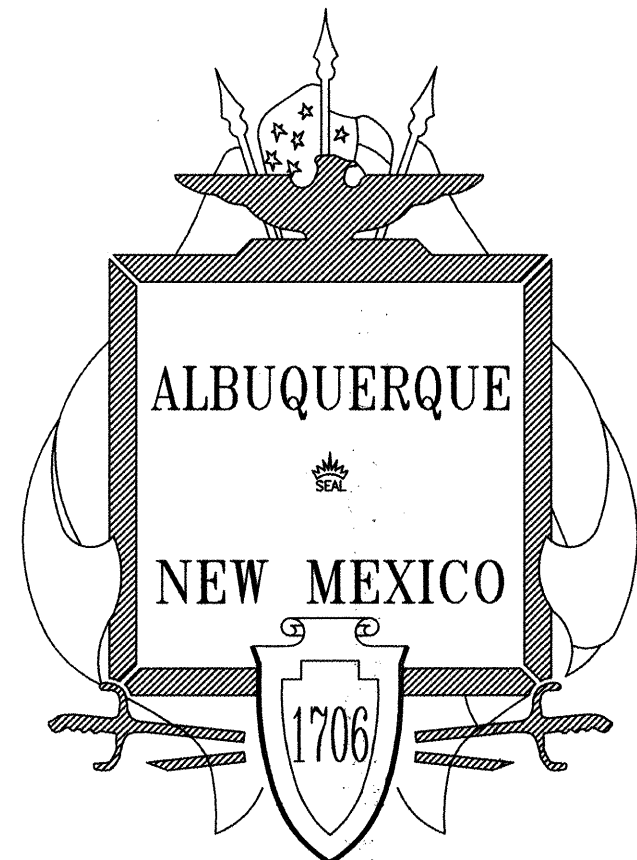


GENERAL NOTES

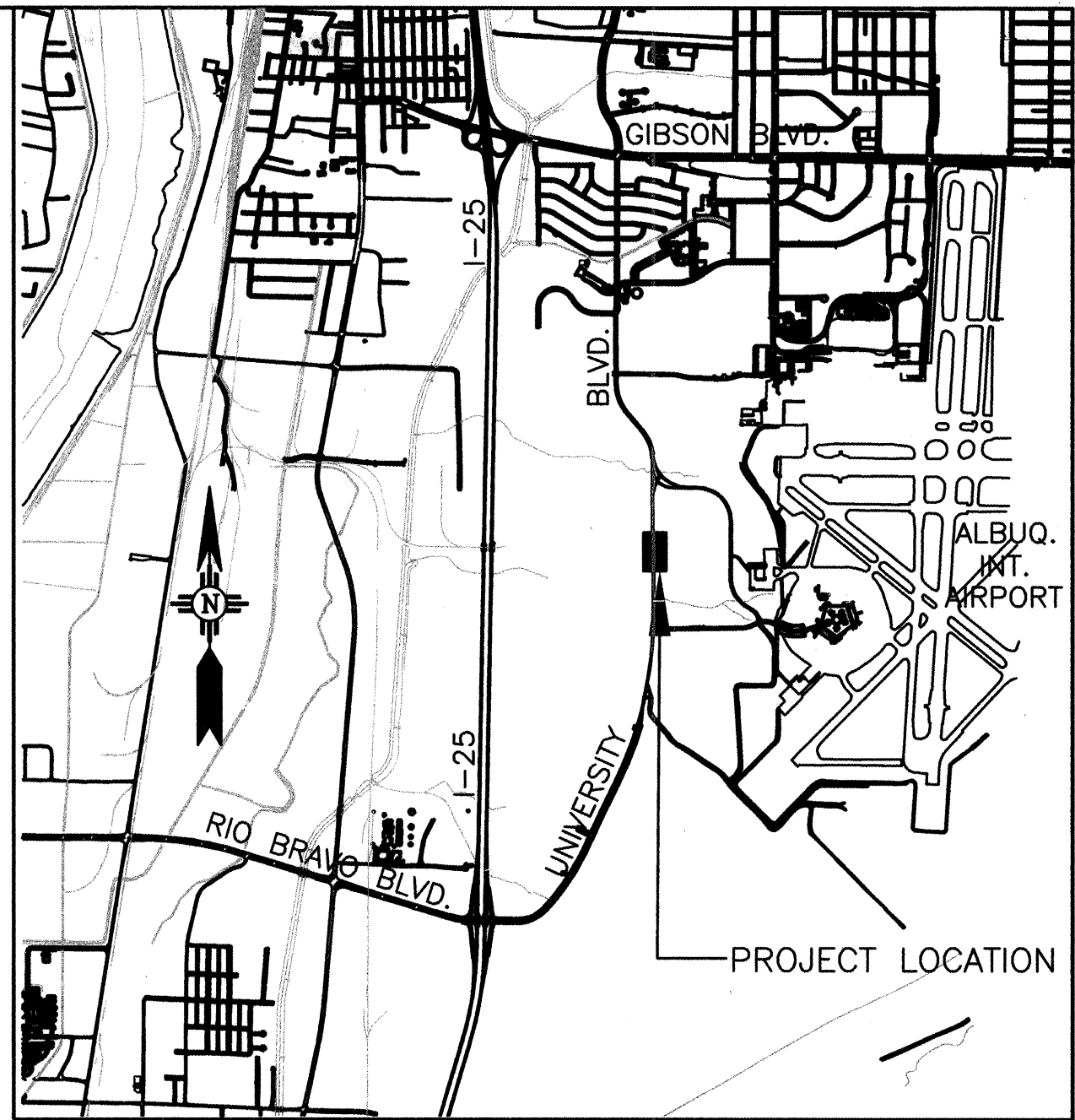
1. ALL WORK DETAILED ON THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH "CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" 1986, INCLUDING AMENDMENT NO. 6, AND ANY REVISIONS AND ADDITIONS IN THE SUPPLEMENTAL SPECIFICATIONS IN THE CONTRACT DOCUMENTS.
2. ALL EXISTING UTILITIES SHOWN HERE WERE OBTAINED AS ACCURATELY AS POSSIBLE FROM RECORD DRAWINGS, FIELD SURVEY AND SPOT EXCAVATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROTECT, MAINTAIN IN SERVICE, AND VERIFY EXACT LOCATIONS OF ALL AFFECTED UTILITIES DURING CONSTRUCTION OF THIS PROJECT.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WHEN WORKING NEAR THEIR SYSTEMS TWO DAYS PRIOR TO ANY EXCAVATION. CONTRACTOR MUST CONTACT NEW MEXICO ONE-CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.
4. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
5. CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
6. REMOVAL OF EXISTING CURB AND GUTTER OR SIDEWALK SHALL BE TO THE NEAREST JOINT OR SAW CUT.
7. WHEN MATCHING NEW PAVING TO EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVING ON A RIGHT ANGLE OR AS DIRECTED BY THE RESIDENT ENGINEER TO REMOVE ANY BROKEN, RAVELED, OR CRACKED PAVING. THE COST OF THIS WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
8. CURB AND GUTTER SHOWN AS EXISTING AND NOT TO BE REMOVED UNDER THIS CONTRACT WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR OR HIS SUBCONTRACTORS, SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
9. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
10. ACCESS TO LOCAL BUSINESS AND RESIDENCES SHALL BE KEPT OPEN AT ALL TIMES. TEMPORARY ACCESS CLOSURES, IF REQUIRED, SHALL BE SCHEDULED AT LEAST FORTY-EIGHT (48) HOURS IN ADVANCE WITH PROPERTY OWNER AND APPROVED BY THE RESIDENT ENGINEER.
11. TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY ENGINEER.
12. REMOVALS SHALL BE DISPOSED OF OFF-SITE AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
13. THE CONTRACTOR SHALL DISPOSE OF ALL UNSUITABLE MATERIAL IN AN ENVIRONMENTALLY ACCEPTABLE MANNER AT A LOCATION ACCEPTABLE TO THE RESIDENT ENGINEER. THERE WILL BE NO DIRECT COMPENSATION FOR THIS WORK.
14. CONTRACTOR SHALL PROVIDE A TEMPORARY STORM DRAINAGE SYSTEM (SUBJECT TO APPROVAL BY THE CITY HYDROLOGY DIVISION AND THE CITY CONSTRUCTION PROJECT MANAGER) FOR ALL WORK ON THIS PROJECT. THE TEMPORARY SYSTEM SHALL BE CAPABLE OF SAFELY CONVEYING EXISTING RUNOFF ACROSS THE PROJECT AND DISCHARGING INTO THE EXISTING DRAINAGE SYSTEM.
15. CONTRACTOR IS RESPONSIBLE FOR SUPPORTING ANY EXISTING UTILITIES EXPOSED DURING REQUIRED EXCAVATIONS.
16. TRAFFIC CONTROL: FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION CO-ORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION CO-ORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS.
17. UTILITY RELOCATION AND NEW UTILITY INSTALLATIONS REQUIRED BY THE CONSTRUCTION OF THIS PROJECT ARE TO BE COORDINATED BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE HIS ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK.
18. THE CONTRACTOR SHALL CONTACT WATER SYSTEMS DIVISION (857-8200) FIVE (5) WORKING DAYS PRIOR TO NEEDING SHUT-OFF OR TURN-ON OF VALVES. ONLY CITY WATER SYSTEMS PERSONNEL ARE AUTHORIZED TO OPERATE VALVES. THE CONTRACTOR IS REFERRED TO SPEC SECTION 18.3.6 RELATIVE TO THE POSSIBLE MORATORIUM OF SHUT DOWNS FOR TRANSMISSION AND MAJOR DISTRIBUTION LINES. APPROVAL OF SHUT OFF BY WATER SYSTEMS IS ANTICIPATED. IF SHUT OFF IS GRANTED BY WATER SYSTEMS, THE CONTRACTOR MUST WORK CONTINUOUSLY, INCLUDING EXTENDED HOURS, UNTIL WORK IS COMPLETED AND THE WATER LINES ARE RETURNED TO SERVICE.
19. ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
20. ALL DISTURBED AREAS LEFT EXPOSED WITHOUT OTHER TREATMENT AFTER THE COMPLETION OF THE CONSTRUCTION SHALL BE SEED PER SECTION 1012 OF THE SPECIFICATIONS.
21. THE PUBLIC WATER LINE MUST BE A MINIMUM OF 18" ABOVE THE SANITARY SEWER LINE AT ALL CROSSINGS.
22. THE CONTRACTOR SHALL FURNISH EMD'S ON WATER AND SEWER SERVICE STUBS, CAPS AND PLUGS.
23. SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
24. IF CURB IS DEPRESSED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
25. ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
26. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS BY CONTRACTOR AS EXISTING OR AS INDICATED BY THIS PLAN SET. ALL NEW STRIPING SHALL BE PLASTIC AS PER CITY STANDARDS.



CONSTRUCTION PLANS  
FOR  
ALBUQUERQUE INTERNATIONAL  
SUNPORT  
**TRAFFIC SIGNALIZATION PLAN**  
**UNIVERSITY BLVD. / RAC ENTRANCE**

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VICINITY MAP  
NOT TO SCALE

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SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

|                             |        |                    |         |                    |         |                           |         |
|-----------------------------|--------|--------------------|---------|--------------------|---------|---------------------------|---------|
| REV.                        | SHEETS | CITY ENGINEER      | DATE    | USER DEPARTMENT    | DATE    | USER DEPARTMENT           | DATE    |
| ENGINEERS STAMP & SIGNATURE |        | APPROVALS          |         | ENGINEER           | DATE    | *****                     |         |
|                             |        | DRC Chairman       |         | <i>[Signature]</i> | 9/13/00 | APPROVED FOR CONSTRUCTION |         |
|                             |        | Transportation     |         | <i>[Signature]</i> | 9/13/00 |                           |         |
|                             |        | Water/Wastewater   |         | <i>[Signature]</i> | 8-31-00 |                           |         |
|                             |        | Hydrology          |         | <i>[Signature]</i> | 9/31/00 |                           |         |
|                             |        | CIP                |         | <i>[Signature]</i> | 9/13/00 |                           |         |
| Constr. Mngmt.              |        | <i>[Signature]</i> | 9/13/00 | City Engineer      |         | Date                      |         |
| Constr. Coord.              |        | <i>[Signature]</i> | 9/13/00 | City Project No.   |         | 99                        |         |
|                             |        |                    |         | 6101.99            |         | Sheet                     | 1 of 28 |



SIGNAL NOTES

1. ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT NATIONAL ELECTRIC CODE, THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS FOR ELECTRICAL WIRING AND APPARATUS, AND THE CITY'S TRAFFIC ENGINEERING OPERATIONS THIRD DRAFT SPECIFICATIONS (JUNE 1994).
2. LOCATIONS OF CONDUITS, FOUNDATIONS, CONTROL CABINETS, POLES, PULL BOXES, MANHOLES, AND SPICE CABINETS SHOWN ON THE PLANS ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD TO MAXIMIZE CLEAR SPACE AVAILABLE FOR PEDESTRIANS AND WHEELCHAIRS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CONTRACTOR SHALL MEET WITH THE CITY'S TRAFFIC ENGINEERING OPERATIONS PERSONNEL IN THE FIELD AT ALL LOCATIONS TO SPOT EQUIPMENT BEFORE BEGINNING THE WORK. ALL SUCH EQUIPMENT SHALL BE INSTALLED WITHIN THE RIGHT-OF-WAY.
3. THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.
4. THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND ANY DRIVEWAYS FOR SIDE STREET CROSSINGS. BEFORE CONDUIT CAN BE BORED, DRILLED, OR PUSHED THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL LOCATE AND EXPOSE GAS LINES WHICH CROSS ANY PROPOSED BORES. THESE EXCAVATIONS SHALL REMAIN OPEN UNTIL AFTER THE BORE IS COMPLETE. CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ANY SIDEWALK OR PAVEMENT REQUIRED TO EXPOSE SUCH LINES. THE CONTRACTOR MAY CUT, TRENCH, AND REPLACE EXISTING PAVEMENT ONLY WHEN APPROVED BY THE PROJECT MANAGER.
5. MASTARMS SHALL BE PLACED 90' TO THE CENTERLINE UNLES OTHERWISE NOTED.
6. MOUNT ALL CONTROLLERS SO DOORS FACE AWAY FROM TRAFFIC, UNLESS OTHERWISE SHOWN ON PLANS OR DIRECTED BY PROJECT MANGER.
7. SHOWN DISTANCES TO TRAFFIC SIGNAL POLES TO BE MEASURED FROM FACE OF CURB, UNLESS OTHERWISE NOTED.
8. SPLICING OF COMMUNICATIONS CABLE WILL NOT BE PERMITTED IN PULL BOXES. SPLICING OF COMMUNICATIONS CABLE (CONNECTIONS) WILL BE PERMITTED ONLY AT SPICE CABINETS OR CONTROLLER CABINETS WITH SPICE BARS. SPLICING OF TRAFFIC SIGNALS MCC WILL BE PERMITTED IN LARGE PULL BOXES INCLUDING LARGE MEDIAN PULL BOXES. SPLICING OF VIDEO DETECTION COAXIAL CABLE WILL NOT BE PERMITTED FROM THE MASTARM BASE TO THE CONTROLLER CABINET. SPLICING OF OPTICAL DETECTOR CABLE WILL NOT BE PERMITTED FROM THE DETECTOR TO THE CONTROLLER CABINET.
9. ALL LOOP LEAD-IN CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH CABLE BY PHASE AND LOOP NUMBER. ALL VIDEO DETECTION COAXIAL AND POWER CABLES SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH CABLE BY CAMERA NUMBER AND LOCATION. ALL OPTICAL DETECTOR CABLE SHALL BE TAGGED AT THE CONTROL CABINET TO IDENTIFY EACH BY DIRECTION AND LOCATION.
10. ALL PULL BOXES SHALL BE REINFORCED POLYMER MORTAR HEAVY DUTY TYPE WITH REINFORCED POLYMER MORTAR HEAVY DUTY COVERS ("PG" TYPE). CONCRETE COVERS, STEEL COVERS, AND CONCRETE PULL BOXES WILL NOT BE ACCEPTABLE.
11. SIGNAL HEADS SHALL BE COVERED WHEN NECESSARY WITH PACIFIC ENTERPRISES SIGNAL COVERS OR APPROVED EQUAL.
12. ALL WIRE ON THIS PROJECT TO BE COPPER.
13. FLASHING OPERATION IS NOT CONSIDERED THE BEGINNING OF THE FIELD TESTING PERIOD.
14. ACCEPTABLE TYPE III STANDARDS ARE VALMONT, UNION METAL, JEM, OR APPROVED EQUAL.
15. THE CONTRACTOR SHALL NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS(857-8000) THREE WORKING DAYS IN ADVANCE OF ANY ANTICIPATED WORK ON SIGNALS, LIGHTING, AND POWER SERVICES. TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL ASSIST THE CONTRACTOR IN FIELD LOCATION OF EQUIPMENT, COLOR CODING OF WIRING, AND MUST BE PRESENT WHEN SIGNALS AND LIGHTING ARE SHUT-OFF OR TURNED ON. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS EACH TIME A TRAFFIC SIGNAL CONTROL DOOR IS OPENED.
16. THE CONTRACTOR SHALL NOTIFY PUBLIC SERVICE COMPANY 30 DAYS IN ADVANCE OF ANTICIPATED POWER SERVICE CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC SERVICE COMPANY TO ESTABLISH ELECTRICAL SERVICE IN THE CITY'S NAME. THE CONTRACTOR SHALL PAY THE LOCAL POWER COMPANY ALL COSTS TO PROVIDE ELECTRICAL SERVICE. THIS WORK WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
17. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNING AND DELIVER TO THE CITY TRAFFIC ENGINEERING YARDS WHEN TRAFFIC SIGNALS ARE PUT INTO OPERATION.
18. LIVE UNUSED CONDUCTORS WILL NOT BE ALLOWED AT MASTARM POLES AND PEDESTAL POLES. ALL SUCH UNUSED CONDUCTORS SHALL BE DISCONNECTED AT THE LARGE PULL BOX ADJACENT TO THE POLE.
19. IF TRENCH WIDTHS LESS THAN 12" ARE PROPOSED BY THE CONTRACTOR, APPROVED COMPACTION METHODS SHALL BE USED DURING BACKFILL TO PREVENT LATENT TRENCH FAILURES. THE CONTRACTOR SHALL USE GROUT OR LEAN FILL AS APPROVED BY THE PROJECT MANAGER IN LIEU OF EARTH BACKFILL.
20. FOR CONDUITS CONTAINING ONLY LOW VOLTAGE COMMUNICATIONS CABLES, THE REQUIREMENTS FOR SINGLE CONDUCTOR GREEN COPPER #8 AWG MAY BE WAIVED WHERE PERMITTED BY THE NATIONAL ELECTRIC CODE.
21. THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL PROVIDE TRAFFIC SIGNAL TIMING PLANS AND WILL PROGRAM TRAFFIC SIGNAL CONTROLLERS.
22. EXISTING CONDUITS TO BE REMOVED OR ABANDONED SHALL HAVE ALL WIRING REMOVED.
23. EXISTING CONDUITS SHALL BE REPAIRED, ADJUSTED, OR REPLACED AS DIRECTED BY THE PROJECT MANAGER WHERE ELECTRICAL PILLBOXES OR TRAFFIC MANHOLES ARE INSTALLED OR REPLACED.
24. CONTRACTOR SHALL COIL EXCESS INTERCONNECT CABLE AT ALL NEW OR EXISTING TRAFFIC MANHOLES BETWEEN SPICE CABINET OR CONTROL CABINETS WITH SPICE BARS. IF MORE THAN ONE MANHOLE EXISTS BETWEEN SPICE CABINETS OR CONTROL CABINETS WITH SPICE BARS, THEN COILING IS ONLY REQUIRED AT ONE OF THE MANHOLES. THE FOLLOWING QUANTITIES OF COMMUNICATION CABLE SHALL BE COILED:  
12 PAIR - 50 FT.  
25 PAIR - 50 FT.  
50 PAIR - 25 FT.  
75 PAIR - 25 FT.
25. THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO DIRECT TRAFFIC WHEN SIGNALS ARE TURNED OFF.
26. ALL DATA SHOWN HEREIN CONCERNING EXISTING UTILITIES HAS BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND FROM FIELD OBSERVATIONS WHICH MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR WILL BE RESPONSIBLE FOR EXPLORATORY TRENCHING. IF NECESSARY, TO MORE SPECIFICALLY LOCATE UTILITY LINES. COST OF LOCATING UTILITY LINES INCLUDING EXPLORATORY TRENCHING WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
27. THE CONTRACTOR SHALL VIDEO TAPE THE EXISTING TRAFFIC SIGNAL EQUIPMENT IN VHS FORMAT AND REVIEW THE TAPE WITH CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL PRIOR TO BEGINNING ANY REMOVALS OF SIGNAL EQUIPMENT. THE TAPE SHALL BECOME THE PROPERTY OF THE CITY AND MAY BE USED TO RESOLVE ANY QUESTIONS RELATED TO THE ORIGINAL CONDITION AND QUALITY OF EXISTING EQUIPMENT. THE EXISTING TRAFFIC SIGNAL EQUIPMENT INCLUDING POLES, CONTROLLER CABINETS, CONFLICT MONITORS, AND DETECTORS SHALL BE DELIVERED TO THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING YARD ON PINO ROAD NE.

TRAFFIC SIGNAL LEGEND

| NEW | EXISTING | ITEM                                                                            |
|-----|----------|---------------------------------------------------------------------------------|
|     |          | PULL BOX                                                                        |
|     |          | SERVICE POLE                                                                    |
|     |          | METER PEDESTAL                                                                  |
|     |          | CONTROLLER CABINET                                                              |
|     |          | CONDUIT RUN (SIGNALS)                                                           |
|     |          | CONDUIT RUN (INTERCONNECT)                                                      |
|     |          | LOOP DETECTOR                                                                   |
|     |          | TRAFFIC SIGNAL PEDESTAL POLE                                                    |
|     |          | CONDUIT RUN NUMBER (SIGNAL)                                                     |
|     |          | CONDUIT RUN NUMBER (POWER SERVICE)                                              |
|     |          | CONDUIT RUN NUMBER (INTERCONNECT)                                               |
|     |          | CONDUIT RUN NUMBER (WARNING BEACON)                                             |
|     |          | TYPE II STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACK PLATE, AND OPTICAL DETECTOR |
|     |          | TRAFFIC SIGNAL, BACK PLATE, OPTICAL DETECTOR, LUMINAIRE, AND VIDEO CAMERA       |
|     |          | PEDESTRIAN PUSH BUTTON (MOUNTED TO SIDE OF POLE WHERE INDICATED)                |
|     |          | PEDESTRIAN SIGNALS (MOUNTED TO SIDE OF POLE WHERE INDICATED)                    |
|     |          | SPICE CABINET                                                                   |
|     |          | TRAFFIC MANHOLE                                                                 |
|     |          | VIDEO CAMERA                                                                    |

DEFINITIONS

1. "ENGINEER" - FOR THE PURPOSES OF THIS PROJECT, THE TERM "ENGINEER" IS SYNONYMOUS WITH THE TERM "PROJECT MANAGER".

FOR INFORMATION ONLY

|                                                                                               |                             |
|-----------------------------------------------------------------------------------------------|-----------------------------|
| <b>URS</b><br>5971 JEFFERSON BLVD. NE<br>SUITE 101<br>ALBUQUERQUE, NM 87109<br>(505) 345-3999 |                             |
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP               |                             |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE TRAFFIC</b>                                       |                             |
| <b>NOTES &amp; LEGEND</b>                                                                     |                             |
| Design Review Committee<br>                                                                   | APPROVE<br>                 |
| City Project No. <b>6101, 99</b>                                                              | Zone Map No. <b>M15,N15</b> |
| Sheet <b>2</b>                                                                                | Of <b>28</b>                |

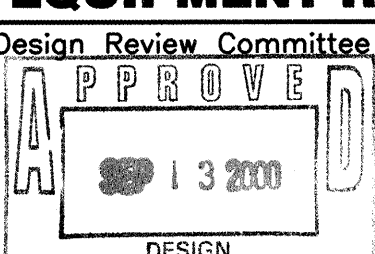
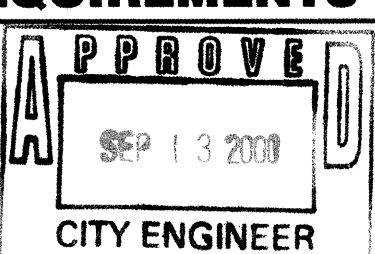
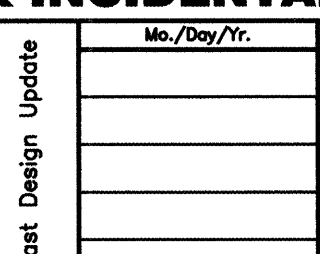
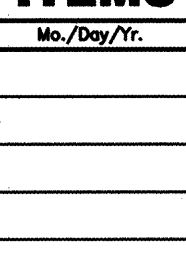


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- INCIDENTAL ITEMS \*

- \* ITEMS LISTED ARE ONLY A GENERAL DESCRIPTION OF THE REQUIRED WORK AND MATERIALS, AND MAY NOT BE COMPLETE. THIS LIST DOES NOT INCLUDE ANY INCIDENTAL WORK OR MATERIALS REQUIRED BY THE SPECIAL PROVISIONS SERIALS (STANDARD DETAILS), SUPPLEMENTAL SPECIFICATIONS, OR THE STANDARD SPECIFICATIONS.

