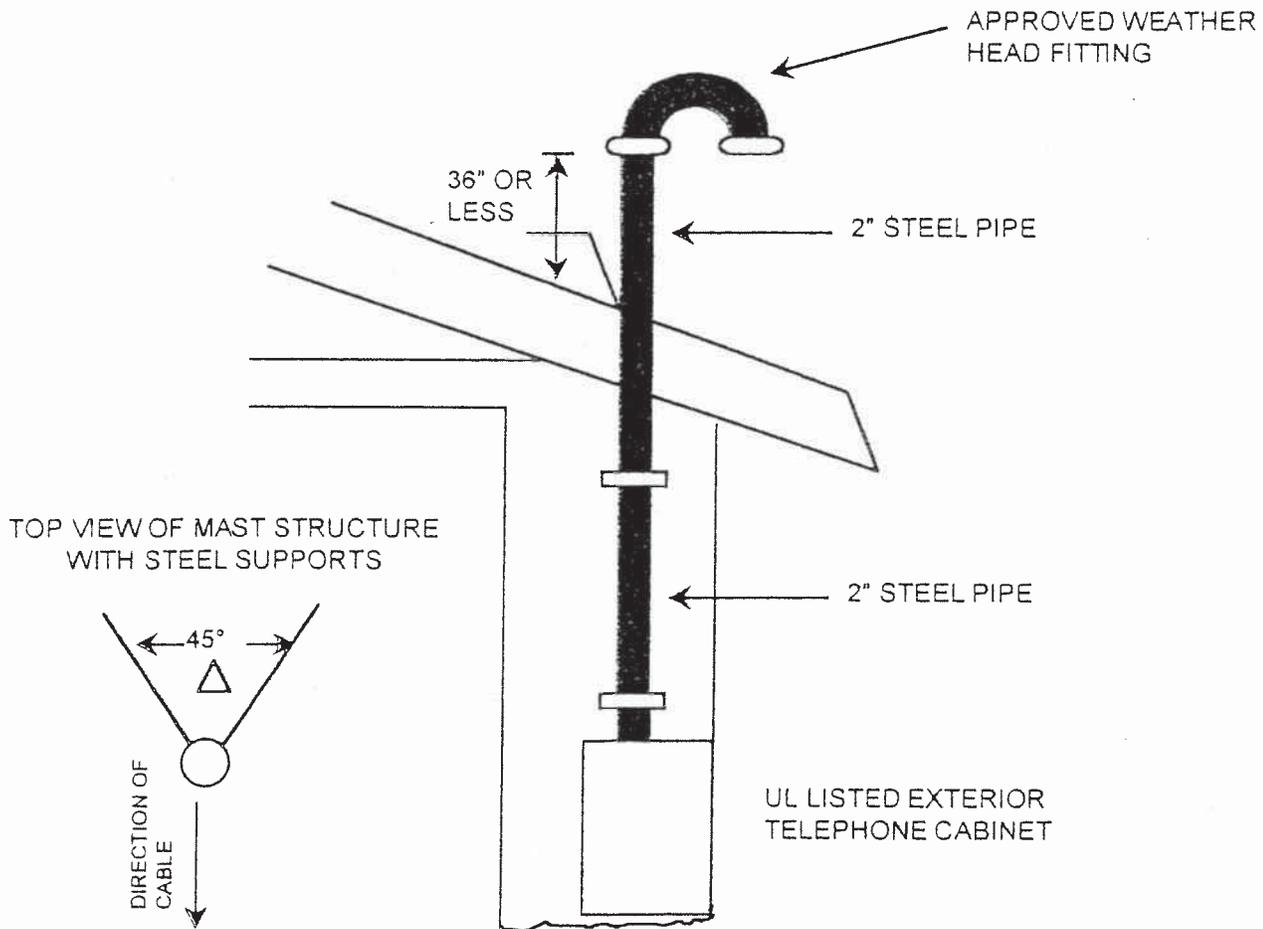
* Values shown are typical, but should be verified with local T or C engineer



