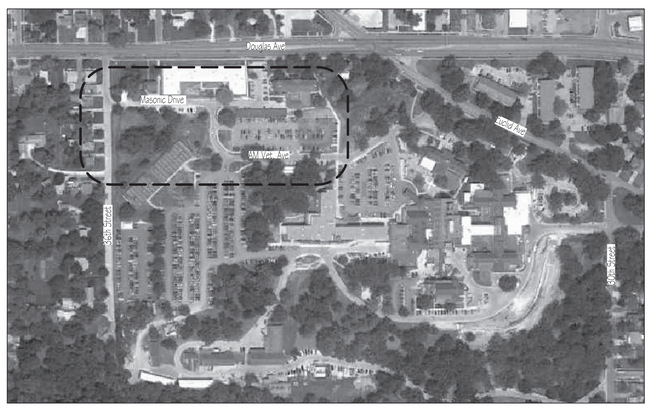
# CENTRAL IOWA HEALTH CARE SYSTEM
# DES MOINES DIVISION

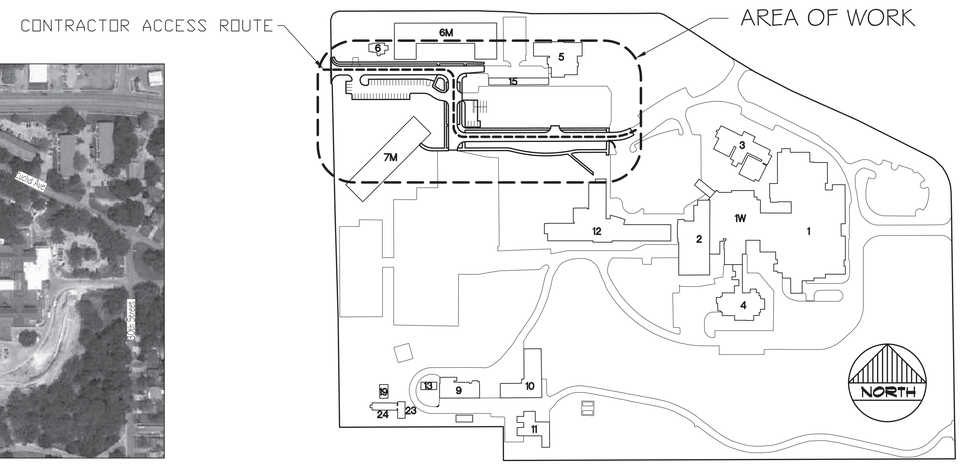
# UPGRADE ROADWAY, PARKING
# PHASE I
# PROJECT NO. 636A6-11-301

## DRAWING LIST

| DRAWING NUMBER | DRAWING # OF # | DRAWING NAME |
|---|---|---|
| **GENERAL** | | |
| GI100 | 1 of 24 | COVER SHEET |
| **CIVIL** | | |
| CS101 | 2 OF 24 | PROJECT LOCATION PLAN – WEST |
| CS102 | 3 OF 24 | PROJECT LOCATION PLAN – EAST |
| CS103 | 4 OF 24 | TOPOGRAPHIC SURVEY FOR INFORMATION ONLY |
| CS104 | 5 OF 24 | CONTRACTOR ACCESS AND STAGING PLAN – WEST (STAGE 2) |
| CS105 | 6 OF 24 | CONTRACTOR ACCESS AND STAGING PLAN – EAST (STAGE 1) |
| CS106 | 7 OF 24 | REMOVAL PLAN – WEST |
| CS107 | 8 OF 24 | REMOVAL PLAN – EAST |
| CS108 | 9 OF 24 | GRADING AND STORM WATER POLLUTION PREVENTION PLAN – WEST |
| CS109 | 10 OF 24 | GRADING AND STORM WATER POLLUTION PREVENTION PLAN – EAST |
| CS110 | 11 OF 24 | GRADING AND STORM WATER POLLUTION PREVENTION PLAN NOTES |
| CS111 | 12 OF 24 | STORM SEWER PLAN – WEST |
| CS112 | 13 OF 24 | STORM SEWER PLAN – EAST |
| CS113 | 14 OF 24 | PAVING PLAN – WEST |
| CS114 | 15 OF 24 | PAVING PLAN – EAST |
| CS115 | 16 OF 24 | JOINT PATTERN AND COORDINATE TABLE |
| CS116 | 17 OF 24 | PAVING PLAN AND PROFILES |
| CS117 | 18 OF 24 | PAVING PLAN AND PROFILES |
| CS118 | 19 OF 24 | LANDSCAPE PLAN – WEST |
| CS119 | 20 OF 24 | LANDSCAPE PLAN – EAST |
| CS120 | 21 OF 24 | DETAIL SHEET |
| **ELECTRICAL** | | |
| ED100 | 22 OF 24 | ELECTRICAL DEMOLITION PLAN |
| EL100 | 23 OF 24 | SITE LIGHTING PLAN |
| EL101 | 24 OF 24 | ELECTRICAL DETAILS, SYMBOLS, SCHEDULES |




AERIAL MAP




SITE MAP

ISSUED FOR BID

| Revisions: | Date |
|---|---|
| | |

Department of Veterans Affairs
Central Iowa Health Care System
Des Moines Division
3600 30th Street
Des Moines , Iowa 50310

ARCHITECT/ENGINEERS:

21 Delta Engineers

21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: COVER SHEET

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: PJM | Drawn: TLS

Project Number: 636A6-11-301

Building Number:

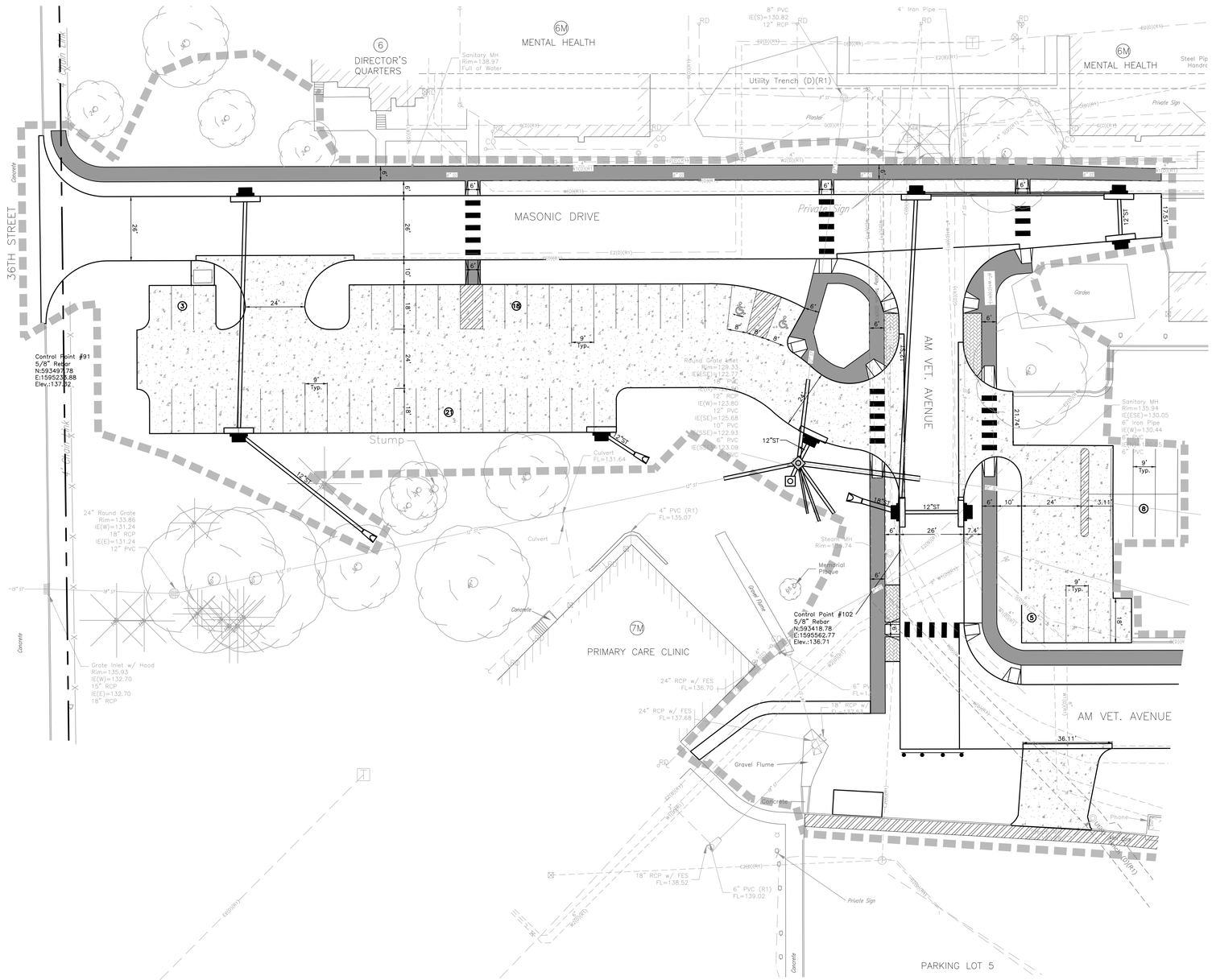
Drawing Number: GI100

Dwg. 1 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## GENERAL NOTES

1. The project specification and supplemental specifications to include the Iowa Statewide Urban Design and Specification (SUDAS), the Iowa Department of Transportation (IDOT), and other supplemental specifications as referenced shall apply to all aspects of the construction. SUDAS shall take precedence if there is a conflict with another specification.
2. The definition of parties shall be the following:
   OWNER: Department of Veteran Affairs Central Iowa Health Care System (VACIHCS)
   ENGINEER: 21 Delta Engineers
   GEOTECHNICAL ENGINEER: Aquaterra Environmental Solutions, Inc.
3. All work shall be in accordance with OSHA codes and standards. Nothing indicated on these plans shall relieve the contractor from complying with any safety regulations.
4. Prior to installing utilities, the contractor shall excavate and field verify the exact location and elevation of all utilities within.
5. CONTRACTOR shall submit paving joint detail to ENGINEER for approval. Minimum Joint requirements are as follows:
   Longitudinal construction joint shall be: BT-1 or equal
   Transverse contraction joint shall be: C or equal
   Construction and expansion joint shall be: ED or equal W/#6 smooth dowel
6. Refer to grading and storm water pollution prevention plan (SWPPP) for erosion, sediment control and grading notes.
7. Construct all sidewalks with 2% maximum cross slope away from buildings unless noted otherwise on plans. Ensure positive drainage.
8. CONTRACTOR shall provide all traffic control necessary for this project.
9. All utility stations in plan and profile view reflect length of utility from designated 0+00 stations. All utility lengths are shown from center of structure to center of structure respectfully.
10. Where utility or other street/road crossings are shown on the plans, full depth special compaction shall be required. See referenced specifications. CONTRACTOR to supply density test reports from testing lab (one test per crossing). All backfill and sub-grade shall be compacted per compaction requirements table. See sheet CS108.
11. Connect all existing field tile, encountered during construction, to the proposed storm sewer system encountered during construction.
12. CONTRACTOR is responsible for obtaining all permits required to complete this project and is responsible for the payment of all fees associated with these permits.
13. See plan sheets for additional notes.

## LEGEND

### PROPOSED

- Proposed 7" PC Concrete Pavement With Integral Curb and Gutter
- Proposed 6" PC Concrete Pavement With Integral Curb and Gutter
- Proposed 5" PC Concrete Sidewalk
- Proposed 7" PC Concrete Sidewalk
- Proposed 7" PC Concrete Stamped Sidewalk
- Future Phase II PC Concrete Pavement
- (5) Proposed Stall Count
- 18"ST Proposed Storm Sewer
- Proposed RCP Apron Section
- Proposed Intake
- Proposed Manhole
- Proposed Rectangular Area Intake
- Proposed Pedestrian Crossing Striping
- Proposed Guard Shack
- 135 Proposed Contours
- 135 Existing Contours
- X 135.0 Spot Elevation
- X 135.0* Match Existing Elevation
- Ridge
- HP/LP High Point/Low Point
- SF X Proposed Silt Fence
- Limits Of Removal, Clearing & Grubbing Grading and Construction
- Stabilized Construction Entrance
- Flow Arrow
- Proposed Barricade
- Proposed Handicap Ramp

### EXISTING

- R1 Record Utility Information Based On Snyder & Associates Drawing, Project No.: 1090753, Dated 11/18/09
- R2 Record Utility Information Based On Efn Drawing, Provided By Tony Stucchi Egan, Field & Nowak, Inc. (efn)
- SS Sanitary Sewer
- ST Storm Sewer
- Manhole
- Clean Out
- Grate Inlet
- Hooded Grate Inlet
- Flared End Section
- Fire Hydrant
- Water Valve
- Curb Stop
- Auto Sprinkler
- Power Pole And Guy
- Street Light
- Light Pole
- Transformer
- Power Riser
- Power Manhole
- Power Pull Box
- Control Point
- Building
- Guard Post
- Information Sign
- Chain Link Fence
- Steel Pipe Fence
- Deciduous Tree And Size To Remain
- Coniferous Tree And Size To Remain
- Bush
- Handicap Parking
- Stop Sign
- A/c
- IE Invert Elevation
- FL Flow Line
- Traffic Sign
- Security Phone
- Post Indicator Valve
- Telephone Manhole
- Telephone Riser
- Gas Valve
- Roof Drain (r1)
- HPG High Pressure Gas
- Approximate Property Line

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\0111090A102.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: PROJECT LOCATION PLAN - WEST

Approved COTR:

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

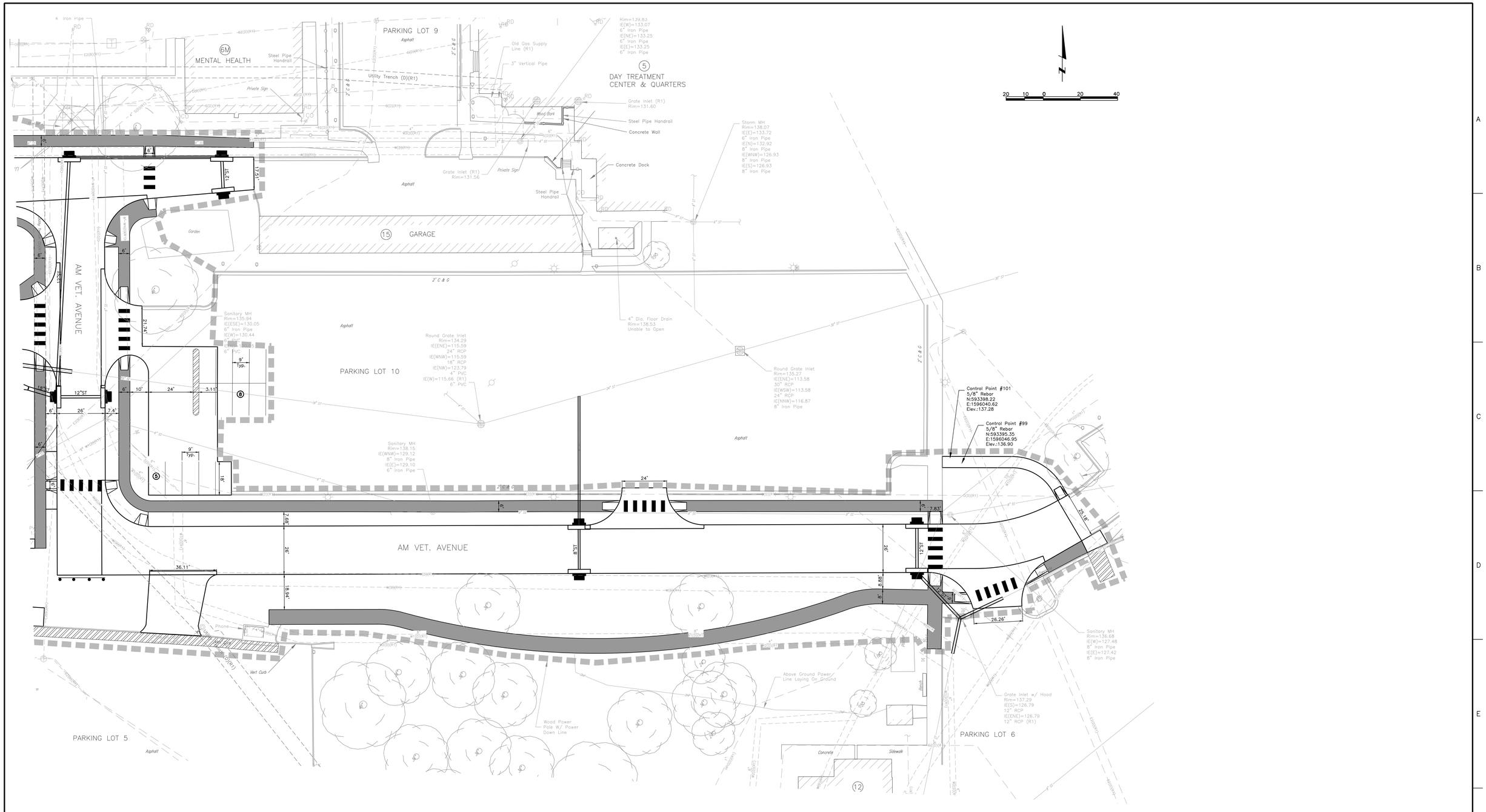
Drawing Number: CS101

Dwg. 2 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\0111090A102.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

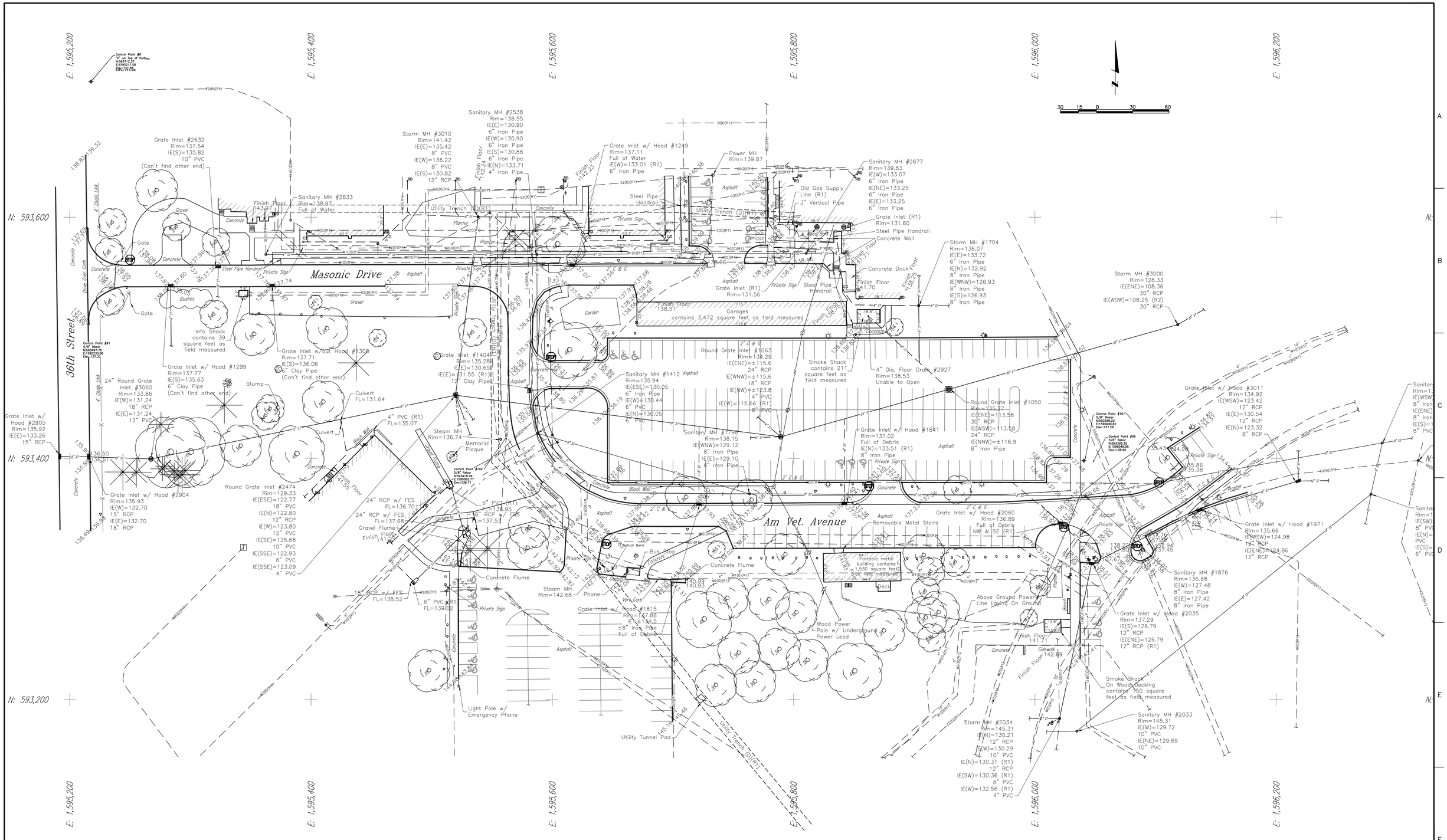
21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | | | |
|---|---|---|---|
| Drawing Title: PROJECT LOCATION PLAN - EAST | Project Title: UPGRADE ROADWAY, PARKING PHASE I | | Project Number: 636A6-11-301 |
| | | | Building Number: |
| Approved: COTR | Location: DES MOINES VA MEDICAL CENTER | | Drawing Number: CS102 |
| | Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH |
| | | | Dwg. 3 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




# FOR INFORMATION ONLY

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A103.dwg

| Revisions: | Date |
|---|---|
| | |

**CONSULTANTS:**

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

**ARCHITECT/ENGINEERS:**

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

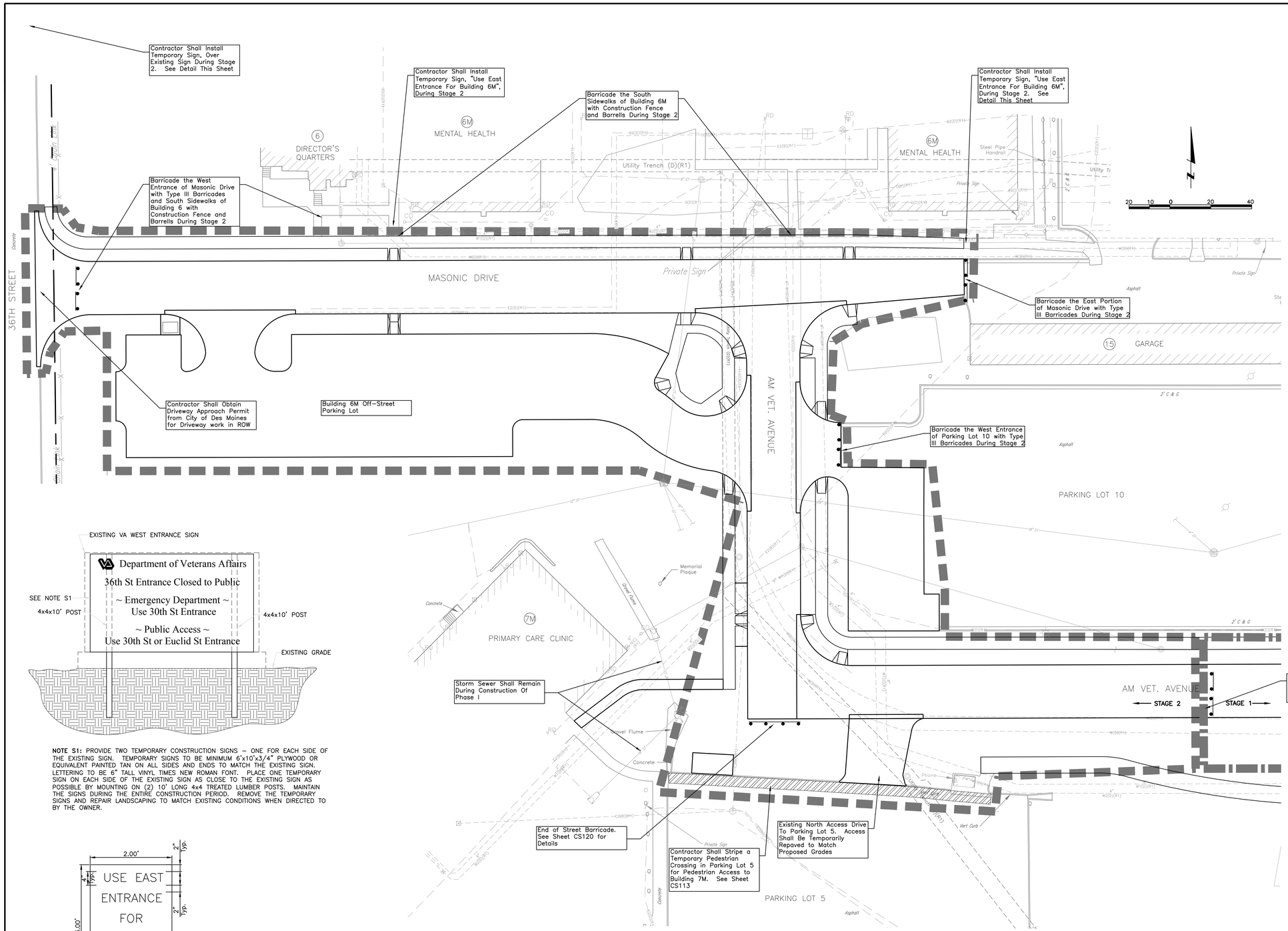
| | |
|---|---|
| Drawing Title | TOPOGRAPHIC SURVEY<br>FOR INFORMATION ONLY |
| Approved COTR | |
| Project Title | UPGRADE ROADWAY, PARKING PHASE I |
| Location | DES MOINES VA MEDICAL CENTER |
| Date | MAY 7, 2012 |
| Checked | SRL |
| Drawn | PCH |
| Project Number | 636A6-11-301 |
| Building Number | |
| Drawing Number | CS103 |
| Dwg. 4 of 24 | |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231

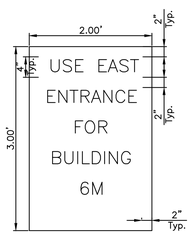
L:\Engineering\0111090\DRAWINGS\PRODUCTION\011109DA103.dwg, 5/7/2012 8:43:12 AM, DanielS, 1:1, Lamp, Rynearson & Associates







**NOTE S1:** PROVIDE TWO TEMPORARY CONSTRUCTION SIGNS – ONE FOR EACH SIDE OF THE EXISTING SIGN. TEMPORARY SIGNS TO BE MINIMUM 6'x10'x3/4" PLYWOOD OR EQUIVALENT PAINTED TAN ON ALL SIDES AND ENDS TO MATCH THE EXISTING SIGN. LETTERING TO BE 6" TALL VINYL TIMES NEW ROMAN FONT. PLACE ONE TEMPORARY SIGN ON EACH SIDE OF THE EXISTING SIGN AS CLOSE TO THE EXISTING SIGN AS POSSIBLE BY MOUNTING ON (2) 10' LONG 4x4 TREATED LUMBER POSTS. MAINTAIN THE SIGNS DURING THE ENTIRE CONSTRUCTION PERIOD. REMOVE THE TEMPORARY SIGNS AND REPAIR LANDSCAPING TO MATCH EXISTING CONDITIONS WHEN DIRECTED TO BY THE OWNER.