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|                                                                                                                      |                                                                                       |                                                                                                             |                                                                                       |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                                      |                                                                                       |                                                                                                             |                                                                                       |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL<br/>EQUIPMENT REQUIREMENTS &amp; INCIDENTAL ITEMS</b> |                                                                                       |                                                                                                             |                                                                                       |
| Design Review Committee<br>     |  | Last Design Update<br> |  |
| City Project No.                                                                                                     | <b>6101.99</b>                                                                        | Zone Map No.                                                                                                | <b>M15,N15</b>                                                                        |
|                                                                                                                      |                                                                                       | Sheet                                                                                                       | <b>3</b> Of <b>28</b>                                                                 |



# TRAFFIC SIGNAL ESTIMATED QUANTITIES

FOR INFORMATION ONLY

|                                                                                                                            |  |  |  |  |     |  |
|----------------------------------------------------------------------------------------------------------------------------|--|--|--|--|-----|--|
| <p align="center"><b>URS</b></p> <p>5971 JEFFERSON BLVD. NE<br/>SUITE 101<br/>ALBUQUERQUE, NM 87109<br/>(505) 345-3999</p> |  |  |  |  |     |  |
|                                                                                                                            |  |  |  |  | No. |  |

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

|        |                                                                                      |
|--------|--------------------------------------------------------------------------------------|
| TITLE: | <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL<br/>ESTIMATED QUANTITIES</b> |
|--------|--------------------------------------------------------------------------------------|

Design Review Committee

APPROVED

SEP 13 2000

DESIGN REVIEW COMMITTEE

|                    |             |             |
|--------------------|-------------|-------------|
| Last Design Update | Mo./Day/Yr. | Mo./Day/Yr. |
|                    |             |             |
|                    |             |             |
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|                  |                |              |                |       |    |          |           |
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| City Project No. | <b>6101.99</b> | Zone Map No. | <b>M15,N15</b> | Sheet | Of | <b>4</b> | <b>28</b> |
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CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

**TITLE: UNIVERSITY BOULEVARD/RAC ENTRANCE  
TRAFFIC SIGNAL  
ESTIMATED QUANTITIES (CONTINUED)**

Design Review Committee

**APPROVE**

**SEP 13 2000**

DESIGN REVIEW COMMITTEE

**APPROVE**  
SEP 13 2010  
**CITY ENGINEER**

## Last Design Update

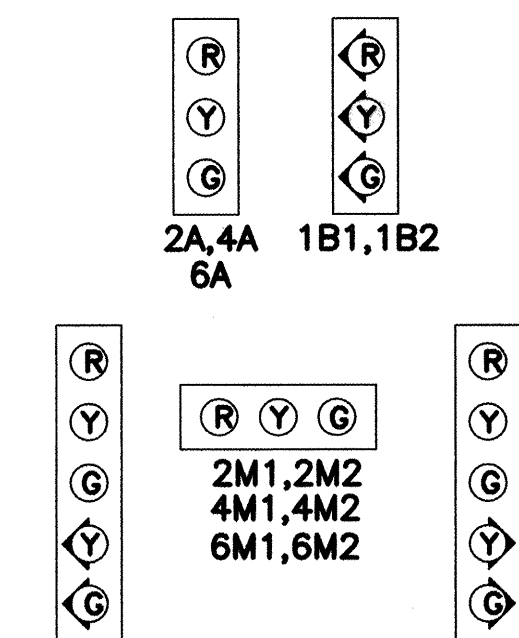
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| City Project No. | <b>6101.99</b> | Zone Map No. | <b>M15,N15</b> | Sheet | Of | <b>5</b> | <b>28</b> |
|------------------|----------------|--------------|----------------|-------|----|----------|-----------|



| OPTICAL DETECTOR CABLE |     |                   |                 |              |
|------------------------|-----|-------------------|-----------------|--------------|
| FROM                   | TO  | CONDUIT TRACE     | # PAIR x LENGTH | TOTAL LENGTH |
| MA1                    | CC1 | MA1-17-2          | 1 @ 80          | 80           |
| MA3                    | CC1 | MA3-21-12-14-16-2 | 1 @ 305         | 305          |
|                        |     |                   |                 |              |
|                        |     |                   |                 |              |
|                        |     |                   |                 |              |
|                        |     |                   | <b>TOTAL</b>    | 305          |

## TYPICAL SIGNAL FACE LENS ARRANGEMENTS



|                 |                                      |
|-----------------|--------------------------------------|
| RED BALL HEADS  | 2A,2M1,2M2,4A,<br>4M1,4M2,6A,6M1,6M2 |
| RED ARROW HEADS | 1B1,1B2                              |

ALL RED, THEN PHASE 2 AND 6 GREEN

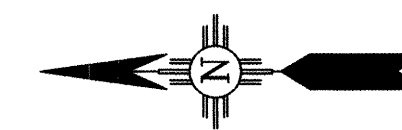
1. PULL BOXES 3 AND 6 ARE STANDARD SIZE, ALL OTHERS ARE LARGE SIZE. ALL PULL BOXES ARE EXISTING.
2. TWO STUB OUTS WITH CAPS SHALL COME OUT OF PB2 FOR FUTURE CONDUIT RUNS 18 AND 25.



2P1,2P2,4P1,4P2



2M1,2M2  
4M1,4M2  
6M1,6M2



SCALE: 1" = 20'



|        |                                |
|--------|--------------------------------|
| MAI    | MASTARM NUMBER                 |
| PP1    | PEDESTAL POLE NUMBER           |
| PPB1   | PEDESTRIAN PUSH BUTTON NUMBER  |
| CC1    | CONTROL CABINET NUMBER         |
| SC1    | SPLICE CABINET NUMBER          |
| PB1    | PULL BOX NUMBER (SIGNALS)      |
| PBS1   | PULL BOX NUMBER (POWER)        |
| PBC1   | PULL BOX NUMBER (INTERCONNECT) |
| DL1(1) | DETECTOR LOOP PHASE # (LOOP #) |
| JA     | SIGNAL HEAD NUMBER             |
| P1     | PEDESTRIAN SIGNAL NUMBER       |
| BP     | BACK PLATE                     |
| EC     | EXTENDED CALL LOOP DETECTOR    |
| SD     | SYSTEM LOOP DETECTOR           |
| MH1    | TRAFFIC MANHOLE NUMBER         |

SYMBOL KEY

|            |                                |
|------------|--------------------------------|
| <b>MA1</b> | SIGNAL & CABINET ID            |
| <b>99</b>  | CONDUIT RUN ID                 |
| <b>S1</b>  | CONDUIT RUN ID (POWER SERVICE) |
| <b>C1</b>  | CONDUIT RUN ID (INTERCONNECT)  |

## FOUNDATION LOCATION DATA

| FROM | STA   | OFFSET |
|------|-------|--------|
| MA1  | 41+80 | 62' LT |
| MA2  | 42+01 | 65' RT |
| MA3  | 41+99 | 42' RT |
| MA4  | 41+06 | 43' LT |
| PP1  | 42+12 | 60' RT |
| PP2  | 42+10 | 5' RT  |
| PP3  | 40+94 | 18' RT |
| CC1  | 41+18 | 75' RT |
| SC1  | 41+19 | 84' LT |
| M    | 41+00 | 52' LT |
|      |       |        |
|      |       |        |

## SIGNAL POLES AND MASTARMS

[illegible]

**NOTES:**

1. CONDUITS, PULL BOXES, AND MANHOLES ARE IN THE LOCATIONS SHOWN.
2. EXISTING CONDUITS INCLUDE NYLON PULL WIRE AND GROUND WIRE. CONDUITS ARE CAPPED AS NEEDED.
3. THIS INSTALLATION INCLUDES ALL FOUNDATIONS AND ABOVE-GROUND EQUIPMENT (PEDESTAL POLES, MASTARM POLES, SIGNALS, CABINETS, METER, ECT.) AND WIRING FOR A COMPLETE OPERATIONAL TRAFFIC SIGNAL.

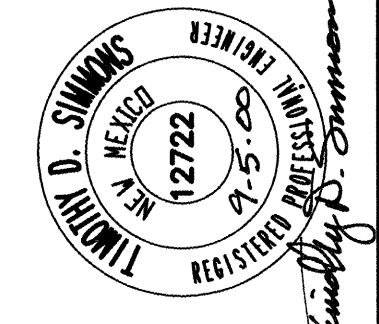
## INFORMATION

| BENCH MARKS                                                                                                                                                                                                            | AS BUILT INFORMATION   |      |                                   |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------|-----------------------------------|------|
| "1"-N16 RESET", AN ACS ALUMINUM CAP APPROX. S 10' E, 1180 FT. FROM THE INTERSECTION OF EXISTING ACCESS ROAD "B" AND CLARK CARR BLVD; AND APPROX. 100 FT SSE OF A CHAIN LINK GATE ALIGNED EAST TO WEST. ELEV. = 5308.73 | CONTRACTOR             | DATE | WORKED BY                         | DATE |
|                                                                                                                                                                                                                        |                        |      | INSPECTOR'S FIELD VERIFICATION BY | DATE |
|                                                                                                                                                                                                                        |                        |      | CORRECTED BY                      | DATE |
|                                                                                                                                                                                                                        | MICRO-FILM INFORMATION |      |                                   |      |
|                                                                                                                                                                                                                        | RECORDED BY            | DATE |                                   |      |
|                                                                                                                                                                                                                        |                        |      |                                   |      |
|                                                                                                                                                                                                                        |                        |      |                                   |      |
|                                                                                                                                                                                                                        |                        |      |                                   |      |

## SURVEY INFORMATION

| SURVEY INFORMATION |                |       |  |
|--------------------|----------------|-------|--|
| FIELD NOTES        |                |       |  |
| No.                | By             | Date  |  |
| 2050               | URS GREINER    | 12/98 |  |
|                    | WOODWARD CLYDE | THRU  |  |
|                    |                | 2/99  |  |
|                    |                |       |  |
|                    |                |       |  |
|                    |                |       |  |

## ENGINEER'S SEAL



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**URS**

5971 JEFFERSON BLVD. NE  
SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE: **UNIVERSITY BOULEVARD/RAC ENTRANCE  
UNIVERSITY BLVD. & RAC ENTRANCE  
SIGNAL PLAN**

Design Review Committee  
**APPROVED**  
SEP 13 2000  
DESIGN REVIEW COMMITTEE

**APPROVE**  
SEP 13 2000  
**CITY ENGINEER**

|                    |             |             |
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| Last Design Update | Mo./Day/Yr. | Mo./Day/Yr. |
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|------------------|----------------|--------------|----------------|-------|----------|----|-----------|
| City Project No. | <b>6101.99</b> | Zone Map No. | <b>M15,N15</b> | Sheet | <b>6</b> | Of | <b>28</b> |
|------------------|----------------|--------------|----------------|-------|----------|----|-----------|



[illegible]

|       |                             |
|-------|-----------------------------|
| CC 6  | COMMUNICATION CABLE-6 PAIR  |
| CC 12 | COMMUNICATION CABLE-12 PAIR |
| DLLIC | DETECTOR LOOP LEAD IN CABLE |
| MA    | MASTARM                     |
| MCC   | MULTI CONDUCTOR CABLE       |
| PB    | PULL BOX                    |
| PP    | PEDESTAL POLE               |
| PPB   | PEDESTRIAN PUSH BUTTON      |
| REC   | RIGID ELECTRIC CONDUIT      |
| SCC   | SINGLE CONDUCTOR CABLE      |
| CAM   | VIDEO CAMERA                |

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TITLE: **UNIVERSITY BOULEVARD/RAC ENTRANCE  
TRAFFIC SIGNAL  
CABLE & CONDUITS QUANTITIES**

Last Design Update

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| CONDUIT LENGTH, SIZE, AND TYPE | CONDUIT FILL BY CONTRACTOR LENGTH AND TYPE |
|--------------------------------|--------------------------------------------|
|--------------------------------|--------------------------------------------|

## ABBREVIATIONS

|       |                             |
|-------|-----------------------------|
| CC 6  | COMMUNICATION CABLE—6 PAIR  |
| CC 12 | COMMUNICATION CABLE—12 PAIR |
| DLIC  | DETECTOR LOOP LEAD IN CABLE |
| MA    | MASTARM                     |
| MCC   | MULTI CONDUCTOR CABLE       |
| PB    | PULL BOX                    |
| PP    | PEDESTAL POLE               |
| PBB   | PEDESTRIAN PUSH BUTTON      |
| REC   | RIGID ELECTRIC CONDUIT      |
| SCC   | SINGLE CONDUCTOR CABLE      |
| CAM   | VIDEO CAMERA                |

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|------------------|----------------|--------------|----------------|-------|----------|----|-----------|
| City Project No. | <b>6101.99</b> | Zone Map No. | <b>M15,N15</b> | Sheet | <b>8</b> | Of | <b>28</b> |
|------------------|----------------|--------------|----------------|-------|----------|----|-----------|

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VIDEO DETECTION IS  
REQUIRED FOR  
THIS INTERSECTION

[illegible]

FUNCTION CHART — 115 VOLT CIRCUIT 1

| CONDUCTOR        |            |        | RING 1 – MULTI CONDUCTOR CABLE 20 |                                    | RING 2 – MULTI CONDUCTOR CABLE 20 |                             |
|------------------|------------|--------|-----------------------------------|------------------------------------|-----------------------------------|-----------------------------|
| CONDUCTOR NUMBER | BASE COLOR | TRACER | FUNCTION                          | FIELD CONNECTION                   | FUNCTION                          | FIELD CONNECTION            |
| 1                | BLACK      | –      | SPARE                             | SPARE                              | SPARE                             | SPARE                       |
| 2                | WHITE      | –      | SPARE                             | SPARE                              | SPARE                             | SPARE                       |
| 3                | RED        | –      | PHASE 1 RED                       |                                    | PHASE 5 RED                       | SPARE                       |
| 4                | GREEN      | –      | PHASE 1 GREEN                     | GREEN LEFT TURN ARROW<br>1B1, 1B2  | PHASE 5 GREEN                     | SPARE                       |
| 5                | ORANGE     | –      | PHASE 1 YELLOW                    | YELLOW LEFT TURN ARROW<br>1B1, 1B2 | PHASE 5 YELLOW                    | SPARE                       |
| 6                | BLUE       | –      | SPARE                             | SPARE                              | SPARE                             | SPARE                       |
| 7                | WHITE      | BLACK  | SPARE                             | SPARE                              | SPARE                             | SPARE                       |
| 8                | RED        | BLACK  | PHASE 2 RED                       | RED BALL<br>2A, 2M1, 2M2           | PHASE 6 RED                       | RED BALL<br>6A, 6M1, 6M2    |
| 9                | GREEN      | BLACK  | PHASE 2 GREEN                     | GREEN BALL<br>2A, 2M1, 2M2         | PHASE 6 GREEN                     | GREEN BALL<br>6A, 6M1, 6M2  |
| 10               | ORANGE     | BLACK  | PHASE 2 YELLOW                    | YELLOW BALL<br>2A, 2M1, 2M2        | PHASE 6 YELLOW                    | YELLOW BALL<br>6A, 6M1, 6M2 |
| 11               | BLUE       | BLACK  | PHASE 2 WALK                      | PEDESTRIAN WALK<br>2P1, 2P2        | PHASE 6 WALK                      | PEDESTRIAN WALK             |
| 12               | BLACK      | WHITE  | PHASE 2 DON'T WALK                | PEDESTRIAN DON'T WALK<br>2P1, 2P2  | PHASE 6 DON'T WALK                | PEDESTRIAN DON'T WALK       |
| 13               | RED        | WHITE  | PHASE 3 RED                       | SPARE                              | PHASE 7 RED                       | SPARE                       |
| 14               | GREEN      | WHITE  | PHASE 3 GREEN                     | SPARE                              | PHASE 7 GREEN                     | SPARE                       |
| 15               | BLUE       | WHITE  | PHASE 3 YELLOW                    | SPARE                              | PHASE 7 YELLOW                    | SPARE                       |
| 16               | BLACK      | RED    | PHASE 4 RED                       | RED BALL<br>4A, 4M1, 4M2           | PHASE 8 RED                       | SPARE                       |
| 17               | WHITE      | RED    | PHASE 4 GREEN                     | GREEN BALL<br>4A, 4M1, 4M2         | PHASE 8 GREEN                     | SPARE                       |
| 18               | ORANGE     | RED    | PHASE 4 YELLOW                    | YELLOW BALL<br>4A, 4M1, 4M2        | PHASE 8 YELLOW                    | SPARE                       |
| 19               | BLUE       | RED    | PHASE 4 WALK                      | PEDESTRIAN WALK<br>4P1, 4P2        | PHASE 8 WALK                      | PEDESTRIAN WALK             |
| 20               | RED        | GREEN  | PHASE 4 DON'T WALK                | PEDESTRIAN DON'T WALK<br>4P1, 4P2  | PHASE 8 DON'T WALK                | PEDESTRIAN DON'T WALK       |

| MULTI CONDUCTOR CABLE 5 |               |             |                  |
|-------------------------|---------------|-------------|------------------|
| CONDUCTOR<br>NUMBER     | BASE<br>COLOR | FUNCTION    | FIELD CONNECTION |
| 1                       | BLACK         | PHASE 2 PPB | 2PBB1 & 2PBB2    |
| 2                       | WHITE         | COMMON      | PPB1 THRU PPB8   |
| 3                       | RED           | PHASE 4 PPB | 4PBB1 & 4PBB2    |
| 4                       | GREEN         | PHASE 6 PPB | SPARE            |
| 5                       | ORANGE        | PHASE 8 PPB | SPARE            |

- 1/ IDENTIFY CONDUCTORS LISTED AS "115 VOLTS"
- 2/ WRAP RING 2 CABLE AT EACH SPLICE POINT WITH COLORED ELECTRICAL TAPE. THE IDENTIFICATION MARKING SHALL BE PROVIDED ON EACH RING 2 CABLE AT EACH SPLICE BOX AND LOCATED 6" BACK FROM THE END.
- 3/ IDENTIFY CONDUCTORS LISTED AS "PPB - LOW VOLTAGE" AT EACH SPLICE POINT. FIVE (5) CONDUCTOR CABLE SHALL BE 24 VOLTS AND USED FOR PUSH BUTTONS ONLY.

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|                                                                                          |                                                                                                                          |
|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| <p>CITY OF ALBUQUERQUE<br/>PUBLIC WORKS DEPARTMENT<br/>ENGINEERING DEVELOPMENT GROUP</p> |                                                                                                                          |
| TITLE:                                                                                   | <p><b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL FUNCTIONS &amp; DETECTORS<br/>VIDEO DETECTION VERSION</b></p> |

Design Review Committee

**APPROVED**

**SEP 13 2000**

DESIGN  
REVIEW COMMITTEE

**APPROVED**  
SEP 13 2000  
**CITY ENGINEER**

## Last Design Update

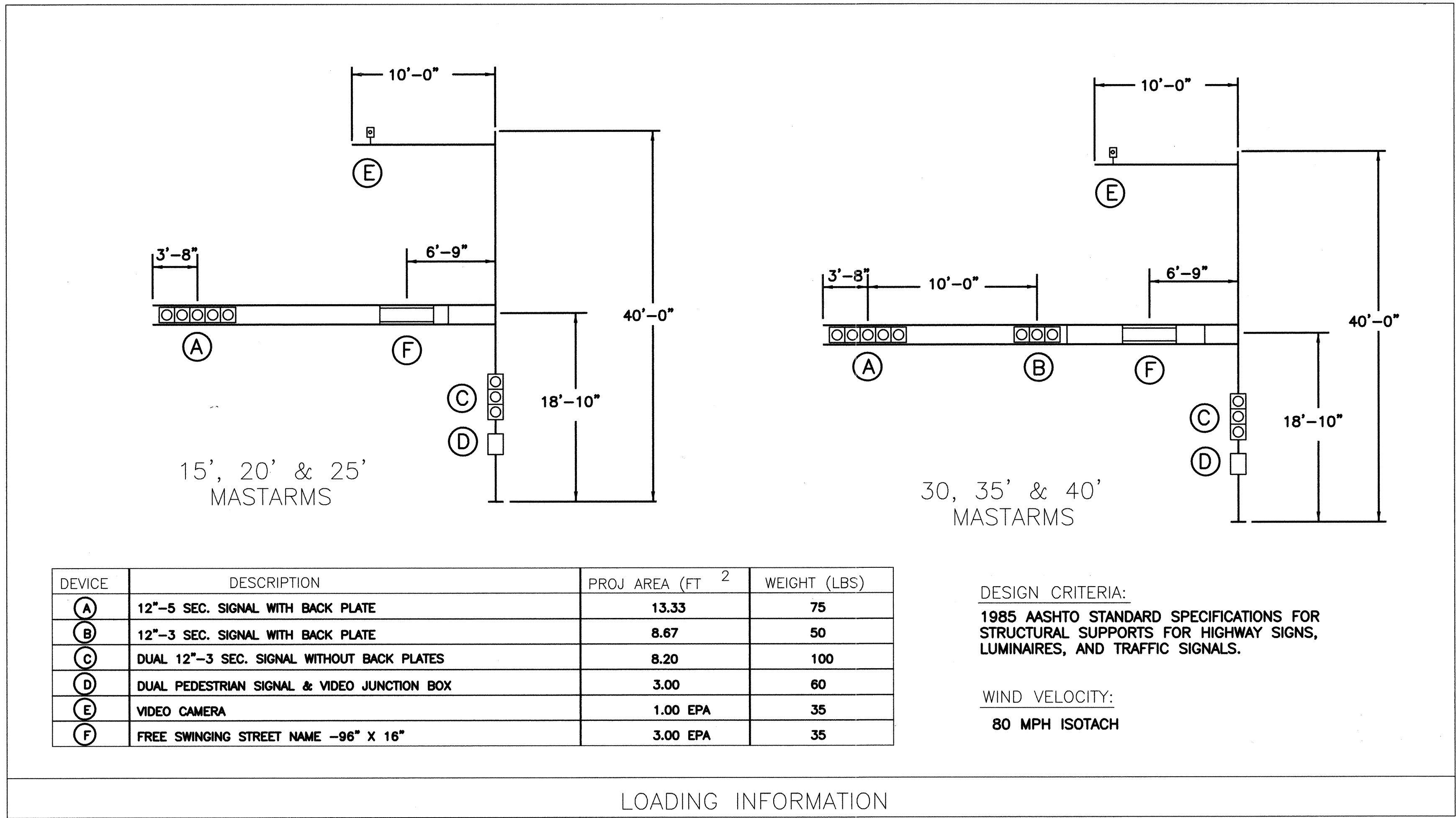
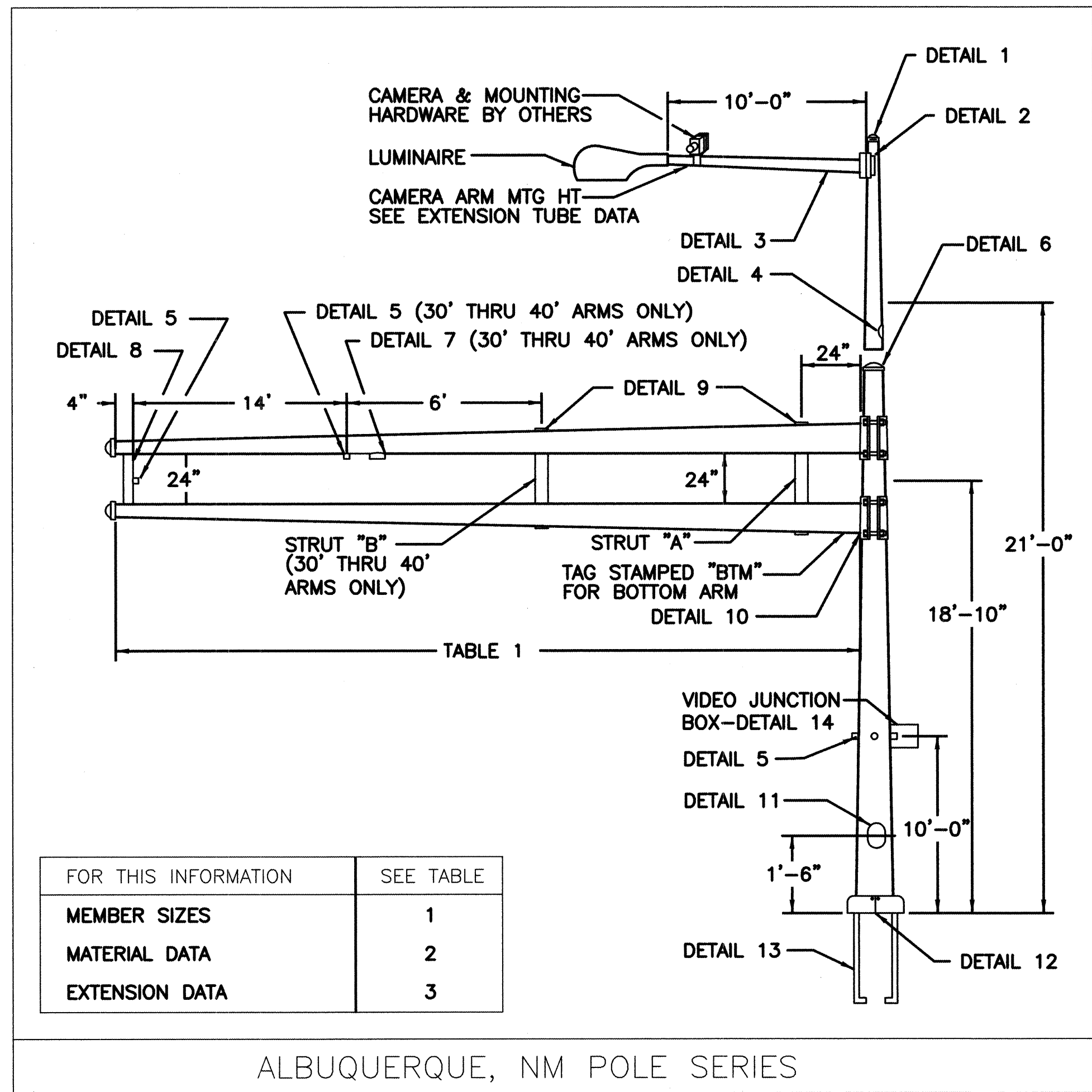
|                  |                |              |                |       |   |    |           |
|------------------|----------------|--------------|----------------|-------|---|----|-----------|
| City Project No. | <b>6101.99</b> | Zone Map No. | <b>M15,N15</b> | Sheet | 9 | Of | <b>28</b> |
|------------------|----------------|--------------|----------------|-------|---|----|-----------|

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| TABLE 1: POLE AND MASTARM SCHEDULE |           |                      |                                       |           |         |        |    |                 |         |          |        |                  |              |            |          |               |              |    |             |                     |        |        |        |                    |
|------------------------------------|-----------|----------------------|---------------------------------------|-----------|---------|--------|----|-----------------|---------|----------|--------|------------------|--------------|------------|----------|---------------|--------------|----|-------------|---------------------|--------|--------|--------|--------------------|
| DESIGNATION (SEE EXAMPLE ABOVE)    |           |                      |                                       | POLE DATA |         |        |    | BASE PLATE DATA |         |          |        | ANCHOR BOLT DATA |              |            |          | MASTARM DATA  |              |    |             | ARM ATTACHMENT DATA |        |        |        |                    |
| POLE SERIES                        | POLE TYPE | SIGNAL ARM SPAN (FT) | CAMERA MOUNTING HEIGHT<br>0=NO CAMERA | BASE DIA  | TOP DIA | LENGTH | GA | CIRCLE "C"      | THK "G" | BC RANGE |        | BOLT CIRCLE      | DIAMETER "K" | LENGTH "J" | HOOK "H" | FIXED END DIA | FREE END DIA | GA | LENGTH (FT) | "A"                 | "B"    | "C"    | "D"    | "E"                |
|                                    |           |                      |                                       |           |         |        |    |                 |         | BC1      | BC2    |                  |              |            |          |               |              |    |             |                     |        |        |        |                    |
| ALB                                | 2         | 15                   | 0, 30, 35, 40                         | 10.00"    | 7.06"   | 21'-0" | 7  | 23.00"          | 1.50"   | 16.00"   | 19.00" | 16.00"           | 1.50"        | 54"        | 6"       | 5.80"         | 3.70"        | 11 | 15          | 7.25"               | 9.44"  | 10.81" | 10.38" | 1.00"-8UNC X 8.00" |
| ALB                                | 2         | 20                   | 0, 30, 35, 40                         | 10.00"    | 7.06"   | 21'-0" | 7  | 23.00"          | 1.50"   | 16.00"   | 19.00" | 16.00"           | 1.50"        | 54"        | 6"       | 6.50"         | 3.70"        | 11 | 20          | 7.25"               | 9.44"  | 10.81" | 10.38" | 1.00"-8UNC X 8.00" |
| ALB                                | 2         | 25                   | 0, 30, 35, 40                         | 10.00"    | 7.06"   | 21'-0" | 7  | 23.00"          | 1.50"   | 16.00"   | 19.00" | 16.00"           | 1.50"        | 54"        | 6"       | 7.00"         | 3.50"        | 11 | 25          | 7.25"               | 9.44"  | 10.81" | 10.38" | 1.00"-8UNC X 8.00" |
| ALB                                | 2         | 30                   | 0, 30, 35, 40                         | 12.00"    | 9.06"   | 21'-0" | 5  | 23.00"          | 1.50"   | 16.00"   | 19.00" | 16.00"           | 1.50"        | 54"        | 6"       | 7.72"         | 3.52"        | 7  | 30          | 9.25"               | 11.44" | 13.81" | 12.38" | 1.00"-8UNC X 9.00" |
| ALB                                | 2         | 35                   | 0, 30, 35, 40                         | 12.00"    | 9.06"   | 21'-0" | 5  | 23.00"          | 1.50"   | 16.00"   | 19.00" | 16.00"           | 1.50"        | 54"        | 6"       | 8.30"         | 3.40"        | 7  | 35          | 9.25"               | 11.44" | 13.81" | 12.38" | 1.00"-8UNC X 9.00" |
| ALB                                | 2         | 40                   | 0, 30, 35, 40                         | 12.00"    | 9.06"   | 21'-0" | 5  | 23.00"          | 1.50"   | 16.00"   | 19.00" | 16.00"           | 1.50"        | 54"        | 6"       | 9.00"         | 3.40"        | 7  | 40          | 9.25"               | 11.44" | 13.81" | 12.38" | 1.00"-8UNC X 9.00" |

| TABLE 2: MATERIAL DATA                                               |                  |                  |                       |                  |                  |
|----------------------------------------------------------------------|------------------|------------------|-----------------------|------------------|------------------|
| COMPONENT                                                            | ASTM DESIGNATION | MIN. YIELD (KSI) | COMPONENT             | ASTM DESIGNATION | MIN. YIELD (KSI) |
| POLE TUBE                                                            | A595 GR A        | 55               | SIGNAL ARM CLAMP      | A36              | 36               |
| BASE PLATE                                                           | A36              | 36               | SIGNAL ARM CONN BOLTS | A325 *           |                  |
| MAST ARM TUBE                                                        | A595 GR A        | 55               | CAMERA ARM PLATES     | A36              | 36               |
| CAMERA ARM TUBE                                                      | A595 GR A        | 55               | GALVANIZING           | A123 & A153      |                  |
| POLE EXTENSION                                                       | A595 GR A        | 55               |                       |                  |                  |
| ANCHOR BOLTS AASHTO M314 GR. 55                                      |                  |                  |                       |                  |                  |
| * LUBRICATE IN FIELD IF NECESSARY IN LIEU OF THE REQUIREMENT IN A325 |                  |                  |                       |                  |                  |