MAIN BUILDING TERMINAL TYPICAL BACKBOARD LAYOUT



AERIAL ENTRANCE ATTACHMENT

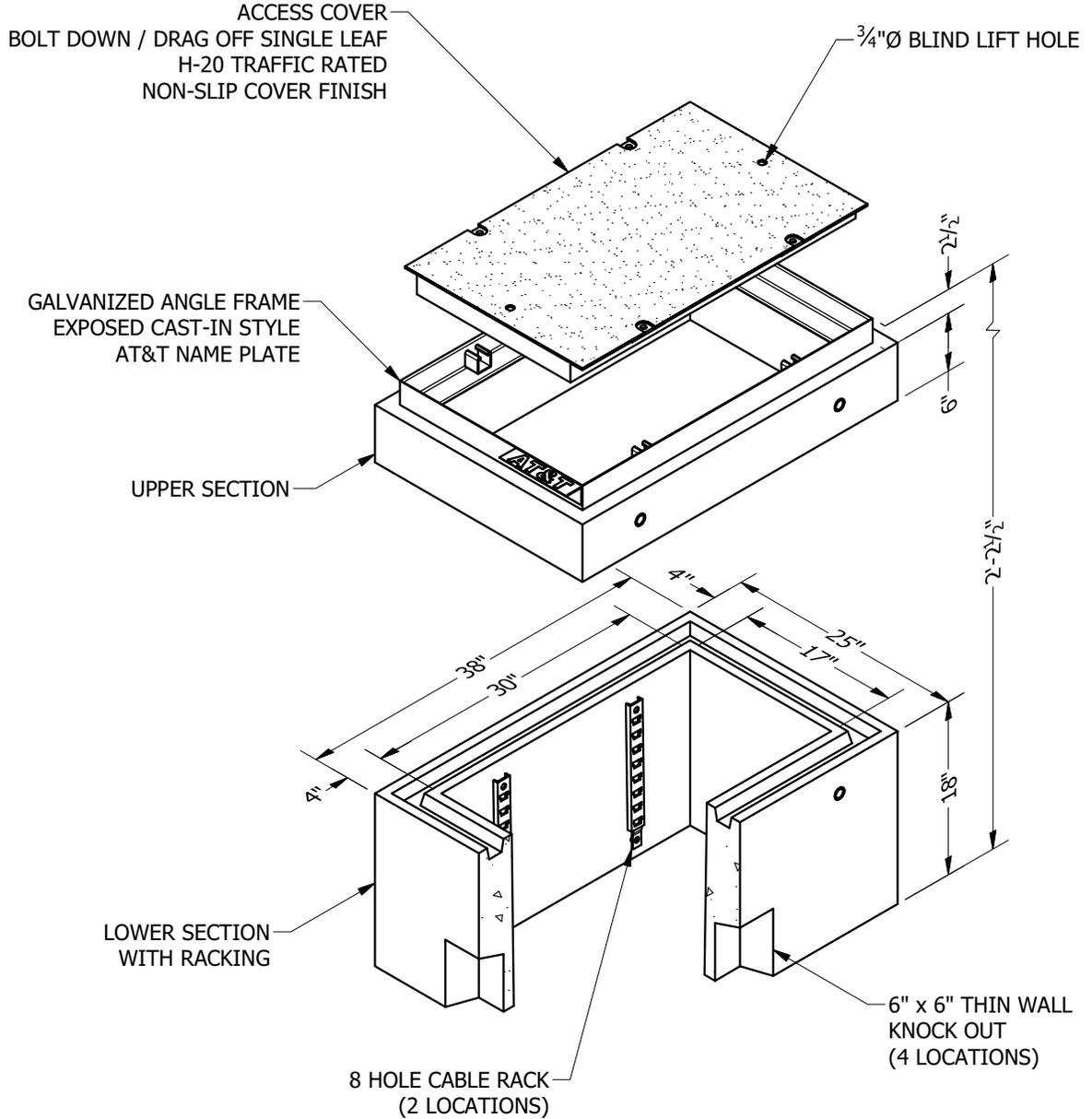


NOTE:

- SLACK SPAN FROM POLE TO MAST NOT TO EXCEED 100'
- MINIMUM DISTANCE FROM POWER IS 12" PER STATE GO 95
- MASTS OVER 36" REQUIRE 1" STEEL SUPPORTS SECURED TO ROOF WITH LAG SCREW
- ATTACH MAST TO STUDDING WITH PIPE STRAPS
- STEEL CONDUIT MUST BE GROUNDED

MATERIAL LIST

PART NUM	DESCRIPTION	WEIGHT (LBS)
1730-L18-AT	17"x30"x18" LOWER SECTION - AT&T	642
1730-T06-AT	17"x30"x6" UPPER SECTION - AT&T	279
1730-GDC-HTNS	BOLT DOWN / DRAG OFF NON-SLIP STEEL COVER - TRAFFIC	83



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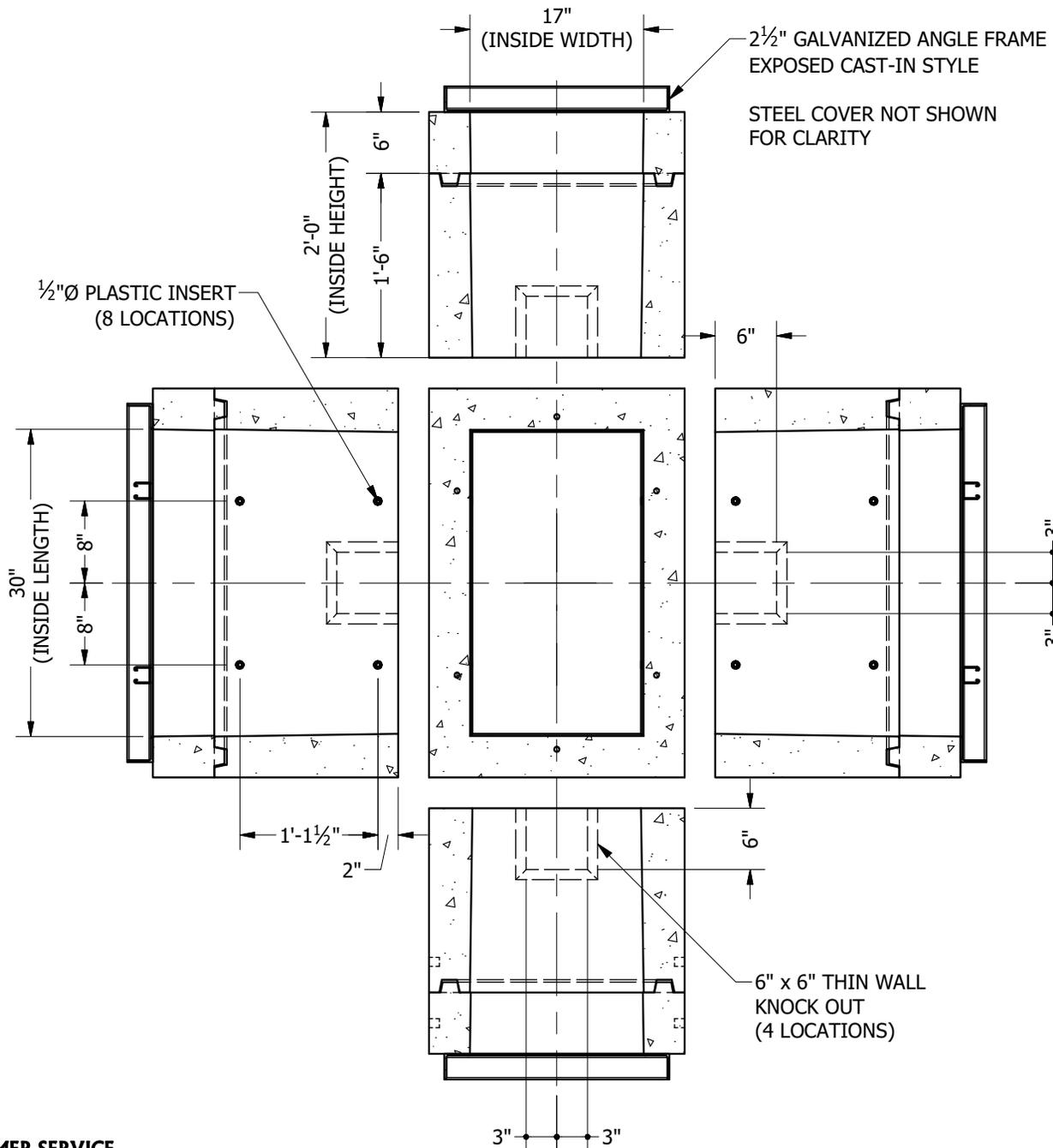
17" x 30" x 24"
 AT&T SPLICE BOX
 TRAFFIC RATED DRAG OFF
 NON-SLIP COVER

ISSUE DATE: 1/5/2009

AGENCY SERIES:

PART #:

ASY-1730-24-TR-AT



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 DETAILED VIEW**



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17" x 30" x 24"
 AT&T SPLICE BOX
 TRAFFIC RATED DRAG OFF
 NON-SLIP COVER