## STAGING NOTES

1. The Project Phasing Shall Generally be as follows:
   a. Phase I project shall consist of Stage 1 and Stage 2 which includes Masonic Drive, AM Vet. Avenue and the proposed Building 6M off-street parking lot. During Phase I, at least one access to Parking Lot 10 shall remain open at all times.
   b. The North access drive to Parking Lot 5 shall remain. The drive shall remain in place during Stage 1 and shall be repaved to match the new grade of AM Vet. Avenue in Stage 2. The proposed future drive to Parking Lot 5 shall be barricaded (See detail Sheet CS120). A temporary walkway will be striped in the parking lot for pedestrian access from the south side of AM Vet. Avenue to Building 7M.
   c. The eastern portion of AM. Vet Avenue from Parking Lot 6 to approximately Station 11+15± just west of the south entrance of Parking Lot 10 shall be constructed in Stage 1 of Phase I. The eastern portion of AM Vet. Avenue, the west entrance to Parking Lot 6 and the south entrance to Parking Lot 10 shall be barricaded to prevent traffic entering this construction zone during the first stage.
   d. Masonic Drive, the proposed Building 6M off-street parking, future access to Parking Lot 5, the remaining portion of AM Vet. Avenue, the temporary access to Parking Lot 5 and the additional parking in Parking Lot 10 shall be constructed in Stage 2 of Phase I. Masonic Drive on 36th Street and the east end at Garage 15, the west entrance to Parking Lot 10 and the western portion of AM Vet Avenue shall be barricaded to prevent traffic entering this construction zone during the second stage.
   e. Pedestrian access and walkways from Building 6M and 7M shall be protected with construction fence if remaining open. If closed, the area shall be barricaded and signed.

## BARRICADE NOTES

1. All barricades and traffic control devices shall conform to the latest edition of the "Manual of Uniform Traffic Control Devices." All barricades and signs shown on plans are approximate locations and may be adjusted to fit field conditions. Additional signs and barricades may be added at the determination of the CONTRACTOR. Signs and barricades shall not be installed to obscure the view of other traffic control devices or create unsafe visibility hazards.
2. Each Stage shall have Construction Fence around its limits to prevent pedestrian access to the construction area.
3. Warning lights shall be installed to mark barricades at night as required. Lane closures or changing of traffic circulation shall be conveyed to the OWNER on the Iowa VA project site at least 48 hours prior to anticipated change.
4. CONTRACTOR is responsible for the placement and the maintenance of all barricades and traffic control devices installed for the construction period.

## LEGEND

Stage 1
Stage 2

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A104.dwg

Revisions: Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: CONTRACTOR ACCESS AND STAGING PLAN - WEST (STAGE 2)

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

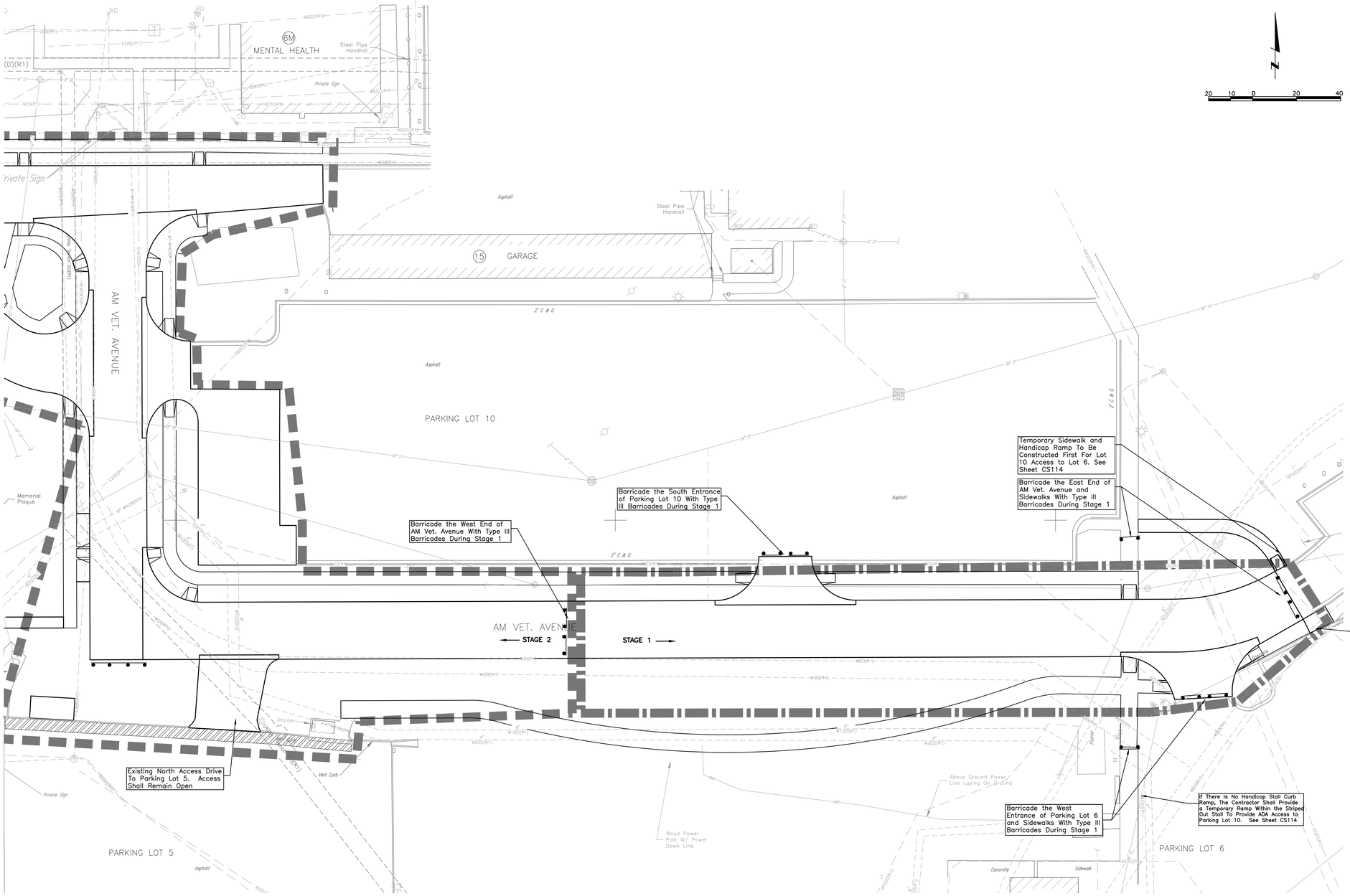
Drawing Number: CS104

Dwg. 5 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## STAGING NOTES

1. The Project Phasing Shall Generally be as follows:

   a. Phase I project shall consist of Stage 1 and Stage 2 which includes Masonic Drive, AM Vet. Avenue and the proposed Building 6M off-street parking lot. During Phase I, at least one access to Parking Lot 10 shall remain open at all times.

   b. The North access drive to Parking Lot 5 shall remain until the future Phase II Project is completed. The drive shall remain in place during Stage 1 and shall be repaved to match the new grade of AM Vet. Avenue in Stage 2. The proposed future drive to Parking Lot 5 shall be barricaded until the Phase II Project is completed. A temporary walkway will be striped in the parking lot for pedestrian access from the south side of AM Vet. Avenue to Building 7M.

   c. The eastern portion of AM. Vet Avenue from Parking Lot 6 to approximately Station 11+15± just west of the south entrance of Parking Lot 10 shall be constructed in Stage 1. The eastern portion of AM Vet. Avenue, the west entrance to Parking Lot 6 and the south entrance to Parking Lot 10 shall be barricaded to prevent traffic entering this construction zone during stage 1.

   d. Masonic Drive, the proposed Building 6M off-street parking, future access to Parking Lot 5, the remaining portion of AM Vet. Avenue, the temporary access to Parking Lot 5 and the additional parking in Parking Lot 10 shall be constructed in Stage 2. Masonic Drive on 36th Street and the east end at Garage 15, the west entrance to Parking Lot 10 and the western portion of AM Vet Avenue shall be barricaded to prevent traffic entering this construction zone during stage 2.

   e. Pedestrian access and walkways from Building 6M and 7M shall be protected with construction fence on both sides, if remaining open. If closed, the area shall be barricaded and signed.

## BARRICADE NOTES

1. All barricades and traffic control devices shall conform to the latest edition of the "Manual of Uniform Traffic Control Devices." All barricades and signs shown on plans are approximate locations and may be adjusted to fit field conditions. Additional signs and barricades may be added at the determination of the CONTRACTOR. Signs and barricades shall not be installed to obscure the view of other traffic control devices.
2. Each Stage shall have Construction Fence around its limits to prevent pedestrian access to the construction area.
3. Warning lights shall be installed to mark barricades at night as required. Lane closures or changing of traffic circulation shall be conveyed to the ENGINEER on the Iowa VA project site at least 48 hours prior to anticipated change.
4. CONTRACTOR is responsible for the placement and the maintenance of all barricades and traffic control devices installed for the construction period.

## LEGEND

Stage 1

Stage 2

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A104.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

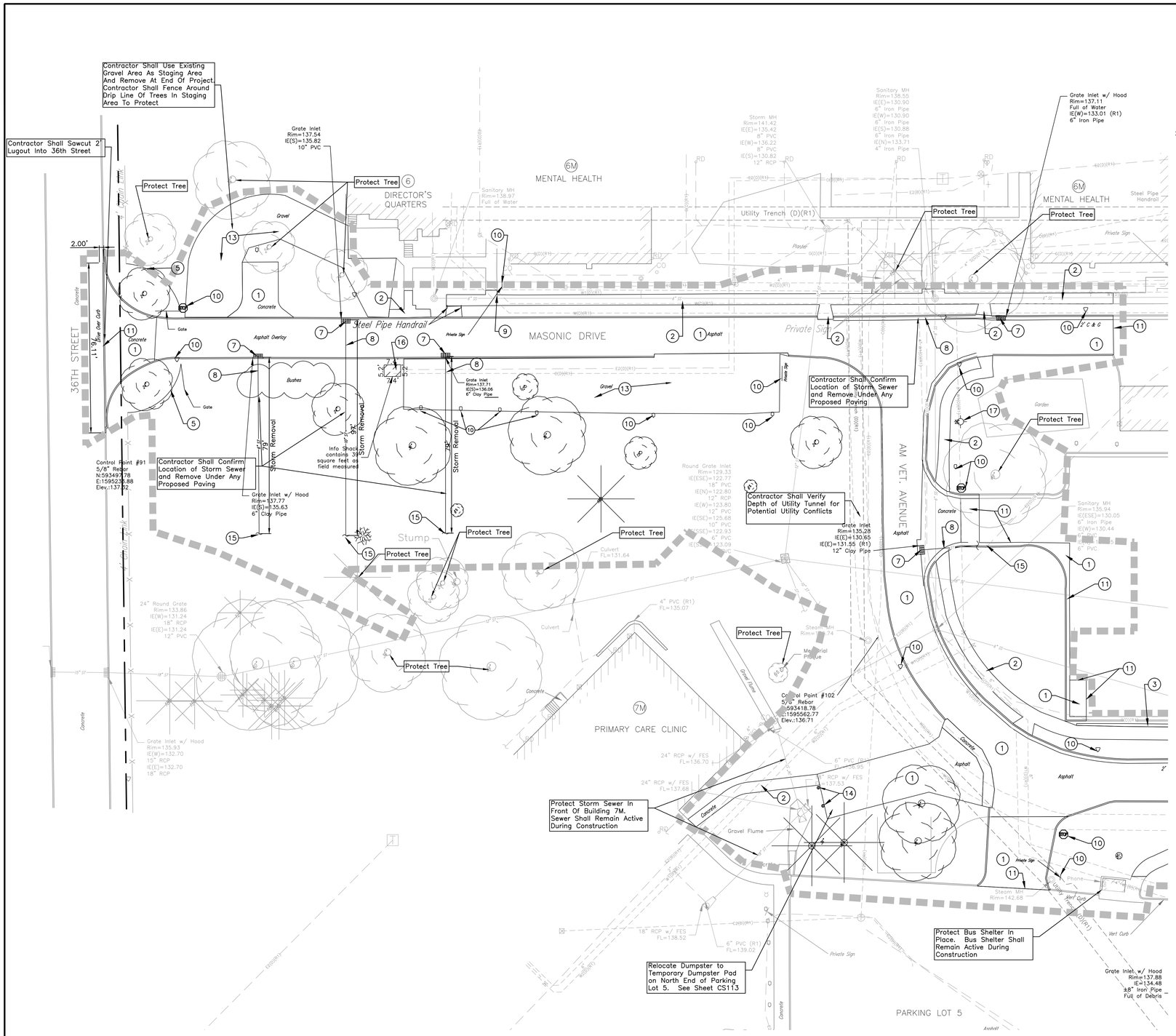
21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | | | |
|---|---|---|---|
| Drawing Title: CONTRACTOR ACCESS AND STAGING PLAN - EAST (STAGE 1) | Project Title: UPGRADE ROADWAY, PARKING PHASE I | | Project Number: 636A6-11-301 |
| Approved: COTR | Location: DES MOINES VA MEDICAL CENTER | | Building Number: |
| | Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH |
| | | | Drawing Number: CS105 |
| | | | Dwg. 6 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## REMOVAL NOTES

1. The CONTRACTOR shall notify the OWNER 72 hours in advance if existing utilities conflict with new construction or if temporary outages are anticipated, including but not limited to water, gas, power, cable television and telephone. Removals shall coincide with the Contractor Access and Phasing Plan. See Sheets CS104 and CS105.
2. The CONTRACTOR shall protect all existing utilities and shall be responsible for any and all damages to utilities that are permitted to remain in place. Damages due directly or indirectly to the CONTRACTORS operations shall be promptly repaired to the satisfaction of the ENGINEER and the OWNER of the property, or shall make payment to such OWNERS for repairs as may become necessary on account of damages that are due to his operations. All utilities onsite are owned by the VA and One Call will not locate. Contractor shall hire and pay for a private locate company to have underground utilities located within the project
3. The CONTRACTOR shall make himself aware of all of the permanent and temporary utility appurtenances in their present and/or relocated positions. No additional compensation will be allowed for any delays, inconvenience, or damage sustained due to interference from the said utility appurtenances or the operation of disconnecting them, including the possibility of uncovering utilities that have been abandoned and/or are not indicated.
4. All demolition rubbish will be removed from the site by a licensed trucking firm, in covered trucks, and taken to a licensed landfill. All this will be paid for by the CONTRACTOR and will be part of the CONTRACTOR'S base bid.
5. Coordination with the VA Emergency and Life Saferty Departments shall be the responsibility of the CONTRACTOR.
6. Burning of materials will NOT be permitted.
7. The OWNER shall be given two week notice before any entrance or access drive closures.
8. The limits of removals shown on the drawings are approximate. The exact limits will be marked in the field by the ENGINEER. ALL VEGETATION AND TREES WITHIN LIMITS OF REMOVAL SHALL BE CLEARED AND GRUBBED UNLESS OTHERWISE NOTED. All trees proposed to remain within the limits of removal shall be protected with a construction fence starting at its dripline around the whole tree.
9. It is anticipated that all utility work shall be on the station and will be owned by the OWNER. All underground utilities identified for removal shall be removed as per the contract documents. No utilities shall be abandoned without express written permission from the OWNER.

## REMOVAL KEYNOTES

1. Remove Pavement
2. Remove Sidewalk To Nearest Joint
3. Remove Retaining Wall
4. Remove Power Pole. Coordinate with Electrical Plans (See Sheet CS107)
5. Remove Fence and Gate
6. Remove Street Light (See Sheet CS107). Coordinate with Electrical Plans
7. Remove Storm Intake
8. Remove Storm Sewer Under Pavement To Be Removed, Storm Sewer Outside Limits of Paving Shall Be Abandoned
9. Remove Stairs and Railings. If Railings Can Be Salvaged Coordinate with OWNER on Salvaged Railings
10. Remove and Salvage Sign. CONTRACTOR Shall Catalog Sign Type and Location, and Coordinate with OWNER on Reinstall
11. Sawcut Pavement Full Depth and in Straight Lines
12. Prepare Trailer for Storage, Salvage Metal Stairs and Move Trailer and Stairs to Designated Area on Station. Coordinate with OWNER on Location. Remove Deck and Utilities Connected To Trailer. Abandon Utilities to a Point They Can No Longer Be Removed. Disconnect Power and Coordinate with Electrical Plans. (See Sheet CS107)
13. Remove Gravel
14. Remove Bollard
15. Abandon Storm Sewer. Storm Sewer Under Existing Pavement Not Identified for Removal and Areas with Protected Vegetation, Shall Be Abandoned
16. Remove and Salvage Guard/Info Shack. Coordinate with OWNER. See Sheet CS113 for New Location and Electrical Plans
17. Remove and Relocate Water Hydrant and Valve. Hydrant Shall Be Moved 5' East and Shall Be 2' Clear of Proposed Sidewalk

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A106.dwg

Revisions: | Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

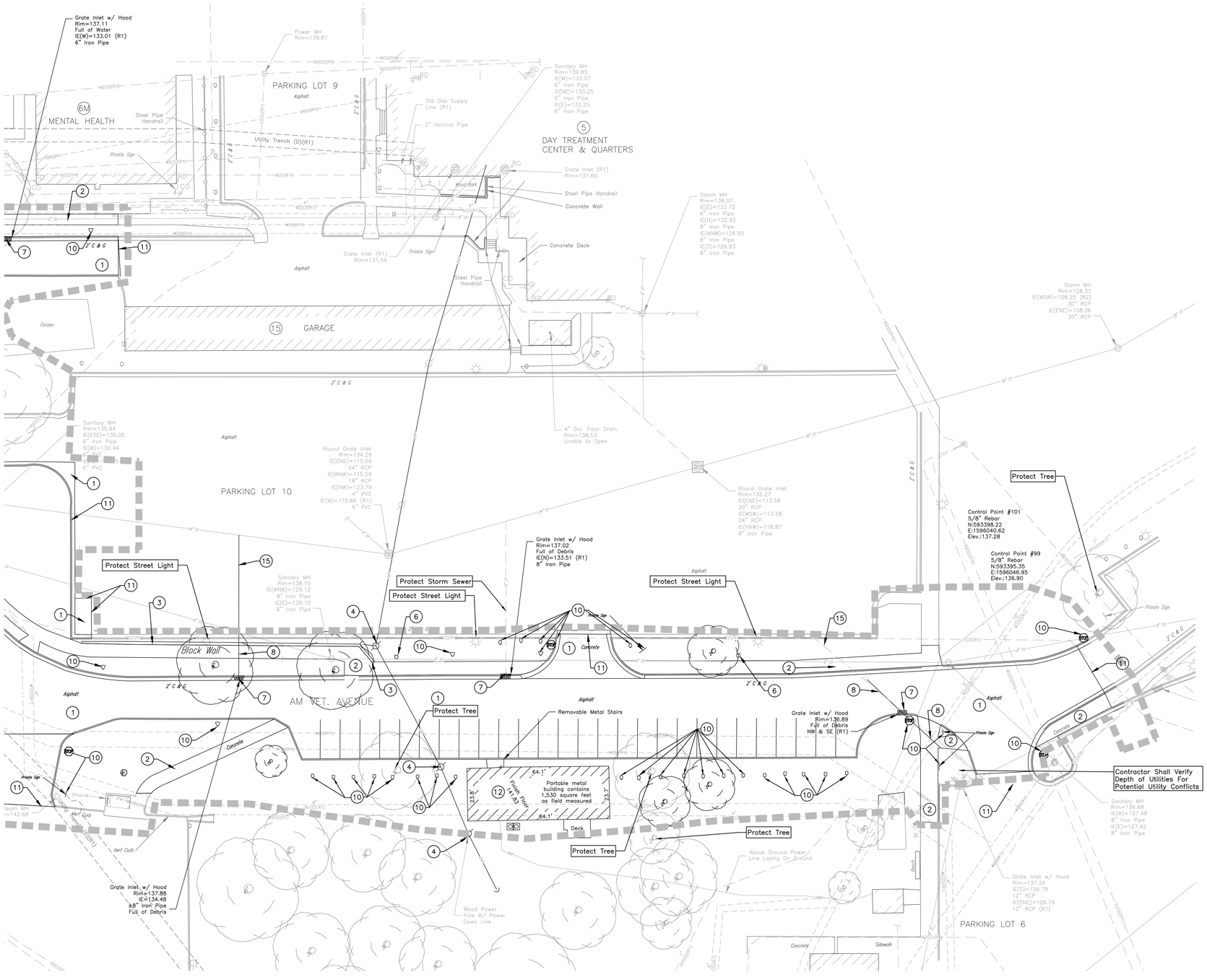
21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | |
|---|---|
| Drawing Title | REMOVAL PLAN - WEST |
| Approved: COTR | |
| Project Title | UPGRADE ROADWAY, PARKING PHASE I |
| Location | DES MOINES VA MEDICAL CENTER |
| Date | MAY 7, 2012 |
| Checked | SRL |
| Drawn | PCH |
| Project Number | 636A6-11-301 |
| Building Number | |
| Drawing Number | CS106 |
| Dwg. | 7 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## REMOVAL KEYNOTES