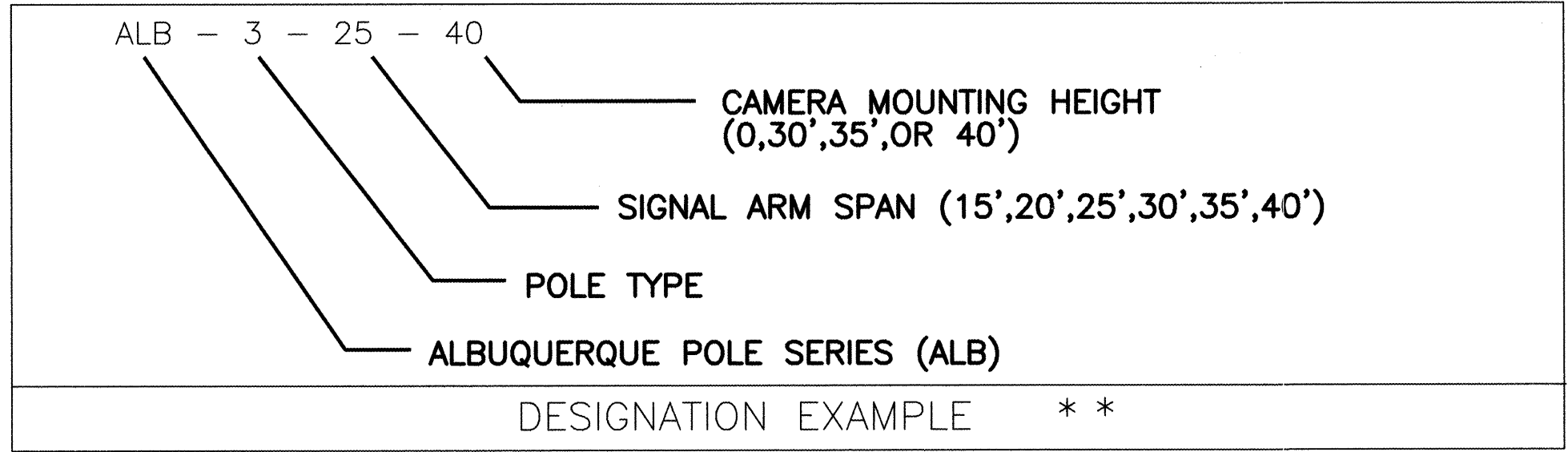
| TABLE 3: EXTENSION TUBE DATA |                    |                |         |             |       |
|------------------------------|--------------------|----------------|---------|-------------|-------|
| MASTARM LENGTH (FT)          | CAMERA MTG HT (FT) | EXTENSION TUBE |         |             |       |
|                              |                    | BASE DIA       | TOP DIA | LENGTH (FT) | GAUGE |
| 15-20                        | 30                 | 7.00           | 5.74    | 9.0         | 11    |
|                              | 35                 | 7.00           | 5.04    | 14.0        | 11    |
|                              | 40                 | 7.00           | 4.34    | 19.0        | 11    |
| 30-40                        | 30                 | 9.00           | 7.74    | 9.0         | 11    |
|                              | 35                 | 9.00           | 7.04    | 14.0        | 11    |
|                              | 40                 | 9.00           | 6.34    | 19.0        | 11    |

FINISH:

☐ GALVANIZED

☐ POWDER COATED

COLOR \_\_\_\_\_



\*\* POLE SHAFTS SHALL BE MARKED "ALB" "15-25" OR "30-40", AND DATE OF FABRICATION (MONTH/YEAR).

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CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE: **UNIVERSITY BOULEVARD/RAC ENTRANCE TRAFFIC SIGNAL MASTARM DETAILS TYPE III STANDARD**

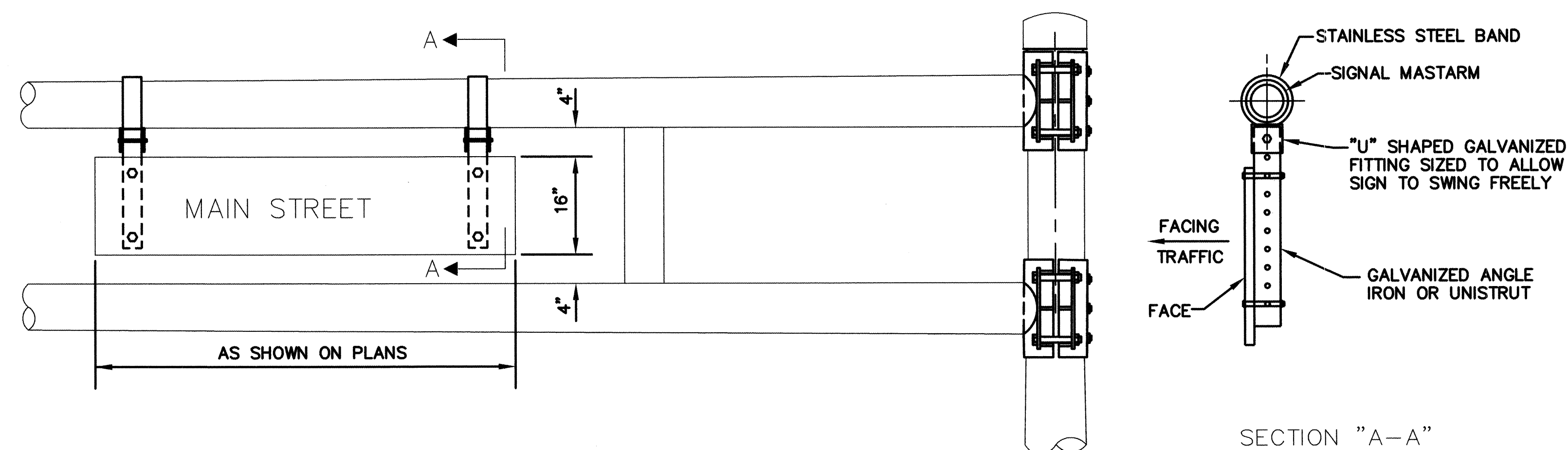
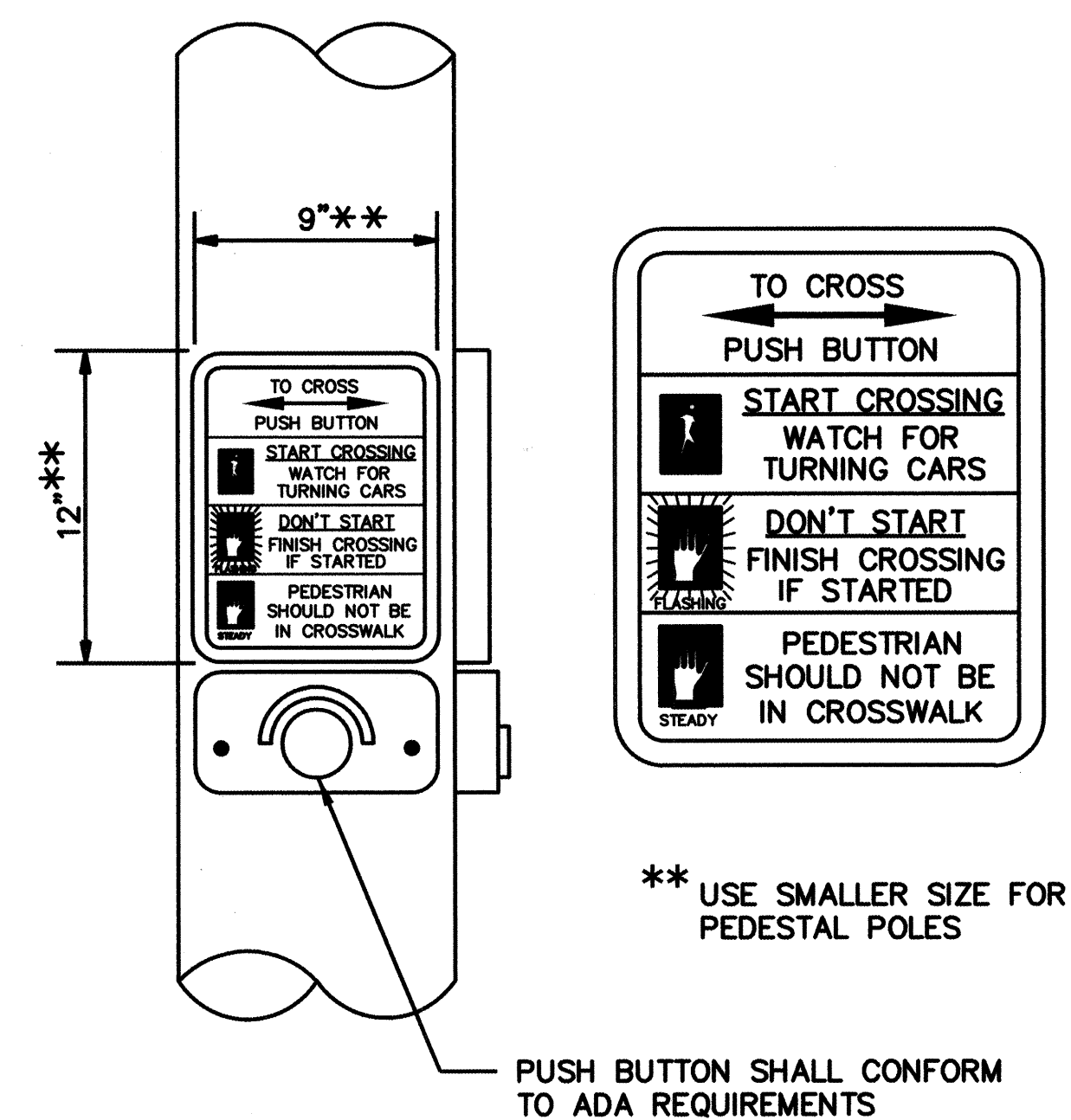
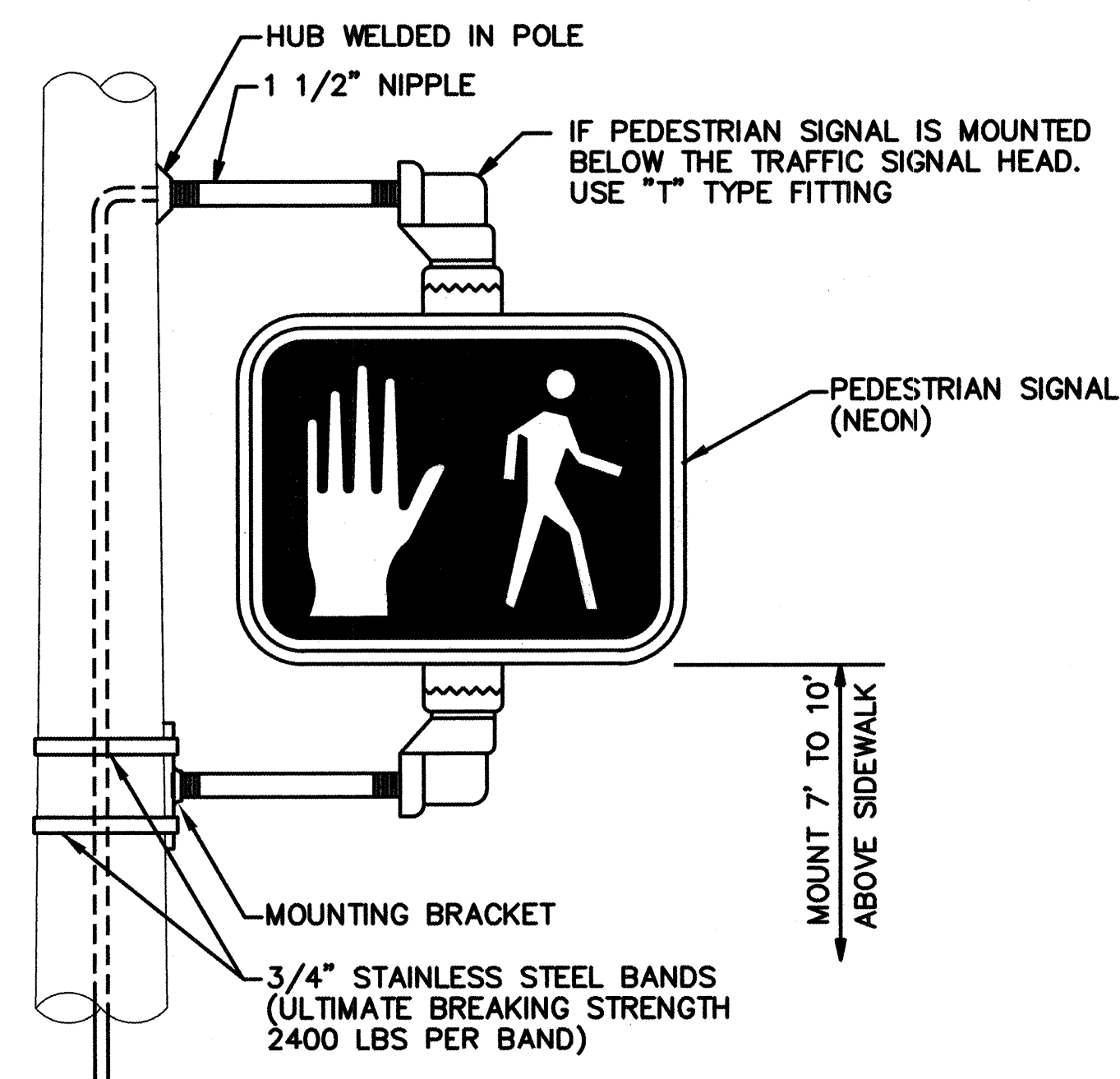
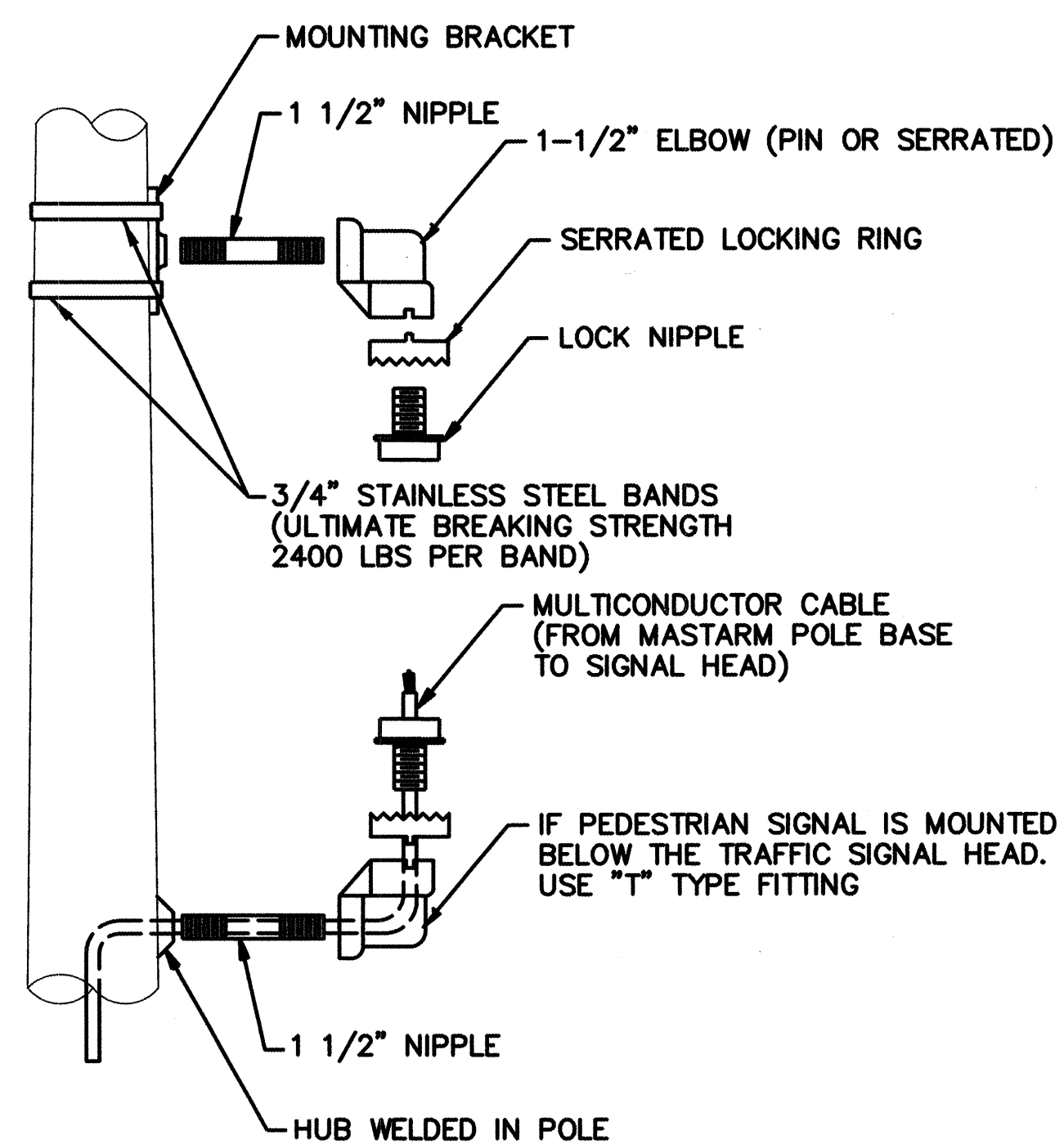
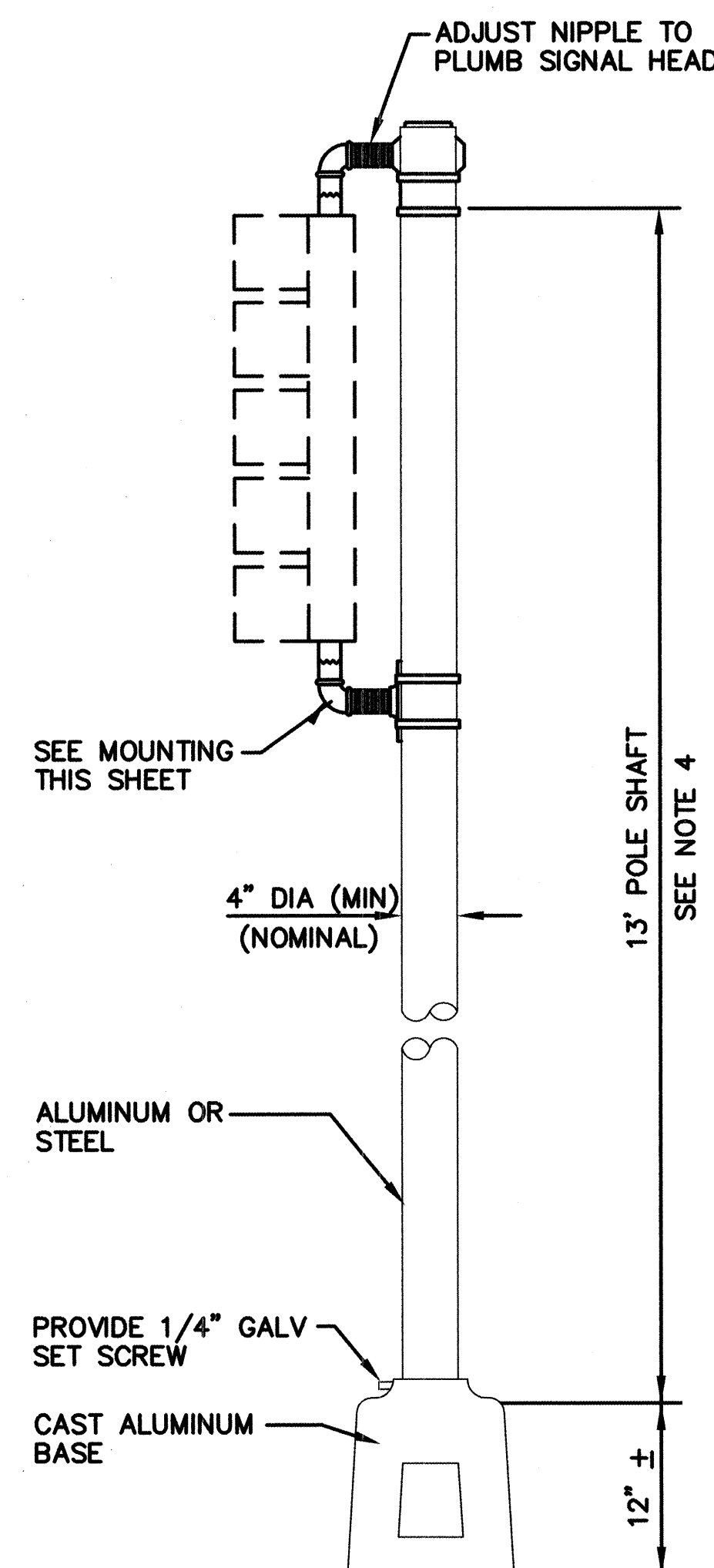
Design Review Committee: **COP** **STP**

City Project No. **6101.97 99** Zone Map No. **M15,N15** Sheet **11** Of **28**









NOTES:

1. STREET NAME SIGNS REQUIRED AS SHOWN ON PLANS.
2. STREET NAME SIGN SHALL BE 16" WIDE WITH 8" SERIES "C" LETTERS. SIGN SHALL BE NO MORE THAN 12 SQUARE FEET TOTAL AREA AND SHALL HAVE HIGH INTENSITY REFLECTIVE LEGEND, 1" BORDER AND BACKGROUND COLORS: WHITE ON GREEN, SIGN PANELS SHALL BE SINGLE SHEET 6061-76 ALUMINUM .120 MINIMUM THICKNESS.
3. PEDESTRIAN ACTUATED CROSSING SHALL BE A MAXIMUM OF 42' (1065 mm) ABOVE THE FINISHED PUBLIC SIDEWALK. A STABLE, FIRM, AND SLIP-RESISTANT AREA - 30'x48' (915 mm x 1220 mm) - SHALL BE PROVIDED TO ALLOW FOR A FORWARD OR PARALLEL APPROACH TO THE CONTROLS. WHERE A SIGNAL IS PROVIDED, CONTROLS SHALL BE WITHIN 10" (255 mm) HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.
4. FOR INSTALLATIONS WITH ONLY PEDESTRIAN SIGNALS, CUT SHAFT TO 9'. USE 15' SHAFT FOR PEDESTAL POLES REQUIRING BOTH 5-SECTION SIGNAL ASSEMBLIES AND PEDESTRIAN SIGNALS.

FINISH:

☐ GALVANIZED☐ POWDER COATED

COLOR \_\_\_\_\_

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SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

|                                                                                 |                                                                                                   |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP |                                                                                                   |
| TITLE:                                                                          | <b>UNIVERSITY BOULEVARD/RAC ENTRANCE</b><br><b>TRAFFIC SIGNAL</b><br><b>MISCELLANEOUS DETAILS</b> |

Design Review Committee

CP

STD

## Last Design Update

Mo./Day/Yr.