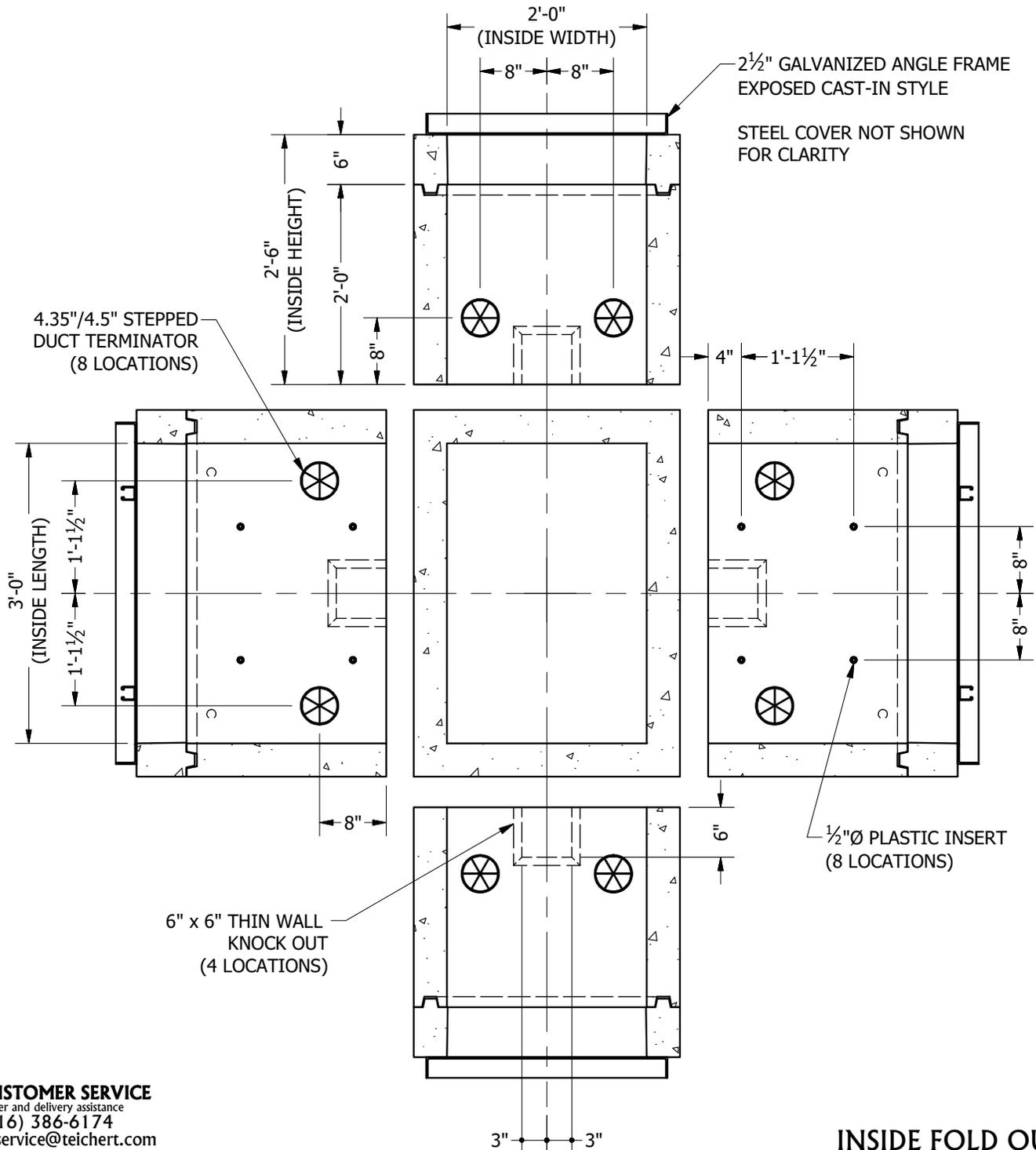
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2'-0" x 3'-0" x 2'-6"
AT&T SPLICE BOX
TRAFFIC RATED DRAG OFF
NON-SLIP COVER

ISSUE DATE:

1/5/2009

AGENCY SERIES:

PART #:

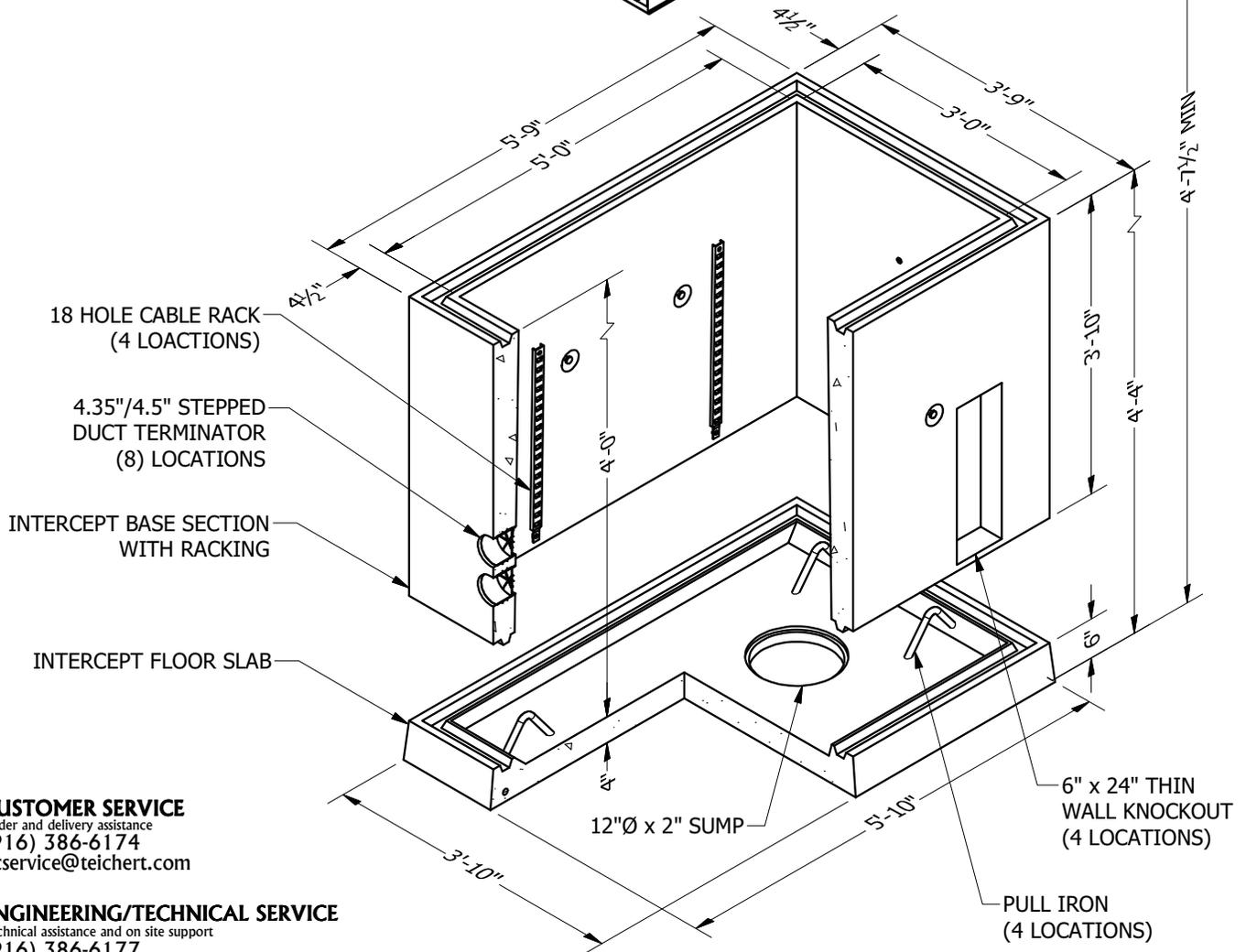
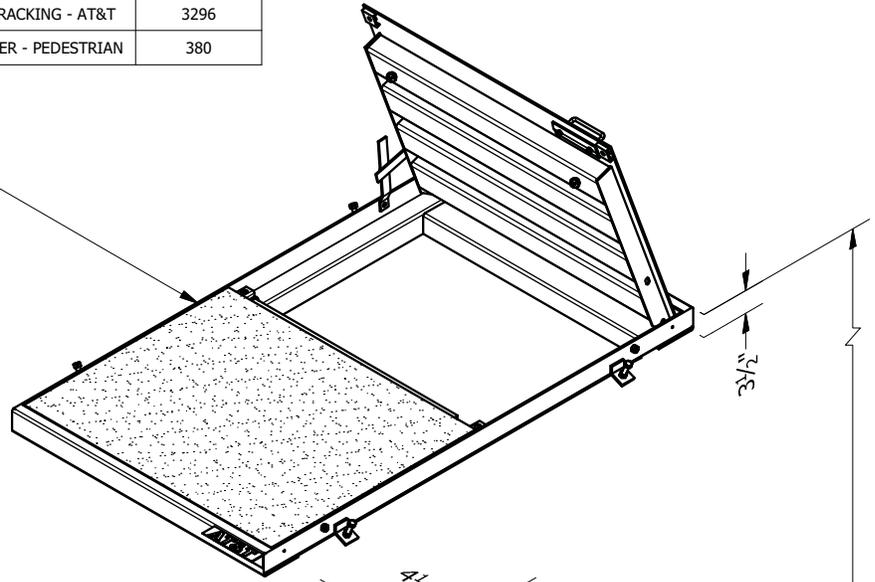
ASY-0100-30-TR-AT