1. Remove Pavement
2. Remove Sidewalk To Nearest Joint
3. Remove Retaining Wall
4. Remove Power Pole. Coordinate with Electrical Plans
5. Remove Fence and Gate (See Sheet CS106)
6. Remove Street Light. Coordinate with Electrical Plans
7. Remove Storm Intake
8. Remove Storm Sewer Under Proposed Pavement or Pavement Identified To Be Removed
9. Remove Stairs and Railings. If Railings Can Be Salvaged Coordinate with OWNER on Salvaged Railings (See Sheet CS106)
10. Remove and Salvage Sign. CONTRACTOR Shall Catalog Sign Type and Location, and Coordinate with OWNER on Reinstall
11. Sawcut Pavement Full Depth and in Straight Lines
12. Prepare Trailer for Storage, Salvage Metal Stairs and Move Trailer and Stairs to Designated Area on Station. Coordinate with OWNER on Location. Remove Deck and Utilities Connected To Trailer. Abandon Utilities to a Point They Can No Longer Be Removed. Disconnect Power and Coordinate with Electrical Plans.
13. Remove Gravel (See Sheet CS106)
14. Remove Bollard (See Sheet CS106)
15. Abandon Storm Sewer. Storm Sewer Under Existing Pavement Not Identified for Removal and Areas with Protected Vegetation, Shall Be Abandoned
16. Remove and Salvage Guard/Info Shack. Coordinate with OWNER. See Sheet CS113 for New Location and Electrical Plans (See Sheet CS106)
17. Remove and Relocate Water Hydrant and Valve. Hydrant Shall Be Moved 5' East and Shall Be 2' Clear of Proposed Sidewalk (See Sheet CS106)

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A106.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: REMOVAL PLAN - EAST

Approved COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number

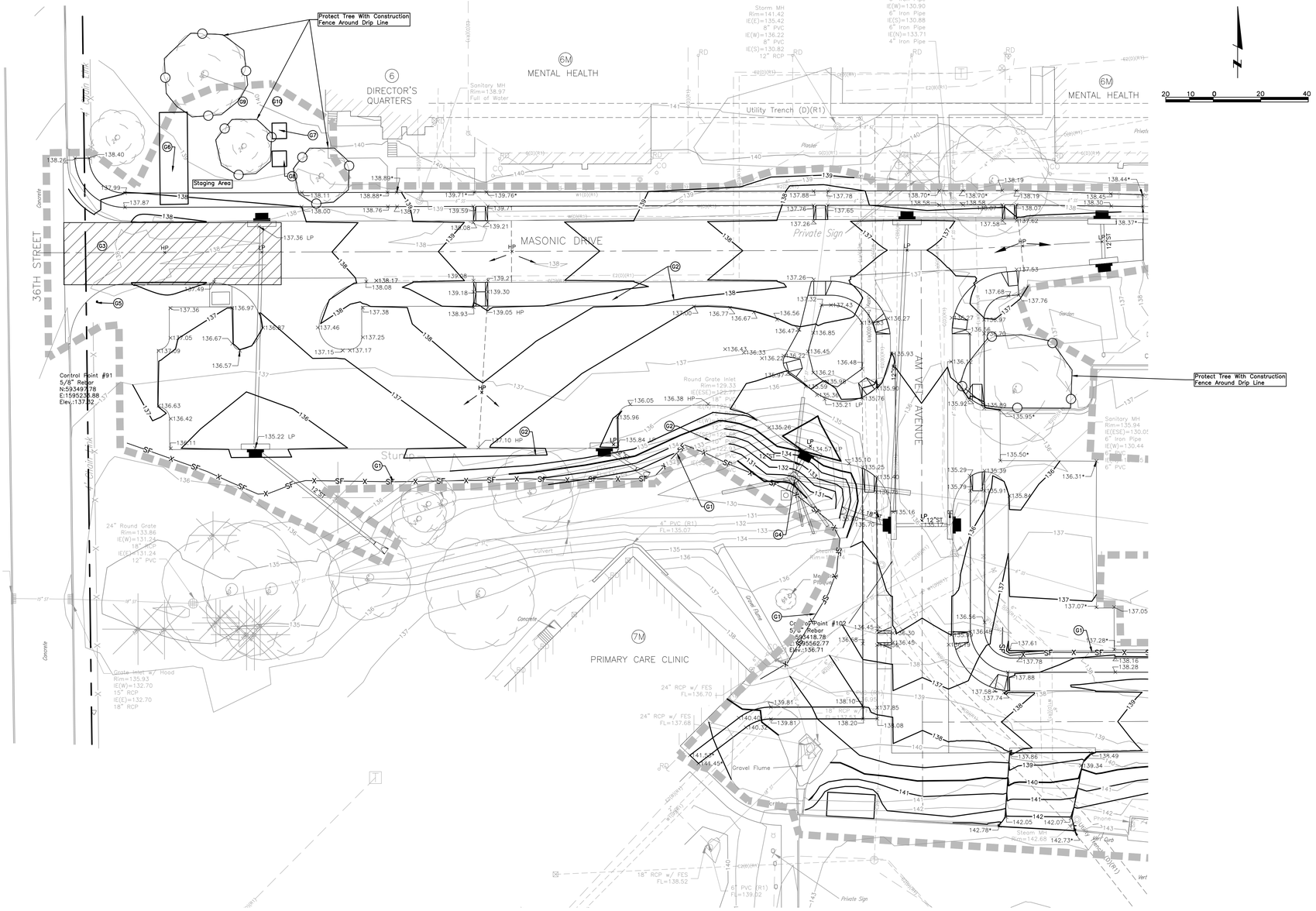
Drawing Number: CS107

Dwg. 8 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## ELEVATION NOTES

1. Proposed contours are finished grade/top of pavement elevations. Not subgrade elevations.
2. ALL SPOT ELEVATIONS IN PAVEMENT ARE TOP OF SLAB UNLESS NOTED OTHERWISE.
3. All areas receiving more than 3 feet of fill shall have a 2 week delay before beginning paving operations.
4. Slopes steeper than 5:1 should be benched before placing fill.
5. See Sheets CS116 and CS117 for paving plan and profile information on Masonic Drive and AM Vet Avenue.

## GRADING KEYNOTES:

G1. CONTRACTOR Shall Construct, Maintain And Clean Out Silt Fence As Shown Per Figure 9040.19 Of SUDAS. Upon Establishment of Vegetation, Contractor Shall Remove Silt Fence.

G2. The CONTRACTOR Shall Install Sod In All Areas Greater Than 4:1 Slope.

G3. The CONTRACTOR Shall Install And Maintain A Stabilized Construction Entrance Location Per Figure 9040.20 Of The SUDAS.

G4. CONTRACTOR Shall Install And Maintain Surface-Applied Intake Protection Device During All Phases Of Construction. Protection Measures Must Be Approved By The INSPECTOR Or The ENGINEER Prior To Installation.

G5. The CONTRACTOR Shall Install And Maintain A SWPPP Notification Sign. See Detail, Sheet CS110. Separate Payment Shall Not Be Made For SWPPP Notification Sign.

G6. Proposed Job Trailer Location If Necessary; Alternate Locations Must Be Approved By The ENGINEER And The SWPPP Shall Be Modified To Reflect Change. Separate Payment Shall Not Be Made For Job Trailer.

G7. Proposed Sanitary Waste Receptacle Location If Necessary; Any Alternate Location Must Be Approved By The ENGINEER And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Sanitary Waste Receptacle.

G8. Proposed Solid Waste Receptacle Location If Necessary: Any Alternate Location Must Be Approved By The ENGINEER And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Solid Waste Receptacle.

G9. Proposed Designated Vehicle And Equipment Fueling Area Location If Necessary: Any Alternate Location Must Be Approved By The ENGINEER And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Vehicle And Equipment Fueling Area.

G10. Proposed Material Delivery And Storage Area Location If Necessary: Any Alternate Location Must Be Approved By The ENGINEER And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Material Delivery And Storage Area.

## COMPACTION REQUIREMENTS TABLE

| | | | | |
|---|---|---|---|---|
| See Geotechnical Engineering Report: | Geotechnical Assessment Parking Lot and Roadway Upgrade-Phase I VA636A6-11-301 | | | |
| Prepared By: | Aquaterra Environmental Solutions, Inc 402-884-6202 | | | |
| Engineer: | John Hartwell, PE, CHMM | | | |
| Project No: | 4963.10 | | | |
| Dated: | November 7, 2011 | | | |
| Max. Depth Of Lift For Fill (Measured Loose) | 8" | | | |
| AREA | TEST | COMPACTION | MOISTURE | |
| Utility Trench Backfill | Standard Proctor | 95% | -0/+4 | 3 |
| PCC Pavement Subgrade (Upper 12") | Standard Proctor | 95% | -2/+2 | |
| Manhole + Structure Backfill (Full Depth) | Standard Proctor | 95% | -0/+4 | 3 |
| Sidewalk Subgrade (Upper 6") | Standard Proctor | 95% | -0/+4 | 3 |
| All Other Fill | Standard Proctor | 95% | -0/+4 | 3 |

Notes:

1. Standard Proctor Shall Be Determined In Accordance With ASTM D 698.
2. Modified Proctor Shall Be Determined In Accordance With ASTM D 1557.
3. Compaction and Moisture Requirements per SUDAS

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A107.dwg

Revisions: Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: GRADING AND STORM WATER POLLUTION PREVENTION PLAN-WEST

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

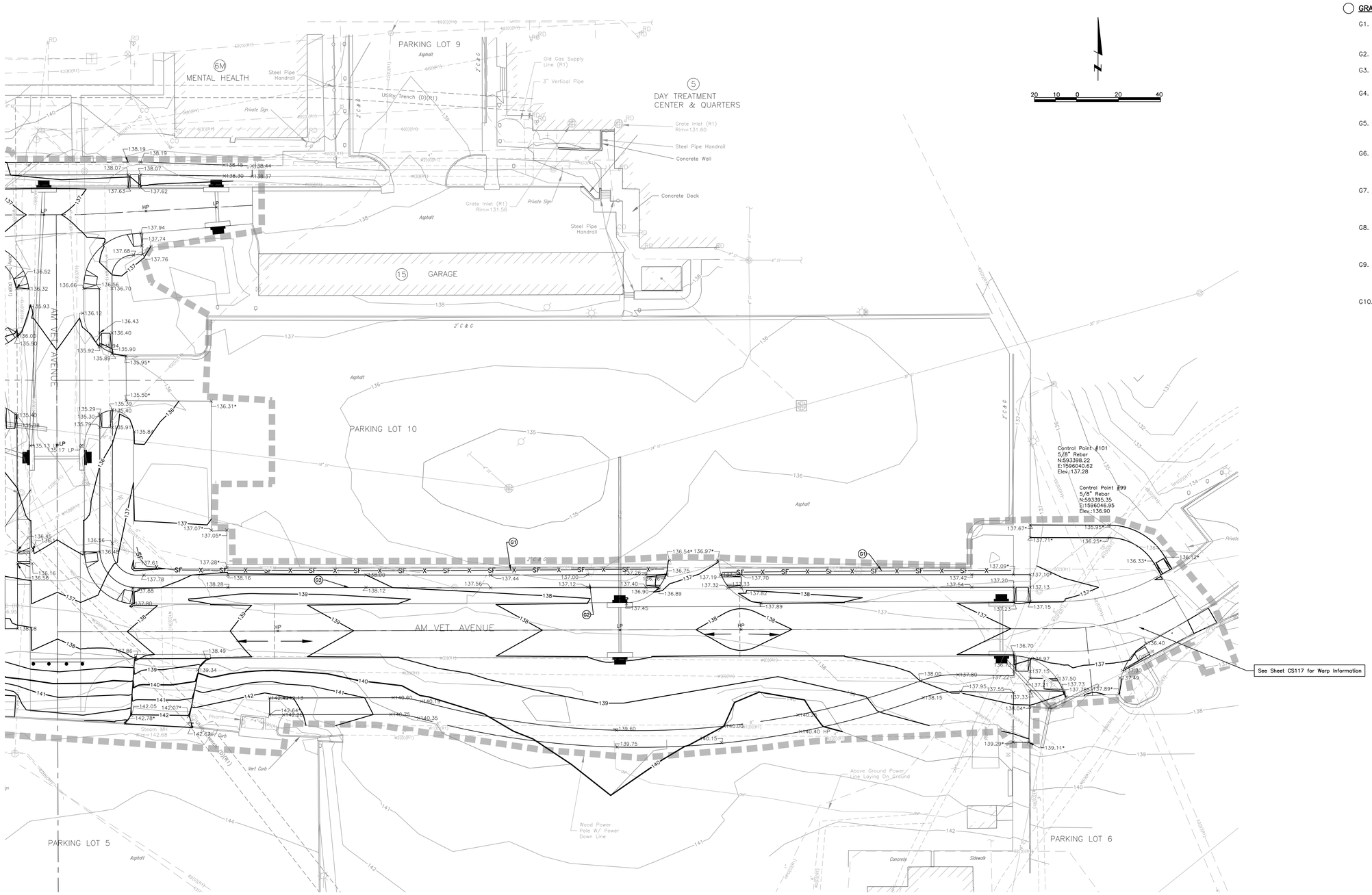
Drawing Number: CS108

Dwg. 9 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## GRADING KEYNOTES:

G1. Contractor Shall Construct, Maintain And Clean Out Silt Fence As Shown Per Figure 9040.19 Of The SUDAS. Upon Establishment of Vegetation, Contractor Shall Remove Silt Fence.

G2. The Contractor Shall Install Sod On All Areas Greater Than 4:1 Slope.

G3. The Contractor Shall Install And Maintain A Stablized Construction Entrance Location Per Figure 9040.20 Of The SUDAS. See Sheet CS108.

G4. Contractor Shall Install And Maintain Inlet Protection Device During All Phases Of Construction. Protection Measures Must Be Approved By The Inspector Or The Engineer Prior To Installation. See Sheet CS108.

G5. The Contractor Shall Install And Maintain A SWPPP Notification Sign. See Detail, Sheet CS110. Separate Payment Shall Not Be Make For SWPPP Notification Sign. See Sheet CS108.

G6. Proposed Job Trailer Location If Necessary; Alternate Locations Must Be Approved By The Engineer And The SWPPP Shall Be Modified To Reflect Change. Separate Payment Shall Not Be Made For Job Trailer. See Sheet CS108.

G7. Proposed Sanitary Waste Receptacle Location If Necessary; Any Alternate Location Must Be Approved By The Engineer And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Sanitary Waste Receptacle. See Sheet CS108.

G8. Proposed Solid Waste Receptacle Location If Necessary: Any Alternate Location Must Be Approved By The Engineer And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Solid Waste Receptacle. See Sheet CS108.

G9. Proposed Designated Vehicle And Equipment Fueling Area Location If Necessary: Any Alternate Location Must Be Approved By The Engineer And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Vehicle And Equipment Fueling Area. See Sheet CS108.

G10. Proposed Material Delivery And Storage Area Location If Necessary: Any Alternate Location Must Be Approved By The Engineer And The SWPPP Modified To Reflect The Change. Separate Payment Shall Not Be Made For Material Delivery And Storage Area. See Sheet CS108.

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A107.dwg

Revisions: | Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: GRADING AND STORM WATER POLLUTION PREVENTION PLAN-EAST

Approved COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number

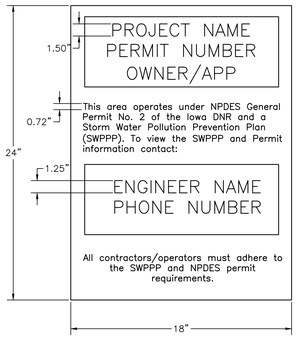
Drawing Number: CS109

Dwg. 10 of 24

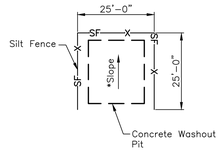
VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




**SWPPP Notification Sign Detail**
No Scale




**CONCRETE WASHOUT DETAIL**
No Scale

Notes:
1. The concrete washout pit will need to be relocated as the concentrated work areas of the site change.
2. The concrete washout pit needs to be designated via mounted sign or by marking the exterior of the silt fence perimeter.
3. The concrete washout pit shall have an impermeable liner and shall be cleaned out with washout disposed of prior to reaching capacity.

* The location of the concrete wash out pit will be such that water and sediment will NOT flow away from the designated concrete washout area.

## CONSTRUCTION ACTIVITIES & SCHEDULE

| ACTIVITY | SCHEDULE |
|---|---|
| Install all BMP's needed and associated with the Grading Phase such as stabilized construction entrances, sediment basins, riser pipes, outlet pipes, sediment traps, silt fence, diversions, terraces and etcetera. | Prior to any stripping of existing vegetation or grading. |
| Proceed with stripping of existing vegetation and grading in accordance with the grading plan, while disturbing no more than necessary. | After installing all BMP's needed and associated with the Grading Phase. Furthermore, INSPECTOR approval must be obtained before the start of any stripping of existing vegetation or grading. |
| Proceed with infrastructure installation. | Infrastructure installation must occur prior to any lot development. |
| Implement the installation of Temporary Seeding, Permanent Seeding, and/or Mulching. | Stabilization measures must be initiated as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. |
| Implement the installation all BMP's needed and associated with the Building Phase. | Building Phase BMP's must be installed concurrently with lot development. |
| Proceed with removal of BMP's. | Unless stated in plans or specifications, BMP's may not be removed until each impacted drainage basin has been fully developed. Full development shall mean installation of pavement, buildings, and utilities, landscaping, and fully established permanent seeding. Furthermore, INSPECTOR approval must be obtained before the removal of any BMP's. |

## BMP'S MAINTENANCE SCHEDULE

The following Maintenance Schedule has been provided. The INSPECTOR must perform the inspections. The OPERATOR/CONTRACTOR must perform all needed maintenance. Furthermore, all erosion control feature requiring maintenance may not be listed below. The OPERATOR/CONTRACTOR and INSPECTOR must perform their respective duties on all BMP's that are not listed below as well.

1. Construction Entrance – The entrance shall be maintained in a condition which will prevent tracking or flow of sediment onto public rights–of–way. This may require periodic top dressing with additional stone or the washing and reworking of existing stone as conditions demand and repair and/or cleanout of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately. The use of water trucks to remove materials dropped, washed, or tracked onto roadways will not be permitted under any circumstances.
2. Silt Fence – The maintenance measures are as follows: (2.1) silt fences shall be inspected immediately after each rainfall and at least daily during prolonged rainfall, any required repairs shall be made immediately; (2.2) close attention shall be paid to the repair of damaged silt fence resulting from end runs and undercutting; (2.3) should the fabric on a silt fence decompose or become ineffective prior to the end of the expected usable life and the barrier is still necessary, the fabric shall be replaced promptly; (2.4) sediment deposits must be removed when the level of deposition reaches approximately one–half the height of the barrier; and (2.5) any sediment deposits remaining in place after the silt fence is no longer required shall be dressed to conform to the existing grade, prepared and seeded.
3. Storm Drain Inlet Protection – The maintenance measures are as follows: (3.1) structures shall be inspected after each rain and repairs made as necessary and (3.2) structures shall be removed and the area stabilized when the remaining drainage area has been properly stabilized.
4. Temporary Earth Diversion Structure – The measure shall be inspected after every storm and repairs made to the struture, flow channel, outlet or sediment trapping facility, as necessary. Once every two weeks, whether a storm event has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.
5. Level Spreader– Since the practice is temporary and under most situations will be covered the next working day, the maintenance required should be low. If the practice is to remain in use for more than one day, an inspection shall be made at the end of each work day and repairs made to the measure if needed. The OPERATOR/CONTRACTOR should avoid the placement of any material over the structure while it is in use. Construction traffic should not be permitted to cross the diversion.
6. Temporary Sediment Basin – The basin embankment should be checked regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment. The basin should be checked after each runoff producing rainfall for sediment cleanout and trash removal. When the sediment reaches the cleanout level, it shall be removed and properly disposed of.
7. Temporary Seeding – Areas which fail to establish vegetative cover adequate to prevent rill erosion will be re–seeded as soon as such areas are identified. Control weeds by mowing.
8. Permanent Seeding – The maintenance measures are as follows: (8.1) in general, a stand of vegetation cannot be determined to be fully established until it has been maintained for one full year after planning; (8.2) new seedlings shall be supplied with adequate moisture, supply water as needed, especially late in the season, in abnormally hot or dry conditions, or on adverse sites, water applications shall be controlled to prevent excessive runoff; (8.3) inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season, if possible; [8.3.a] if stand is inadequate for erosion control, over seed and fertilize using half of the rates originally specified; [8.3.b] if stand is 60% damaged, re–establish following seedbed and seeding recommendations; [8.3.c] if stand has less than 40% cover, re–evaluate choice of plant materials and quantities of lime and fertilizer, the soil must be tested to determine if acidity or nutrient imbalances are responsible, re–establish the stand following seedbed and seeding recommendations.
9. Mulching – All mulches and soil coverings should be inspected periodically (particularly after rainstorms) to check for erosion. Where erosion is observed in mulched areas, additional mulch should be applied. Nets and mats should be inspected after rainstorms for dislocation or failure. If washouts or breakage occur, reinstall netting or matting as necessary after repairing damage to the slope or ditch. Inspections should take place until grasses are firmly established. Where mulch is used in conjunction with ornamental plantings, inspect periodically throughout the year to determine if mulch is maintaining coverage of the soil surface; repair as needed.
10. Soil Stabilization Blankets & Matting – All soil stabilization blankets and matting should be inspected periodically following installation, particularly after rainstorms to check for erosion and undermining. Any dislocation or failure should be repaired immediately. If washouts or breakage occurs, reinstall the material after repairing damage to the slope or ditch. Continue to monitor these areas until which time they become permanently stabilized; at that time an annual inspections should be adequate.
11. Street Cleaning / Sweeping – The maintenance measures are as follows: (11.1) evaluate access points daily for sediment tracking; (11.2) when tracked or spilled sediment is found on paved surfaces, it will be removed daily, during times of heavy track–out, such as during rains, cleaning may be done several times throughout the day; (11.3) unknown spills or objects will not be mixed with the sediment; and (11.4) if sediment is mixed with other pollutants, it will be disposed of properly at an authorized landfill.

## GRADING NOTES

1. Take all necessary measures to protect against erosion and dust pollution on and around the project site to include all public R.O.W. and off–site borrow and spoil areas.
2. For all areas indicating proposed construction, remove all organic material to a 4" minimum depth. Stock pile top soil separately, amend and re–spread for final grading. Contractor shall achieve 5%+– organic matter in topsoil on site after construction is completed through the use of compost or amending the topsoil. Contractor shall coordinate with OWNER/ENGINEER on stockpile location.
3. Spot elevations at back of curb represent top of curb (/TC) elevations. All other spot elevations and contours represent finished grade.
4. Native soils may be reused for common fill after they are sorted to remove all deleterious materials such as concrete, bricks, rock larger than 1–inch, organic material such as tree roots, and other ruble. All excess material including deleterious material shall be removed from the project site by the contractor.
5. Sub–grade for pavements shall be proof rolled for soft spots. CONRTRACTOR shall notify ENGINEER and OWNER a minimum of two working days prior to proof roll. Materials testing laboratory hired by the CONTRACTOR, ENGINEER, and OWNER shall be present to witness the proof rolling. Any soft spots found shall have unacceptable material removed and replaced with select material. Proof roll the exposed sub–grade and replace with compacted fill to bottom of concrete drives, streets, curbs, sidewalks, and building floor elevations.
6. Grade to ensure positive drainage.
7. Back fill to top of curb and back of sidewalk.
8. CONTRACTOR shall read and follow the geotechnical soils report prepared for this project.