Mo./Day/Yr.

|  |                  |
|--|------------------|
|  | City Project No. |
|--|------------------|

6101.97 99

|              |  |
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| Zone Map No. |  |
|--------------|--|

Zone Map No.  
**M15,N15**

|       |
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| Sheet |
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|  |  | C |
|--|--|---|

13 Of 28

ENGINEER'S SEAL

## SURVEY INFORMATION

## BENCH MARKS

**AS BUILT INFORMATION**

| TRACTOR | DATE |
|---------|------|
| TRK     |      |

|             |      |
|-------------|------|
| MAKED BY    | DATE |
| SPECTOR'S   |      |
| CEPTANCE BY |      |

[illegible]

DATE \_\_\_\_\_  
DRAWINGS \_\_\_\_\_  
DIRECTED BY \_\_\_\_\_  
MICRO-FILM INFORMATION \_\_\_\_\_

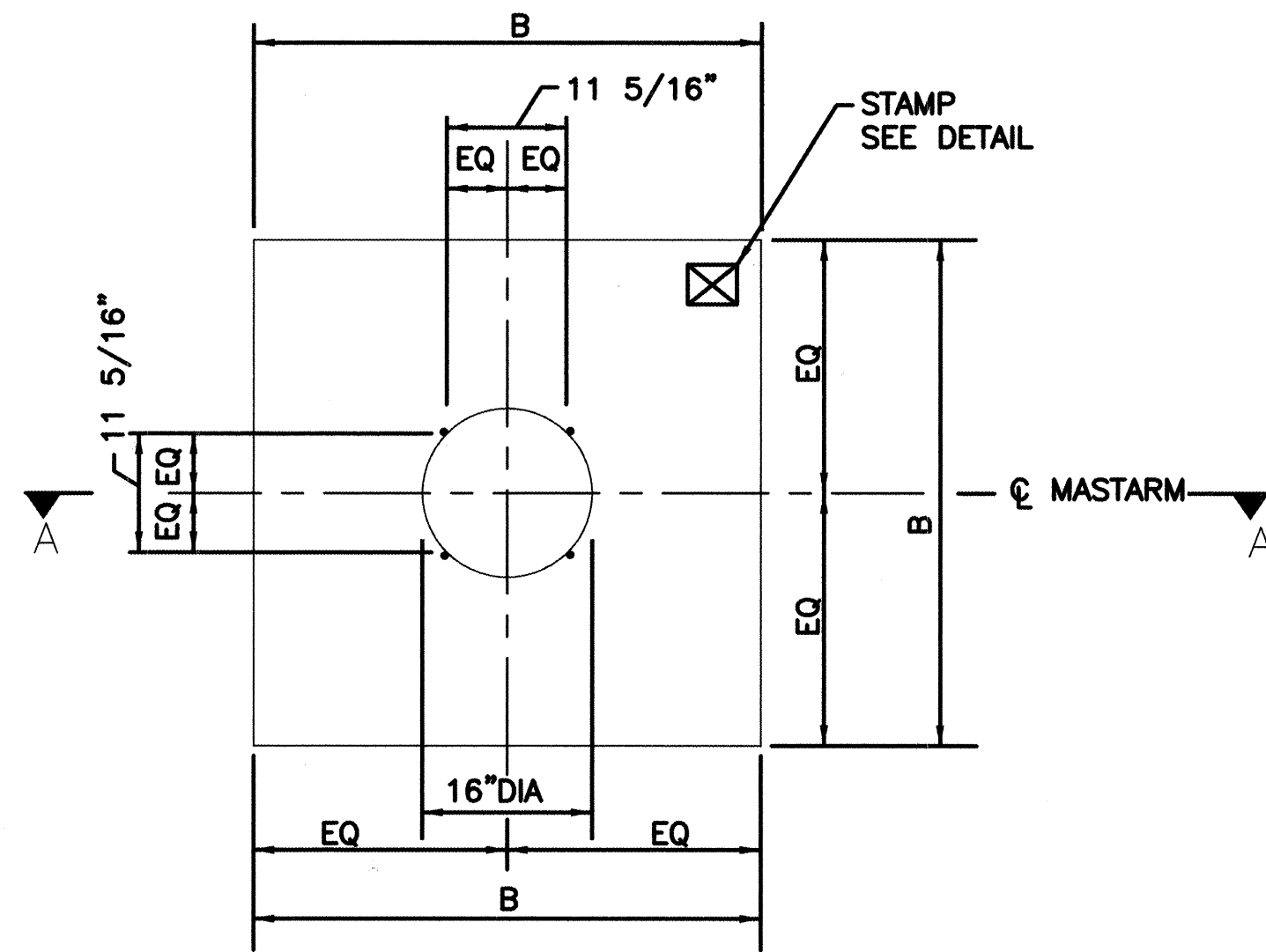
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| RECORDED BY | DATE |
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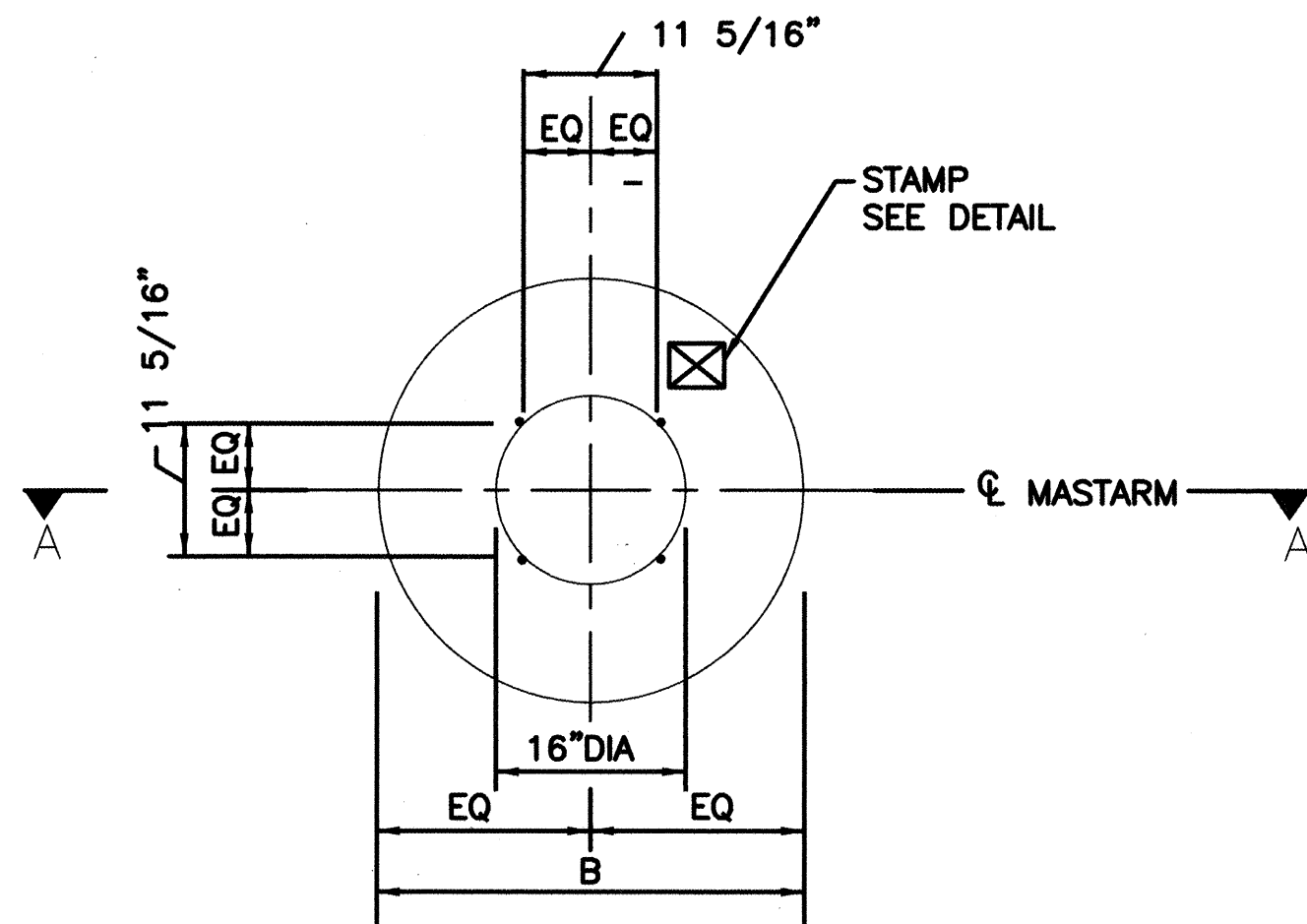
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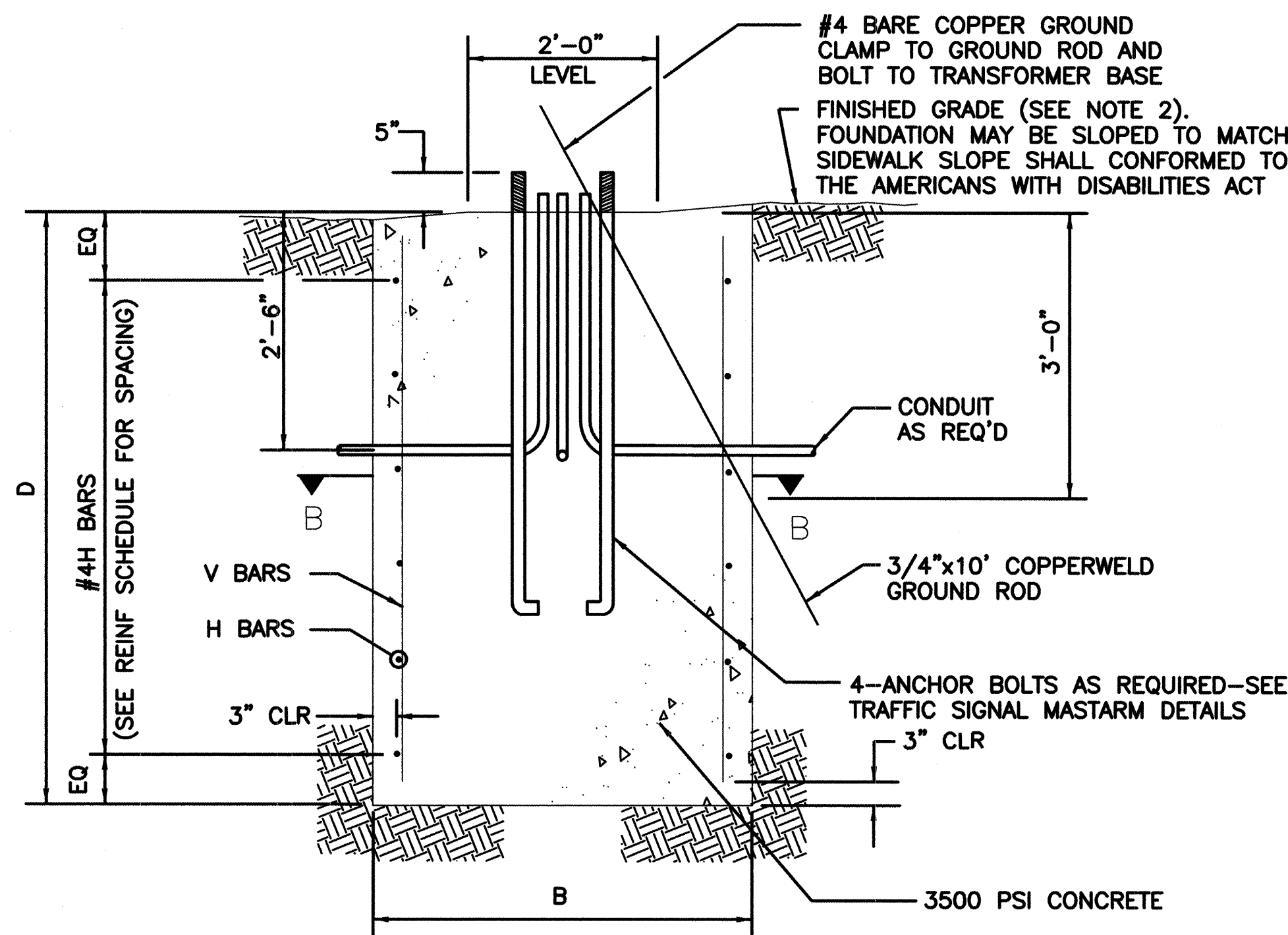




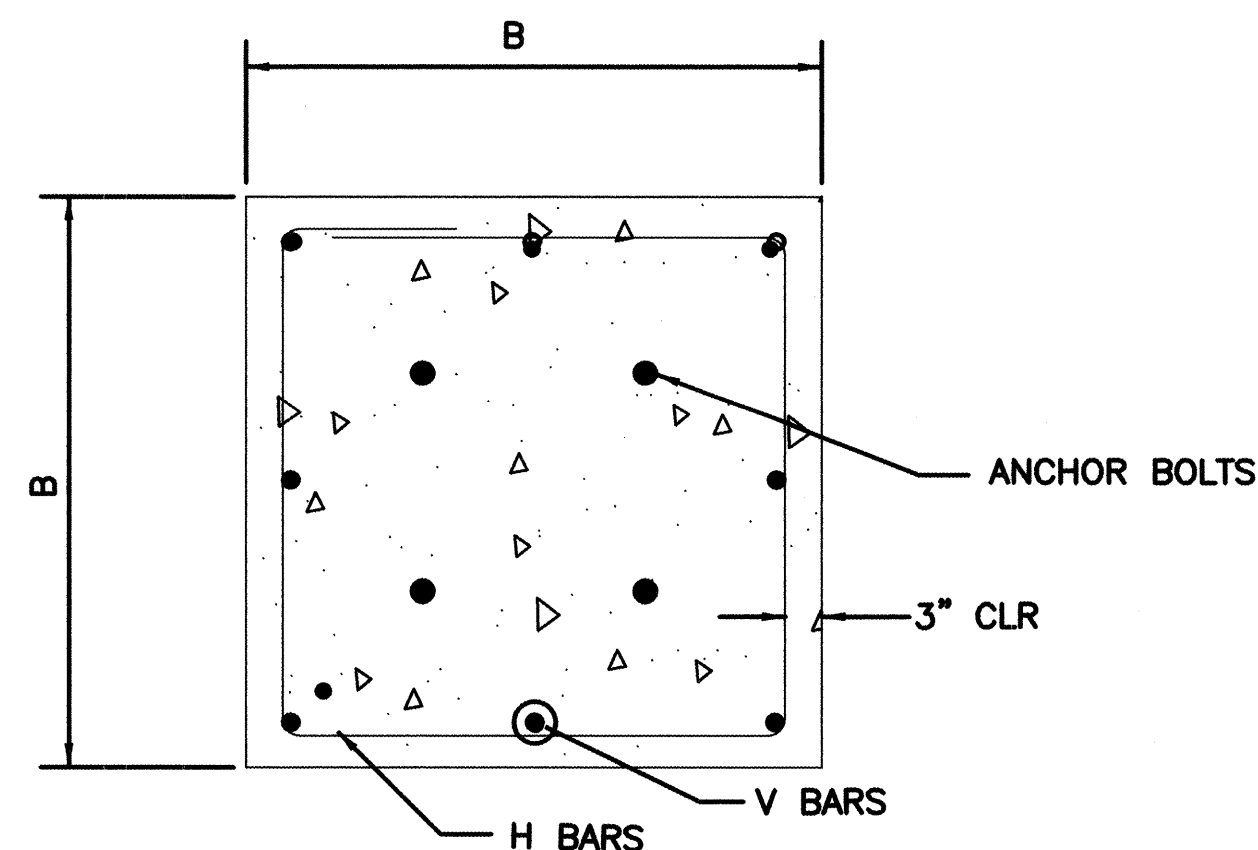
PLAN VIEW (SQUARE)  
NO SCALE



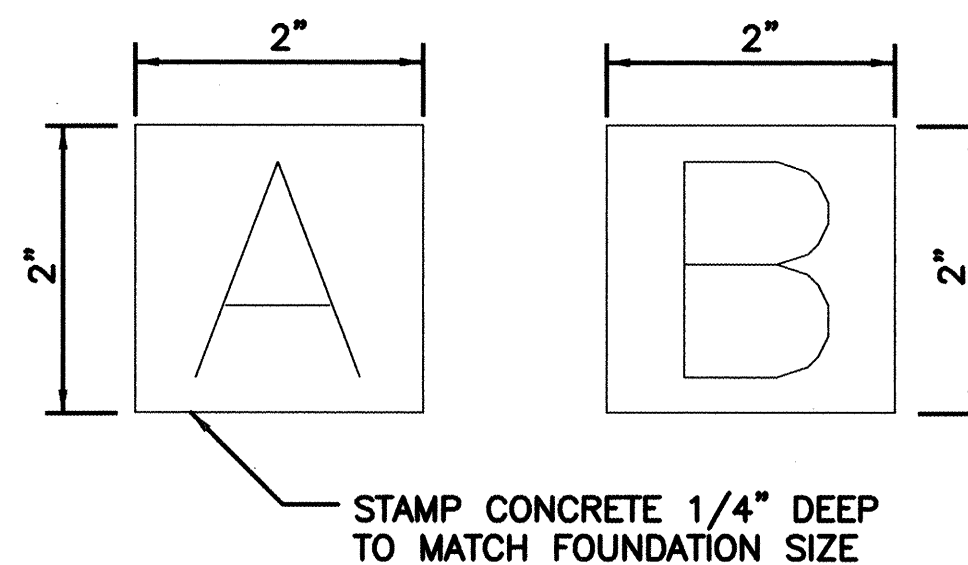
PLAN VIEW (ROUND)  
NO SCALE



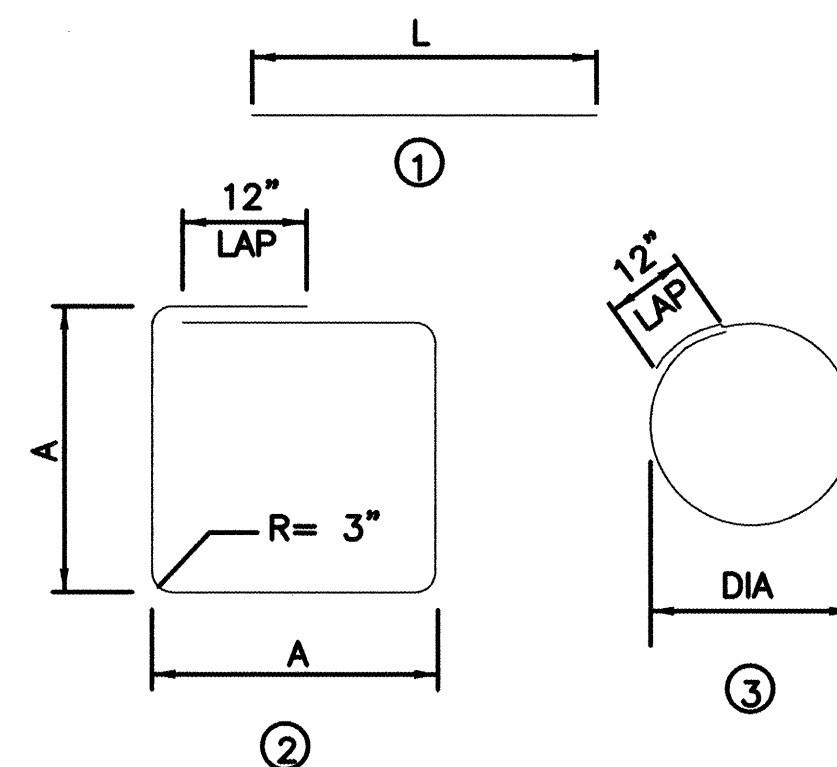
SECTION A-A (ROUND OR SQUARE)  
NO SCALE



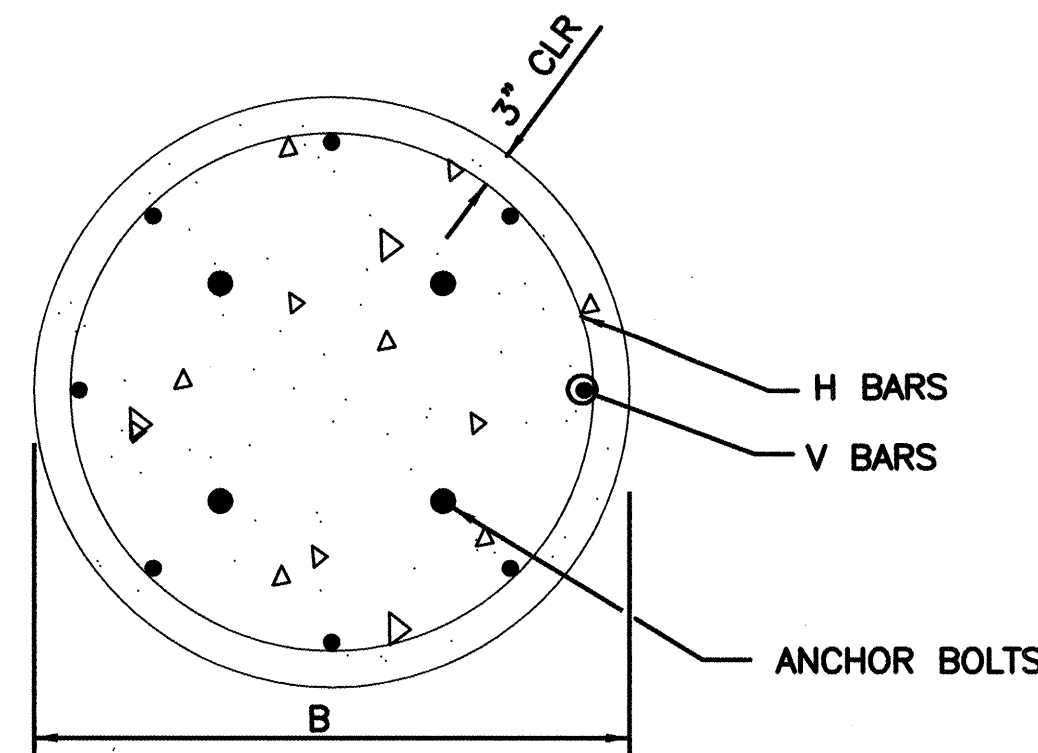
SECTION B-B (SQUARE)  
NO SCALE



STAMP DETAIL  
NO SCALE



BAR BENDING DIAGRAM



SECTION B-B (ROUND)  
NO SCALE

| FOUNDATION DIMENSIONS AND QUANTITIES |                     |           |           |             |             |              |                               |                                                                                                        |
|--------------------------------------|---------------------|-----------|-----------|-------------|-------------|--------------|-------------------------------|--------------------------------------------------------------------------------------------------------|
| FOUNDATION TYPE                      | SIGNAL ARM SPAN(FT) | DIMENSION |           | REINFORCING |             | REBAR POUNDS | 3500 PSI CONCRETE CUBIC YARDS | NOTES                                                                                                  |
|                                      |                     | B (WIDTH) | D (DEPTH) | V BARS MARK | H BARS MARK |              |                               |                                                                                                        |
| TYPE A (SQUARE)                      | 15                  | 3'-6"     | 5'-0"     | #4V2        | #3H2        | 49.1         | 2.27                          |                                                                                                        |
|                                      | 20                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
|                                      | 25                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
| TYPE B (SQUARE)                      | 30                  | 4'-0"     | 6'-3"     | #5V1        | #3H1        | 82.6         | 3.70                          |                                                                                                        |
|                                      | 35                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
|                                      | 40                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
| TYPE A (ROUND)                       | 15                  | 2'-6"     | 8'-6"     | #6V4        | #3H4        | 98.1         | 1.55                          | ROUND SHAPE TO BE USED ONLY WHERE SPECIFICALLY NOTED ON PLANS OR WHEN APPROVED BY THE PROJECT MANAGER. |
|                                      | 20                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
|                                      | 25                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
| TYPE B (ROUND)                       | 30                  | 3'-0"     | 11'-9"    | #7V3        | #3H3        | 179.7        | 3.08                          |                                                                                                        |
|                                      | 35                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |
|                                      | 40                  | "         | "         | "           | "           | "            | "                             |                                                                                                        |

| REINFORCING SCHEDULE (GRADE 60 BARS) |       |      |      |        |                                                                                                          |
|--------------------------------------|-------|------|------|--------|----------------------------------------------------------------------------------------------------------|
| MARK                                 | QUANT | TYPE | SIZE | LENGTH | COMMENTS                                                                                                 |
| #5V1                                 | 8     | 1    | 5    | 5'-9"  | A = 42",TIES AT 14" OC<br>A = 36",TIES AT 12" OC<br>DIA = 30",TIES AT 12" OC<br>DIA = 24",TIES AT 12" OC |
| #4V2                                 | 8     | 1    | 4    | 4'-6"  |                                                                                                          |
| #7V3                                 | 6     | 1    | 7    | 11'-3" |                                                                                                          |
| #6V4                                 | 6     | 1    | 6    | 8'-0"  |                                                                                                          |
| #3H1                                 | 6     | 2    | 3    | 15'-4" |                                                                                                          |
| #3H2                                 | 5     | 2    | 3    | 13'-4" |                                                                                                          |
| #3H3                                 | 12    | 3    | 3    | 9'-3"  |                                                                                                          |
| #3H4                                 | 9     | 3    | 3    | 7'-8"  |                                                                                                          |

#### TRAFFIC SIGNAL MASTARM FOUNDATION NOTES

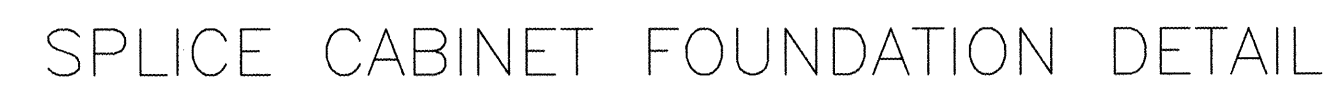
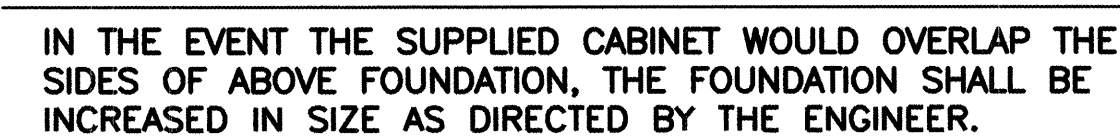
- REFER TO THE PLANS FOR LOCATIONS OF TRAFFIC SIGNAL MASTARM FOUNDATIONS.
- FINISHED GRADE FOR THE FOUNDATIONS SHALL BE ESTABLISHED IN THE FIELD BY THE PROJECT MANAGER.
- THE FOUNDATIONS SHOWN HERE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, CURRENT REVISION.
- CONCRETE SHALL BE 3500 PSI FOR EXTERIOR STRUCTURES. REFER TO TABLE 101.C OF THE SPECIFICATIONS.
- REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60.
- THE TOP 6 INCHES OF THE FOUNDATION PEDESTAL SHALL BE FORMED TO THE DIMENSIONS SHOWN ON THIS SHEET TO FORM NEAT LINES. CONCRETE BELOW 6 LINES MAY BE CAST AGAINST THE EARTH.
- THE CONCRETE SHALL GAIN 80% OF THE DESIGN STRENGTH PRIOR TO INSTALLING THE TRAFFIC SIGNAL MASTARM.
- ALL FOUNDATIONS SHALL INCLUDE COPPERWELD GROUND RODS. ALL GROUND RODS SHALL BE 3/4" DIA X 10'-0" AND WILL BE CONSIDERED INCIDENTAL TO THE FOUNDATIONS BID ITEMS.
- ALL FOUNDATIONS SHALL BE STAMPED EITHER "A" OR "B" TO SHOW TYPE CONSTRUCTED (SEE STAMP DETAIL).