MATERIAL LIST

PART NUM	DESCRIPTION	WEIGHT (LBS)
0400-F06	3'-0" x 5'-0" x 6" INTERCEPT FLOOR	1228
0400-INT46-R-AT	3'-0" x 5'-0" x 3'-10" INTERCEPT WITH RACKING - AT&T	3296
0400-SHC-PRNS-AT	TORSION HINGED NON-SLIP STEEL COVER - PEDESTRIAN	380

ACCESS COVER
TORSION HINGED DOUBLE LEAF
PEDESTRIAN RATED
NON-SLIP COVER FINISH
ADJUSTABLE SKIRTED STYLE FRAME
AT&T NAME PLATE

SEE DRAWING OF PART #:
0400-SHC-PRNS-AT FOR
ADDITIONAL COVER DETAILS



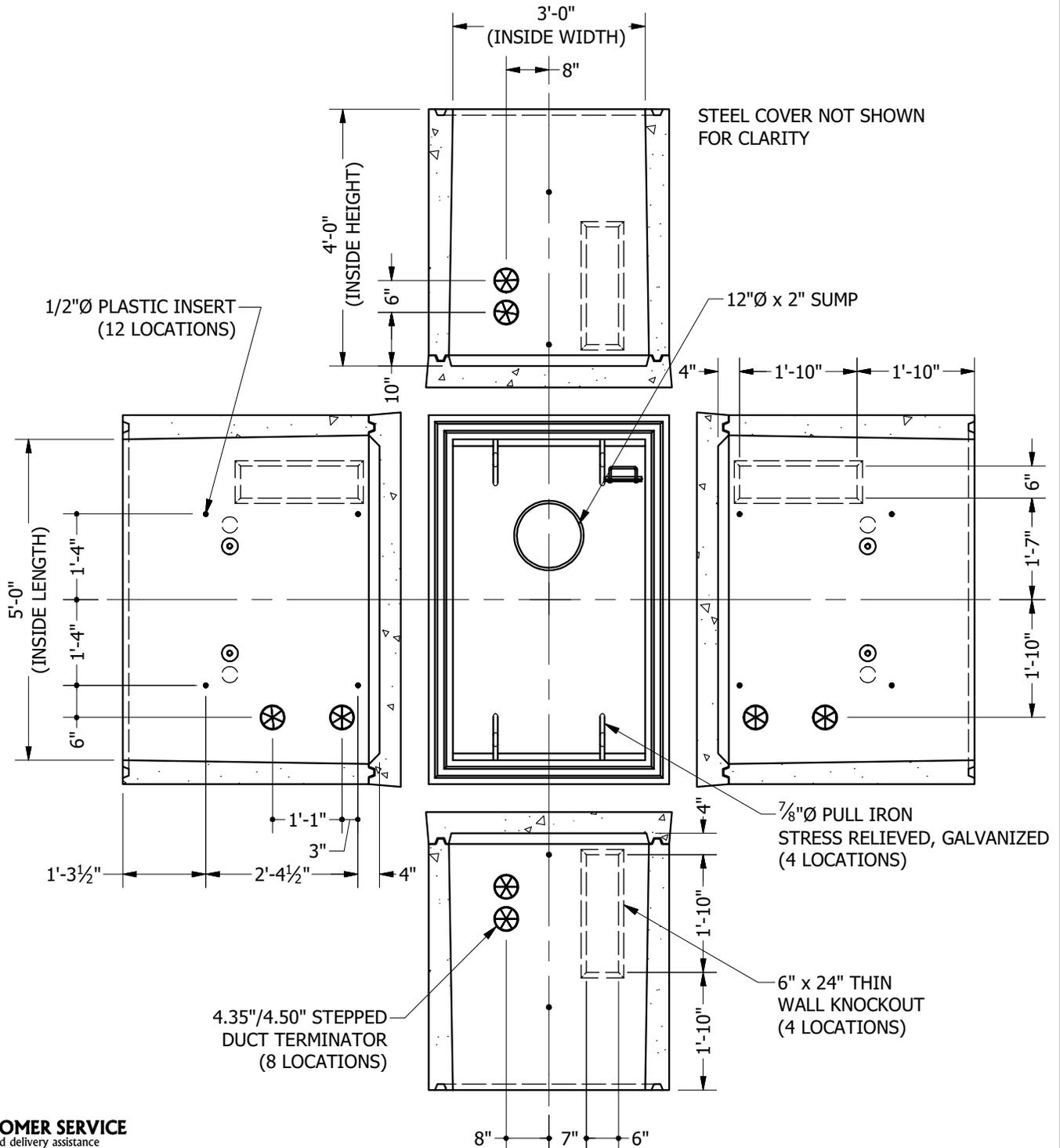
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3'-0" x 5'-0" x 4'-0" INTERCEPT
AT&T SUB-SURFACE ENCLOSURE
PEDESTRIAN RATED HINGED
NON-SLIP COVER