## STORM WATER POLLUTION PREVENTION PLAN GENERAL NOTES

1. All OPERATORS/CONTRACTORS must comply with all noise and dust control ordinances of applicable government agencies.
2. Barricades shall conform to SUDAS.
3. All OPERATORS/CONTRACTORS shall be responsible to comply with OSHA regulations.
4. All OPERATORS/CONTRACTORS must confirm with the APPLICANT that any and all applicable governmental approvals have been received prior to the start of work.
5. The APPLICANT and INSPECTOR must comply with all government regulators in regards to the construction activities so as to minimize the potential for erosion.
6. All OPERATORS/CONTRACTORS must comply with the APPLICANT, INSPECTOR, and all government regulators in regards to the construction activities so as to minimize the potential for erosion and pollution.
7. Each OPERATOR/CONTRACTOR must monitor Silt Fencing, within their areas of responsibility, and install additional silt fencing if necessary and as directed by the INSPECTOR.
8. Each OPERATOR/CONTRACTOR shall periodically remove accumulated sediment from Temporary Sediment Basins, behind Silt Fences, and all other erosion control measures that store sediment, within their areas of responsibility, if necessary and as directed by the INSPECTOR.
9. Each OPERATOR/CONTRACTOR must build stabilized Construction Entrances, within their areas of responsibility and as defined within the SWPPP. Each OPERATOR/CONTRACTOR must monitor all stabilized Construction Entrances, within their areas of responsibility, and maintain the entrances as needed and directed by the INSPECTOR. OPERATORS/CONTRACTORS shall not use any other access to the site or allow others to use alternate access points.
10. Each OPERATOR/CONTRACTOR must perform preventative maintenance on each Best Management Practice (BMP), within their areas of responsibility, to ensure proper function. The INSPECTOR must ensure preventative maintenance is being performed.
11. All BMP's must be kept in working order. Each OPERATOR/CONTRACTOR must repair all damages caused by pollutant discharge and construction activities, within their areas of responsibility, at or before the end of each working day and as directed by the INSPECTOR.
12. BMP's may not be removed without INSPECTOR and applicable governmental approval.
13. Each OPERATOR/CONTRACTOR shall be responsible for adhering to all BMP's, within their areas of responsibility.
14. In the event of a release of oil or hazardous substance, all OPERATORS/CONTRACTORS shall comply with the requirements of the Iowa Department of Natural Resources for notification, containment, investigation, remedial action and disposal.
15. The APPLICANT, INSPECTOR, and CONTRACTORS/OPERATORS must ensure Level Spreader and Temporary Earth Diversion Structure are constructed as shown within the SWPPP and as necessary to properly control pollutant discharge. Level Spreader and Temporary Earth Diversion Structure shall be installed at the end of each working day, prior to all rain events, and as directed by the INSPECTOR.
16. The APPLICANT, INSPECTOR, and/or OPERATORS/CONTRACTORS shall allow all government regulators access to the site for inspections at any time, at the VA discretion.
17. The APPLICANT, INSPECTOR, and CONTRACTORS/OPERATORS must initiate stabilization measures, such as Temporary Seeding, Permanent Seeding, and/or Mulching, as soon as possible in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site have temporarily or permanently ceased.
18. For Dust Control, the APPLICANT, INSPECTOR, and CONTRACTORS/OPERATORS must use any of the following measures or a combination if necessary: establishing Temporary Seeding, Permanent Seeding, and/or Mulch In areas subject to little or no construction traffic; irrigating stripped areas and/or haul roads; reducing vehicular speed on haul roads; and as directed by the INSPECTOR.
19. The APPLICANT, INSPECTOR, and CONTRACTORS/OPERATORS must ensure sediment that has been accidentally transported onto public streets is removed as needed, at the end of each working day, and prior to all rain events. Sediment shall be shoveled and/or swept from the street and disposed of in a manner that prevents stormwater contamination.
20. The APPLICANT, INSPECTOR, and CONTRACTORS/OPERATORS must adhere to all Good Housekeeping BMP's. Good Housekeeping BMP's focus on keeping the work site clean and orderly while handling materials and waste in a manner that eliminates the potential for pollutant runoff. Good Housekeeping BMP's such as Sanitary Waste Management, Solid Waste Management, Material Delivery & Storage, Street Cleaning / Sweeping, and Vehicle & Equipment Fueling must be addressed when applicable.
21. The SWPPP documents are essential and a requirement in one part is as binding as though occurring in all. The SWPPP documents are complementary. The documents describe and provide the complete SWPPP. The APPLICANT, INSPECTOR, and/or CONTRACTORS/OPERATORS may not take advantage of any apparent SWPPP errors or omissions. The INSPECTOR shall notify the APPLICANT, DESIGNER, and CONTRACTORS/OPERATORS promptly of any omissions or errors. The APPLICANT shall instruct the DESIGNER to make any corrections necessary to fulfill the overall intent of the SWPPP Documents (e.g., Grading Permit Modification Form). In the case of a discrepancy between parts of the SWPPP documents, the most stringent requirement shall rule.
22. In construction of controlled fills, all soils shall be compacted as specified in the Compaction Requirements Table (See Sheet CS108).
23. No trees shall be removed without approval of the ENGINEER.
24. Do not disturb existing vegetation outside limits of grading.
25. Maintain drainage in existing road ditches at all entrances and from all culverts draining onto the site.
26. Topsoil shall be stripped to a minimum depth of 4 inches and stockpiled within the limits of grading. Do not strip more area than is required for working space.
27. The CONTRACTOR shall redistribute topsoil over completed areas except for paved areas, as soon as possible.
28. The CONTRACTOR is referred to the following "Iowa Statewide Urban Designs and Specifications" (SUDAS).
    Figures:
    9040.3 Rolled Erosion Control Product (RECP) Installed on Slopes
    9040.19 Silt Fence
    9040.20 Stabilized Construction Access

## BMP RESPONSIBILITY TABLE

| MAJOR ACTIVITY | CONTROL MEASURES | TIMING | RESPONSIBLE PARTY |
|---|---|---|---|
| Grading | Stabilized Construction Access | Prior To Stripping | General Contractor |
| | Silt Basins | Prior To Stripping | General Contractor |
| | Silt Fence | Prior To Stripping | General Contractor |
| | Trash Containers | Prior To Stripping | General Contractor |
| | Restroom Facilities | Prior To Stripping | General Contractor |
| | Fuel Containment | Prior To Stripping | General Contractor |
| | Area Cleanup Of Any Tracked Mud/Dirt From Adjacent Streets | Daily | General Contractor |
| | Use Of Water Truck To Control Windblown Dust | As Often As Needed And As Recommended By Inspector | General Contractor |
| Sewers | Continue To Utilize And Maintain Items Listed Under Grading Control Measures | As Often As Needed And As Recommended By Inspector | General Contractor |
| Paving | Continue To Utilize And Maintain Items Listed Under Grading Control Measures | As Often As Needed And As Recommended By Inspector | General Contractor |
| | Clean Onsite Pavement To Remove Mud And Dirt | As Often As Needed And As Recommended By Inspector | General Contractor |

## EROSION CONTROL SUMMARY TABLE

| | |
|---|---|
| Total Area Of Site | 2.72 Ac. |
| Disturbed Area | 2.59 Ac. |
| Erosion Control Measures: | Silt Fence, Rock Access Road, Inlet Protection, Erosion Control Mat and Seeding |

## APPLICANT SWPPP CERTIFICATION

VACIHCS
Business Name
Representative's Email Address
Phone Number
Representative's Name
3600 30th Street
Address
515–699–5859
Fax Number
Project # Assigned By APPLICANT
Des Moines
City
IA
State
50310
Zip Code

DESIGNER

Lamp, Rynearson & Associates, Inc.
Business Name
Scott Loos
Representative's Name
14710 West Dodge Rd,. Suite 100
Address
Scott.Loos@lra–inc.com
Representative's Email Address
Omaha, NE 68154
City, State, & Zip Code
0110115.01–021
Project # Assigned By DESIGNER
402–496–2498
Phone Number
402–496–2730
Fax Number

INSPECTOR

Business Name
Representative's Name
Address
Representative's Email Address
City, State, & Zip Code
Project # Assigned By INSPECTOR
Phone Number
Fax Number

I hereby agree to act as APPLICANT in association with this SWPPP. Furthermore, I certify under penalty of law the following: (1) that, this document and all supporting information has been prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted; (2) that, I understand and agree to abide by the terms and conditions contained within this Storm Water Pollution Prevention Plan – Site Map (SWPPP–SM) and the associated Storm Water Pollution Prevention Plan – Narrative (SWPPP–N); (3) that, to the best of my knowledge and belief information contained in this SWPPP is true, complete, and accurate; (4) that, the SWPPP has been represented and warranted to conform to all applicable Standards, Criteria, Ordinances, Laws, Rules, and Regulations enacted by the –– [a] City of Council Bluffs, [b] Pottawattamie County, [c] State of Iowa, and [d] United States Federal Government; (5) that, sound and established practices were used for the creation of this SWPPP; (6) that, I am obligated to ensure inspection, reporting, and maintenance requirements occur under the terms of this SWPPP; (7) that, this SWPPP will be implemented as the first element of construction; (8) that, I shall indemnify and save harmless the PCWP, its Members, Officers, Agents and Employees from all claims and demands of every nature and description growing out of the implementation of this SWPPP, including personal injuries received and all property damage sustained; (9) that, I will retain the services of the aforementioned DESIGNER and INSPECTOR, to perform all design and inspection duties associated with this SWPPP, though a contractual agreement for the life of the SWPPP; and (10) that, corrections of defects and deficiencies in design, construction, inspection, implementation, and testing shall be without expense to the City of Council Bluffs and its Members, Officers, Agents and Employees and shall be my obligations while acting as APPLICANT.

APPLICANT'S Signature
Date

## SITE INFORMATION

June 2012
Estimated Start Date
VACIHCS – Upgrade Roadway, Parking Phase I
Project Name
3602 30th Street
Address
Des Moines
City
Polk
County
41°37'43.0944"
Latitude
93°39'50.6417"
Longitude
Iowa
State
50310
Zip Code

| | | | |
|---|---|---|---|
| Total Site Area (Acres) | 2.72 | Estimated Permit Duration (Months) | 12 |
| Disturbed Area (Acres) | 2.59 | Cut Volume (YD^3) | 940 |
| Undisturbed Area (Acres) | 0.13 | Fill Volume (YD^3) | 869 |
| Impervious Area Before Construction (%) | 44.5 | Curve Number Before Construction | 78.8 |
| Impervious Area After Construction (%) | 53.6 | Curve Number After Construction | 81.9 |

The Storm Water Pollution Prevention Plan For This Site Was Reviewed By A Stormwater Management Specialist.

Stormwater Management Specialist's Signature
Date

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A108.dwg

Revisions: Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496–4115
Fax: (402) 493–2744

Drawing Title: GRADING AND STORM WATER POLLUTION PREVENTION PLAN NOTES
Approved: COTR
Project Title: UPGRADE ROADWAY, PARKING PHASE I
Location: DES MOINES VA MEDICAL CENTER
Date: MAY 7, 2012
Checked: SRL
Drawn: PCH
Project Number: 636A6-11-301
Building Number:
Drawing Number: CS110
Dwg. 11 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

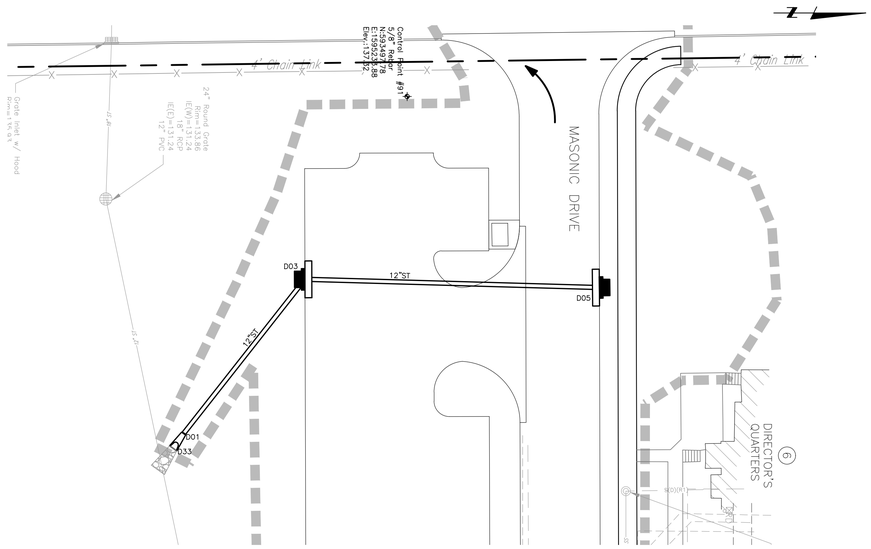
Department of Veterans Affairs

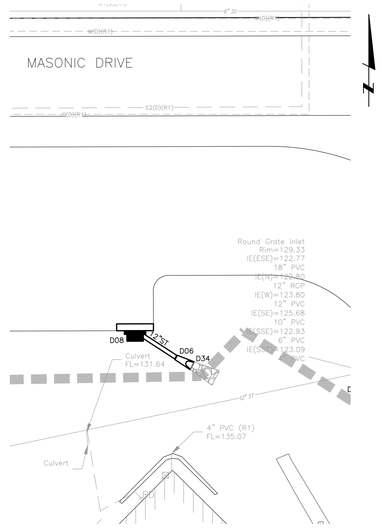
VA FORM 08–6231

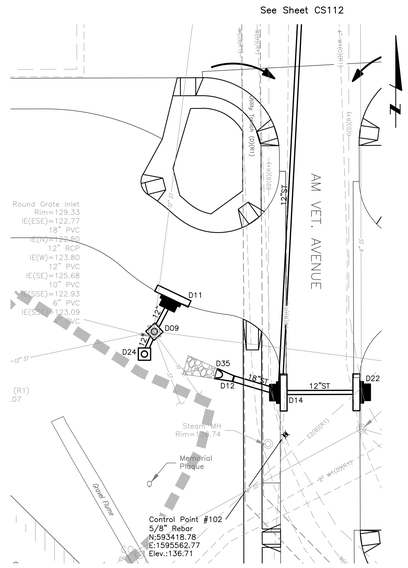
| Structure Table | | |
|---|---|---|
| Structure | Northing | Easting |
| D01 | 593424.89 | 1595343.81 |
| D03 | 593464.45 | 1595293.50 |
| D05 | 593560.46 | 1595296.17 |
| D06 | 593456.16 | 1595453.79 |
| D08 | 593464.89 | 1595440.39 |
| D09 | 593452.40 | 1595520.07 |
| D11 | 593462.99 | 1595525.60 |
| D24 | 593445.09 | 1595516.81 |
| D33 | 593421.49 | 1595348.61 |
| D34 | 593453.45 | 1595459.02 |

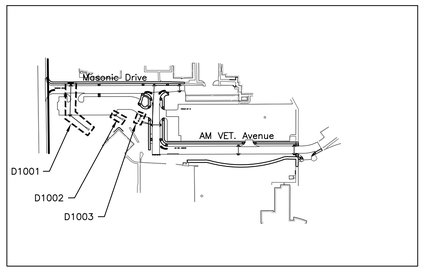
## STORM SEWER NOTES

1. The CONTRACTOR is referred to the following Iowa Statewide Urban Design and Specifications (SUDAS) For Public Improvement Manual Figures.
   3010.101 – Trench Bedding and Backfill Zones
   3010.102 – Rigid Gravity Pipe Trench Bedding
   4020.211 – Special Pipe Connection for Storm Sewer
   4030.221 – RCP Apron Section Footing
   6010.501 – Single Grate Intake (SW-501)
   6010.512 – Circular Area Intake (SW-512)
   6010.603 – Castings for Grate Intakes
   9040.10 – Rock Apron for Pipe Outlet onto Flat Ground
2. Trench backfill shall be compacted as shown in the Compaction Requirements Table (See sheet CS108).
3. Utilities on station are federal property and considered private. Contractor shall hire and pay to have all utilities marked by private locate companies prior to beginning construction. Utility locates shall be updated as needed at the contractors expense. Where utility fixtures are shown as existing on the plans or encountered within the construction area, it shall be the responsibility of the contractor to notify owner five (5) working days in advance of modification to the utility. The contractor shall afford access to these utilities for necessary modification of services. Underground facilities, structures and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. It is possible there may be others, the existence of which is presently not known or shown. It is the contractor's responsibility to determine their existence and exact location and to avoid damage thereto. Claims for additional compensation will not be allowed to the contractor for any interruption or delay caused by such work. THE CONTRACTOR'S BID SHALL INCLUDE 20 HOURS OF EXPLORATORY EXCAVATION FOR POTENTIAL UTILITY CONFLICTS.

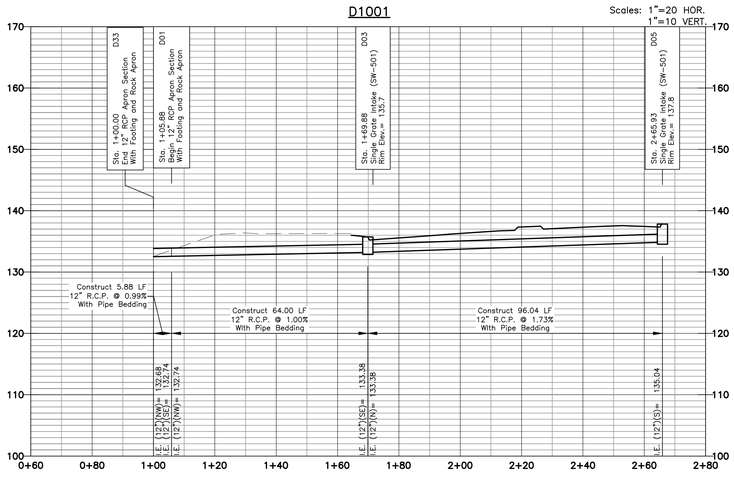


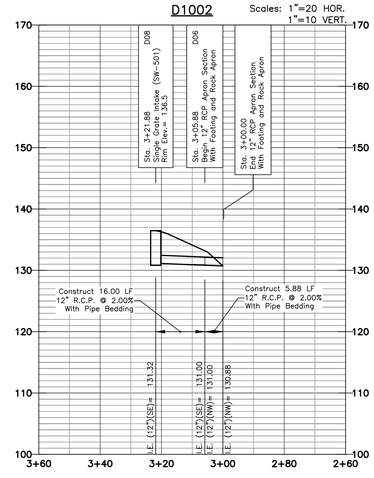



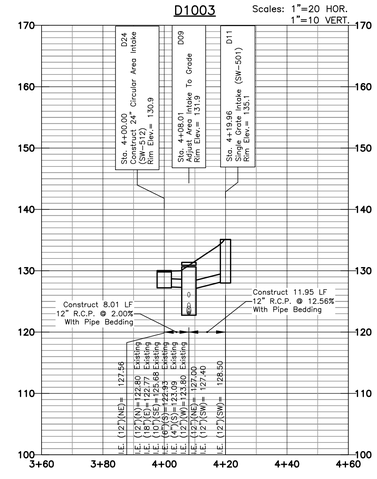




Storm Sewer Key Map




ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A109.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | | | |
|---|---|---|---|
| Drawing Title: STORM SEWER PLAN - WEST | Project Title: UPGRADE ROADWAY, PARKING PHASE I | | Project Number: 636A6-11-301 |
| Approved: COTR | Location: DES MOINES VA MEDICAL CENTER | | Building Number: |
| | Date: MAY 7, 2012 | Checked: SRL | Drawing Number: CS111 |
| | | Drawn: PCH | Dwg. 12 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

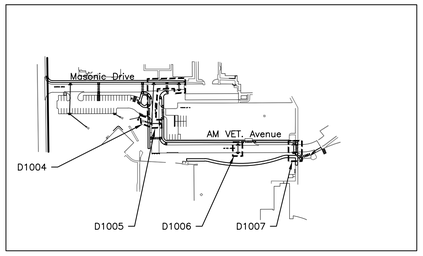
Department of Veterans Affairs

VA FORM 08-6231

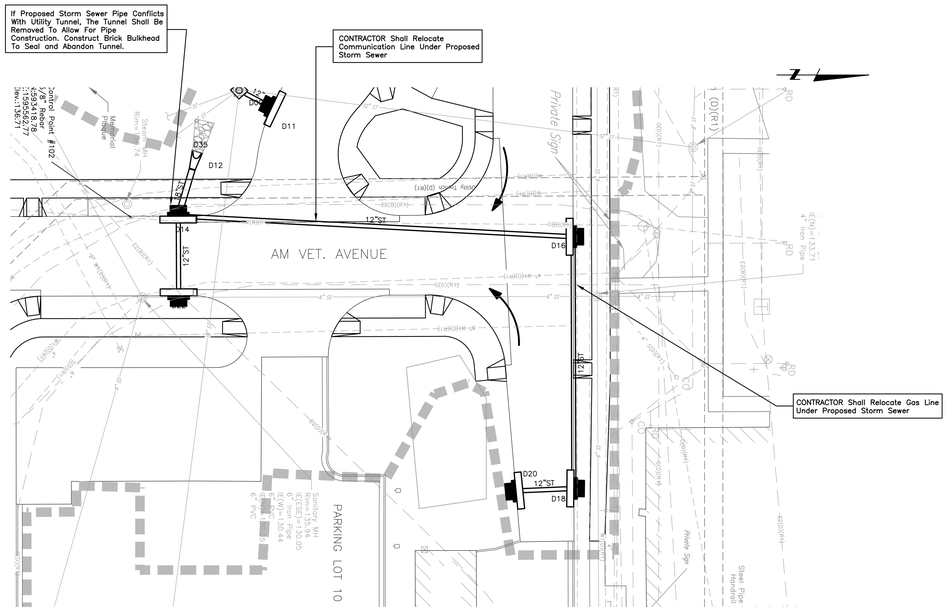
| Structure Table | | |
|---|---|---|
| Structure | Northing | Easting |
| D12 | 593437.09 | 1595545.72 |
| D14 | 593432.53 | 1595561.05 |
| D16 | 593561.25 | 1595567.79 |
| D18 | 593561.48 | 1595649.87 |
| D20 | 593542.61 | 1595650.67 |
| D22 | 593432.62 | 1595587.05 |
| D25 | 593363.46 | 1595842.13 |
| D27 | 593337.46 | 1595842.21 |
| D28 | 593313.39 | 1596047.06 |
| D30 | 593338.03 | 1596023.96 |
| D32 | 593364.03 | 1596023.86 |
| D35 | 593438.73 | 1595540.07 |

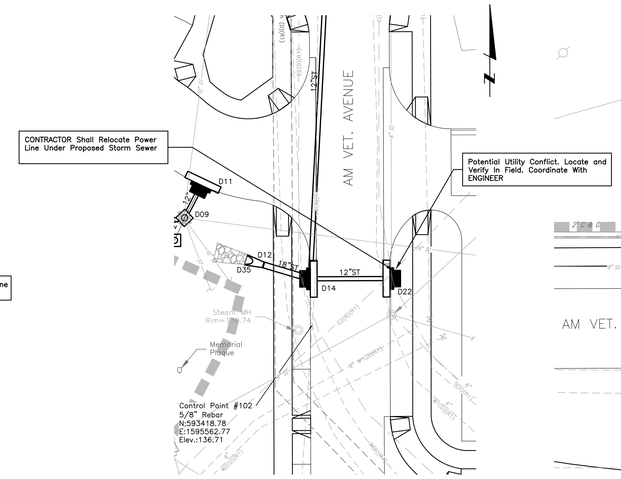
NOTE:

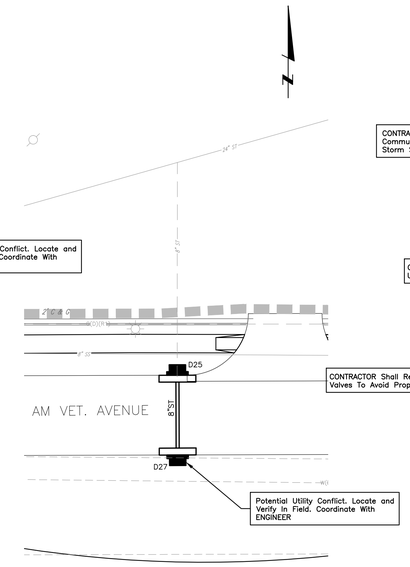
1. All Utility Crossing Locations and Elevation are Approximate. CONTRACTOR Shall Field Verify Prior To Storm Sewer Construction.
2. CONTRACTOR Shall Protect All Crossing Utilities That Are To Remain.
3. CONTRACTOR Shall Coordinate With OWNER On Length Of Utility Disconnection During Utility Relocations.