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**URS**  
5971 JEFFERSON BLVD. NE  
SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

|                                                                                                                          |                             |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                                          |                             |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL FOUNDATION<br/>DETAILS TYPE II AND TYPE III STANDARDS</b> |                             |
| Design Review Committee                                                                                                  | Mo./Day/Yr.                 |
| CDP                                                                                                                      | STD                         |
| City Project No. <b>6101.99</b>                                                                                          | Zone Map No. <b>M15,N15</b> |
| Sheet <b>14</b>                                                                                                          | Of <b>28</b>                |

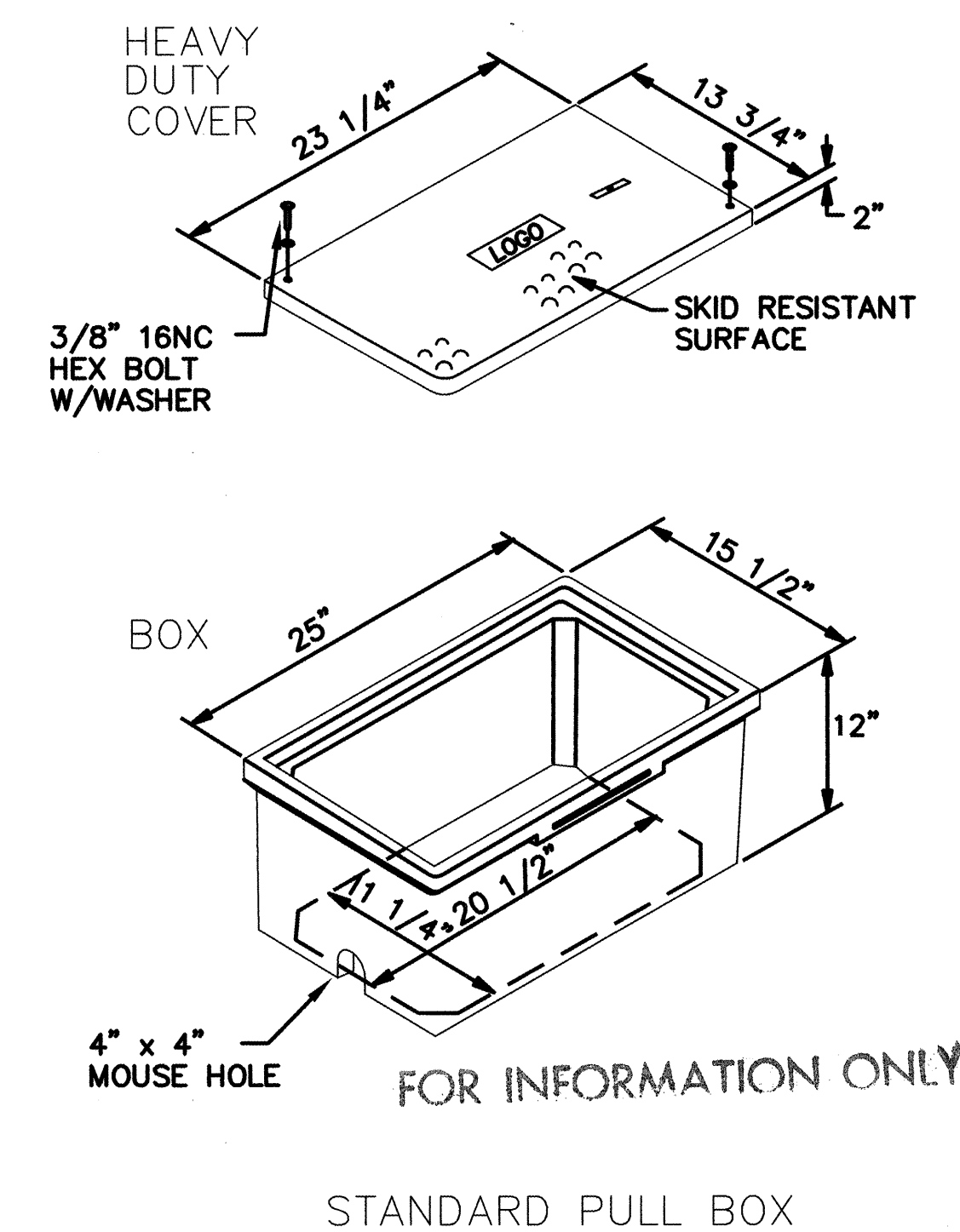
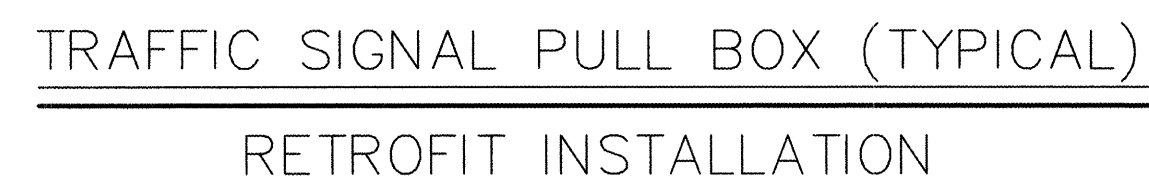
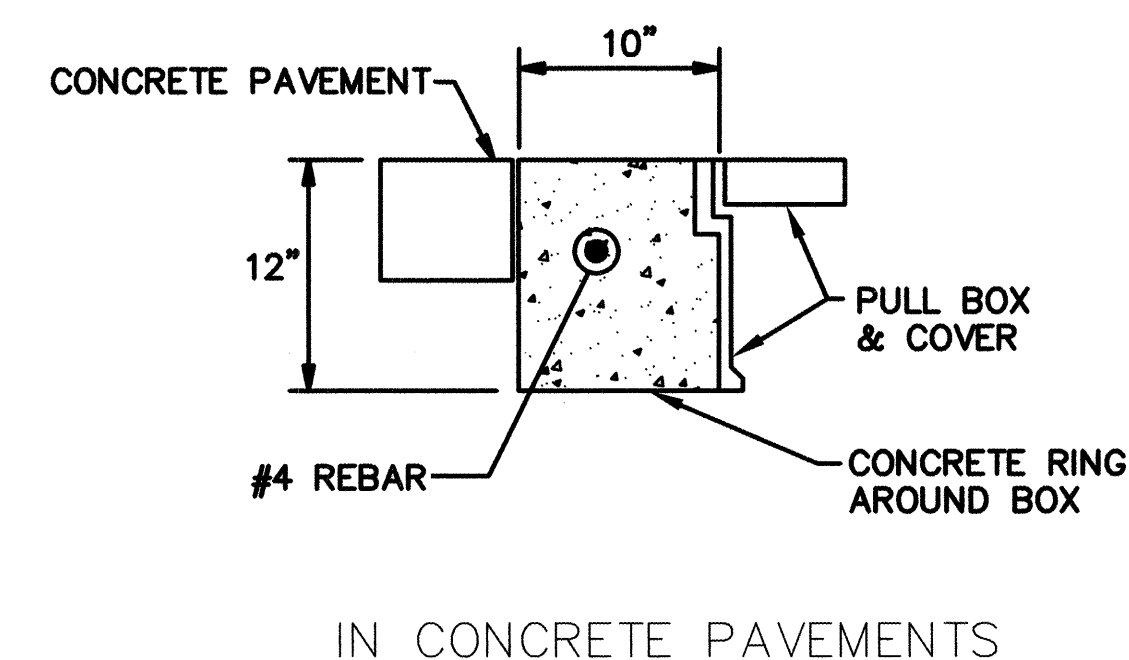
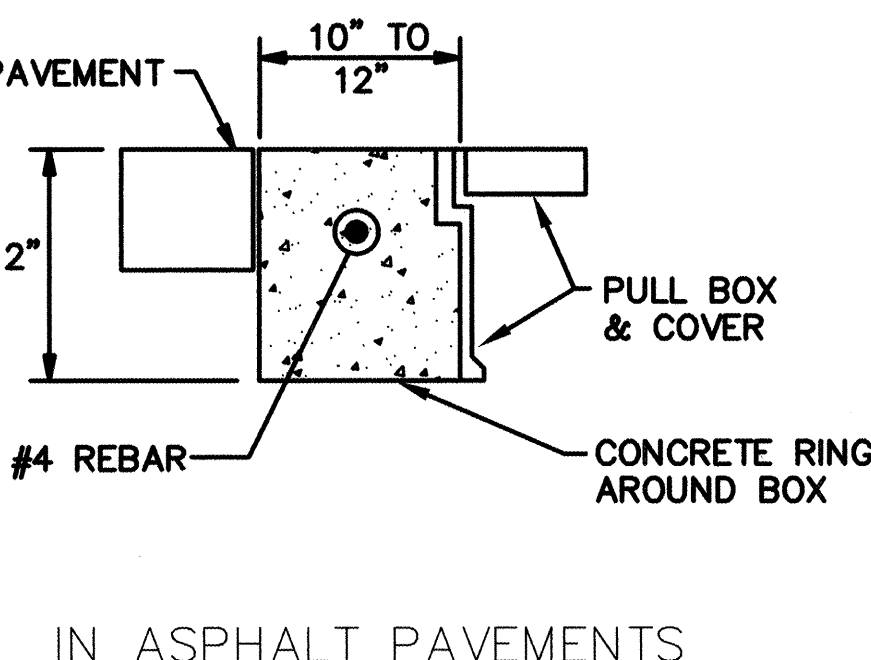




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|                                                                                                                |  |  |                    |  |  |             |  |             |  |                                                      |
|----------------------------------------------------------------------------------------------------------------|--|--|--------------------|--|--|-------------|--|-------------|--|------------------------------------------------------|
| URS<br>5971 JEFFERSON BLVD. NE<br>SUITE 101<br>ALBUQUERQUE, NM 87109<br>(505) 345-3999                         |  |  |                    |  |  |             |  | No.         |  | Designed By: PAR<br>Drawn By: PED<br>Checked By: TDS |
|                                                                                                                |  |  |                    |  |  |             |  |             |  |                                                      |
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                                |  |  |                    |  |  |             |  |             |  |                                                      |
| TITLE: UNIVERSITY BOULEVARD/RAC ENTRANCE<br>TRAFFIC SIGNAL CONTROLLER<br>CABINET & PEDESTAL FOUNDATION DETAILS |  |  |                    |  |  |             |  |             |  |                                                      |
| Design Review Committee                                                                                        |  |  | Last Design Update |  |  | Mo./Day/Yr. |  | Mo./Day/Yr. |  |                                                      |
| CCA                                                                                                            |  |  |                    |  |  |             |  |             |  |                                                      |
| STD                                                                                                            |  |  |                    |  |  |             |  |             |  |                                                      |
|                                                                                                                |  |  |                    |  |  |             |  |             |  |                                                      |
|                                                                                                                |  |  |                    |  |  |             |  |             |  |                                                      |
| City Project No.                                                                                               |  |  | Zone Map No.       |  |  | Sheet       |  | Of          |  |                                                      |
| 6101.9799                                                                                                      |  |  | M15,N15            |  |  | 15          |  | 28          |  |                                                      |





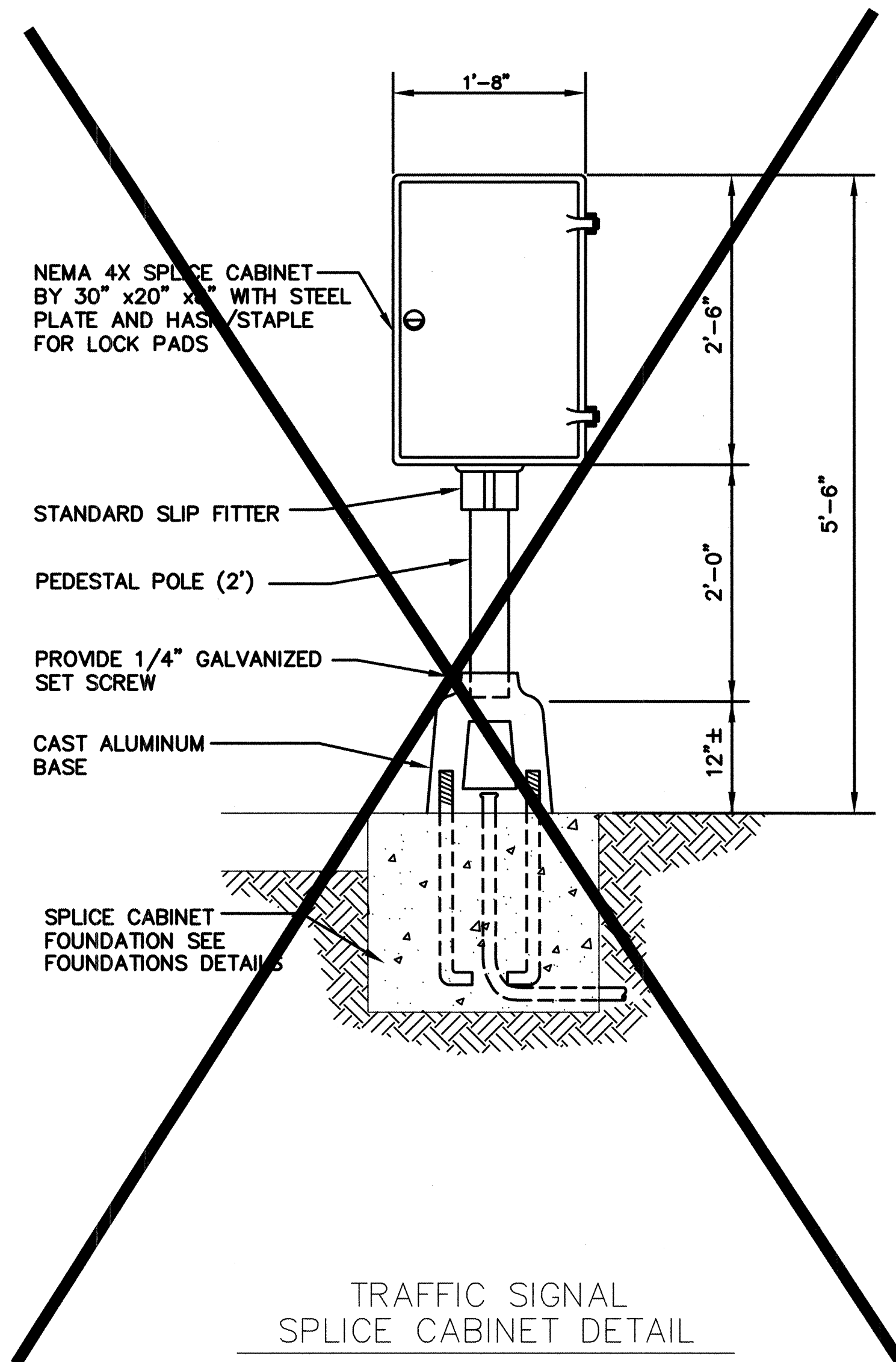
1. MATERIAL TO BE AN AGGREGATE CONSISTING OF SAND AND GRAVEL BOUND TOGETHER WITH A POLYMER AND REINFORCED WITH CONTINUOUS WOVEN GLASS STRANDS. THE MATERIAL MUST HAVE THE FOLLOWING MECHANICAL PROPERTIES: COMPRESSIVE STRENGTH - 11,000 PSI, TENSILE STRENGTH - 1,700 PSI, FLEXURAL STRENGTH - 7,500 PSI.
2. ALL PULL BOX COVERS SHALL BE HEAVY DUTY REINFORCED POLYMER MORTAR, HAVING A SERVICE LOAD OF 22,568 LBS OVER 10" SQUARE (225 PSI).
3. PULL BOX TYPE AND LOGO SHALL BE APPROVED BY THE PROJECT MANAGER.
4. THE DIMENSIONS OF THE PULL BOXES SHOWN ARE NOMINAL DIMENSIONS AND MAY VARY AS TO THE MANUFACTURER'S RECOMMENDATIONS. ALL DIMENSIONS SHALL BE VERIFIED BY THE PROJECT MANAGER.
5. ELECTRICAL PULL BOX (STANDARD) SHALL BE A HEAVY DUTY REINFORCED POLYMER MORTAR PULL BOX AND COVER MEASURING 13 3/4" x 23 1/4" x 2".

|                                                                                                                                                                                      |  |                                                            |                             |                    |                 |  |              |                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------|-----------------------------|--------------------|-----------------|--|--------------|------------------------------------------------------|
| <div style="text-align: center;"> <b>URS</b><br/>         5971 JEFFERSON BLVD. NE<br/>         SUITE 101<br/>         ALBUQUERQUE, NM 87109<br/>         (505) 345-3999       </div> |  |                                                            |                             |                    |                 |  |              | Designed By: PAR<br>Drawn By: PEG<br>Checked By: TDS |
|                                                                                                                                                                                      |  |                                                            |                             |                    |                 |  | No.          |                                                      |
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                                                                                                      |  |                                                            |                             |                    |                 |  |              |                                                      |
| TITLE: <b>UNIVERSITY KOLEVARI/RAC ENTRANCE<br/>TRAFFIC SIGNAL<br/>PULL BOX DETAILS</b>                                                                                               |  |                                                            |                             |                    |                 |  |              |                                                      |
| Design Review Committee<br><br><div style="font-size: 2em; text-align: center;">CDA</div>                                                                                            |  | <div style="font-size: 2em; text-align: center;">STP</div> |                             | Last Design Update | Mo./Day/Yr.     |  | Mo./Day/Yr.  |                                                      |
|                                                                                                                                                                                      |  |                                                            |                             |                    |                 |  |              |                                                      |
|                                                                                                                                                                                      |  |                                                            |                             |                    |                 |  |              |                                                      |
|                                                                                                                                                                                      |  |                                                            |                             |                    |                 |  |              |                                                      |
|                                                                                                                                                                                      |  |                                                            |                             |                    |                 |  |              |                                                      |
| City Project No. <b>6101.97 99</b>                                                                                                                                                   |  |                                                            | Zone Map No. <b>M15,N15</b> |                    | Sheet <b>16</b> |  | Of <b>28</b> |                                                      |

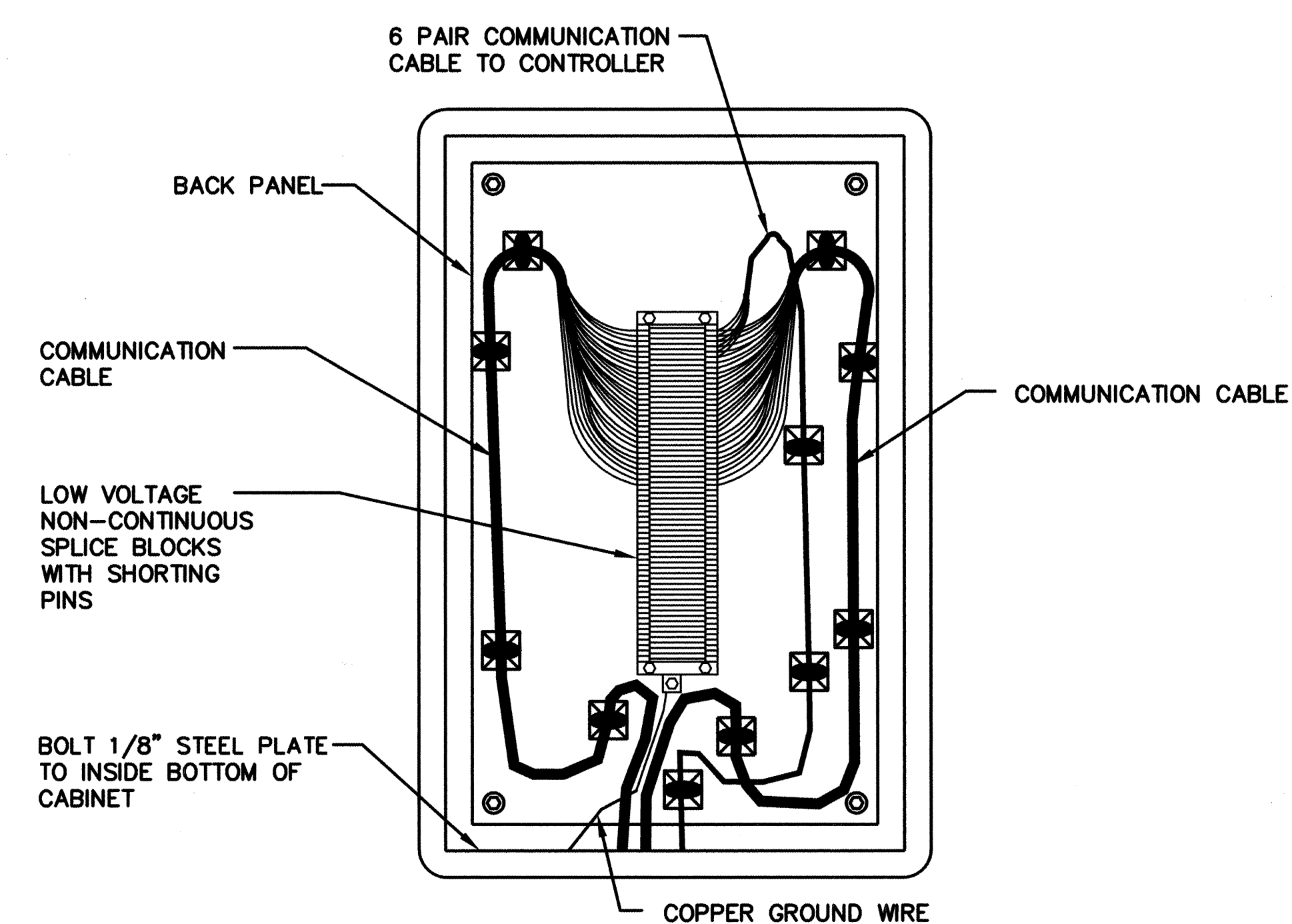




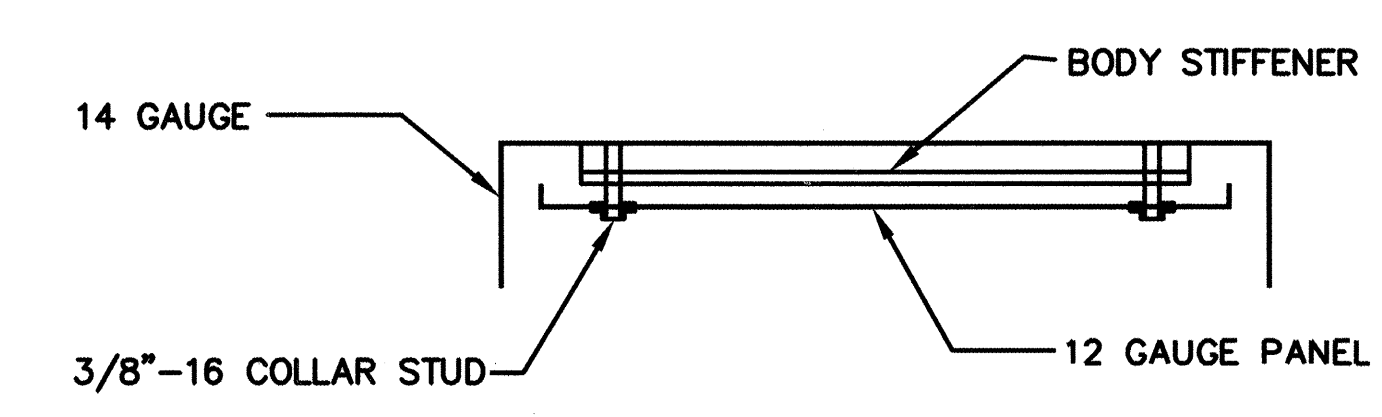




TRAFFIC SIGNAL  
SPLICE CABINET DETAIL



TRAFFIC SIGNAL  
SPLICE CABINET WIRING DETAIL



SPLICE CABINET PANEL DETAIL

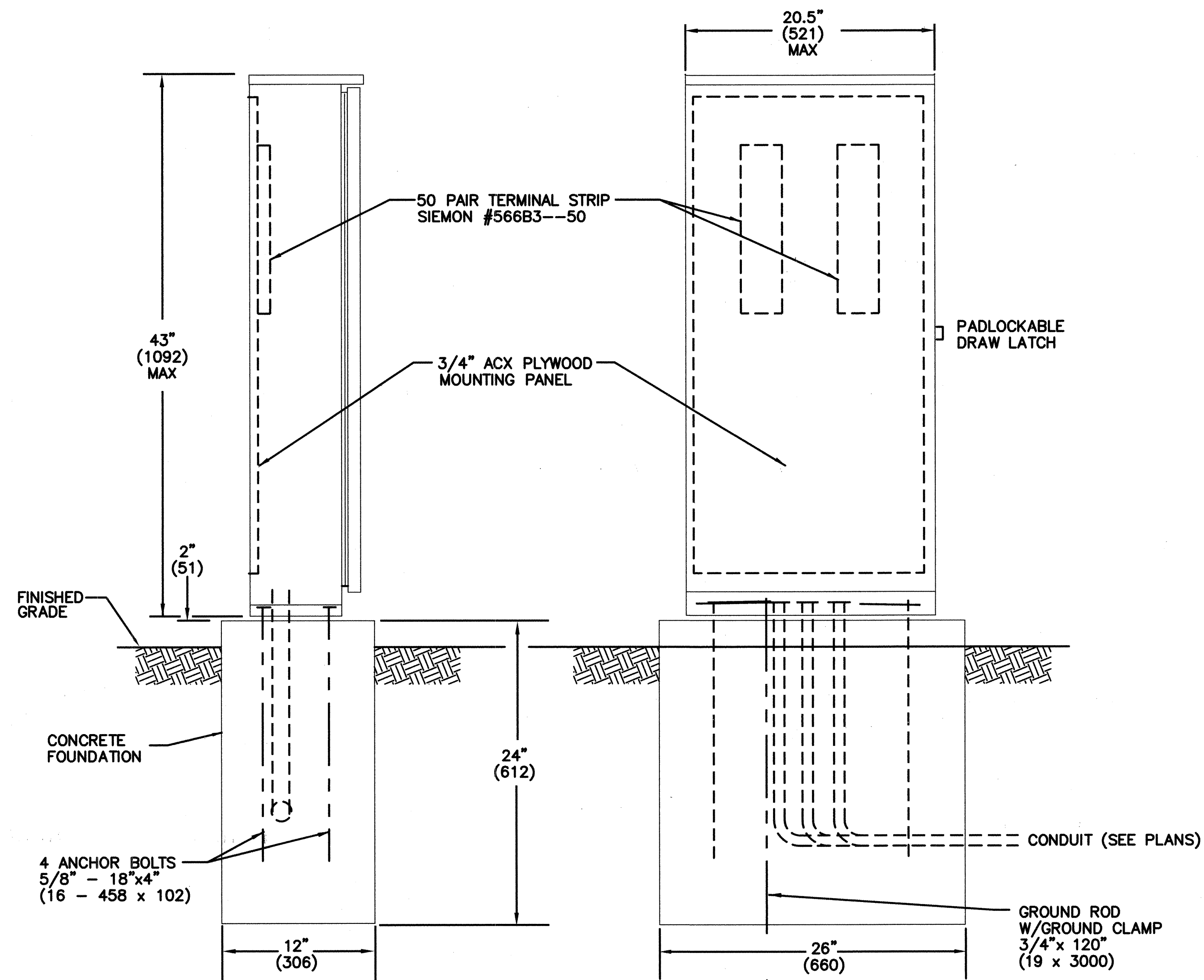
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|                                                                                                     |        |              |          |
|-----------------------------------------------------------------------------------------------------|--------|--------------|----------|
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                     |        |              |          |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL<br/>SPLICE CABINET MOUNT DETAILS</b> |        |              |          |
| Design                                                                                              | Review | Committee    |          |
| CCA                                                                                                 | STD    |              |          |
| Last Design Update                                                                                  |        | Mo./Day/Yr.  |          |
|                                                                                                     |        |              |          |
| City Project No.                                                                                    |        | Zone Map No. | Sheet Of |
| 6101, 9799                                                                                          |        | M15, N15     | 18 28    |

| SURVEY INFORMATION |                | BENCH MARKS |                                                                | AS BUILT INFORMATION   |      |
|--------------------|----------------|-------------|----------------------------------------------------------------|------------------------|------|
| No.                | By             | Date        | Field Notes                                                    | Contractor             | Date |
| 2050               | URS GREINER    | 12/98       | By                                                             | WORK                   | DATE |
|                    | WOODWARD CLYDE | THRU        | INTERSECTION OF EXISTING ACCESS ROAD "B"                       | STAKED BY              | DATE |
|                    |                | 2/99        | AND CLARK CARR BLVD. AND APPROX. 100 FT. WEST.                 | INSPECTED BY           | DATE |
|                    |                |             | SSE OF A CHAIN LINK GATE ALIGNED EAST TO WEST. ELEV. = 5308.73 | FIELD VERIFICATION BY  | DATE |
|                    |                |             |                                                                | CORRECTED BY           | DATE |
|                    |                |             |                                                                | MICRO-FILM INFORMATION |      |
|                    |                |             |                                                                | RECORDED BY            | DATE |





# CONSTRUCTION MATERIALS AND FINISH

|                                                            |
|------------------------------------------------------------|
| <input type="checkbox"/> 12 GA HD GALVANIZED SHEET STEEL   |
| <input type="checkbox"/> POWDER COATED                     |
| <input type="checkbox"/> 14 GA #304D STAINLESS STEEL SHEET |
| <input type="checkbox"/> POWDER COATED COLOR:              |
| <input type="checkbox"/> NATURAL                           |
| <input type="checkbox"/> 0.125" ALUMINUM SHEET             |
| <input type="checkbox"/> POWDER COATED COLOR:              |
| <input type="checkbox"/> ANODIZED                          |

## POWDER COAT COLORS

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> WHITE      | <input type="checkbox"/> RANCH GREEN |
| <input type="checkbox"/> MINT GREEN | <input type="checkbox"/> OTHER _____ |
| <input type="checkbox"/> CAMEL      |                                      |

## SPLICE CABINET CONSTRUCTION NOTES

- SPLICE CABINET SHALL BE UL LISTED "INDUSTRIAL CONTROL PANEL" PER UL 508.
- CONSTRUCTION SHALL BE NEMA 3R AND 12, RAIN TIGHT AND DUST TIGHT. ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
- ALL NUTS, BOLTS, SCREWS AND HINGES SHALL BE STAINLESS STEEL. ELECTRICALLY WELDED AND REINFORCED WHERE REQUIRED.
- NUTS, BOLTS, AND SCREWS SHALL NOT BE VISIBLE FROM OUTSIDE OF SPLICE CABINET.
- PHENOLIC NAME PLATES SHALL BE PROVIDED AS REQUIRED.
- ALL POWDER COATED CABINETS SHALL HAVE A CORROSION RESISTANT COATING WHICH INCLUDES A FIVE STEP DIP TANK METAL PREPARATION PROCESS:
  - ALKALINE CLEANER 160° F.
  - CLEAR WATER RINSE.
  - IRON PHOSPHATE APPLICATION 150°.
  - CLEAR WATER RINSE.
  - INHIBITIVE RINSE TO SEAL PHOSPHATED SURFACES 120°.
 FINISHED WITH AN ELECTROSTATICALLY APPLIED DRY POLYESTER POWDER COATING THEN BAKED @ 380° TO CURE.
- FOUNDATIONS, INCLUDING EXCAVATION, CONCRETE AND ANCHOR BOLTS, COMPLETE IN PLACE AND BACK FILLED, SHALL BE CONSIDERED INCIDENTAL TO THE SPLICE CABINET.