ISSUE DATE: 1/5/2009
AGENCY SERIES: PTS-3660I
PART #: ASY-0400-INT48-HPR-AT



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3'-0" x 5'-0" x 4'-0" INTERCEPT
 AT&T SUB-SURFACE ENCLOSURE
 PEDESTRIAN RATED HINGED
 NON-SLIP COVER

ISSUE DATE:

1/5/2009

AGENCY SERIES:

PTS-3660I

PART #:

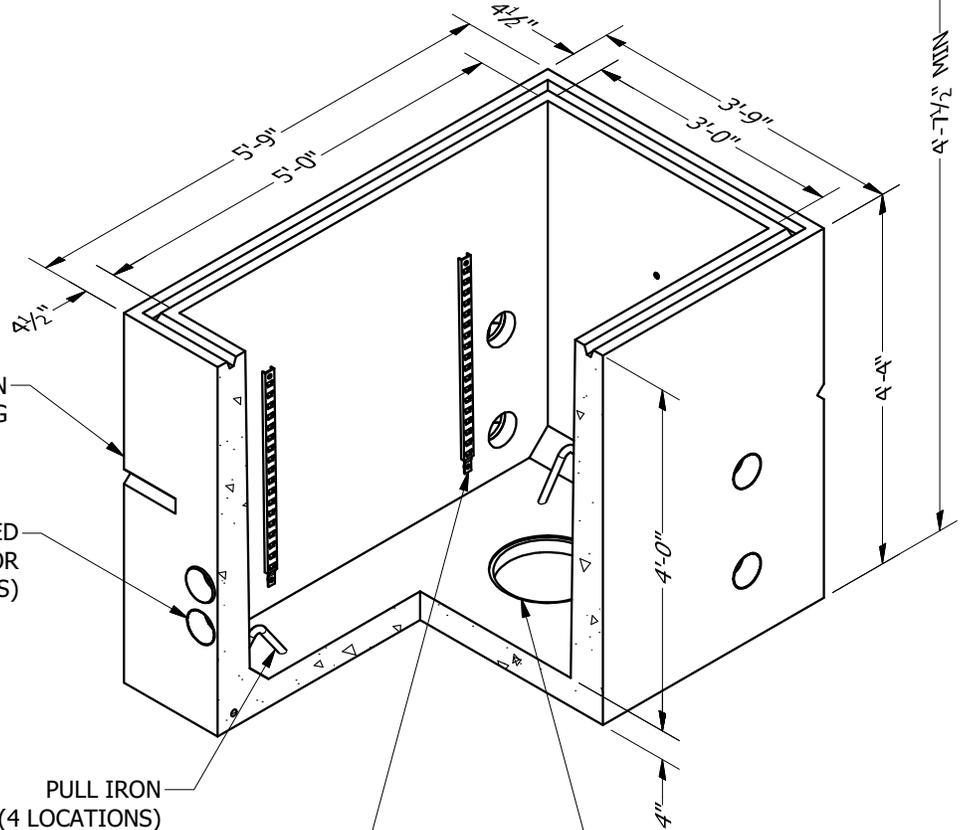
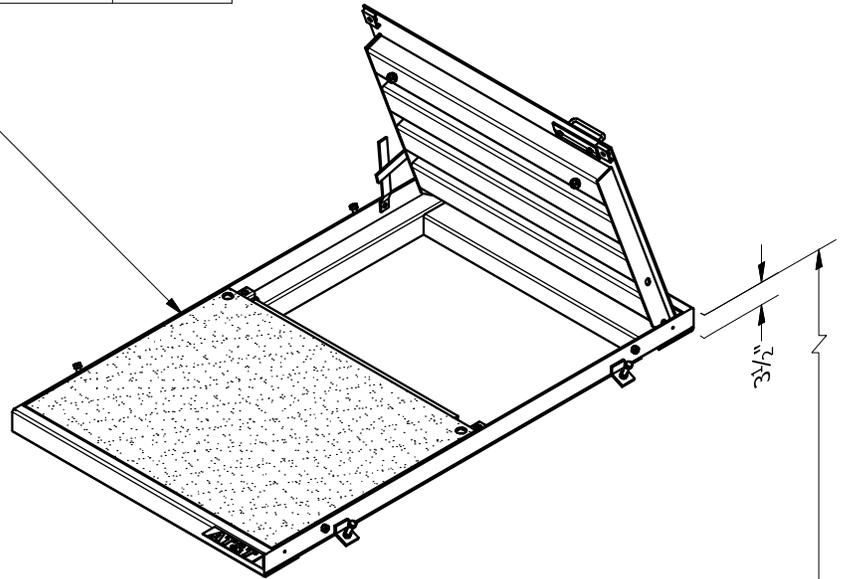
ASY-0400-INT48-HPR-AT

MATERIAL LIST

PART NUM	DESCRIPTION	WEIGHT (LBS)
0400-B48-R-AT	3'-0" x 5'-0" x 4'-0" BASE WITH RACKING - AT&T	5214
0400-SHC-TRNS-AT	TORSION HINGED NON-SLIP STEEL COVER - TRAFFIC RATED	445

ACCESS COVER
 TORSION HINGED DOUBLE LEAF
 H-20 TRAFFIC RATED (NON IMPACT)
 NON-SLIP COVER FINISH
 ADJUSTABLE SKIRTED STYLE FRAME
 AT&T NAME PLATE

SEE DRAWING OF PART #:
 0400-SHC-TRNS-AT FOR
 ADDITIONAL COVER DETAILS



BASE SECTION
 WITH RACKING

4.35"/4.5" STEPPED
 DUCT TERMINATOR
 (16 LOCATIONS)

PULL IRON
 (4 LOCATIONS)

18 HOLE CABLE RACK
 (4 LOCATIONS)

12"Ø x 2" SUMP

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3'-0" x 5'-0" x 4'-0"
 AT&T SUB-SURFACE ENCLOSURE
 TRAFFIC RATED HINGED
 NON-SLIP COVER

ISSUE DATE:

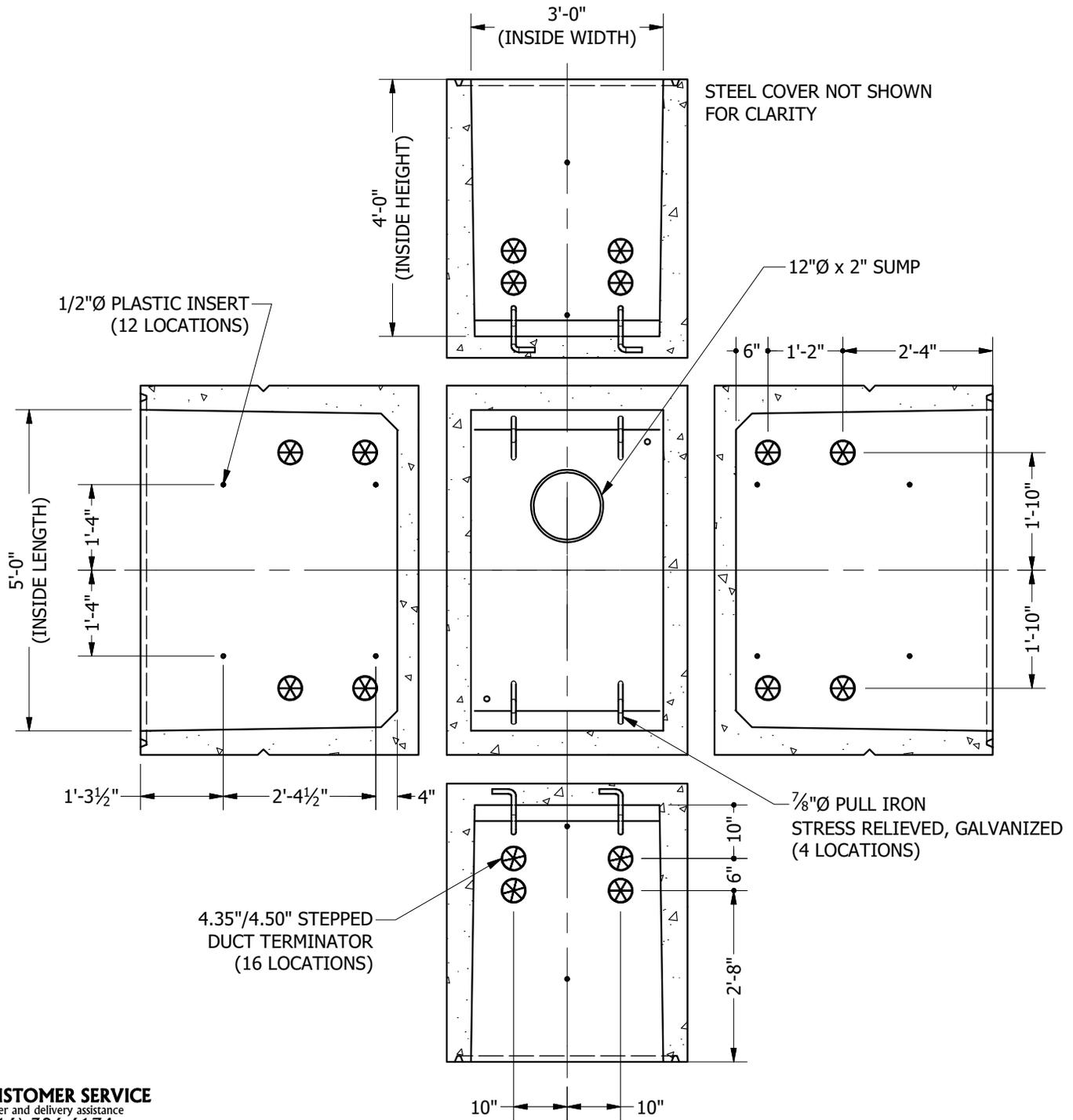
1/5/2009

AGENCY SERIES:

PTS-3660

PART #:

ASY-0400-48-HTR-AT



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3'-0" x 5'-0" x 4'-0"
 AT&T SUB-SURFACE ENCLOSURE
 TRAFFIC RATED HINGED
 NON-SLIP COVER

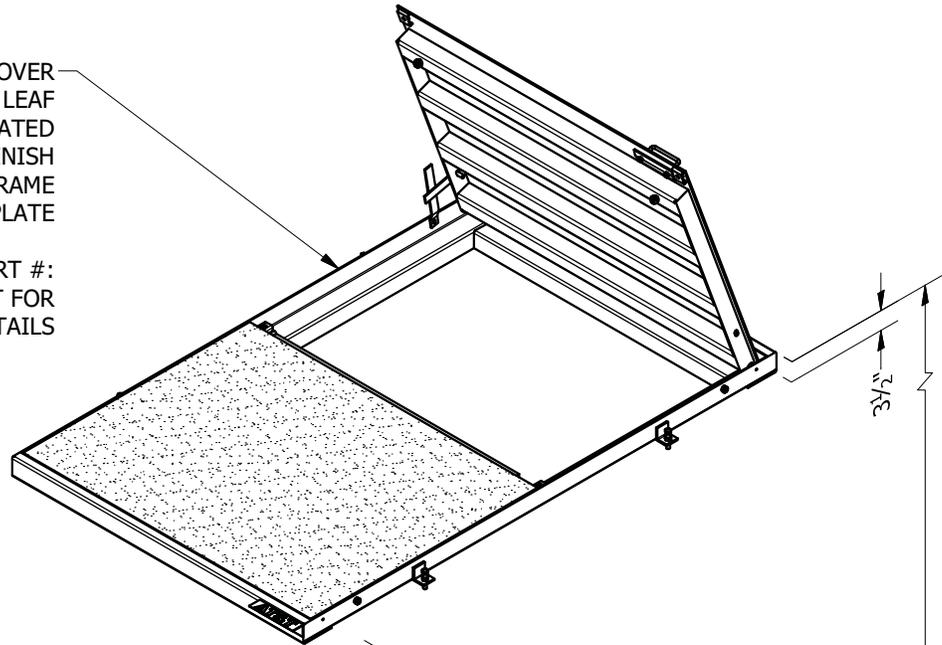
ISSUE DATE: 1/5/2009
 AGENCY SERIES: PTS-3660
 PART #: ASY-0400-48-HTR-AT

MATERIAL LIST

PART NUM	DESCRIPTION	WEIGHT (LBS)
0500-B48-R-AT	4'-0" x 6'-6" x 4'-0" BASE WITH RACKING - AT&T	9823
0500-SHC-PRNS-AT	TORSION HINGED NON-SLIP STEEL COVER - PEDESTRIAN	575

ACCESS COVER
 TORSION HINGED DOUBLE LEAF
 PEDESTRIAN RATED
 NON-SLIP COVER FINISH
 ADJUSTABLE SKIRTED STYLE FRAME
 AT&T NAME PLATE