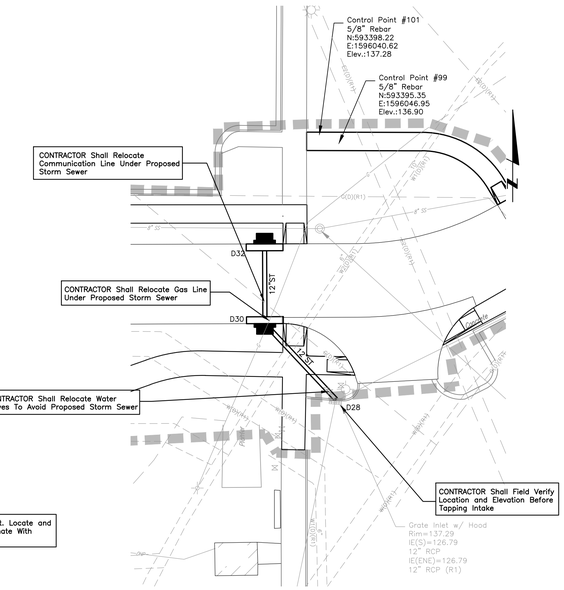


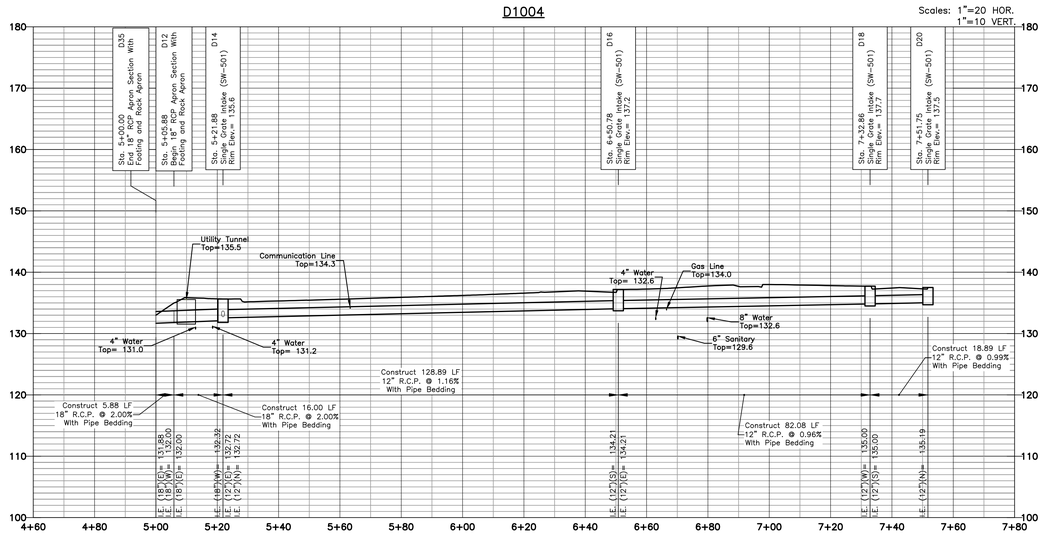

Storm Sewer Key Map

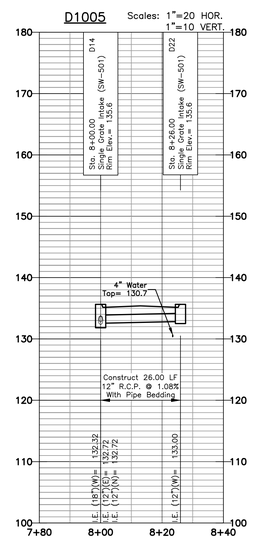


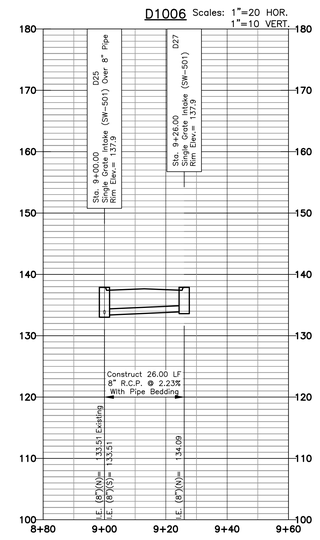



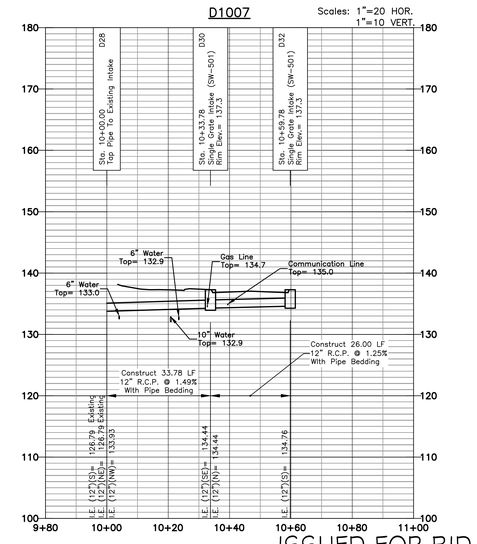




ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A109.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: STORM SEWER PLAN - WEST

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

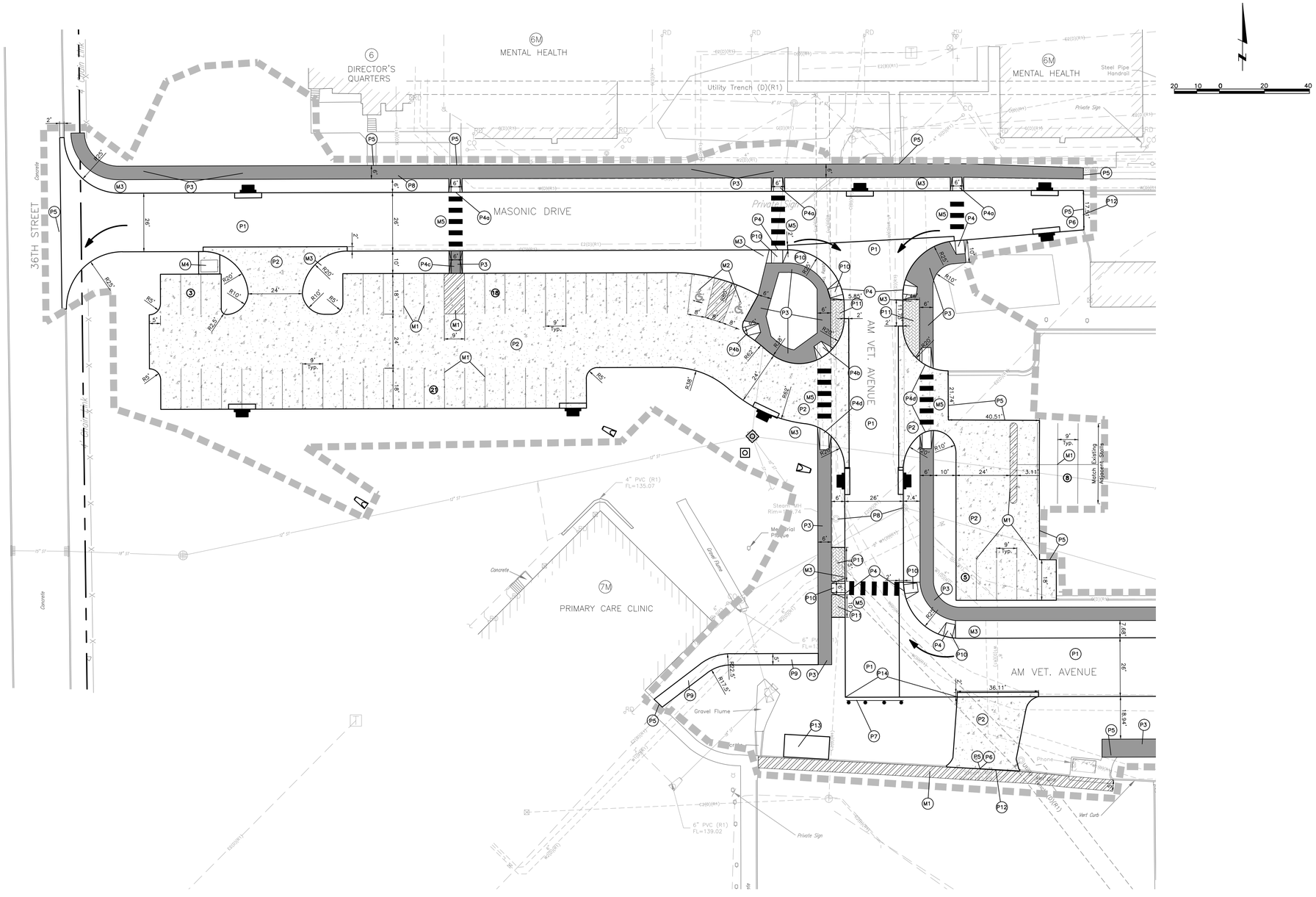
Drawing Number: CS112

Dwg. 13 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## PCC PAVING NOTES

1. Curbs shall be 6" in accordance with SUDAS unless otherwise noted
2. Pavement subgrade to a depth of 12 inches and to a width of 2 feet outside pavement edges shall be compacted as specified in the Compaction Requirements Table (See Sheet CS108).
3. Drop curb for future wheelchair ramps, shall be constructed at all paving returns and handicap access points per SUDAS.
4. The CONTRACTOR is referred to the following Iowa Statewide Urban Design and Specifications (SUDAS) For Public Improvement Manual Figures.
   - 7010.101 – Joints
   - 7010.102 – PCC Curb Details
   - 7010.901 – PCC Pavement Jointing
   - 7010.904 – Typical Pavement Jointing
   - 7030.201 – Classes of Sidewalks
   - 7030.202 – Curb Details for Class A Sidewalk
   - 7030.204 – General Sidewalk Details
   - 7030.205 – Curb Ramps Outside of Intersection Radius
   - 7030.206 – Curb Ramps Within Intersection Radius for Class A Sidewalk
   - 7030.207 – Curb Ramps within Intersection Radius for Class B or C Sidewalk
5. Water-reducing admixture shall be added to all hand-placed and finished concrete.
6. The CONTRACTOR shall contact the GEOTECHNICAL ENGINEER to observe the subgrade prior to placing pavement to delineate any areas where subgrade overexcavation may be required

## SIDEWALK NOTES

1. Sidewalk subgrade to a depth of 6 inches and to a width of 6 inches outside of sidewalk edges shall be compacted as specified in the Compaction Requirements Table (See Sheet CS108).
2. Backfill shall be compacted as specified in the Compaction Requirements Table (See Sheet CS108).
3. The CONTRACTOR is referred to the following Iowa Statewide Urban Design and Specifications (SUDAS) For Public Improvement Manual Figures. :
   - 7030.201 – Classes of Sidewalks
   - 7030.202 – Curb Details for Class A Sidewalk
   - 7030.204 – General Sidewalk Details
   - 7030.205 – Curb Ramps Outside of Intersection Radius
   - 7030.206 – Curb Ramps Within Intersection Radius for Class A Sidewalk
   - 7030.207 – Curb Ramps within Intersection Radius for Class B or C Sidewalk
4. Water-reducing admixture shall be added to all hand-placed and finished concrete.
5. All curb ramps shall include detectable warning texturing as per SUDAS.

## PAVING KEYNOTES

- P1. Construct 7" PC Concrete Pavement with Integral Curb and Gutter
- P2. Construct 6" PC Concrete Pavement with Integral Curb and Gutter
- P3. Construct 5" PC Concrete Sidewalk
- P4. Construct Perpindicular Curb Ramp For Class A Sidewalk With Detectable Warning Panel per SUDAS
- P4a. Construct Perpindicular Curb Ramp For Class B Sidewalk With Detectable Warning Panel per SUDAS
- P4b. Construct Curb Ramp Within Intersection Radius For Class A Sidewalk With Detectable Warning Panel per SUDAS
- P4c. Construct Access At Curbed Median With Detectable Warning Panels per SUDAS
- P4d. Construct Non-Radial Curb Ramp. See Detail Sheet CS120
- P5. Match Existing Pavement Edge
- P6. Construct Thickened Edge.
- P7. Construct Barricade (See Detail Sheet CS120)
- P8. Adjust Manhole To Grade
- P9. Construct Temporary 4" PC Concrete Sidewalk
- P10. Construct 7" PC Concrete Sidewalk
- P11. Construct 7" PC Concrete Stamped Sidewalk. Sidewalk Stamp Shall Be Herringbone Pattern
- P12. Mill 10' Of Existing Asphalt 2" Deep. Construct Asphalt Inlay and Match Pavement (See Detail Sheet CS120)
- P13. Construct 7" Temporary Dumpster Pad For Building 7M
- P14. Construct Temporary 6" PC Concrete Curb. Curb To Be Removed For Phase II Construction

## MISCELLANEOUS KEYNOTES

- M1. Paint 4" Yellow Parking Stall/Island Striping (2' Spacing Typical for Striped Islands)
- M2. Construct Handicap Stall Markings and Signage. One Stall Shall Be Van Accessible
- M3. Construct Salvaged Sign and Post. Contractor Shall Reference Salvaged Sign Catalog For Sign Placement
- M4. Locate Salvaged Guard/Info Shack With 6" PC Concrete Pad
- M5. Tape 2' Wide, 6' Long White Pedestrian Crossing Stripes Spaced at 3' On Center With Anti-Skid Measures per Iowa Department of Transporation Standard Specifications

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A110.dwg

Revisions: | Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: PAVING PLAN - WEST

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

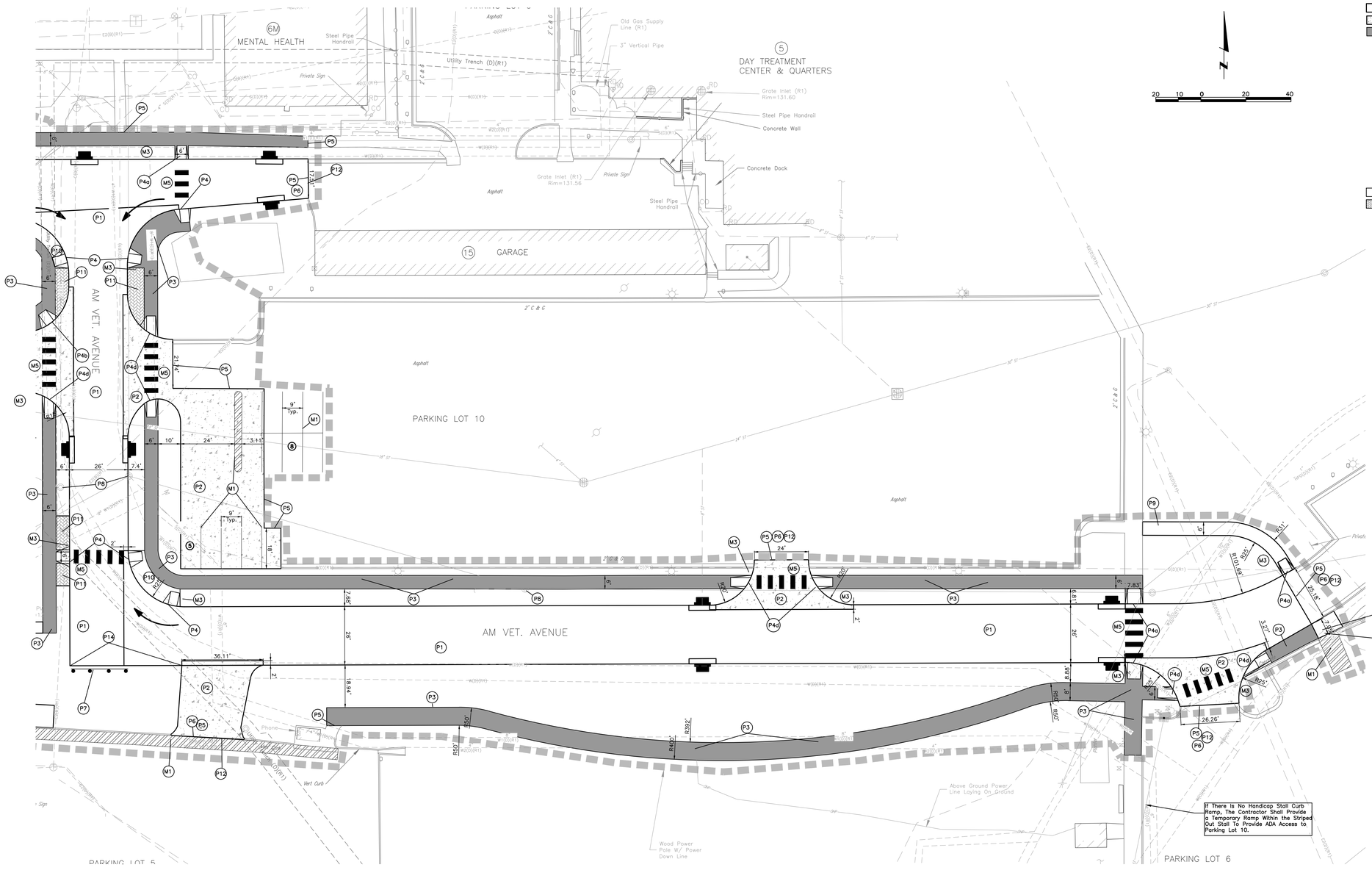
Drawing Number: CS113

Dwg. 14 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




## PAVING KEYNOTES

- P1. Construct 7" PC Concrete Pavement with Integral Curb and Gutter
- P2. Construct 6" PC Concrete Pavement with Integral Curb and Gutter
- P3. Construct 5" PC Concrete Sidewalk
- P4. Construct Perpindicular Curb Ramp For Class A Sidewalk With Detectable Warning Panel per SUDAS
- P4a. Construct Perpindicular Curb Ramp For Class B Sidewalk With Detectable Warning Panel per SUDAS
- P4b. Construct Curb Ramp Within Intersection Radius For Class A Sidewalk With Detectable Warning Panel per SUDAS
- P4c. Construct Access At Curbed Median With Detectable Warning Panels per SUDAS
- P4d. Construct Non-Radial Curb Ramp. See Detail Sheet CS120
- P5. Match Existing Pavement Edge
- P6. Construct Thickened Edge.
- P7. Construct Barricade (See Detail Sheet CS120)
- P8. Adjust Manhole To Grade
- P9. Construct Temporary 4" PC Concrete Sidewalk
- P10. Construct 7" PC Concrete Sidewalk
- P11. Construct 7" PC Concrete Stamped Sidewalk. Sidewalk Stamp Shall Be Herringbone Pattern
- P12. Mill 10' Of Existing Asphalt 2" Deep. Construct Asphalt Inlay and Match Pavement (See Detail Sheet CS120)
- P13. Construct 7" Temporary Dumpster Pad For Building 7M (See Sheet CS113)
- P14. Construct Temporary 6" PC Concrete Curb. Curb To Be Removed For Phase II Construction

## MISCELLANEOUS KEYNOTES

- M1. Paint 4" Yellow Parking Stall/Island Striping (2' Spacing Typical for Striped Islands)
- M2. Construct Handicap Stall Markings and Signage. One Stall Shall Be Van Accessible
- M3. Construct Salvaged Sign and Post. Contractor Shall Reference Salvaged Sign Catalog For Sign Placement
- M4. Locate Salvaged Guard/Info Shack With 6" PC Concrete Pad
- M5. Tape 2' Wide, 6' Long White Pedestrian Crossing Stripes Spaced at 3' On Center With Anti-Skid Measures per Iowa Department of Transporation Standard Specifications

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A110.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

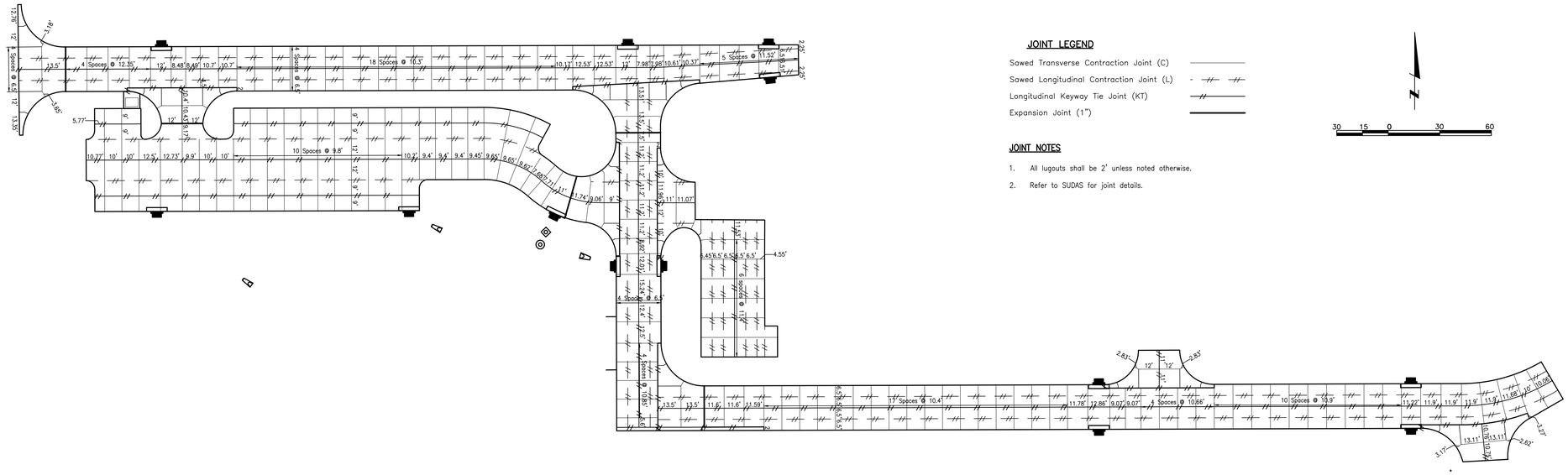
21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | | | |
|---|---|---|---|
| Drawing Title: PAVING PLAN - EAST | Project Title: UPGRADE ROADWAY, PARKING PHASE I | | Project Number: 636A6-11-301 |
| Approved: COTR | Location: DES MOINES VA MEDICAL CENTER | | Building Number: |
| | Date: MAY 7, 2012 | Checked: SRL | Drawing Number: CS114 |
| | | Drawn: PCH | Dwg. 15 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231



## JOINT LEGEND

- Sawed Transverse Contraction Joint (C)
- Sawed Longitudinal Contraction Joint (L)
- Longitudinal Keyway Tie Joint (KT)
- Expansion Joint (1")