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CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

TITLE: **UNIVERSITY BOULEVARD/RAC ENTRANCE  
TRAFFIC SIGNAL  
SPLICE CABINET GROUND MOUNT (LARGE)**

|                         |             |             |
|-------------------------|-------------|-------------|
| Design Review Committee | Mo./Day/Yr. | Mo./Day/Yr. |
| CEA                     | STD         |             |
| Update                  |             |             |
|                         |             |             |
|                         |             |             |

City Project No. **6101,9999** Zone Map No. **M15,N15** Sheet **19** Of **28**

| SURVEY INFORMATION |                 | BENCH MARKS |                                                                                                                  | AS BUILT INFORMATION   |      |
|--------------------|-----------------|-------------|------------------------------------------------------------------------------------------------------------------|------------------------|------|
| No.                | By              | Date        | CONTRACTOR                                                                                                       | WORKED BY              | DATE |
| 2050               | URS GREINER     | 12/98       | "I-1-N16 RESET", AN ACS ALUMINUM CAP APPROX. S 10° E, 1180 FT. FROM THE INTERSECTION OF EXISTING ACCESS ROAD "B" | INSPECTED BY           | DATE |
|                    | WOODWARD CLOYDE | THRU        | AND CLARK CARR BLVD; AND APPROX. 100 FT. VERIFICATION BY                                                         | DATE                   | DATE |
|                    |                 | 2/99        | SSE OF A CHAIN LINK GATE ALIGNED EAST TO WEST. ELEV. = 5308.73                                                   | COMPLETED BY           | DATE |
|                    |                 |             |                                                                                                                  | MICRO-FILM INFORMATION | DATE |
|                    |                 |             |                                                                                                                  | RECORDED BY            | DATE |

| ENGINEER'S SEAL |    | REVISIONS |      |
|-----------------|----|-----------|------|
| No.             | By | Remarks   | Date |
|                 |    | DESIGN    | 7-00 |
|                 |    |           | 7-00 |
|                 |    |           | 7-00 |

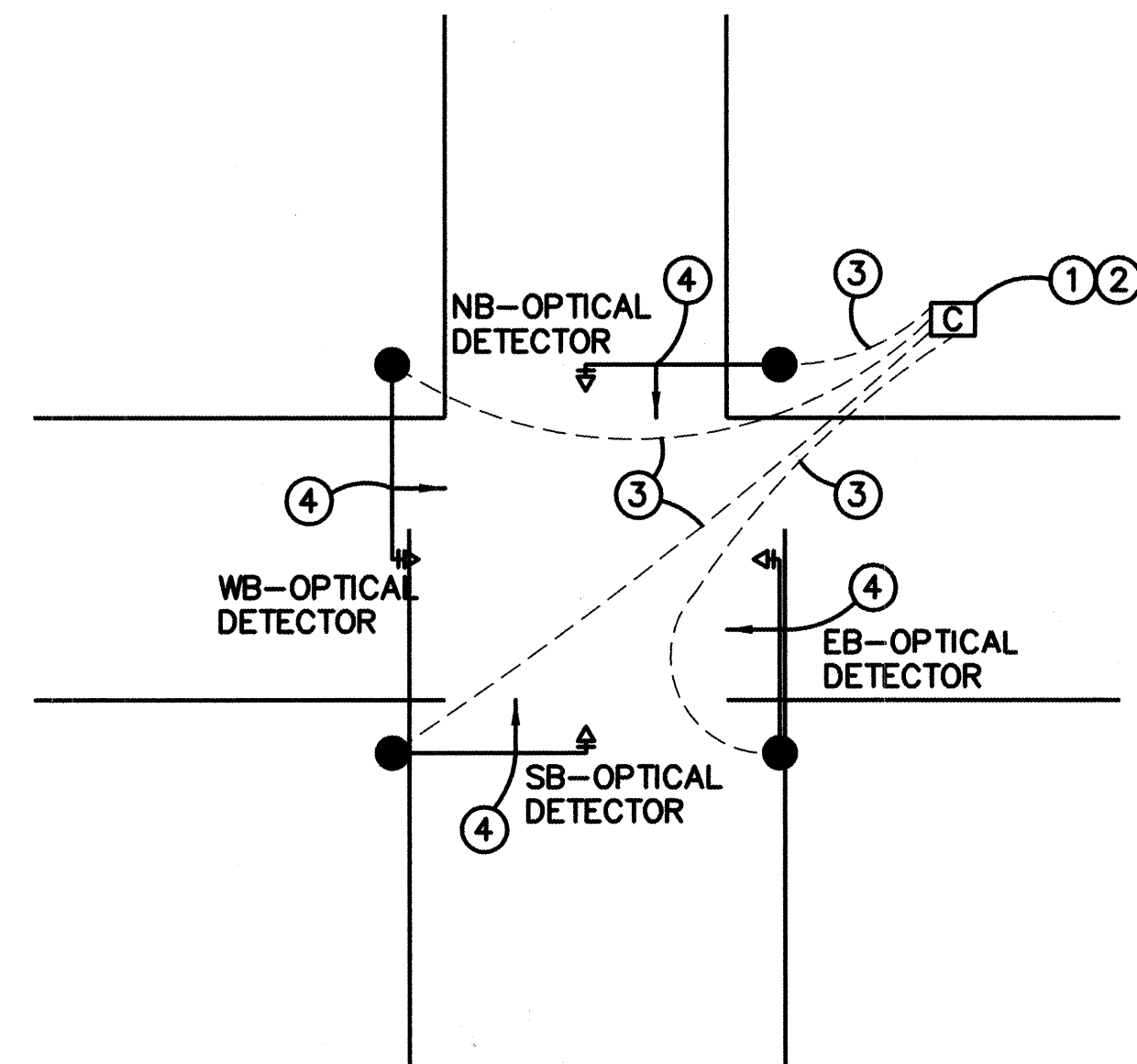




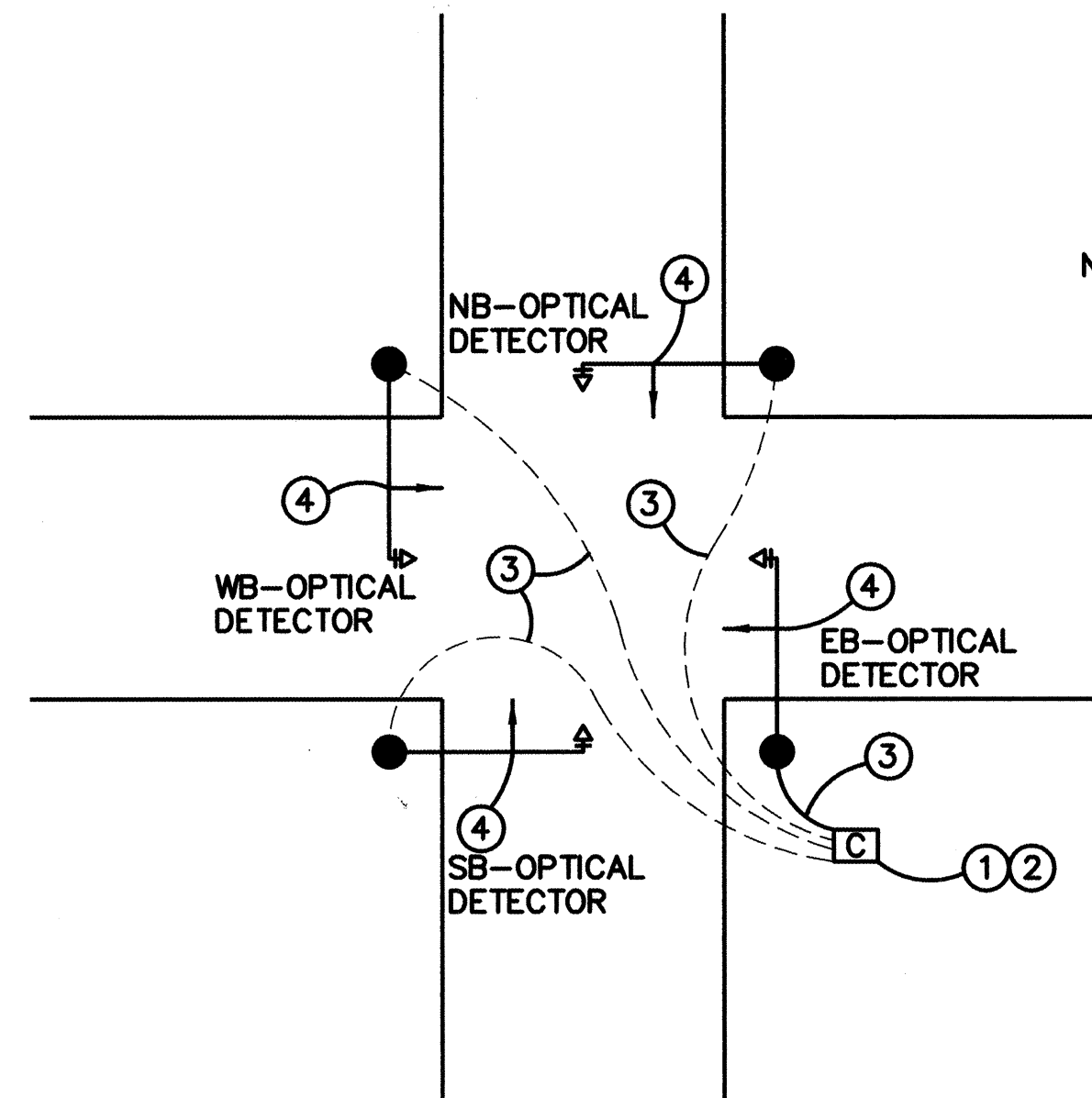




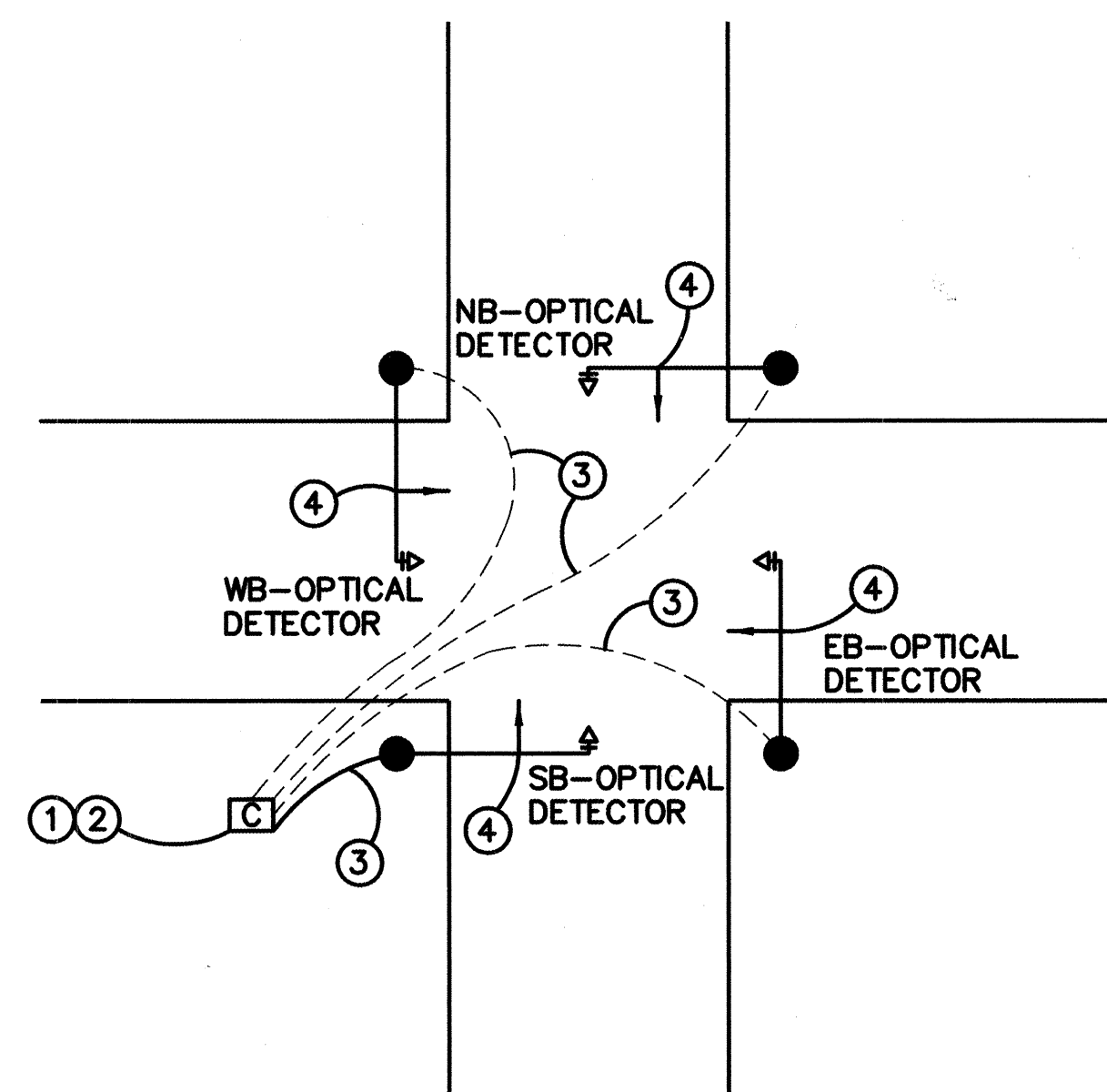




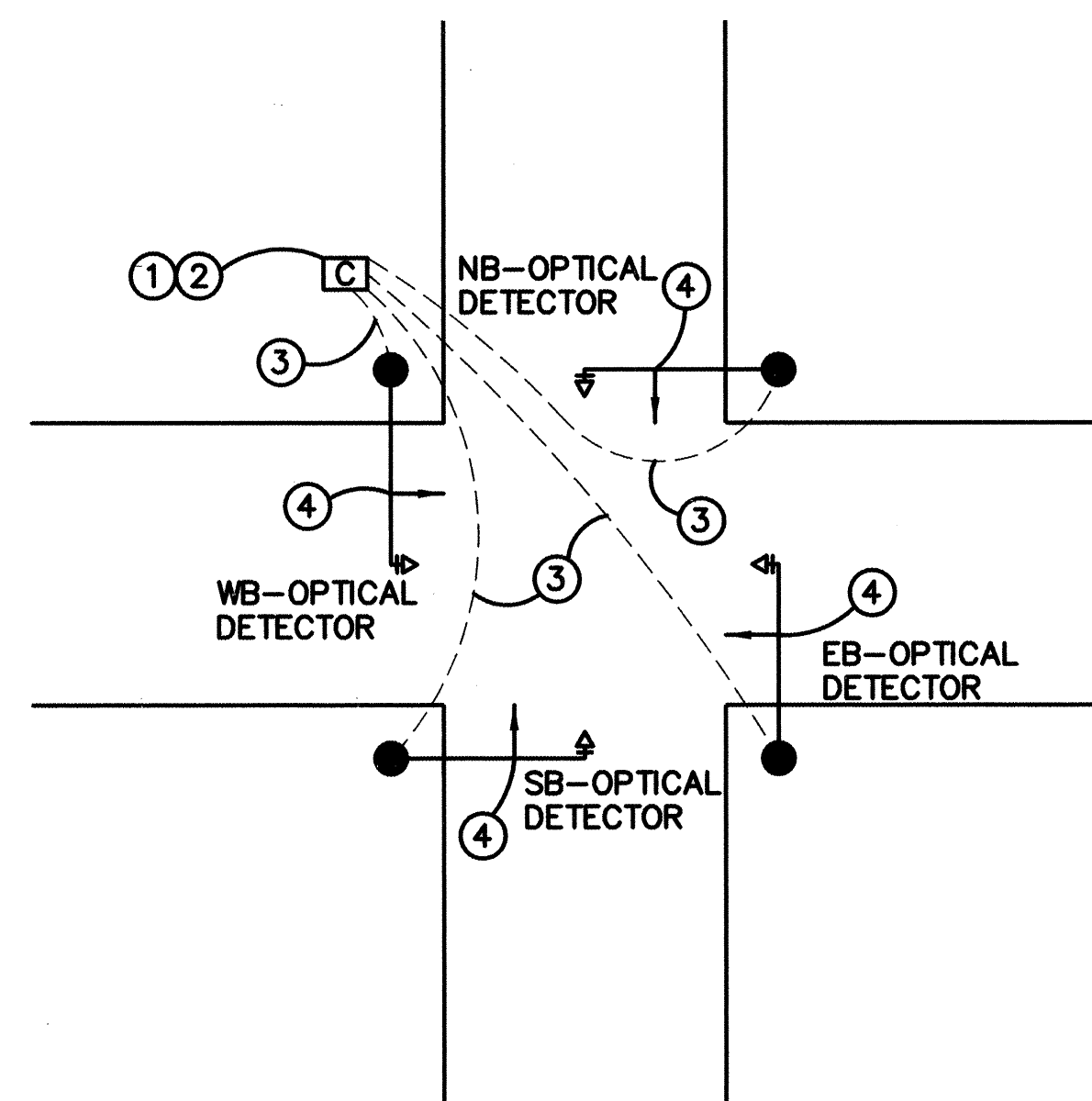
DETAIL EWNS #1 \*  
EAST-WEST NORTH-SOUTH DETECTION  
CONTROLLER ON NE CORNER



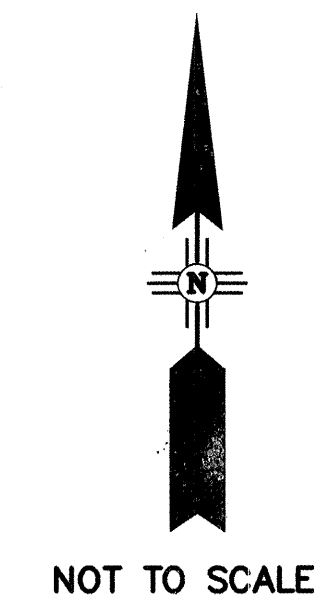
DETAIL EWNS #2 \*  
EAST-WEST NORTH-SOUTH DETECTION  
CONTROLLER ON SE CORNER



DETAIL EWNS #3 \*  
EAST-WEST NORTH-SOUTH DETECTION  
CONTROLLER ON SW CORNER



DETAIL EWNS #4\*  
EAST-WEST NORTH-SOUTH DETECTION  
CONTROLLER ON NW CORNER



#### KEY NOTES

- ① INSTALL PHASE SELECTOR RACK INSIDE EXISTING CONTROL CABINET
- ② INSTALL PHASE SELECTOR MODULE (S) INSIDE EXISTING CONTROL CABINET
- ③ INSTALL OPTICAL DETECTOR CABLE IN EXISTING SIGNAL CONDUITS
- ④ INSTALL OPTICAL DETECTOR, SINGLE DIRECTION, SINGLE CHANNEL (ID/IC) ON EXISTING SIGNAL MASTARM

#### ESTIMATED LENGTH OF OPTICAL DETECTOR CABLE

| DETAIL  | ALL DIRECTIONS |
|---------|----------------|
| EWNS #1 | 675            |
| EWNS #2 | 675            |
| EWNS #3 | 675            |
| EWNS #4 | 675            |

\* NOTE:  
BOTH OPTICAL DETECTORS SHOWN MAY NOT BE REQUIRED. REFER TO PLANS FOR REQUIRED DETECTORS AT EACH INTERSECTION. IF ONLY ONE DETECTOR IS TO BE INSTALLED DURING THIS PHASE, THEN WIRING IS ONLY REQUIRED TO THAT MASTARM.

#### ABBREVIATIONS

EB - EASTBOUND  
WB - WESTBOUND  
NB - NORTHBOUND  
SB - SOUTHBOUND  
NE - NORTHEAST  
NW - NORTHWEST  
SE - SOUTHEAST  
SW - SOUTHWEST

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**URS**  
5971 JEFFERSON BLVD. NE  
SUITE 101  
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CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP  
TITLE: **UNIVERSITY BOULEVARD/RAC ENTRANCE  
TRAFFIC SIGNAL OPTICAL DETECTION  
PLAN EAST-WEST AND NORTH-SOUTH**

| Design | Review | Committee | Mo./Day/Yr. | Mo./Day/Yr. |
|--------|--------|-----------|-------------|-------------|
| COR    | STD    |           |             |             |
|        |        |           |             |             |
|        |        |           |             |             |
|        |        |           |             |             |

City Project No. **6101,9199** Zone Map No. **M15,N15** Sheet **22** of **28**

| AS BUILT INFORMATION   |      |
|------------------------|------|
| CONTRACTOR             | DATE |
| WORKED BY              | DATE |
| INSPECTED BY           | DATE |
| FIELD VERIFICATION BY  | DATE |
| CORRECTED BY           | DATE |
| MICRO-FILM INFORMATION |      |
| RECORDED BY            | DATE |

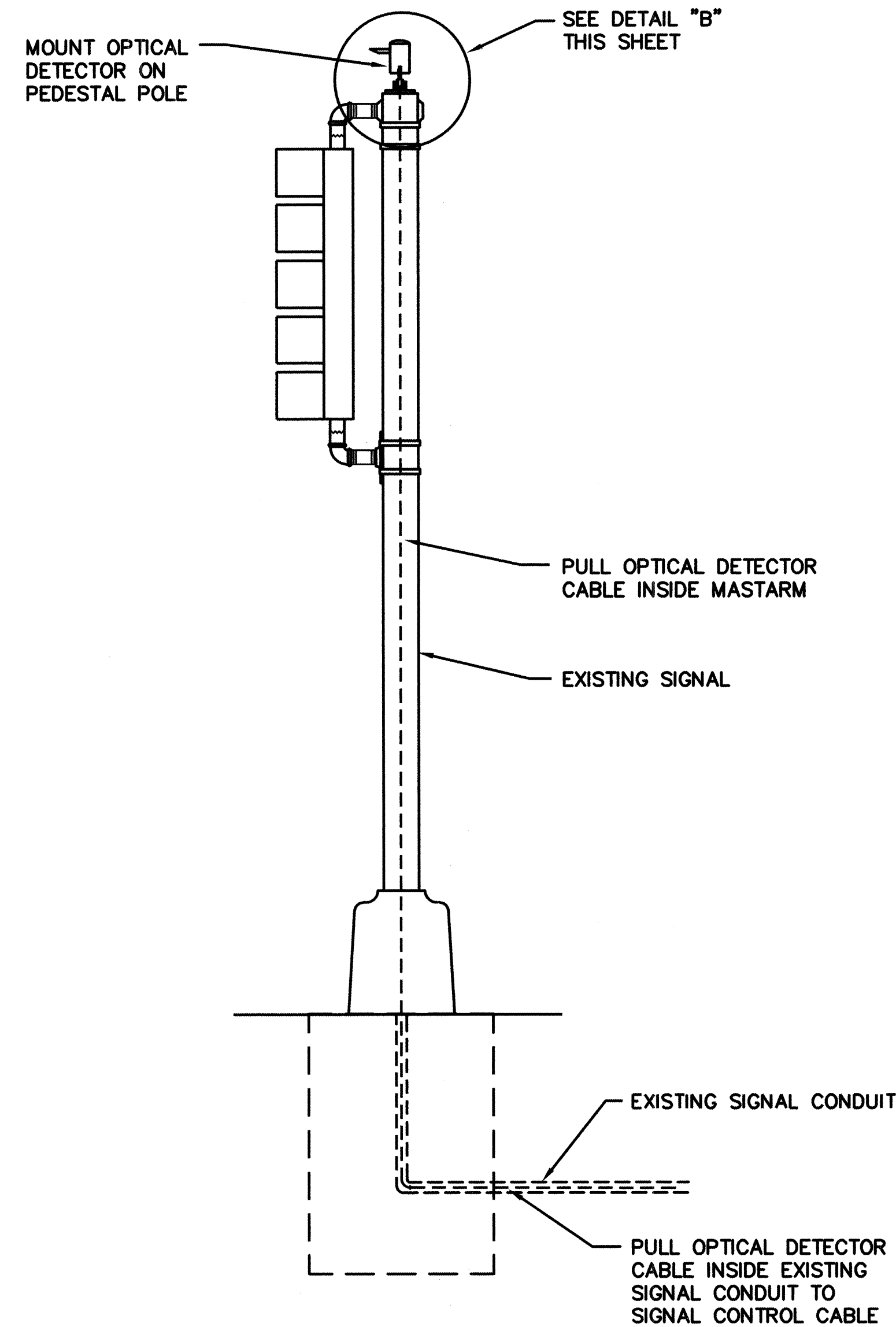
| BENCH MARKS                              |  |
|------------------------------------------|--|
| *1-N16 RESET, AN ACS ALUMINUM CAP        |  |
| APPROX. S 10' E, 1180 FT. FROM THE       |  |
| INTERSECTION OF EXISTING ACCESS ROAD "B" |  |
| AND CLARK CARR BLVD, AND APPROX. 100 FT  |  |
| THRU                                     |  |
| 2/99                                     |  |
| WEST. ELEV. = 5308.73                    |  |

| SURVEY INFORMATION |       |
|--------------------|-------|
| By                 | Date  |
| URS GREINER        | 12/98 |
| WOODWARD CLYDE     | THRU  |
|                    | 2/99  |

| ENGINEER'S SEAL |      |
|-----------------|------|
| No.             | 2050 |
|                 |      |
|                 |      |