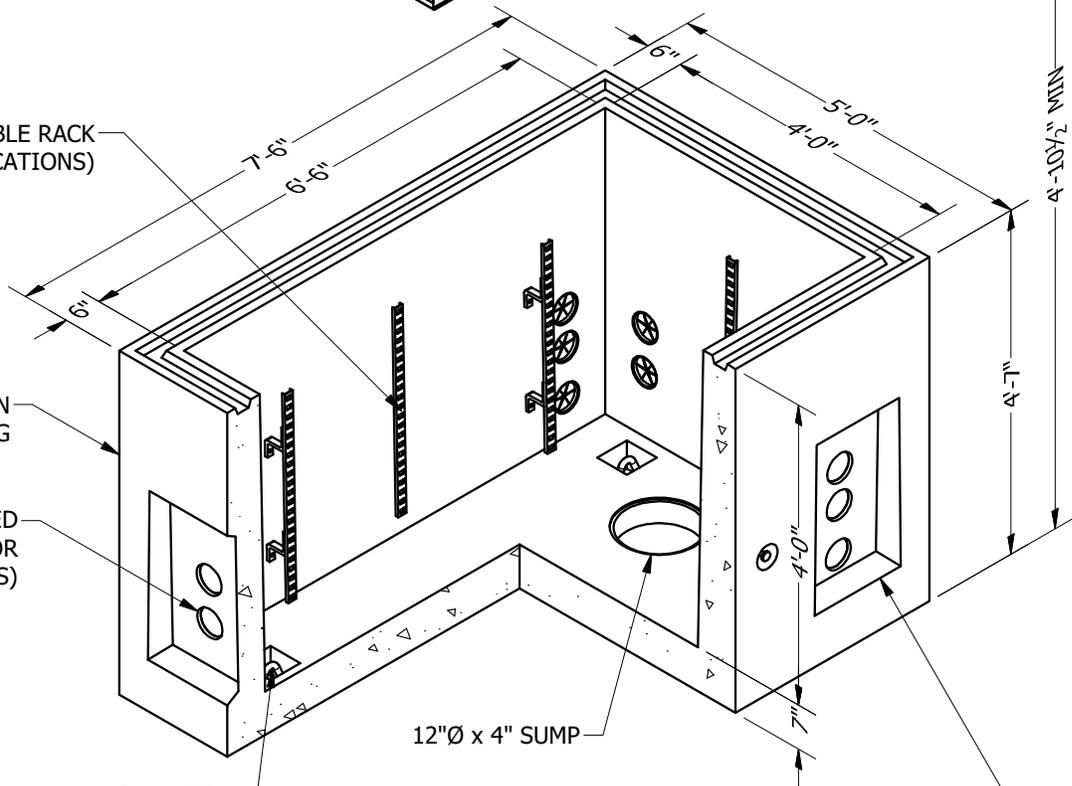
SEE DRAWING OF PART #:
 0500-SHC-PRNS-AT FOR
 ADDITIONAL COVER DETAILS



22 HOLE CABLE RACK
 (8 LOCATIONS)

BASE SECTION
 WITH RACKING

4.35"/4.5" STEPPED
 DUCT TERMINATOR
 (20 LOCATIONS)



12"Ø x 4" SUMP

PULL IRON
 (4 LOCATIONS)

12 1/2" x 24" TERMINATOR PAN
 (8 LOCATIONS)

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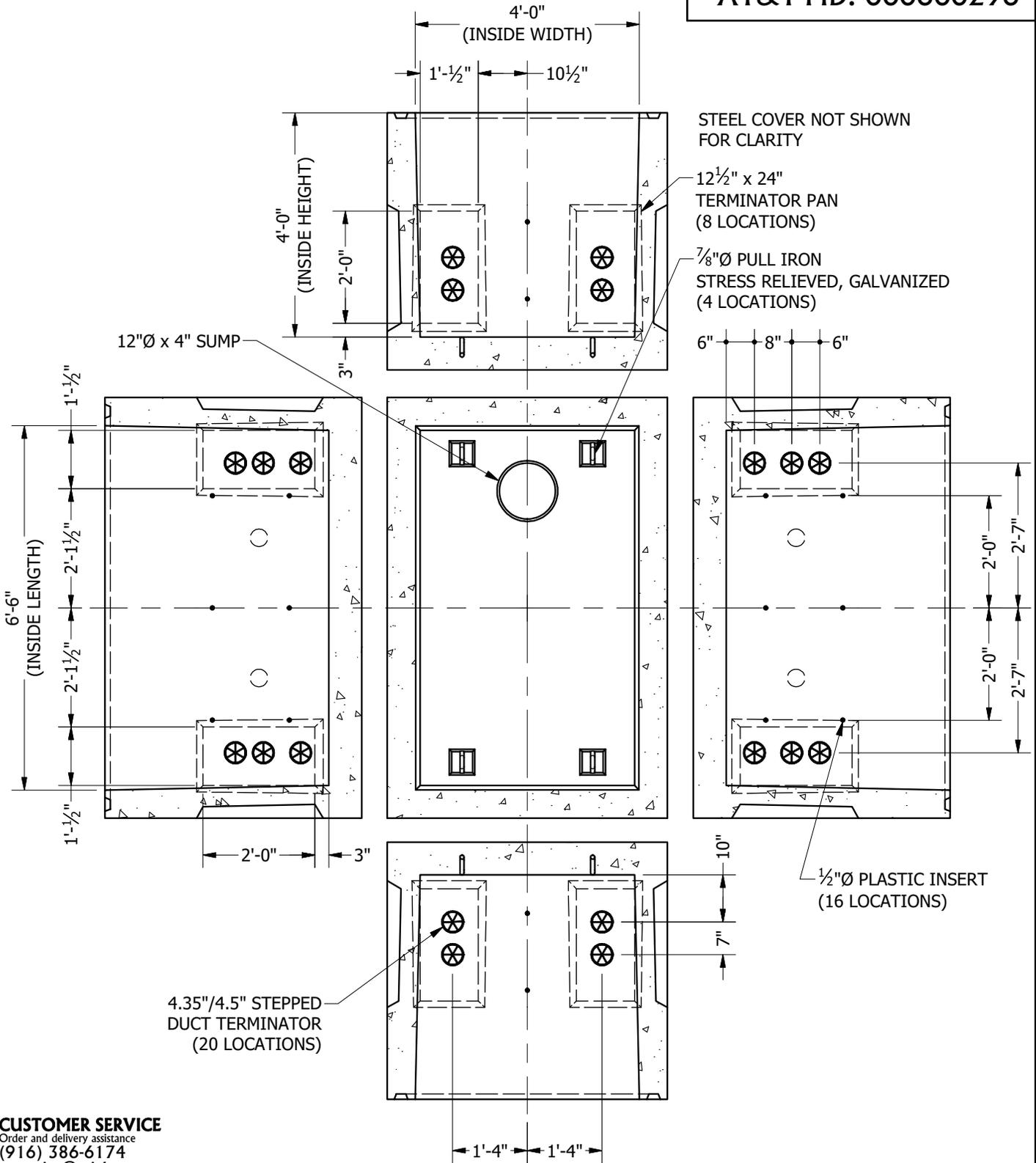
4'-0" x 6'-6" x 4'-0"
 AT&T SUB-SURFACE ENCLOSURE
 PEDESTRIAN RATED HINGED
 NON-SLIP COVER

ISSUE DATE: 1/5/2009

AGENCY SERIES: PTS-4878

PART #: ASY-0500-48-HPR-AT

AT&T PID: 000600296



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4'-0" x 6'-6" x 4'-0"
 AT&T SUB-SURFACE ENCLOSURE
 PEDESTRIAN RATED HINGED
 NON-SLIP COVER