## JOINT NOTES

1. All lugouts shall be 2' unless noted otherwise.
2. Refer to SUDAS for joint details.

30 15 0 30 60

| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 1 | 593585.00 | 1595214.52 |
| 2 | 593584.97 | 1595212.52 |
| 3 | 593508.87 | 1595213.51 |
| 4 | 593508.90 | 1595215.51 |
| 5 | 593509.30 | 1595240.50 |
| 6 | 593534.30 | 1595240.43 |
| 7 | 593534.40 | 1595276.18 |
| 8 | 593514.40 | 1595276.24 |
| 9 | 593515.63 | 1595296.20 |
| 10 | 593516.43 | 1595286.23 |
| 11 | 593506.46 | 1595286.93 |
| 12 | 593508.95 | 1595286.75 |
| 13 | 593508.94 | 1595284.25 |
| 14 | 593524.43 | 1595284.21 |
| 15 | 593524.42 | 1595283.64 |
| 16 | 593533.00 | 1595283.60 |
| 17 | 593524.40 | 1595274.23 |
| 18 | 593534.40 | 1595274.18 |
| 19 | 593524.35 | 1595257.21 |
| 20 | 593511.35 | 1595257.25 |
| 21 | 593511.33 | 1595252.25 |
| 22 | 593506.33 | 1595252.26 |
| 23 | 593482.33 | 1595252.34 |
| 24 | 593477.33 | 1595252.35 |
| 25 | 593477.35 | 1595257.35 |
| 26 | 593464.35 | 1595257.39 |
| 27 | 593464.91 | 1595446.39 |
| 28 | 593477.91 | 1595446.35 |
| 29 | 593477.92 | 1595451.35 |
| 30 | 593482.92 | 1595451.34 |
| 31 | 593483.02 | 1595484.21 |
| 32 | 593445.02 | 1595484.33 |
| 33 | 593473.33 | 1595509.67 |
| 34 | 593519.53 | 1595551.02 |

| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 35 | 593457.99 | 1595543.47 |
| 36 | 593438.14 | 1595541.04 |
| 37 | 593438.18 | 1595561.04 |
| 38 | 593385.09 | 1595561.19 |
| 39 | 593384.55 | 1595587.39 |
| 40 | 593363.33 | 1595606.80 |
| 41 | 593454.87 | 1595551.99 |
| 42 | 593336.74 | 1595612.33 |
| 43 | 593338.05 | 1596029.60 |
| 44 | 593313.05 | 1596029.68 |
| 45 | 593318.51 | 1596054.19 |
| 46 | 593319.96 | 1596080.40 |
| 47 | 593322.08 | 1596105.32 |
| 48 | 593343.78 | 1596092.87 |
| 49 | 593355.06 | 1596112.54 |
| 50 | 593376.77 | 1596099.79 |
| 51 | 593456.31 | 1596053.18 |
| 52 | 593364.12 | 1596054.19 |
| 53 | 593363.67 | 1595909.31 |
| 54 | 593383.67 | 1595909.24 |
| 55 | 593383.61 | 1595889.24 |
| 56 | 593383.53 | 1595865.24 |
| 57 | 593383.47 | 1595845.24 |
| 58 | 593363.47 | 1595845.31 |
| 59 | 593362.74 | 1595612.26 |
| 60 | 593387.74 | 1595612.19 |
| 61 | 593387.67 | 1595587.19 |
| 62 | 593437.37 | 1595587.04 |
| 63 | 593437.43 | 1595607.04 |
| 64 | 593452.49 | 1595593.88 |
| 65 | 593444.96 | 1595600.46 |
| 66 | 593444.88 | 1595610.46 |
| 67 | 593379.62 | 1595610.48 |
| 68 | 593379.66 | 1595655.03 |

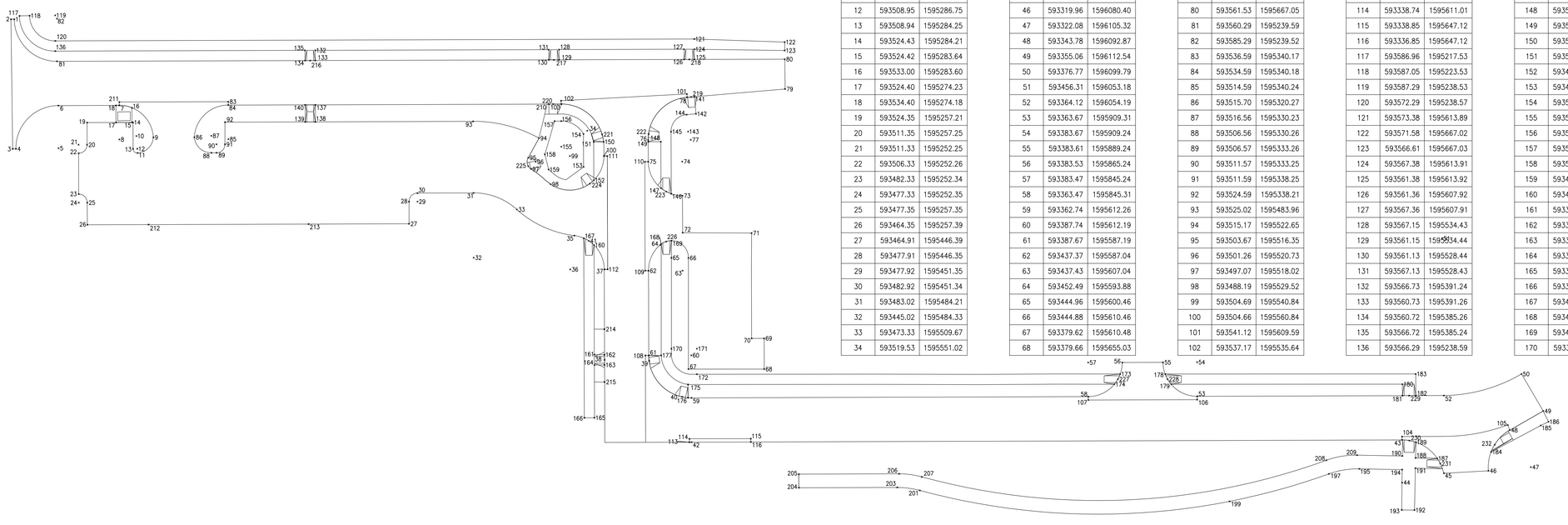
| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 69 | 593397.66 | 1595654.98 |
| 70 | 593397.65 | 1595647.57 |
| 71 | 593459.47 | 1595647.57 |
| 72 | 593459.68 | 1595607.06 |
| 73 | 593481.43 | 1595606.95 |
| 74 | 593501.42 | 1595606.84 |
| 75 | 593501.37 | 1595586.85 |
| 76 | 593514.14 | 1595586.81 |
| 77 | 593514.22 | 1595611.81 |
| 78 | 593539.13 | 1595609.69 |
| 79 | 593544.02 | 1595667.26 |
| 80 | 593561.53 | 1595667.05 |
| 81 | 593560.29 | 1595239.59 |
| 82 | 593585.29 | 1595239.52 |
| 83 | 593536.59 | 1595340.17 |
| 84 | 593534.59 | 1595340.18 |
| 85 | 593514.59 | 1595340.24 |
| 86 | 593515.70 | 1595320.27 |
| 87 | 593516.56 | 1595330.23 |
| 88 | 593506.56 | 1595330.26 |
| 89 | 593506.57 | 1595333.26 |
| 90 | 593511.57 | 1595333.25 |
| 91 | 593511.59 | 1595338.25 |
| 92 | 593524.59 | 1595338.21 |
| 93 | 593525.02 | 1595483.96 |
| 94 | 593515.17 | 1595522.65 |
| 95 | 593503.67 | 1595516.35 |
| 96 | 593501.26 | 1595520.73 |
| 97 | 593497.07 | 1595518.02 |
| 98 | 593488.19 | 1595529.52 |
| 99 | 593504.69 | 1595540.84 |
| 100 | 593504.66 | 1595560.84 |
| 101 | 593541.12 | 1595609.59 |
| 102 | 593537.17 | 1595535.64 |

| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 103 | 593535.17 | 1595535.75 |
| 104 | 593340.05 | 1596029.60 |
| 105 | 593346.84 | 1596091.72 |
| 106 | 593361.67 | 1595909.31 |
| 107 | 593361.47 | 1595845.31 |
| 108 | 593387.66 | 1595585.19 |
| 109 | 593437.36 | 1595585.04 |
| 110 | 593501.35 | 1595584.85 |
| 111 | 593504.67 | 1595562.84 |
| 112 | 593438.19 | 1595563.04 |
| 113 | 593336.70 | 1595611.01 |
| 114 | 593338.74 | 1595611.01 |
| 115 | 593338.85 | 1595647.12 |
| 116 | 593336.85 | 1595647.12 |
| 117 | 593586.96 | 1595217.53 |
| 118 | 593587.05 | 1595223.53 |
| 119 | 593587.29 | 1595238.53 |
| 120 | 593572.29 | 1595238.57 |
| 121 | 593573.38 | 1595613.89 |
| 122 | 593571.58 | 1595667.02 |
| 123 | 593566.61 | 1595667.03 |
| 124 | 593567.38 | 1595613.91 |
| 125 | 593561.38 | 1595613.92 |
| 126 | 593561.36 | 1595607.92 |
| 127 | 593567.36 | 1595607.91 |
| 128 | 593567.15 | 1595534.43 |
| 129 | 593561.15 | 1595534.44 |
| 130 | 593561.13 | 1595528.44 |
| 131 | 593567.13 | 1595528.43 |
| 132 | 593566.73 | 1595391.24 |
| 133 | 593560.73 | 1595391.26 |
| 134 | 593560.72 | 1595385.26 |
| 135 | 593566.72 | 1595385.24 |
| 136 | 593566.29 | 1595238.59 |

| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 137 | 593534.74 | 1595391.33 |
| 138 | 593524.74 | 1595391.36 |
| 139 | 593524.73 | 1595385.36 |
| 140 | 593534.73 | 1595385.33 |
| 141 | 593539.49 | 1595613.99 |
| 142 | 593529.49 | 1595614.91 |
| 143 | 593519.02 | 1595610.26 |
| 144 | 593528.97 | 1595609.34 |
| 145 | 593518.99 | 1595600.26 |
| 146 | 593482.50 | 1595600.37 |
| 147 | 593485.80 | 1595594.36 |
| 148 | 593513.12 | 1595594.28 |
| 149 | 593513.09 | 1595586.81 |
| 150 | 593513.02 | 1595560.66 |
| 151 | 593513.00 | 1595554.81 |
| 152 | 593490.44 | 1595554.88 |
| 153 | 593498.28 | 1595548.86 |
| 154 | 593517.69 | 1595548.80 |
| 155 | 593510.17 | 1595535.82 |
| 156 | 593525.17 | 1595535.78 |
| 157 | 593525.16 | 1595531.84 |
| 158 | 593505.65 | 1595526.11 |
| 159 | 593496.76 | 1595528.35 |
| 160 | 593452.45 | 1595554.99 |
| 161 | 593388.07 | 1595555.19 |
| 162 | 593388.09 | 1595561.19 |
| 163 | 593382.09 | 1595561.20 |
| 164 | 593382.07 | 1595555.20 |
| 165 | 593351.07 | 1595555.29 |
| 166 | 593351.05 | 1595549.29 |
| 167 | 593456.48 | 1595548.98 |
| 168 | 593452.96 | 1595594.46 |
| 169 | 593454.96 | 1595600.46 |
| 170 | 593391.61 | 1595600.48 |

| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 171 | 593391.61 | 1595615.48 |
| 172 | 593376.61 | 1595615.48 |
| 173 | 593376.73 | 1595864.08 |
| 174 | 593370.74 | 1595860.67 |
| 175 | 593370.61 | 1595610.24 |
| 176 | 593362.81 | 1595610.26 |
| 177 | 593387.69 | 1595594.48 |
| 178 | 593376.73 | 1595890.49 |
| 179 | 593370.74 | 1595893.99 |
| 180 | 593370.80 | 1596029.84 |
| 181 | 593364.05 | 1596029.86 |
| 182 | 593364.07 | 1596037.69 |
| 183 | 593376.80 | 1596037.64 |
| 184 | 593331.02 | 1596081.96 |
| 185 | 593346.54 | 1596111.08 |
| 186 | 593348.74 | 1596115.66 |
| 187 | 593327.23 | 1596050.27 |
| 188 | 593327.48 | 1596037.55 |
| 189 | 593336.72 | 1596037.73 |
| 190 | 593328.63 | 1596029.79 |
| 191 | 593321.48 | 1596037.44 |
| 192 | 593296.89 | 1596036.96 |
| 193 | 593296.97 | 1596029.42 |
| 194 | 593320.63 | 1596029.68 |
| 195 | 593321.11 | 1596004.55 |
| 196 | 593271.12 | 1596003.59 |
| 197 | 593318.16 | 1595986.65 |
| 198 | 593694.49 | 1595851.09 |
| 199 | 593302.01 | 1595928.29 |
| 200 | 593694.49 | 1595851.09 |
| 201 | 593308.44 | 1595746.38 |
| 202 | 593260.18 | 1595733.29 |
| 203 | 593310.18 | 1595733.14 |
| 204 | 593310.00 | 1595675.30 |

| Point Table | | |
|---|---|---|
| Point # | Northing | Easting |
| 205 | 593318.00 | 1595675.28 |
| 206 | 593318.18 | 1595734.19 |
| 207 | 593316.41 | 1595747.56 |
| 208 | 593326.13 | 1595985.16 |
| 209 | 593329.13 | 1596003.22 |
| 210 | 593535.15 | 1595528.52 |
| 211 | 593536.40 | 1595276.17 |
| 212 | 593464.45 | 1595293.39 |
| 213 | 593464.73 | 1595387.40 |
| 214 | 593403.09 | 1595561.14 |
| 215 | 593372.09 | 1595561.23 |
| 216 | 593560.73 | 1595388.26 |
| 217 | 593561.14 | 1595531.44 |
| 218 | 593561.37 | 1595610.97 |
| 219 | 593539.33 | 1595612.04 |
| 220 | 593535.16 | 1595531.02 |
| 221 | 593517.42 | 1595559.75 |
| 222 | 593517.59 | 1595587.04 |
| 223 | 593483.82 | 1595597.37 |
| 224 | 593488.50 | 1595552.59 |
| 225 | 593498.78 | 1595516.39 |
| 226 | 593454.50 | 1595597.46 |
| 227 | 593373.74 | 1595862.72 |
| 228 | 593373.73 | 1595891.89 |
| 229 | 593364.06 | 1596033.79 |
| 230 | 593337.69 | 1596033.88 |
| 231 | 593324.20 | 1596052.06 |
| 232 | 593335.23 | 1596084.04 |



ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A110.dwg

Revisions: Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: JOINT PATTERN AND COORDINATE TABLE

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

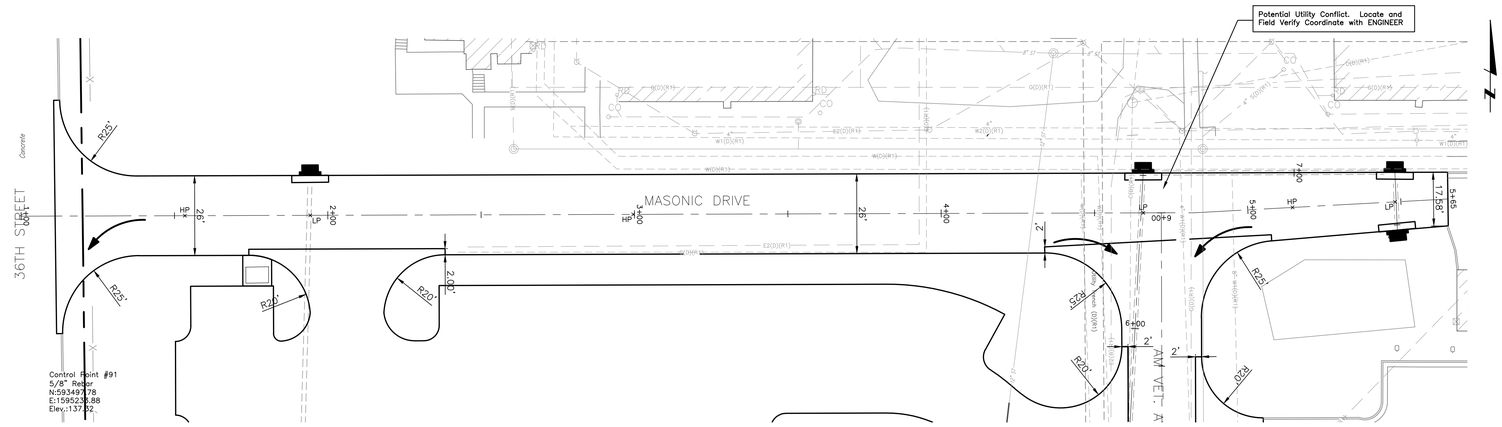
Drawing Number: CS115

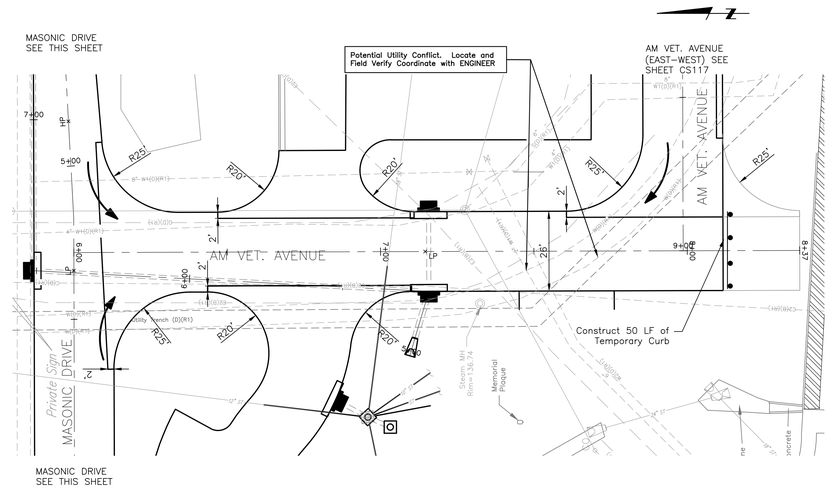
Dwg. 16 of 24

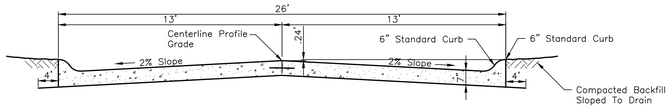
VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

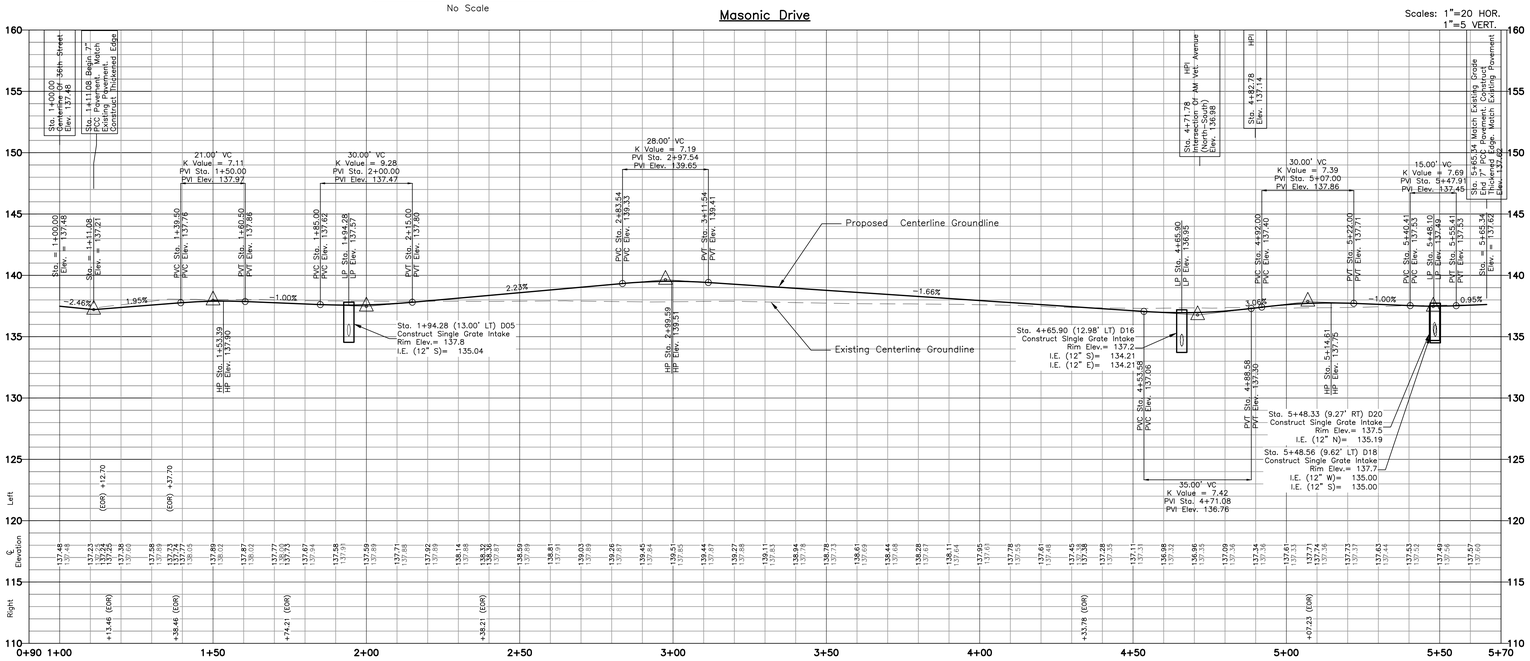
VA FORM 08-6231

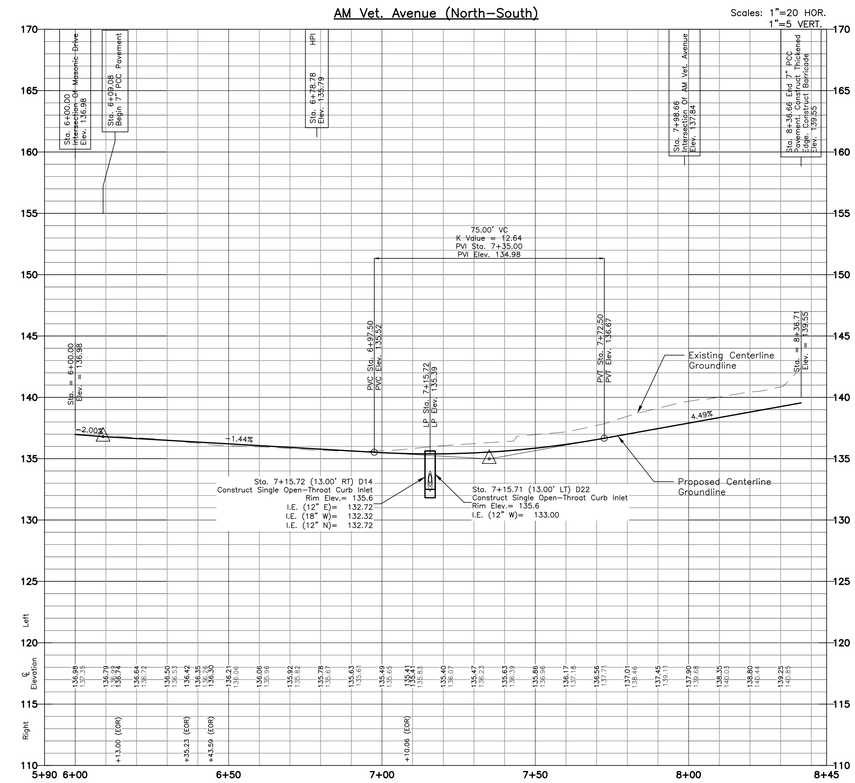



TYPICAL 26' WIDE PAVING SECTION
(MASONIC DRIVE AND AM VET. AVENUE)
No Scale




ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A107.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | | | |
|---|---|---|---|
| Drawing Title: PAVING PLAN AND PROFILES | Project Title: UPGRADE ROADWAY, PARKING PHASE I | | Project Number: 636A6-11-301 |
| Approved: COTR | | | Building Number: |
| | Location: DES MOINES VA MEDICAL CENTER | | Drawing Number: CS116 |
| | Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH |
| | | | Dwg. 17 of 24 |