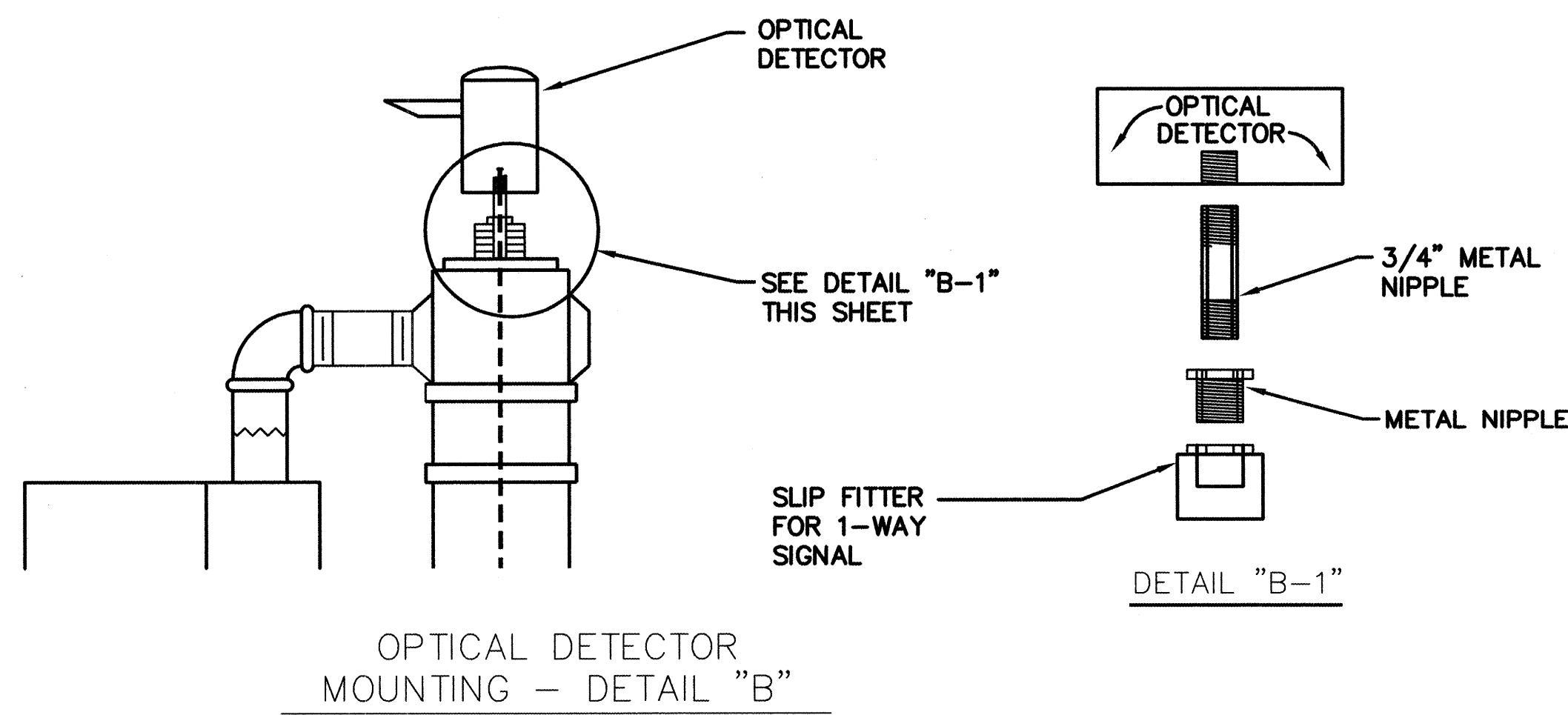
| REVISIONS   |         |
|-------------|---------|
| By          | Remarks |
|             | DESIGN  |
| Designed By | PARJ    |
| Drawn By    | PEG     |
| Checked By  | TDS     |
| Date        | 7-00    |
| Date        | 7-00    |
| Date        | 7-00    |



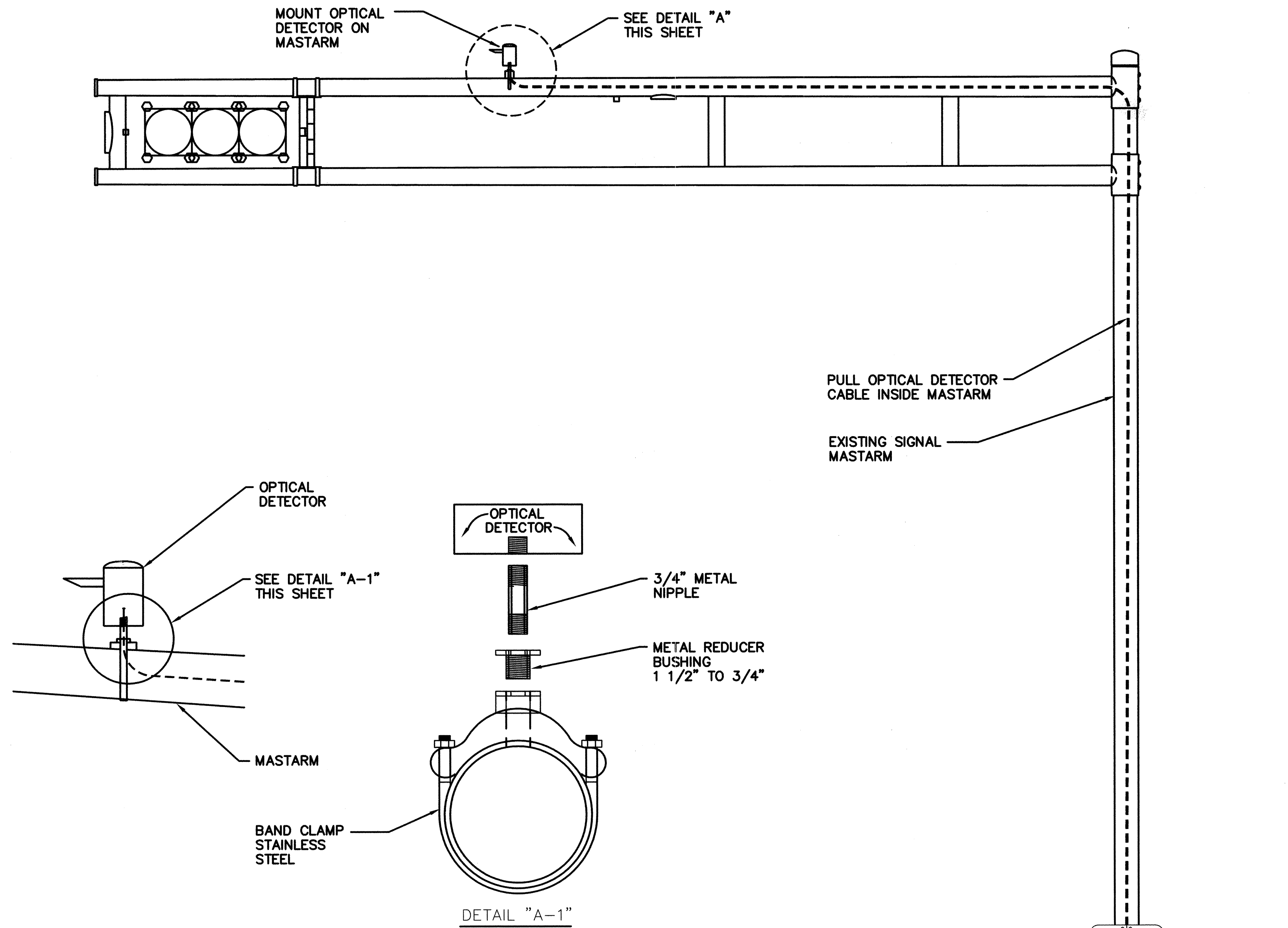


TYPICAL OPTICAL DETECTOR INSTALLATION - PEDESTAL POLE

NOTE: OPTICAL DETECTOR SHALL ONLY BE MOUNTED ON PEDESTAL POLES WHEN THERE IS NO MASTARM.



OPTICAL DETECTOR MOUNTING - DETAIL "B"



OPTICAL DETECTOR MOUNTING - DETAIL "A"

NOTES:

1. ALL OPTICAL DETECTOR MOUNTING HARDWARE SHALL CONFORM TO OPTICAL DETECTOR MANUFACTURER'S REQUIREMENTS.

TYPICAL OPTICAL DETECTOR INSTALLATION - MASTARM

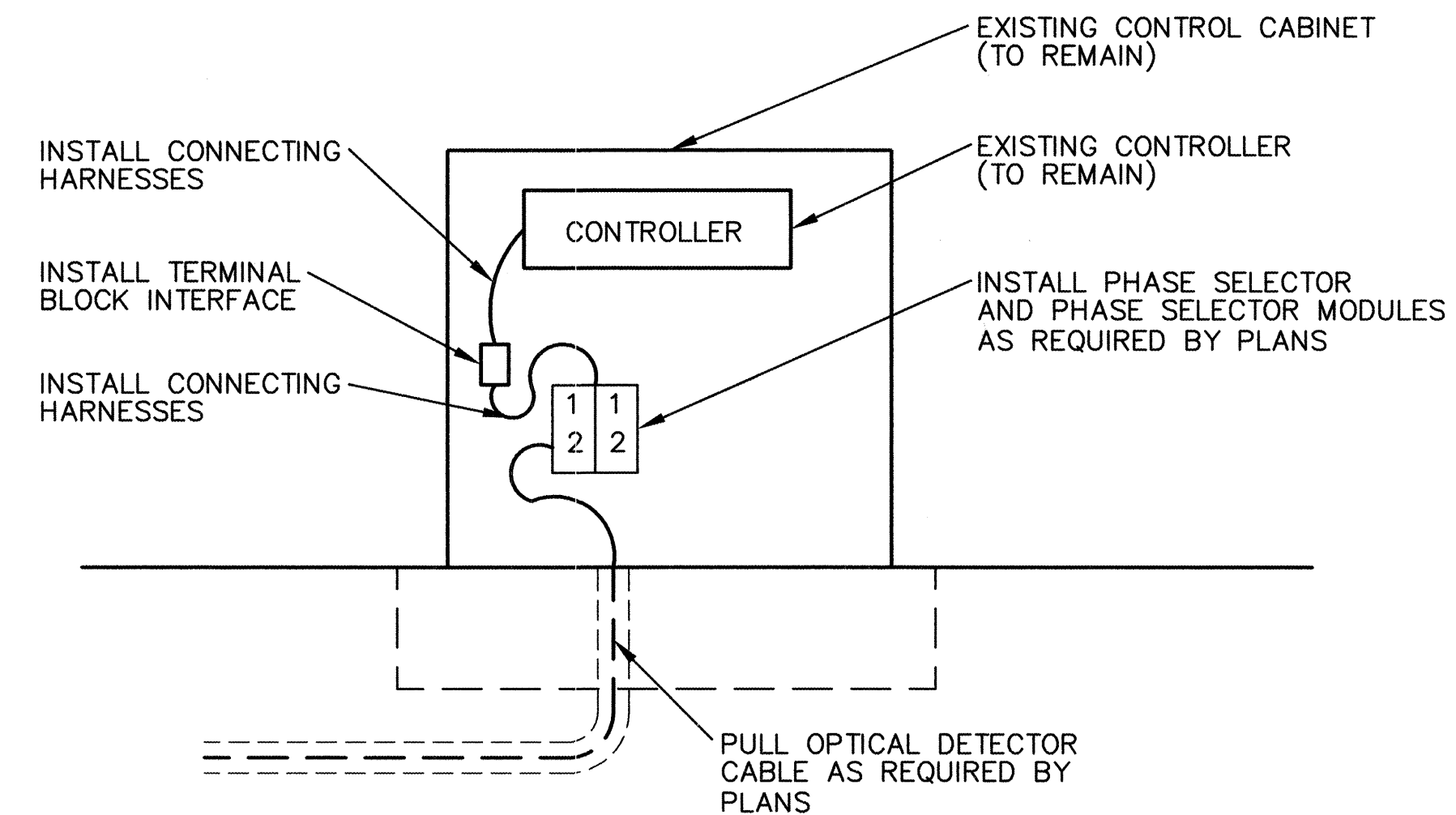
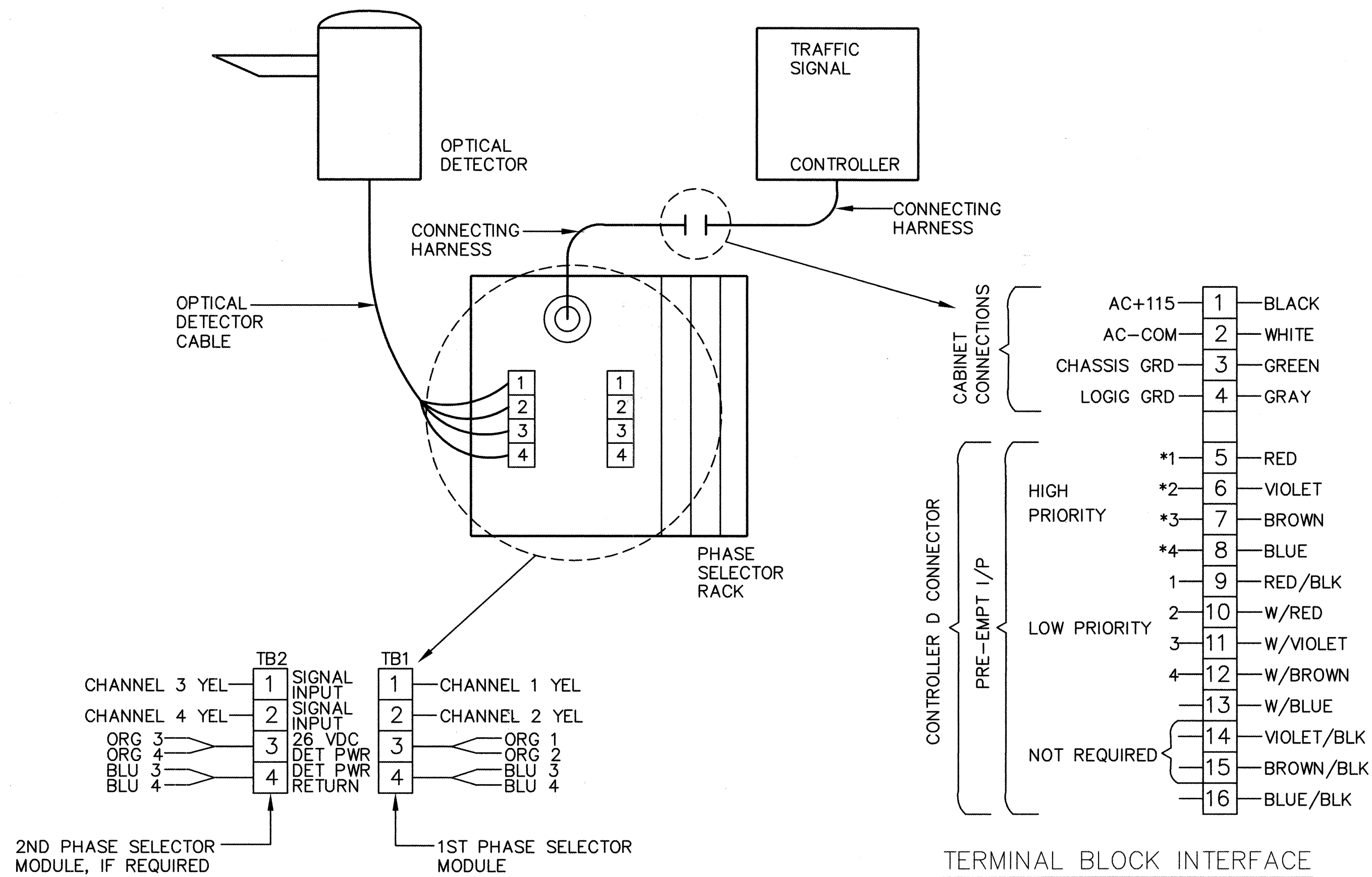
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**URS**  
5971 JEFFERSON BLVD. NE  
SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

|                                                                                                              |            |              |          |
|--------------------------------------------------------------------------------------------------------------|------------|--------------|----------|
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                              |            |              |          |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL OPTICAL<br/>DETECTOR INSTALLATION DETAILS</b> |            |              |          |
| Design Review Committee                                                                                      | CEA        | STD          |          |
| City Project No.                                                                                             | 6101, 9199 | Zone Map No. | M15, N15 |
| Sheet                                                                                                        | 23         | Of           | 28       |

| ENGINEER'S SEAL   |  | SURVEY INFORMATION |                | BENCH MARKS |                                                                                                                                                                                                                        | AS BUILT INFORMATION |                                             |  |
|-------------------|--|--------------------|----------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------------------------------------|--|
|                   |  | FIELD NOTES        |                |             |                                                                                                                                                                                                                        |                      |                                             |  |
|                   |  | No.                | By             | Date        |                                                                                                                                                                                                                        |                      |                                             |  |
|                   |  | 2050               | URS GREINER    | 12/98       | "1-N16 RESET", AN ACO ALUMINUM CAP APPROX. S 10° E, 1180 FT. FROM THE INTERSECTION OF EXISTING ACCESS ROAD "B" AND CLARK CARR BLVD; AND APPROX. 100 FT. SSE OF A CHAIN LINK GATE ALIGNED EAST TO WEST. ELEV. = 5508.73 |                      | WORK DONE BY INSPECTOR'S ACCEPTANCE BY DATE |  |
|                   |  |                    | WOODWARD CLYDE | THRU        |                                                                                                                                                                                                                        |                      | DRAWINGS CORRECTED BY DATE                  |  |
|                   |  |                    |                | 2/99        |                                                                                                                                                                                                                        |                      | MICRO-FILM INFORMATION                      |  |
| REVISIONS         |  |                    |                |             |                                                                                                                                                                                                                        | RECORDED BY DATE     |                                             |  |
| DESIGN            |  |                    |                |             |                                                                                                                                                                                                                        |                      |                                             |  |
| Designed By: PARJ |  | Date: 7-00         |                |             |                                                                                                                                                                                                                        |                      |                                             |  |
| Drawn By: PEG     |  | Date: 7-00         |                |             |                                                                                                                                                                                                                        |                      |                                             |  |
| Checked By: TDS   |  | Date: 7-00         |                |             |                                                                                                                                                                                                                        |                      |                                             |  |





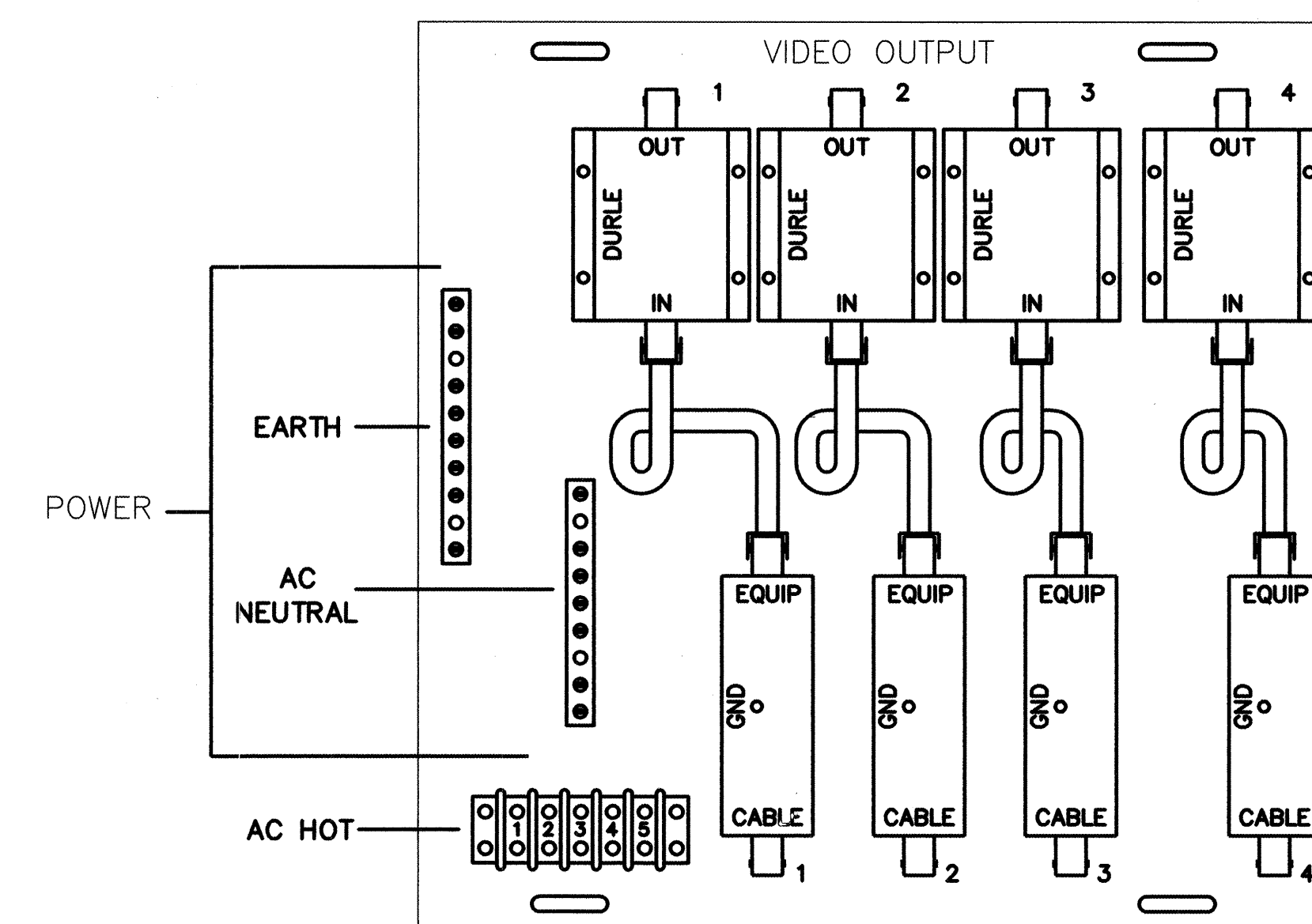
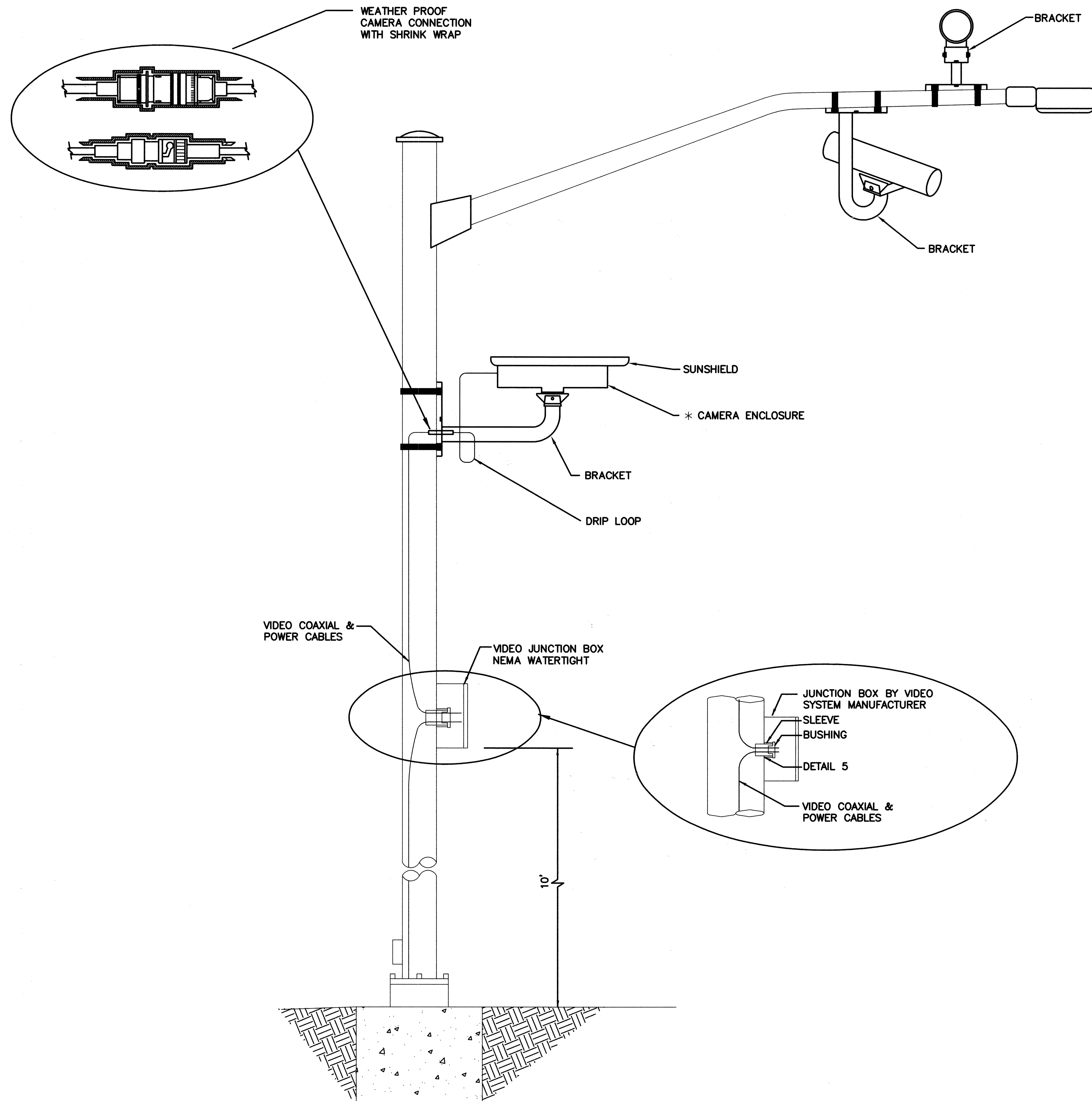
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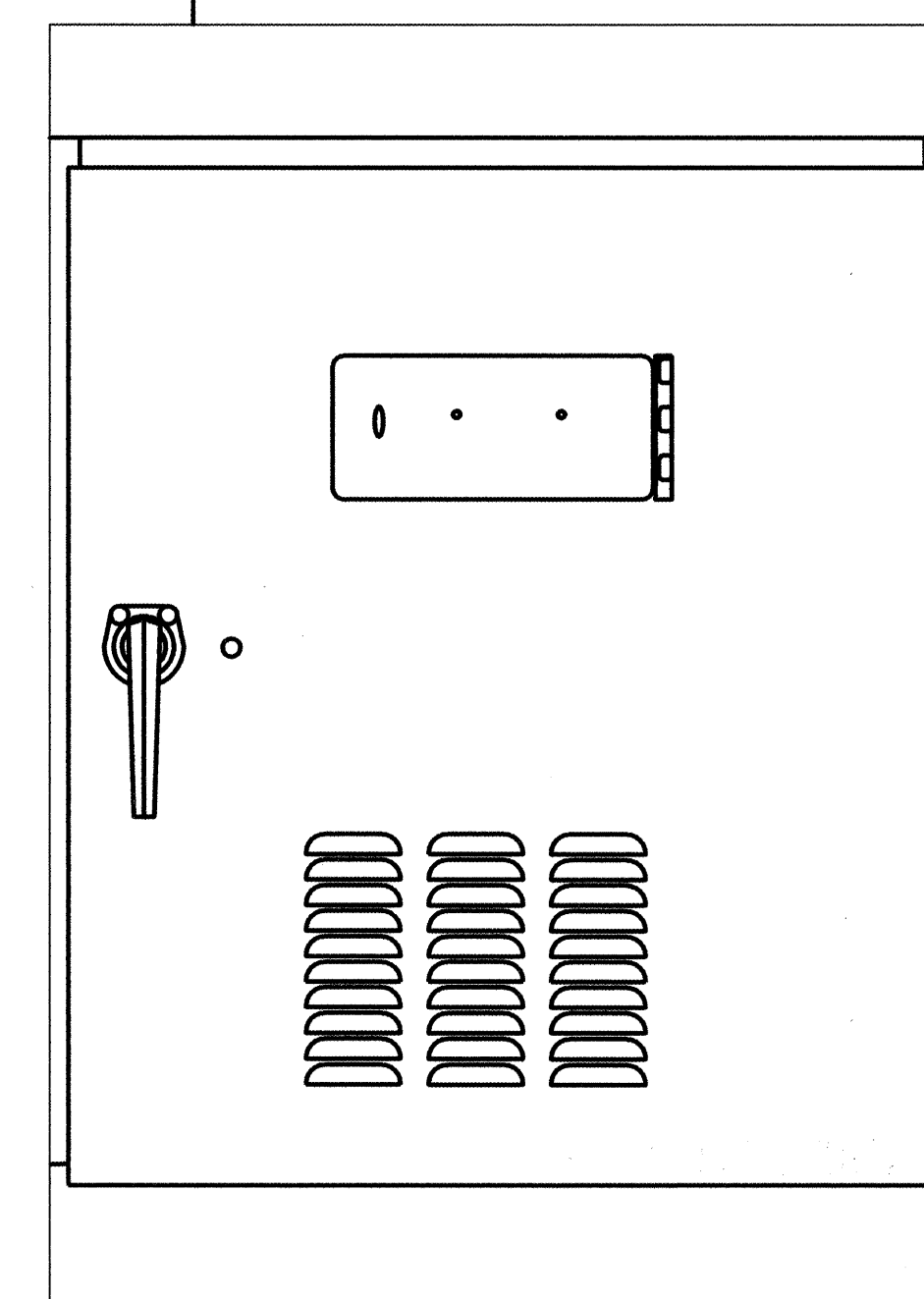
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| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                 |              |             |    |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL<br/>OPTICAL DETECTOR IWIRING</b> |              |             |    |
| Design Review Committee                                                                         | Mo./Day/Yr.  | Mo./Day/Yr. |    |
| CEA                                                                                             | STD          |             |    |
| City Project No.                                                                                | Zone Map No. | Sheet       | Of |
| 6101.99                                                                                         | M15,N15      | 24          | 28 |

| SURVEY INFORMATION |             | BENCH MARKS |                                                                                                                                                                                                                        | AS BUILT INFORMATION                                                                                                                    |      |
|--------------------|-------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------|
| No.                | By          | Date        | Notes                                                                                                                                                                                                                  | CONTRACTOR                                                                                                                              | DATE |
| 2050               | URS GREINER | 12/98       | "1-N16 RESET", AN ACS ALUMINUM CAP APPROX. S 10° E, 1180 FT. FROM THE INTERSECTION OF EXISTING ACCESS ROAD "B" AND CLARK CARR BLVD; AND APPROX. 100 FT. SSE OF A CHAIN LINK GATE ALIGNED EAST TO WEST. ELEV. = 5308.73 | WORK<br>SIGNED BY<br>ACCEPTANCE BY<br>DATE<br>DRAWN BY<br>DATE<br>CORRECTED BY<br>DATE<br>MICRO-FILM INFORMATION<br>RECORDED BY<br>DATE |      |





CAMERA INTERFACE PANEL



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SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

|                               |                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------|
| CITY OF ALBUQUERQUE           |                                                                                                         |
| PUBLIC WORKS DEPARTMENT       |                                                                                                         |
| ENGINEERING DEVELOPMENT GROUP |                                                                                                         |
| TITLE:                        | <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>TRAFFIC SIGNAL MACHINE<br/>VISION VEHICLE DETECTOR SYSTEMS</b> |

|                         |     |                    |             |             |
|-------------------------|-----|--------------------|-------------|-------------|
| Design Review Committee |     | Lost Design Update | Mo./Day/Yr. | Mo./Day/Yr. |
| COP                     | STD |                    |             |             |
|                         |     |                    |             |             |
|                         |     |                    |             |             |
|                         |     |                    |             |             |
|                         |     |                    |             |             |

|                  |                   |              |                |       |           |    |           |
|------------------|-------------------|--------------|----------------|-------|-----------|----|-----------|
| City Project No. | <b>6101.99 99</b> | Zone Map No. | <b>M15,N15</b> | Sheet | <b>25</b> | Of | <b>28</b> |
|------------------|-------------------|--------------|----------------|-------|-----------|----|-----------|

[illegible]

\* CAMERA SHALL BE ROTATED INSIDE THE ENCLOSURE AFTER INSTALLATION, TO ALIGN HORIZON AT HORIZONTAL PLANE.