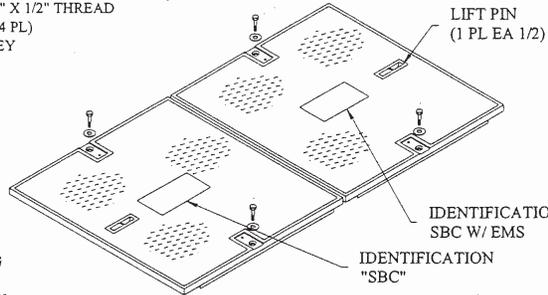
ISSUE DATE: 1/5/2009
 AGENCY SERIES: PTS-4878
 PART #: ASY-0500-48-HPR-AT

Part #: FCA306036F4857
 Drawing #: C1000575

3060/36 20K ASSEMBLY
 SBC PID# 301111290

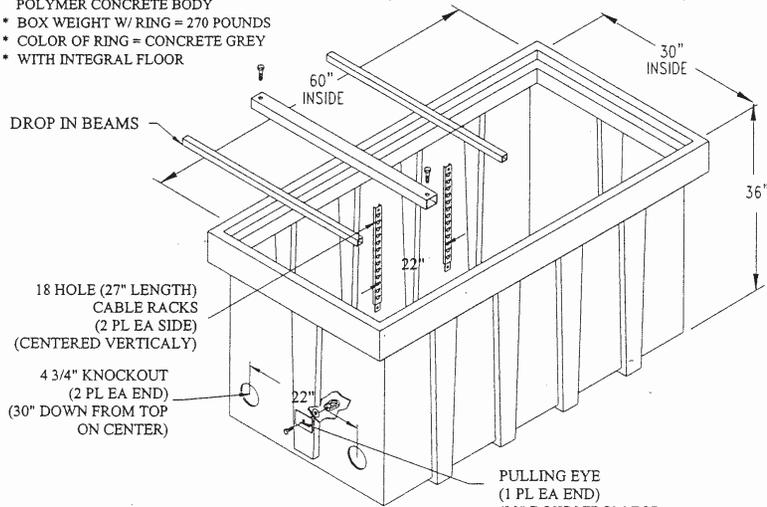
COVER FEATURES:

- * 20,000 POUND WHEEL LOAD ON 10 X 20 PLATE
- * POLYMER CONCRETE CONSTRUCTION
- * 3/4" SS HEX HEAD X 3 1/2" X 1/2" THREAD BOLTS WITH WASHERS (4 PL)
- * COLOR = CONCRETE GREY
- * NON-SKID SURFACE



BOX FEATURES:

- * POLYMER CONCRETE RING
- * FIBERGLASS REINFORCED POLYMER CONCRETE BODY
- * BOX WEIGHT W/ RING = 270 POUNDS
- * COLOR OF RING = CONCRETE GREY
- * WITH INTEGRAL FLOOR



APPROXIMATE COVER WEIGHT = 135 LBS EA 1/2
 APPROXIMATE TOTAL ASSEMBLY WEIGHT = 520 LBS

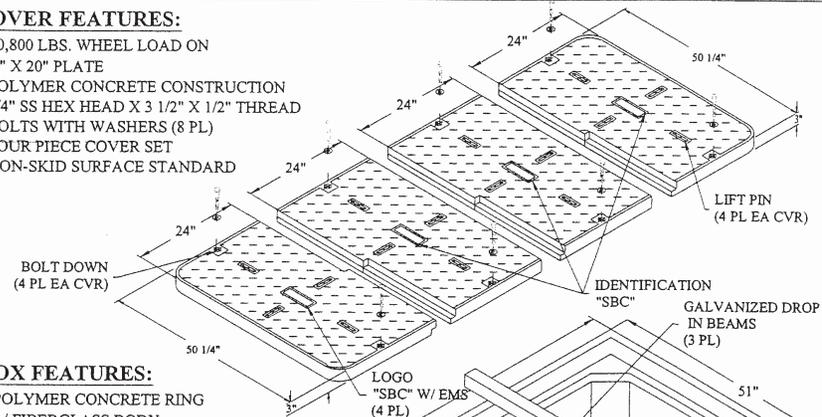
PULLING EYE (1 PL EA END) (30" DOWN FROM TOP ON CENTER)
 2,200# MAXIMUM LOAD RATING

Date: 09/06/03
 Part #: FCA489648FF4859
 Drawing #: C1000576

4896/48 20K ASSEMBLY
 SBC PID# 301111308-3587917

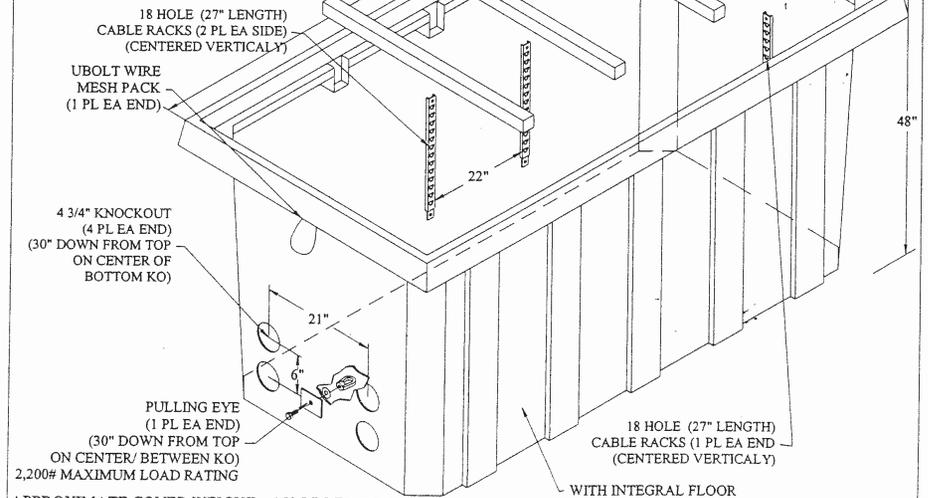
COVER FEATURES:

- * 20,800 LBS. WHEEL LOAD ON 10" X 20" PLATE
- * POLYMER CONCRETE CONSTRUCTION
- * 3/4" SS HEX HEAD X 3 1/2" X 1/2" THREAD BOLTS WITH WASHERS (8 PL)
- * FOUR PIECE COVER SET
- * NON-SKID SURFACE STANDARD



BOX FEATURES:

- * POLYMER CONCRETE RING w/ FIBERGLASS BODY
- * RING COLOR: CONCRETE GREY
- * APPROX. WEIGHT 622 LBS.



APPROXIMATE COVER WEIGHT = 153 LBS EA END 1/4
 APPROXIMATE COVER WEIGHT = 126 LBS EA CENTER 1/4
 APPROXIMATE TOTAL ASSEMBLY WEIGHT = 1180 LBS

NewBasis
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 Riverside, CA 92507

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 Fax 909.787.0632
 www.newbasis.com

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