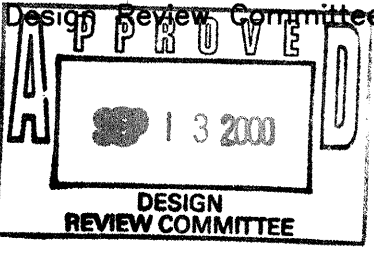
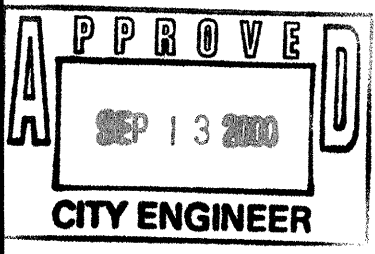


# SPECIAL CITY OF ALBUQUERQUE TRAFFIC CONTROL REQUIRMENTS

## PROJECT REQUIREMENTS

1. SEPARATE PERMITS WILL BE REQUIRED FOR EVERY LANE CLOSURE. EACH PERMIT SHALL BE CLEARED BY THE CONSTRUCTION COORDINATION DIVISION OF THE CITY OF ALBUQUERQUE FOR INTERFERENCE WITH OTHER CONSTRUCTION PROJECTS. THE CONTRACTOR SHALL ALLOW ENOUGH TIME BETWEEN HIS PERMIT REQUEST AND CONSTRUCTION BEFORE SCHEDULING CREWS AND EQUIPMENT. BARRICADING PERMITS SHALL BE INCIDENTAL TO ITEM NUMBER 19.010.
2. ALL LANES INCLUDING PARKING LANES SHALL BE OPEN FROM 6:30 AM TO 9:00 AM AND 4:00 PM TO 7:00 PM, MONDAY THROUGH FRIDAY, UNLESS APPROVED OTHERWISE BY THE CITY'S CONSTRUCTION COORDINATION DIVISION.
3. CONTRACTOR SHALL COORDINATE WITH THE CITY'S CONSTRUCTION COORDINATION DIVISION TO INSURE THAT PROJECT MONITORING PERSONNEL ARE ON-DUTY DURING THE PROPOSED WORK SCHEDULE.
4. THE CONTRACTOR SHALL WORK ONLY AT NIGHT AND ON SATURDAYS, SUNDAYS, AND HOLIDAYS (EXCEPT WHEN RESTRICTED BY SPECIAL EVENTS) AS DIRECTED BY THE CITY'S CONSTRUCTION COORDINATION DIVISION.
5. ALL EXCAVATIONS ARE TO BE BACKFILLED, FINISHED, PLATED, OR PATCHED AND OPEN TO VEHICULAR AND PEDESTRIAN TRAFFIC FROM 6:30 AM TO 6:30 PM, MONDAY THROUGH FRIDAY AND DURING SPECIAL EVENTS AS DIRECTED BY THE CITY'S CONSTRUCTION COORDINATION DIVISION. BARRICADING OF CONSTRUCTION SITES SHALL BE PLACED NO EARLIER THAN ONE HOUR PRIOR TO STARTING WORK AND SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE WORK. THE CLEARING THE ROADWAY.
6. THE CONTRACTOR SHALL USE HIGH EARLY STRENGTH CONCRETE AS REQUIRED TO CONFORM TO THESE TRAFFIC CONTROL REQUIREMENTS. MIX DESIGNS FOR HIGH EARLY STRENGTH CONCRETE SHALL BE APPROVED IN ADVANCE OF ANTICIPATED USE.
7. WORK AREAS SHALL BE LIMITED TO A MAXIMUM OF 5 INTERSECTIONS AND 5 CONNECTING BLOCKS AT ONE TIME. WORK SHALL BE SCHEDULED TO MINIMIZE DISRUPTION AND CONTINUE OPERATIONS TO A SMALL AREA.
8. THE CONTRACTOR SHALL REVIEW HIS OPERATIONAL PRACTICES AND PROCEDURES ON A DAILY BASIS TO EXPEDITE THE WORK AND CLEAR THE RIGHT-OF-WAY AS SOON AS POSSIBLE.
9. THE CONTRACTOR SHALL PREPARE A DETAILED CRITICAL PATH PROJECT SCHEDULE FOR THE PROJECT BEFORE BEGINNING CONSTRUCTION. THIS SCHEDULE SHALL BE SUBMITTED TO THE PROJECT MANAGER FOR REVIEW, COMMENTS, AND APPROVAL. THE SCHEDULE WILL BE USED FOR ESTABLISHING MAJOR CONSTRUCTION OPERATIONS AND FOR DETERMINING THE PROGRESS OF THE WORK. SHOULD IT BECOME APPARENT TO THE PROJECT MANAGER OR THE CONTRACTOR THAT THE CONTRACTOR WILL NOT BE ABLE TO MEET THE REQUIREMENTS OF THE SCHEDULE, THE CONTRACTOR SHALL SUBMIT A REVISED SCHEDULE REFLECTING THE ACTUAL AUTHORIZED TIME LEFT FOR REVIEW AND APPROVAL. REQUESTS FOR TIME EXTENSIONS SUBMITTED BY THE CONTRACTOR WILL BE COMPARED TO THE CRITICAL PATH AND APPROVED OR DENIED ON THIS BASIS. THE CONTRACTOR SHALL UPDATE THE SCHEDULE MONTHLY AND SUBMIT WITH THE MONTHLY PAYMENT REQUEST.
10. THE CONTRACTOR'S COSTS TO COMPLY WITH THE "SPECIAL CITY TRAFFIC CONTROL REQUIREMENTS" INCLUDING BUT NOT LIMITED TO ADDITIONAL COORDINATION, PREPARATION OF CRITICAL PATH PROJECT SCHEDULE, SCHEDULING OF WORK, WORKING DURING OFF-HOURS, PLATING, PATCHING, USE OF HIGH-EARLY STRENGTH CONCRETE, REMOVING AND RESETTING OF TRAFFIC CONTROL DEVICES, ETC. SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 619100--SPECIAL CITY TRAFFIC CONTROL REQUIREMENTS.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING, SCHEDULING, AND PAYING APD OVERTIME OFFICERS DURING NON-PEAK HOURS (FROM 7:00 PM TO 5:00AM) WHEN NEEDED FOR MULTIPLE LANE CLOSURES FOR INSTALLING OVERHEAD MAST ARMS AND POWER OUTAGES FOR SWITCHING CONTROLLERS.

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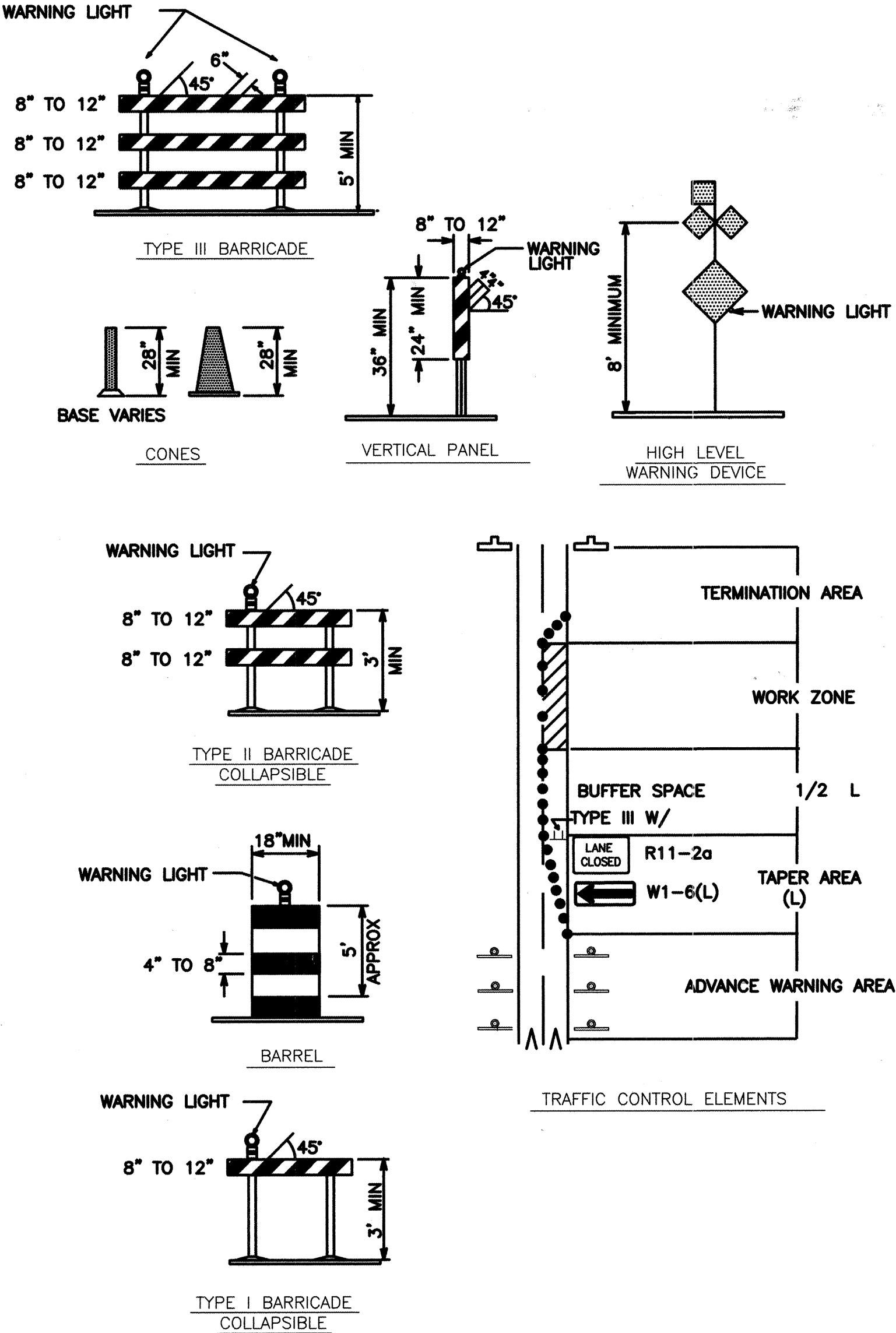
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
|------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------|--|--------------------|--|--------------|--|-------------|--|--|------------------------------------------------------------|
| 5971 JEFFERSON BLVD. NE<br>SUITE 101<br>ALBUQUERQUE, NM 87109<br>(505) 345-3999                                  |  |                                                                                       |  |                    |  |              |  | No.         |  |  | Designed By<br>PEG<br>Drawn By<br>PEG<br>Checked By<br>TOS |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
| CITY OF ALBUQUERQUE<br>PUBLIC WORKS DEPARTMENT<br>ENGINEERING DEVELOPMENT GROUP                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
| TITLE: <b>UNIVERSITY BOULEVARD/RAC ENTRANCE<br/>SPECIAL CITY<br/>TRAFFIC CONTROL REQUIREMENTS</b>                |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
| Design Review Committee<br> |  |  |  | Last Design Update |  | Mo./Day/Yr.  |  | Mo./Day/Yr. |  |  |                                                            |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
|                                                                                                                  |  |                                                                                       |  |                    |  |              |  |             |  |  |                                                            |
| City Project No. <b>6101.99 00</b>                                                                               |  | Zone Map No. <b>M15,N15</b>                                                           |  | Sheet <b>26</b>    |  | Of <b>28</b> |  |             |  |  |                                                            |



CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.
2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.
3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.
4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.
5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.
6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.
7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORK SITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.
8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.
9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.
10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.
11. CONTRACTOR SHALL NOT BEGIN WORK BEFORE 7:00 A.M. OR END WORK AFTER 7:00 P.M. WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.
12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.
13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.
14. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.
15. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.
16. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.
17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.
18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.
19. 24 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.
20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.
22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:  
1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.  
2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.  
3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.
23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION, WASHING OF EQUIPMENT IS INCIDENTAL TO IT'S PLACEMENT AND MAINTENANCE.
25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.
26. ADVANCE WARNING SIGNS SHALL BE 36"x36" WITH SUPER ENGINEERING GRADE SHEETING OR BETTER.



**LEGEND**

WORK AREA  
BARRICADE - TYPE I, TYPE II, OR BARREL  
BARRICADE - TYPE III  
VERTICAL PANEL  
WARNING SIGN  
DISTANCE BETWEEN SIGNS - A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET  
FLAGMAN POSITION  
SPACING BETWEEN BARRICADES - A DISTANCE MEASURED IN FEET EQUAL TO THE STREET LIMIT OF THE STREET  
TAPER LENGTH - SEE CHART BELOW

THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.

**TAPER REQUIREMENT**

| SPEED LIMIT (MPH) | TAPER LENGTH(L) (FEET) |          |          | MINIMUM NUMBER OF DEVICES FOR TAPER | MAXIMUM DEVICE SPACING IN FEET |             |
|-------------------|------------------------|----------|----------|-------------------------------------|--------------------------------|-------------|
|                   | 10' LANE               | 11' LANE | 12' LANE |                                     | ALONG TAPER                    | AFTER TAPER |
| 20                | 70                     | 75       | 80       | 5                                   | 20                             | 20          |
| 25                | 105                    | 115      | 125      | 6                                   | 25                             | 25          |
| 30                | 150                    | 165      | 180      | 7                                   | 30                             | 30          |
| 35                | 205                    | 225      | 245      | 8                                   | 35                             | 35          |
| 40                | 270                    | 295      | 320      | 9                                   | 40                             | 40          |
| 45                | 450                    | 495      | 540      | 13                                  | 45                             | 45          |
| 50                | 500                    | 550      | 600      | 13                                  | 50                             | 50          |
| 55                | 550                    | 605      | 660      | 13                                  | 55                             | 55          |

**RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING SIGN SERIES**

| SPEED LIMIT (MPH) | MINIMUM DISTANCE IN FEET |                                    |
|-------------------|--------------------------|------------------------------------|
|                   | FROM LAST SIGN TO TAPER  | FROM TAPER TO ADVANCE WARNING AREA |
| 0-20              | 10 X SPEED LIMIT         | 10 X SPEED LIMIT                   |
| 25-30             | 10 X SPEED LIMIT         | 10 X SPEED LIMIT                   |
| 30-35             | 10 X SPEED LIMIT         | 10 X SPEED LIMIT                   |
| 40-45             | 10 X SPEED LIMIT         | 10 X SPEED LIMIT                   |
| 50-60             | 10 X SPEED LIMIT         | 10 X SPEED LIMIT                   |

**TAPER CRITERIA**

| TYPE OF TAPER         | TAPER LENGTH      |
|-----------------------|-------------------|
| UPSTREAM TAPER:       | L MINIMUM         |
| MERGING TAPER         | 1/2 L MINIMUM     |
| SHIFTING TAPER        | 1/2 L MINIMUM     |
| SHOULDER TAPER        | 100 FEET MAXIMUM  |
| TWO-WAY TRAFFIC TAPER | 100 FEET PER LANE |
| DOWNSTREAM TAPERS     | 100 FEET PER LANE |

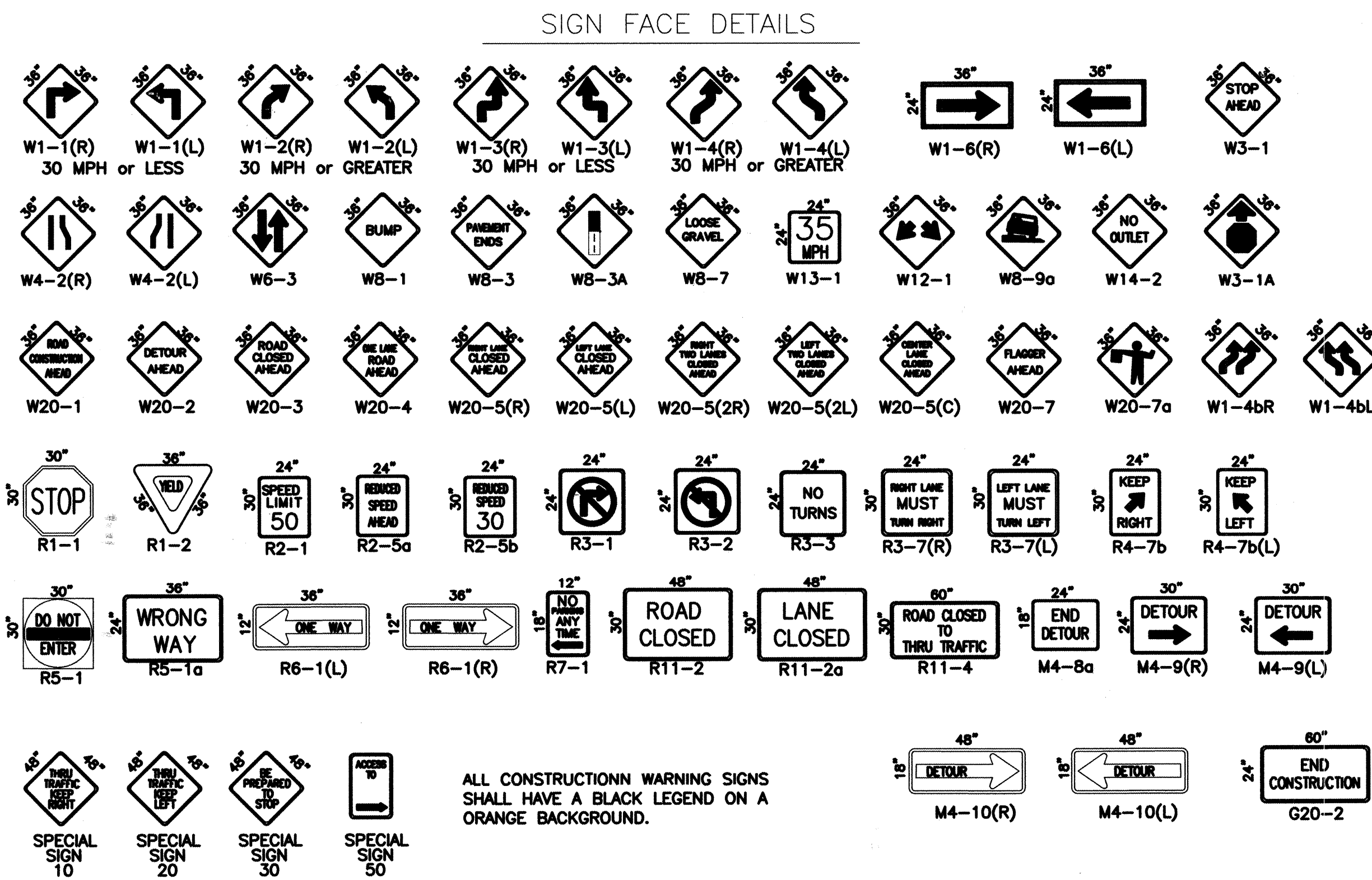
**TAPER LENGTH COMPUTATION**

**SPEED LIMIT**

40 MPH OR LESS  $L = \frac{WS^2}{60}$

40 MPH OR GREATER  $L = W \times S$

L = TAPER LENGTH  
W = WIDTH OF OFFSET IN FEET  
S = POSTED SPEED OR OFF-PEAK 85-PERCENTILE SPEED IN MPH



ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

**FOR INFORMATION ONLY**

**URS**  
5971 JEFFERSON BLVD. NE  
SUITE 101  
ALBUQUERQUE, NM 87109  
(505) 345-3999

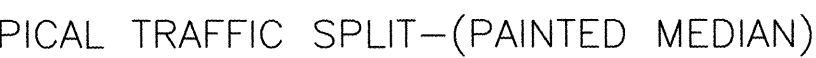
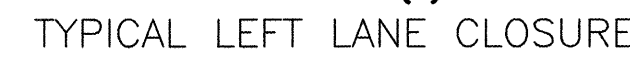
CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP

**TITLE: UNIVERSITY BOULEVARD/RAC ENTRANCE TRAFFIC CONTROL SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS**

Design Review Committee: *COA* *STD*

City Project No. **6101.9799** Zone Map No. **M15,N15** Sheet **27** Of **28**





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- Diagram illustrating the Typical Sanitary Sewer Sliplining Operation. The diagram shows a horizontal sewer line with several manholes. At each manhole, a "TYPE III'S W/ R11-4" (Rigid Polypropylene) pipe is being installed inside an existing "TYPE III'S W/ R11-4" pipe. The diagram includes labels for "W20-1" (Warning of Water Main), "R7-1" (Right of Way), and "D" (Disconnect). A legend at the bottom states: "ALL PITS TO HAVE TYPE-A FLASHING LIGHTS" and "ALL PITS TO HAVE FLAGLINE".

- ALL PITS TO HAVE TYPE-A FLASHING LIGHTS
- ALL PITS TO HAVE FLAGLINE

[illegible]

The diagram illustrates a four-way intersection with a center turn lane. The approaches and their associated traffic signs and lane markings are as follows:

- North Approach (W20-0, W20-3, W20-2, W20-1):** Features a series of diamond-shaped signs. W20-0 has a "ROAD CLOSED" sign. W20-3 has a "ROAD CLOSED" sign. W20-2 has a "ROAD CLOSED" sign. W20-1 has a "ROAD CLOSED" sign. The center turn lane is marked with "D" and "D" signs.
- South Approach (R1-1, M4-9(L), M4-9(R)):** Features a "STOP" sign, a "DETOUR" sign with a left arrow, and a "ROAD CLOSED" sign. The center turn lane is marked with "D" and "D" signs.
- East Approach (R1-1, M4-9(L), M4-9(R)):** Features a "STOP" sign, a "DETOUR" sign with a right arrow, and a "ROAD CLOSED" sign. The center turn lane is marked with "D" and "D" signs.
- West Approach (R1-1, M4-9(L), M4-9(R)):** Features a "STOP" sign, a "DETOUR" sign with a left arrow, and a "ROAD CLOSED" sign. The center turn lane is marked with "D" and "D" signs.

The intersection is controlled by a traffic signal system, with a "TYPE III W/ R11-4 M4-10(R)" sign indicating the signal type. The center turn lane is marked with "D" and "D" signs. The diagram also shows various other signs, including "ROAD CLOSED" and "DETOUR" signs, and lane markings for the center turn lane.

[illegible]

TYPICAL DOUBLE RIGHT LANE CLOSURE

[illegible]

**URS**  
5971 JEFFERSON  
SUITE 1  
ALBUQUERQUE, NM  
(505) 345-

TITLE: **UNIVERSITY BOULEVARD/RAC ENTRANCE  
TYPICAL TRAFFIC CONTROL  
AND SIGNING EXAMPLES (REF MUTCD**

Design Review Committee

|  |                 |
|--|-----------------|
|  | City Project No |
|--|-----------------|

6101.97 99 Zone Map No. M15.N15

|              |  |
|--------------|--|
| Zone Map No. |  |
|--------------|--|

Sheet **28** Of **28**

| AS BUILT INFORMATION   |      |
|------------------------|------|
| CONTRACTOR             | DATE |
| WORK                   |      |
| STARTED BY             | DATE |
| FINISHED BY            | DATE |
| INSPECTED BY           | DATE |
| FIELD                  | DATE |
| CORRECTION BY          | DATE |
| DRAWINGS               |      |
| MICRO-FILM INFORMATION |      |
| RECORDED BY            | DATE |

BENCH MARKS

|   |                                                                                                                                                                                                                                                                       |   |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 1 | "1"-N16 RESET", AN ACS ALUMINUM CAP APPROX. S 10° E, 1180 FT. FROM THE INTERSECTION OF EXISTING ACCESS ROAD "B" AND CLARK CARR BLVD; AND APPROX. 100 FT. S OF THE INTERSECTION OF EXISTING ACCESS ROAD "B" AND CLARK CARR BLVD. ALIGNED EAST TO WEST. ELEV. = 5308.73 | R |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|

| SURVEY INFORMATION |                |       |
|--------------------|----------------|-------|
| FIELD NOTES        |                |       |
| No.                | By             | Date  |
| 2050               | URS GREINER    | 12/98 |
|                    | WOODWARD CLYDE | THRU  |
|                    |                | 2/99  |
|                    |                |       |
|                    |                |       |

|                                                                                                                                |                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
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|                                                                                                                                | <div style="text-align: center;">  </div> |

[illegible][illegible]