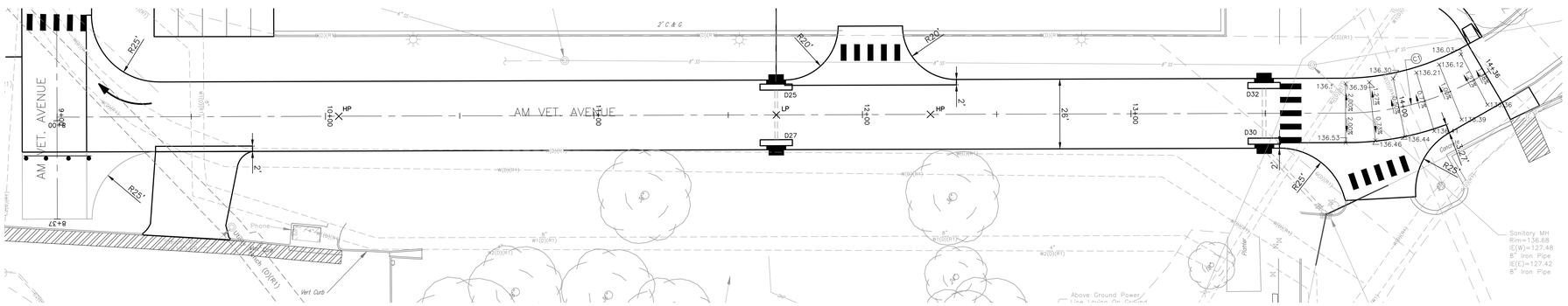
VACIHCS
3600 30th ST
Des Moines, Iowa

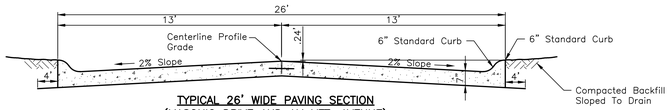
Department of Veterans Affairs

VA FORM 08-6231

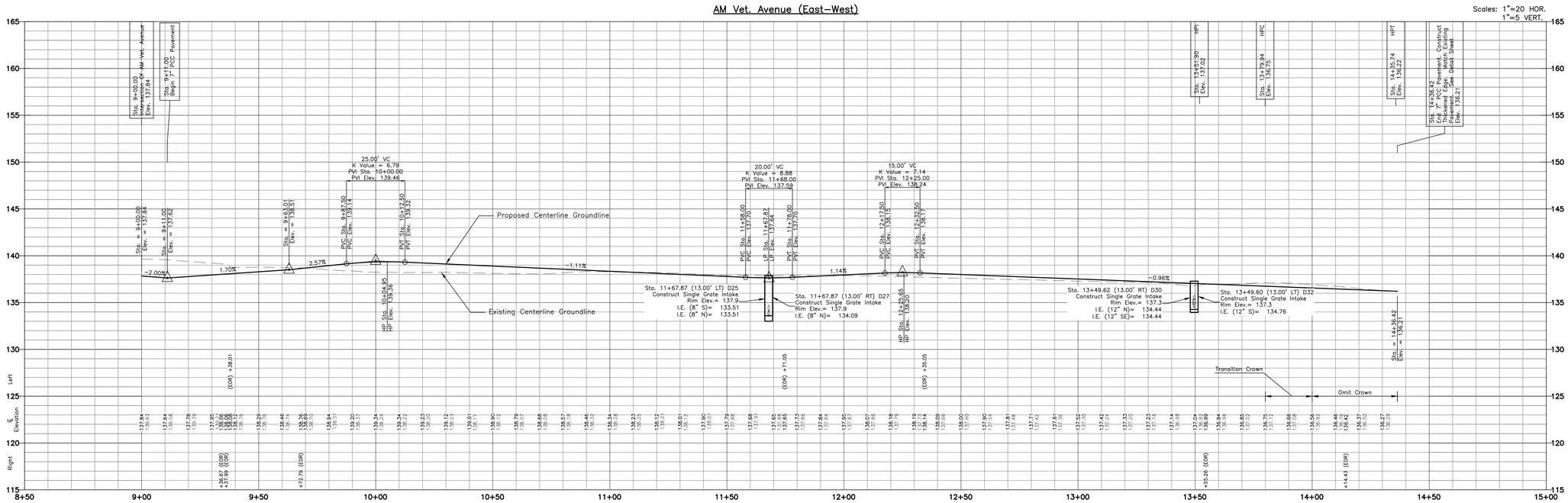
L:\Engineering\0111090\DRAWINGS\PRODUCTION\011190\PNP.dwg, 5/7/2012 8:48:16 AM, DanaS, 1:1, Lamp, Rynearson & Associates

| Centerline Curve Table | | | | | |
|---|---|---|---|---|---|
| Curve # | Radius | Arc Length | Chord Length | Chord Bearing | Delta Angle |
| C1 | 100.00 | 55.80 | 55.08 | N73° 50' 02.10"E | 031°58'24" |




TYPICAL 26' WIDE PAVING SECTION
(MASONIC DRIVE AND AM VET. AVENUE)
No Scale




ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\0111190A107.dwg

| 100% Design Development | 03/01/2012 |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| Revisions: | Date |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: PAVING PLAN AND PROFILES

Approved COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number

Drawing Number: CS117

Dwg. 18 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231

L:\Engineering\0111000\DRAWINGS\PRODUCTION\0111000PNP-2.dwg, 5/7/2012 8:48:45 AM, DanielS, 1:1, Lamp, Rynearson & Associates

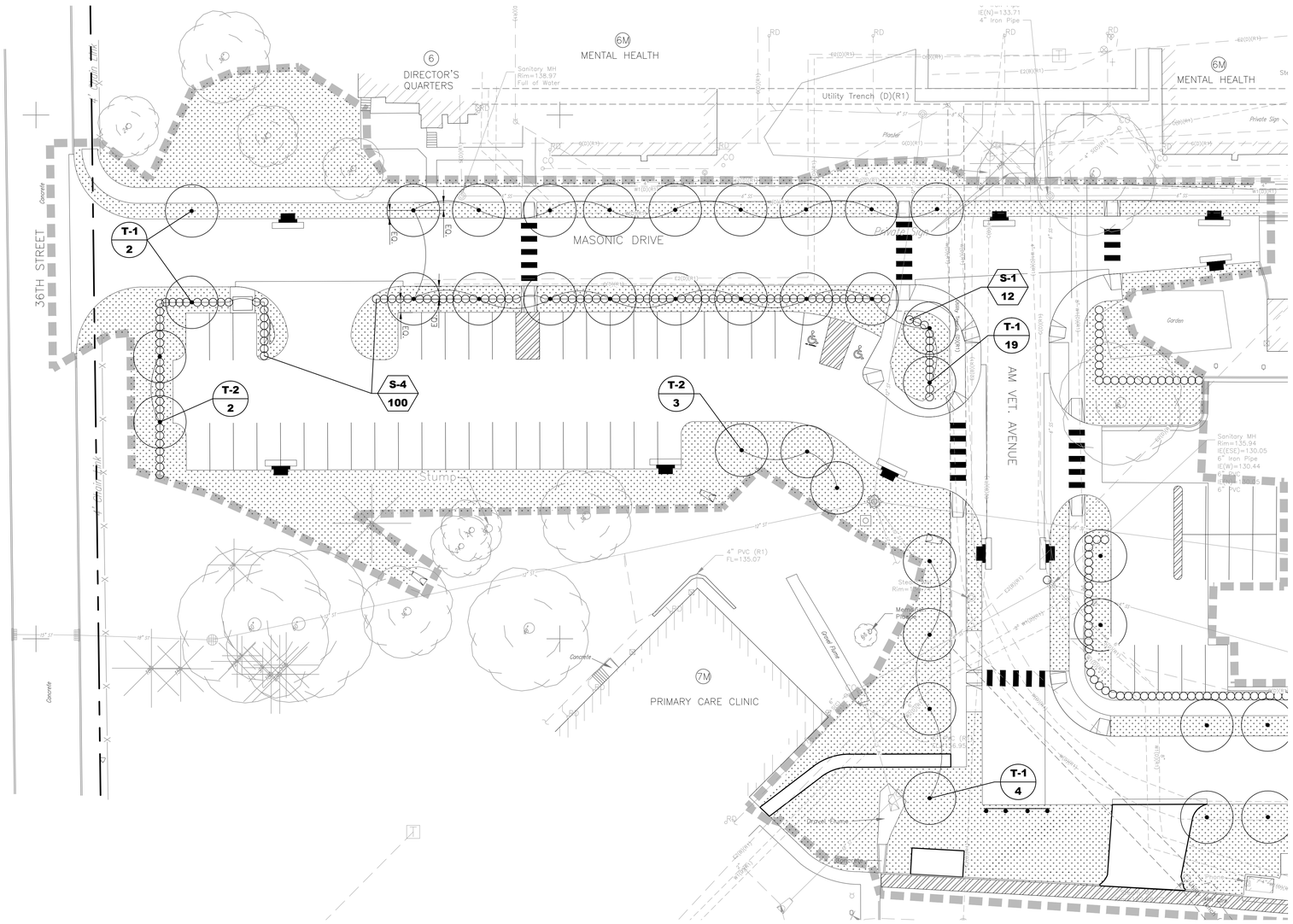
## PLANTING LEGEND

Tree Code, See Legend For Genus–Species
T-1
10
Quantity

Shrub Code, See Legend For Genus–Species
S-1
10
Quantity

12"
Existing Deciduous Tree And Size

12"
Existing Coniferous Tree And Size




## GENERAL NOTES

1. CONTRACTOR to verify location of all proposed and existing vaults, electrical duct banks, manholes, conduit and piping, drainage structures and other utilities prior to commencing work.
2. CONTRACTOR shall not willfully install any proposed landscape improvements when conflicts exist between landscape improvements and existing or proposed utilities or site features such as walks, roads, buildings or existing trees to remain.
3. Prior to construction field verify location of all buildings, walls, roads and curbs affecting landscape scope of work.
4. All work performed within the drip line of trees designated "existing trees to remain" shall be hand labor.
5. Reference to north refers to true north, reference to scale is for full–sized drawings only. Do not scale from reduced drawings.
6. Dimensions take precedence over scales shown on drawings.
7. All planted areas to be irrigated by hand as necessary during the establishment period to maintain all planted materials in a healthy and vigorous condition.

## PLANTING NOTES

1. Install all trees a minimum of four (4) feet from back of curb, edge of wall or paving unless noted otherwise.
2. Install lawn under all trees throughout entire lawn planting area unless noted otherwise.
3. Plant names are abbreviated on the drawings. See plant list for key and classification.
4. Place a 3" layer of wood chip mulch on all plantings areas except lawn.
5. Location of all planting is diagrammatic. Do not willfully locate plantings where conflicts exist with utilities or the building.
6. RESODDING: The CONTRACTOR will resod all lawn areas disturbed during the course of construction. This item will not be paid for separately, but will considered incidental to the planting of new vegetation.
7. Scarify all planting areas and completely break–up soil to a minimum depth of 12" prior to amending the soils.
8. Plant quantities are shown for the convenience to the CONTRACTOR. If there are discrepancies between the plan and notes, the plans shall govern.

## TREE PLANTING NOTES

1. Align trees across streets. Adjust spacing as necessary, subject to review by the ENGINEER.
2. Form 30 inch watering around all trees not installed in lawn or paved areas.
3. BARK MULCH: The CONTRACTOR shall place 3 cubic feet of bark mulch in a 3–foot diameter ring at the base of each tree that is planted. Any bark mulch placed in excess of the requirements shall be at the CONTRACTORS expense.

## SODDING NOTES

1. Sod shall be "4 Season Kentucky Bluegrass" by National Seed or Approved Equal.
2. Sod shall be fertilized per SUDAS requirements.

### PLANT LIST

| CODE | BOTANICAL NAME | COMMON NAME | SIZE | QUANTITY | | NOTES |
|---|---|---|---|---|---|---|
| TREES | | | | | | |
| T–1 | Quercus rubra | Red Oak | 2" cal. or #7 Root Trapper (Or Approved Equal) | 53 | EA | |
| T–2 | Quercus macrocarpa | Bur Oak | 2" cal. or #7 Root Trapper (Or Approved Equal) | 5 | EA | |
| SHRUBS | | | | | | |
| S–1 | Taxus baccata densi–formis | English Yew | 5 gal. | 300 | EA | |
| Sod Lawn, See Notes and Specs | | | | | | |

20 10 0 20 40

ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A111.dwg

Revisions: Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

21 Delta Engineers

21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496–4115
Fax: (402) 493–2744

Drawing Title: LANDSCAPE PLAN - WEST

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6–11–301

Building Number:

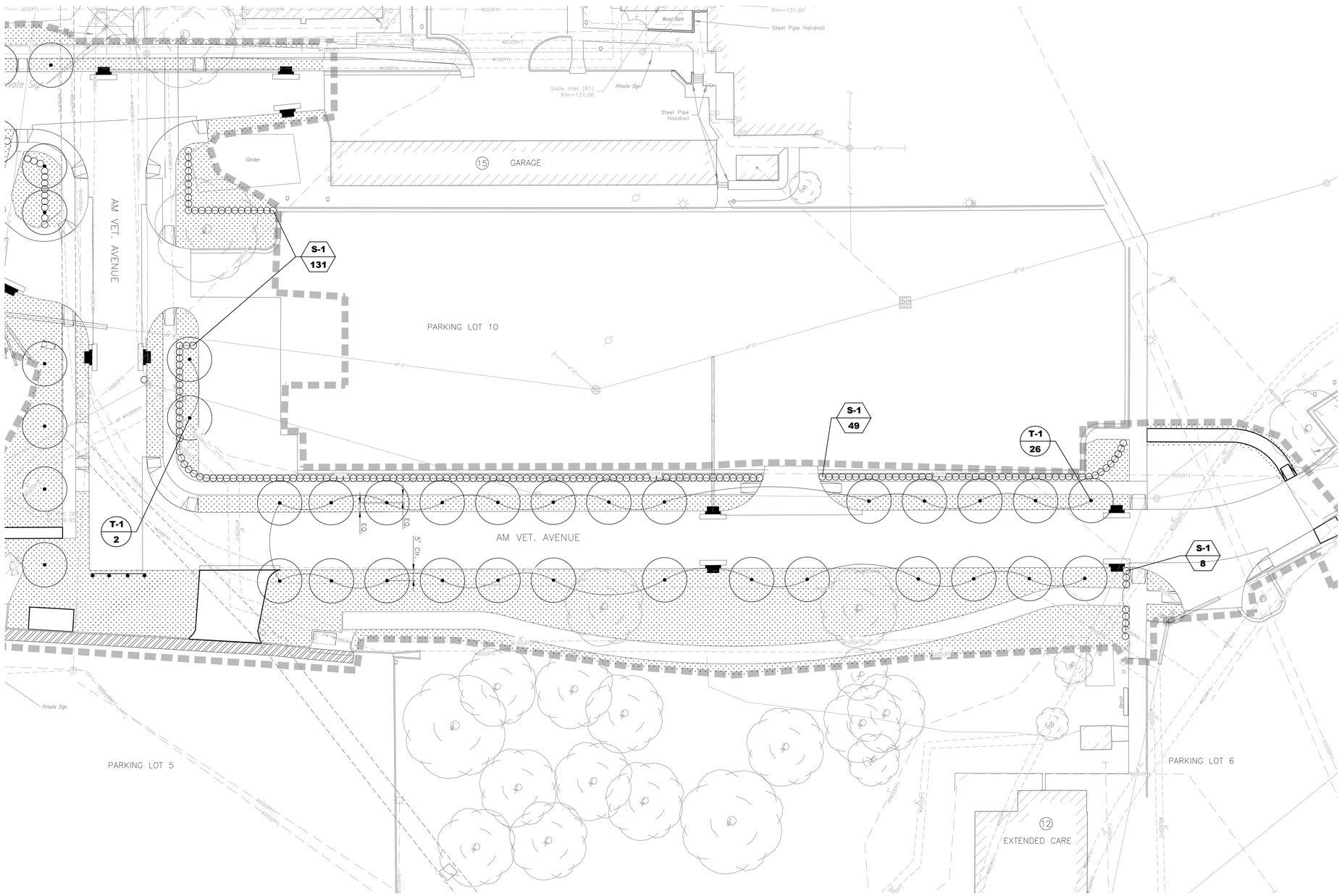
Drawing Number: CS118

Dwg. 19 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08–6231




ISSUED FOR BID

L:\Engineering\0111089\Drawings\Production\011190A111.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers

21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: LANDSCAPE PLAN - EAST

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: SRL | Drawn: PCH

Project Number: 636A6-11-301

Building Number:

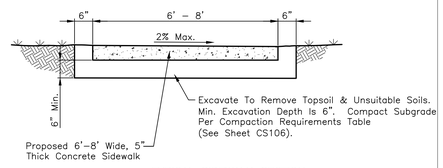
Drawing Number: CS119

Dwg. 20 of 24

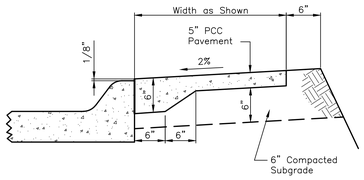
VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

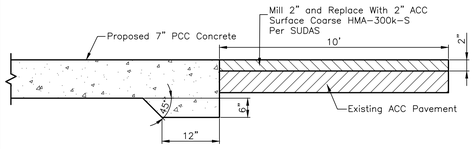
VA FORM 08-6231



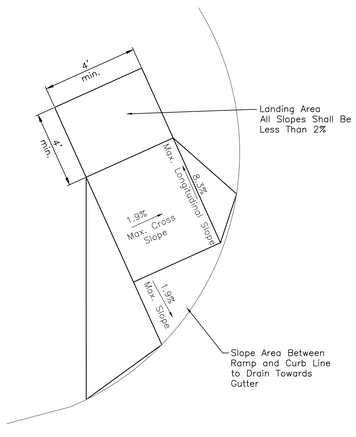

TYPICAL SIDEWALK SECTION
No Scale



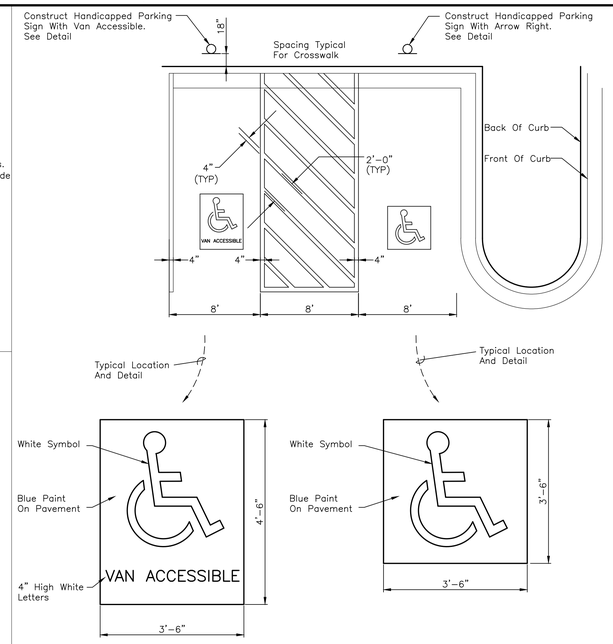

TYPICAL SIDEWALK DETAIL
No Scale




THICKENED EDGE AND MILLED JOINT DETAIL
No Scale

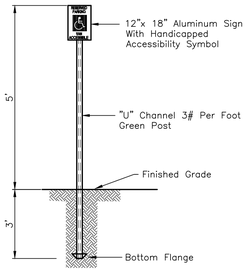



NON–RADIAL HANDICAP RAMP DETAIL
No Scale

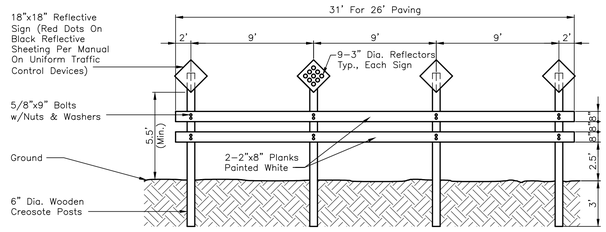



TYPICAL HANDICAP STRIPING DETAILS
No Scale

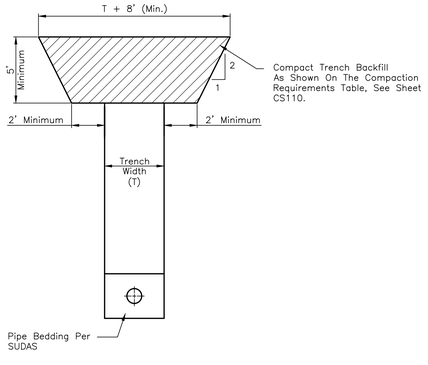
TYPICAL HANDICAP SIGNS
ALL SIGNS SHALL BE R7–8A, 12" x 18"



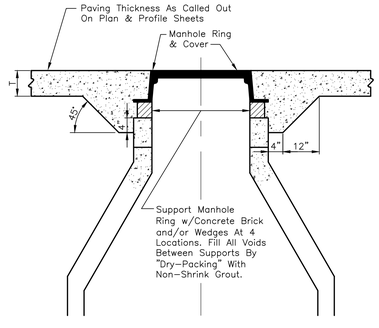

SIGN DETAIL
No Scale




BARRICADE DETAIL
No Scale




TRENCH BACKFILL DETAIL
No Scale




MANHOLE ADJUSTMENT DETAIL
No Scale

NOTES:

1. Grout Shall Be Five Star R Special Grout 150 or other approved non–shrink, sulfate–resistant grout.
2. To Prevent Traffic over ungrouted Manhole Place Type II Barricade Over Manhole During Joint Sawing And Maintain Barricade Until Grout Has Reached 3000psi Compressive Strength.

ISSUED FOR BID

L:\Engineering\01110890\Drawings\Production\011190A112.dwg

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
402.496.2498 | P
402.496.2730 | F
www.LRA-Inc.com

ARCHITECT/ENGINEERS:

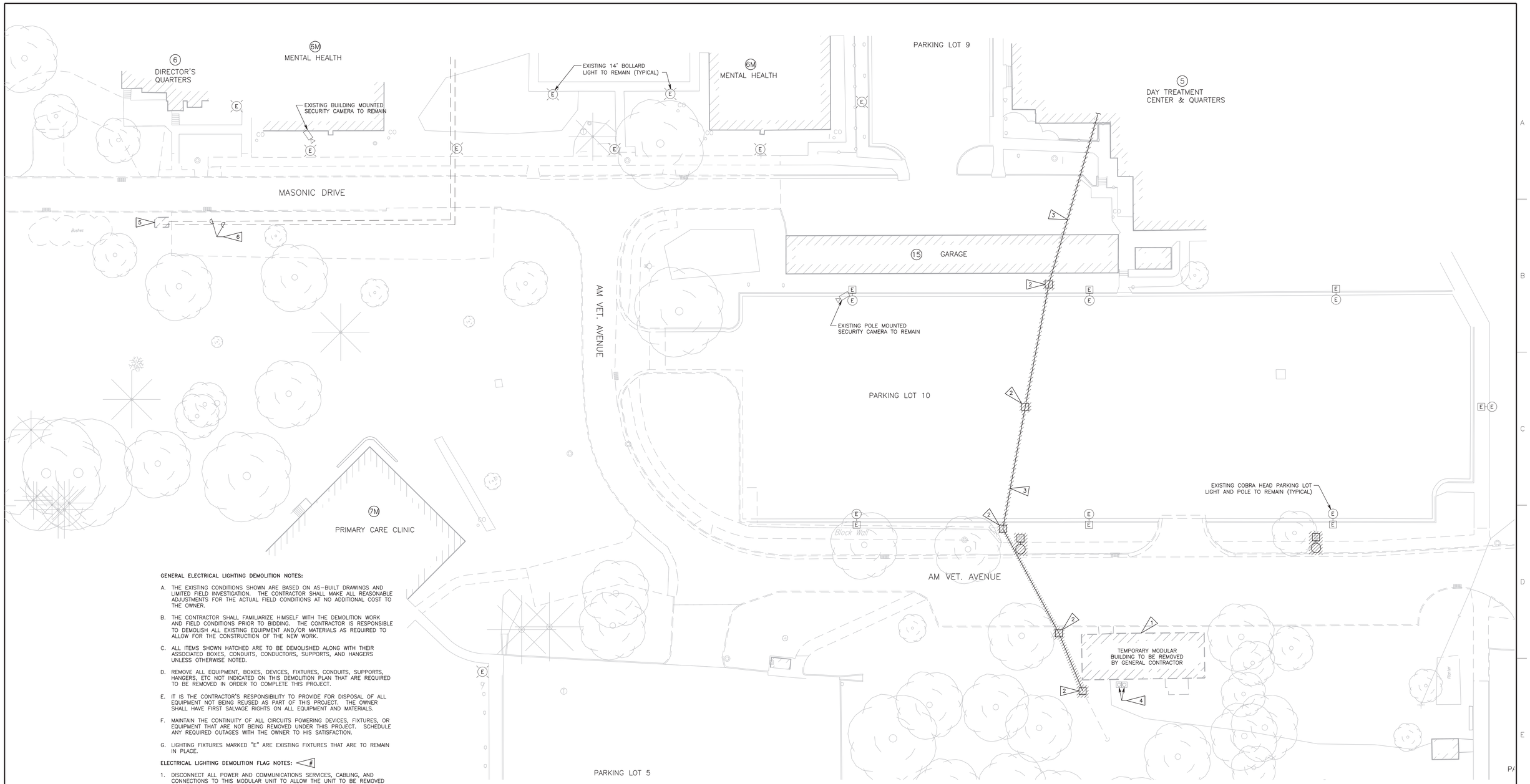
21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496–4115
Fax: (402) 493–2744

| | | | |
|---|---|---|---|
| Drawing Title: DETAIL SHEET | Project Title: UPGRADE ROADWAY, PARKING PHASE I | | Project Number: 636A6–11–301 |
| Approved: COTR | Location: DES MOINES VA MEDICAL CENTER | | Building Number: |
| | Date: MAY 7, 2012 | Checked: SRL | Drawing Number: CS120 |
| | | Drawn: PCH | Dwg. 21 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08–6231




**GENERAL ELECTRICAL LIGHTING DEMOLITION NOTES:**

A. THE EXISTING CONDITIONS SHOWN ARE BASED ON AS-BUILT DRAWINGS AND LIMITED FIELD INVESTIGATION. THE CONTRACTOR SHALL MAKE ALL REASONABLE ADJUSTMENTS FOR THE ACTUAL FIELD CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.

B. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE DEMOLITION WORK AND FIELD CONDITIONS PRIOR TO BIDDING. THE CONTRACTOR IS RESPONSIBLE TO DEMOLISH ALL EXISTING EQUIPMENT AND/OR MATERIALS AS REQUIRED TO ALLOW FOR THE CONSTRUCTION OF THE NEW WORK.

C. ALL ITEMS SHOWN HATCHED ARE TO BE DEMOLISHED ALONG WITH THEIR ASSOCIATED BOXES, CONDUITS, CONDUCTORS, SUPPORTS, AND HANGERS UNLESS OTHERWISE NOTED.

D. REMOVE ALL EQUIPMENT, BOXES, DEVICES, FIXTURES, CONDUITS, SUPPORTS, HANGERS, ETC NOT INDICATED ON THIS DEMOLITION PLAN THAT ARE REQUIRED TO BE REMOVED IN ORDER TO COMPLETE THIS PROJECT.

E. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR DISPOSAL OF ALL EQUIPMENT NOT BEING REUSED AS PART OF THIS PROJECT. THE OWNER SHALL HAVE FIRST SALVAGE RIGHTS ON ALL EQUIPMENT AND MATERIALS.

F. MAINTAIN THE CONTINUITY OF ALL CIRCUITS POWERING DEVICES, FIXTURES, OR EQUIPMENT THAT ARE NOT BEING REMOVED UNDER THIS PROJECT. SCHEDULE ANY REQUIRED OUTAGES WITH THE OWNER TO HIS SATISFACTION.

G. LIGHTING FIXTURES MARKED "E" ARE EXISTING FIXTURES THAT ARE TO REMAIN IN PLACE.

**ELECTRICAL LIGHTING DEMOLITION FLAG NOTES:**

1. DISCONNECT ALL POWER AND COMMUNICATIONS SERVICES, CABLING, AND CONNECTIONS TO THIS MODULAR UNIT TO ALLOW THE UNIT TO BE REMOVED BY THE GENERAL CONTRACTOR. TERMINATE EACH UTILITY AT ITS SUPPLY SOURCE. REMOVE ALL UNDERGROUND UTILITIES UP TO WHERE THEY ARE INSTALLED UNDER EXISTING PAVEMENT NOT IDENTIFIED FOR REMOVAL. ABANDON UNDERGROUND UTILITIES AT THE POINT WHERE THEY CAN NO LONGER BE REMOVED. ABANDON UNDERGROUND UTILITIES ACCORDING TO SUDAS.

2. DEMOLISH THIS EXISTING WOODEN POLE USED TO SUPPORT THE OVERHEAD POWER FEED TO THE TRAILER. PATCH CONCRETE, ASPHALT, OR SOD AS NEEDED.

3. DEMOLISH THIS OVERHEAD POWER FEED TO THE TRAILER COMPLETE TO THE BREAKER IN PANEL "5B3" IN BUILDING 5. LEAVE EXISTING BREAKER IN PANEL "5B3" AS A SPARE.

4. DISCONNECT POWER AND CONTROLS TO THESE A/C CONDENSING UNITS TO ALLOW THEM TO BE REMOVED WITH THE TRAILER BY THE GENERAL CONTRACTOR.

5. DISCONNECT ALL POWER AND COMMUNICATIONS CONNECTIONS TO THIS INFORMATION BOOTH SO THAT IT CAN BE RELOCATED BY THE GENERAL CONTRACTOR. DISCONNECT AND SALVAGE THE (4) GROUND RODS USED AS LIGHTNING PROTECTION – (1) AT EACH CORNER OF THE BOOTH.

6. RECORD DRAWINGS INDICATE THAT THESE ARE THE EXISTING POWER AND COMMUNICATIONS CONDUIT ROUTES TO THE EXISTING INFORMATION BOOTH. POWER IS A 1-1/2" CONDUIT WITH A 100A 120/208 1ø FEEDER AND THE COMMUNICATION CONDUIT IS 1-1/4". INTERRUPT THESE CONDUITS AND RETAIN THEIR CONDUCTORS AND/OR CABLES SO THAT THEY MAY BE EXTENDED TO THE NEW INFORMATION BOOTH LOCATION.

## ELECTRICAL DEMOLITION PLAN

Scale: 1" = 20'-0"

0 10' 20' 40'
1" = 20'-0"

ISSUED FOR BID

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers

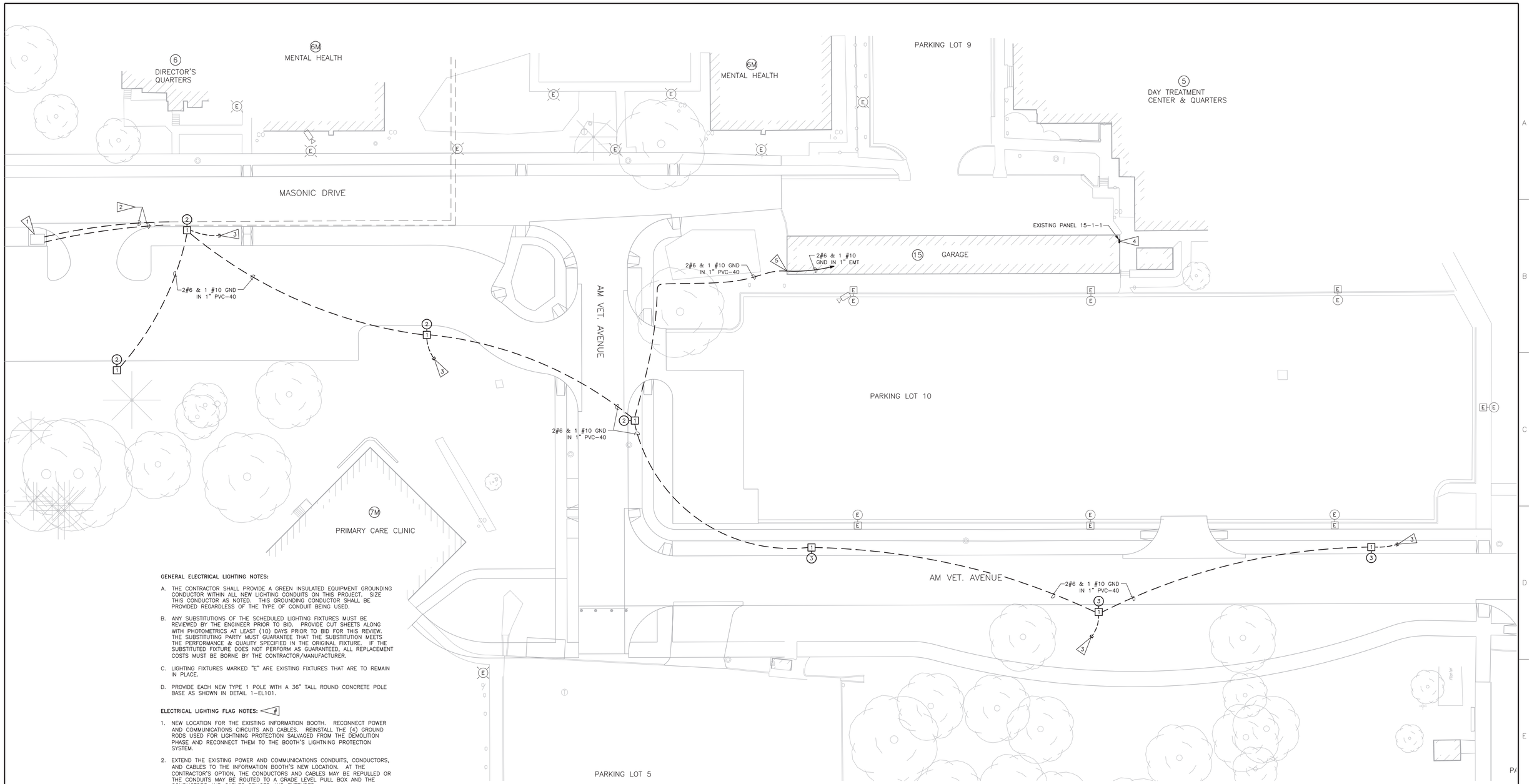
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | |
|---|---|
| Drawing Title | ELECTRICAL DEMOLITION PLAN |
| Approved COTR | |
| Project Title | UPGRADE ROADWAY, PARKING PHASE I |
| Location | DES MOINES VA MEDICAL CENTER |
| Date | MAY 7, 2012 |
| Checked | PJM |
| Drawn | TLS |
| Project Number | 636A6-11-301 |
| Building Number | |
| Drawing Number | ED100 |
| Dwg. | 22 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231




**GENERAL ELECTRICAL LIGHTING NOTES:**

A. THE CONTRACTOR SHALL PROVIDE A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR WITHIN ALL NEW LIGHTING CONDUITS ON THIS PROJECT. SIZE THIS CONDUCTOR AS NOTED. THIS GROUNDING CONDUCTOR SHALL BE PROVIDED REGARDLESS OF THE TYPE OF CONDUIT BEING USED.

B. ANY SUBSTITUTIONS OF THE SCHEDULED LIGHTING FIXTURES MUST BE REVIEWED BY THE ENGINEER PRIOR TO BID. PROVIDE CUT SHEETS ALONG WITH PHOTOMETRICS AT LEAST (10) DAYS PRIOR TO BID FOR THIS REVIEW. THE SUBSTITUTING PARTY MUST GUARANTEE THAT THE SUBSTITUTION MEETS THE PERFORMANCE & QUALITY SPECIFIED IN THE ORIGINAL FIXTURE. IF THE SUBSTITUTED FIXTURE DOES NOT PERFORM AS GUARANTEED, ALL REPLACEMENT COSTS MUST BE BORNE BY THE CONTRACTOR/MANUFACTURER.

C. LIGHTING FIXTURES MARKED "E" ARE EXISTING FIXTURES THAT ARE TO REMAIN IN PLACE.

D. PROVIDE EACH NEW TYPE 1 POLE WITH A 36" TALL ROUND CONCRETE POLE BASE AS SHOWN IN DETAIL 1-EL101.

**ELECTRICAL LIGHTING FLAG NOTES:** <#>

1. NEW LOCATION FOR THE EXISTING INFORMATION BOOTH. RECONNECT POWER AND COMMUNICATIONS CIRCUITS AND CABLES. REINSTALL THE (4) GROUND RODS USED FOR LIGHTNING PROTECTION SALVAGED FROM THE DEMOLITION PHASE AND RECONNECT THEM TO THE BOOTH'S LIGHTNING PROTECTION SYSTEM.

2. EXTEND THE EXISTING POWER AND COMMUNICATIONS CONDUITS, CONDUCTORS, AND CABLES TO THE INFORMATION BOOTH'S NEW LOCATION. AT THE CONTRACTOR'S OPTION, THE CONDUCTORS AND CABLES MAY BE REPULLED OR THE CONDUITS MAY BE ROUTED TO A GRADE LEVEL PULL BOX AND THE CONDUCTORS AND CABLES SPLICED AND EXTENDED.

3. PROVIDE A 3/4" PVC-40 STUB OUT FROM THE BASE FOR FUTURE EXPANSION. CAP THE EMPTY CONDUIT BELOW GROUND AND INDICATE ITS LOCATION ON THE AS-BUILT PLANS.

4. PROVIDE A NEW SQUARE D QO SERIES 30/2 BREAKER IN EXISTING PANEL "15-1-1" AT SPACES 10-12 TO POWER THE NEW POLE LIGHTS. UPDATE THE PANEL DIRECTORY PER SPECIFICATIONS.

5. TRANSITION FROM PVC-40 CONDUIT TO RMC A MINIMUM OF 12" BELOW GRADE, RISE UP THE EXTERIOR OF THE GARAGE TO ROOF LEVEL, AND ENTER THE GARAGE ROOF VIA AN SLB CONDUIT BODY.

**NOTE:** REFER TO CIVIL SHEET CS103 FOR RECORD DRAWING OF EXISTING UNDERGROUND UTILITIES. COORDINATE ALL BORING AND TRENCHING WITH THAT PLAN AND FIELD LOCATES.

## SITE LIGHTING PLAN

Scale: 1" = 20'-0"

0 10' 20' 40'

1" = 20'-0"

ISSUED FOR BID

| Revisions: | Date |
|---|---|
| | |

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

| | |
|---|---|
| Drawing Title | SITE LIGHTING PLAN |
| Approved COTR | |
| Project Title | UPGRADE ROADWAY, PARKING PHASE I |
| Location | DES MOINES VA MEDICAL CENTER |
| Date | MAY 7, 2012 |
| Checked | PJM |
| Drawn | TLS |
| Project Number | 636A6-11-301 |
| Building Number | |
| Drawing Number | EL100 |
| Dwg. | 23 of 24 |

VACIHCS
3600 30th ST
Des Moines, Iowa

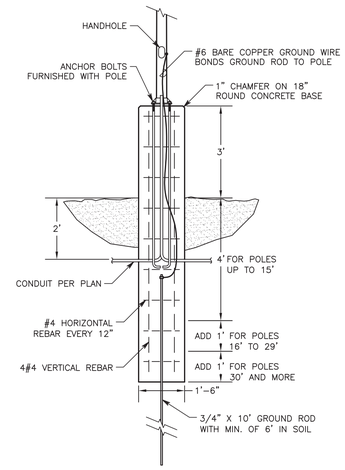
Department of Veterans Affairs

VA FORM 08-6231

## LIGHTING FIXTURES

| TYPE | MANUFACTURER | CATALOG NUMBER | LAMP INFORMATION (NOTE 1) | | | VOLTS | MOUNTING | DESCRIPTION/REMARKS |
|---|---|---|---|---|---|---|---|---|
| | | | QUAN | DESCRIPTION | TYPE | | | |
| 1 | GE LIGHTING SOLUTIONS | RRTS-30-SA-6S-7.5-11-GV | N/A | N/A | N/A | N/A | ON 36" CONCRETE BASE | 30' TAPERED STEEL GALVANIZED POLE WITH SINGLE 6' ARM |
| 2 | GE LIGHTING SOLUTIONS | MDCA-40-S-0-A-2-1-F-MC2-1 with PECOTL PHOTOCELL | 1 | 400W | HPS | 208 | ON POLE | TYPE II DISTRIBUTION COBRA HEAD FIXTURE WITH 4-BOLT SLIPFITTER |
| 3 | GE LIGHTING SOLUTIONS | MDCA-25-S-0-A-2-1-F-MC2-1 with PECOTL PHOTOCELL | 1 | 250W | HPS | 208 | ON POLE | TYPE II DISTRIBUTION COBRA HEAD FIXTURE WITH 4-BOLT SLIPFITTER |

NOTE 1: FL=FLUORESCENT, CFL=COMPACT FLURESCENT, INC=INCANDESCENT, MH=METAL HALIDE, HPS=HIGH PRESSURE SODIUM, LPS=LOW PRESSURE SODIUM, MV=MERCURY VAPOR




1 3' POLE BASE DETAIL
EL101 SCALE: NONE

## ELECTRICAL SYMBOLS

| SYMBOL | DESCRIPTION | DESCRIPTION | SYMBOL |
|---|---|---|---|
| | POWER | | |
| | DUPLEX NEMA 5-20R RECEPTACLE | MANUAL STARTER | |
| | DUPLEX NEMA 5-20R RECEPTACLE MOUNTED HORIZONTAILY | FUSED SWITCH WITH TYPE "S" FUSE (SSY OR SSU) | |
| | DUPLEX NEMA 5-20R RECEPTACLE-LOWER OUTLET SWITCHED | WALL MOUNTED JUNCTION BOX | |
| | DOUBLE DUPLEX NEMA 5-20R RECEPTACLE (QUAD) | CEILING MOUNTED JUNCTION BOX | |
| | CEILING MOUNTED DUPLEX NEMA 5-20R RECEPTACLE | FLOOR MOUNTED JUNCTION BOX | |
| | SINGLE NEMA 5-20R RECEPTACLE (SIMPLEX) | JUNCTION BOX WITHIN (EQUIPMENT OR MILLWORK | |
| | MONUMENT NEMA 5-20R DUPLEX RECEPTACLE | MOTOR ("X" INDICATES HORSE POWER) | |
| | ISOLATED GROUND NEMA 5-20R DUPLEX RECEPTACLE | DISCONNECT: NON-FUSED UNLESS NOTED OTHERWISE | |
| | SINGLE NEMA 5-15R CLOCK HANGER RECEPTACLE | MAGNETIC MOTOR STARTER | |
| | FLOOR POWER RECEPTACLE (SEE SPECS OR NOTES) | COMBINATION MAGNETIC STARTER/DISCONNECT | |
| | COMBINATION FLOOR POWER/DATA BOX (SEE SPECS OR NOTES) | RELAY (POWER, LIGHTING, OR SYSTEMS) | |
| | RANGE RECEPTACLE (NEMA 14-50R) | CONTACTOR (POWER, LIGHTING, OR SYSTEMS) | |
| | DRYER RECEPTACLE (NEMA 14-30R) | SMALL CONTROL TRANSFORMER | |
| | 20A, 250V POWER RECEPTACLE (NEMA 6-20R) | LARGE CONTROL OR BUCK-BOOST TRANSFORMER | |
| | SPECIAL RECEPTACLE (NEMA CONFIGURATION AS NOTED) | SURFACE MOUNTED ELECTRICAL PANEL-NEW | |
| | SINGLE PUSH BUTTON STATION | SURFACE MOUNTED ELECTRICAL PANEL-EXISTING | |
| | MULTIPLE BUTTON STATION OR MOTOR CONTROL STATION | FLUSH MOUNTED ELECTRICAL PANEL-NEW | |
| | POWER CORD WITH PLUG CAP (SEE NOTES FOR NEMA CONFIG) | FLUSH MOUNTED ELECTRICAL PANEL-EXISTING | |
| | MULTI-OUTLET ASSEMBLY OR PLUG MOLD | PLAN VIEW OF UTILITY OR DRY TYPE POWER TRANSFORMER | T |
| C, WP, GFI, EXP | WHEN ATTACHED TO SYMBOLS, "C" DENOTES CEILING MOUNTED, "WP" DENOTES WEATHERPROOF, "GFI" DENOTES GROUND FAULT INTERRUPTER, AND "EXP" DENOTES EXPLOSION PROOF | DISTRIBUTION PANELS, SWITCHBOARDS, SWITCHGEAR, AND MOTOR CONTROL CENTERS | |
| | LIGHTING | | |
| S | SINGLE POLE SWITCH | RECESSED OR CEILING MOUNTED LIGHT FIXTURE | |
| $S_3$ | THREE WAY SWITCH | DIRECTIONAL OR WALL WASH LIGHT FIXTURE | |
| $S_4$ | FOUR WAY SWITCH | WALL MOUNTED LIGHT FIXTURE | |
| $S_1$ | SPECIAL SWITCH (SEE NOTES) | CEILING MOUNTED FLUORESCENT LIGHT FIXTURE | |
| $S_P$ | DOUBLE POLE SWITCH | WALL MOUNT FLUORESCENT LIGHT FIXTURE | |
| $S_d$ | DIMMER SWITCH-NUMBER INDICATES HUNDREDS OF WATTS | SURFACE OR RECESSED LIGHT FIXTURE | |
| $S_t$ | TIMER SWITCH | CEILING MOUNTED EXIT LIGHT WITH DIRECTION ARROWS | |
| $S_p$ | SWITCH WITH PILOT LIGHT OR ILLUMINATED SWITCH | WALL MOUNTED EXIT LIGHT WITH DIRECTION ARROW | |
| | WALL MOUNT OCCUPANCY SENSOR | TRACK LIGHT WITH HEADS | |
| | CEILING MOUNT OCCUPANCY SENSOR | LIGHT POLE WITH ONE OR MORE LUMINARIES | |
| | PHOTOCELL-120V, 1200W RATED UNLESS OTHERWISE NOTED | BOLLARD LIGHT FIXTURE | |
| | TIME CLOCK | BATTERY BACKUP UNIT EQUIPMENT FIXTURE | |
| C, WP, K, EXP | WHEN ATTACHED TO SYMBOLS, "C" DENOTES CEILING MOUNTED, "WP" DENOTES WEATHERPROOF, "K" DENOTES A KEYED DEVICE, AND "EXP" DENOTES EXPLOSION PROOF | EMERGENCY ILLUMINATION FIXTURES. HALF HATCHED FIXTURES MUST HAVE DUAL BALLASTS AND HAVE 1 OR 2 LAMPS ON EMERGENCY AND THE OTHER LAMP(S) ON NORMAL POWER | |
| | FIRE ALARM | | |
| | CEILING MOUNT SMOKE DETECTOR | FIRE ALARM HORN/STROBE-"x" DENOTES CANDELA OF STROBE | |
| | WALL MOUNT SMOKE DETECTOR | FIRE ALARM HORN ONLY | |
| | DUCT MOUNT SMOKE DETECTOR | FIRE ALARM STROBE-"x" DENOTES CANDELA OF STROBE | |
| | OPTICAL BEAM SMOKE DETECTOR (TRANSMITTER AND RECEIVER) | MINI HORN/STROBE-"x" DENOTES CANDELA OF STROBE | |
| | CARBON MONOXIDE DETECTOR | FIRE ALARM ELECTRIC BELL OR WATER GONG | |
| | CEILING MOUNT HEAT DETECTOR | FIRE ALARM CONTROL PANEL | FACP |
| | WALL MOUNT HEAT DETECTOR | FIRE ALARM ANNUNCIATOR PANEL | FAAP |
| F | FIRE ALARM MANUAL PULL STATION | FIRE ALARM CEILING MOUNT SPEAKER | |
| F | FIRE ALARM MAGNETIC DOOR HOLD OPEN | FIRE ALARM WALL MOUNT SPEAKER | |
| F | FIRE ALARM SPRINKLER TAMPER SWITCH | FIRE ALARM WALL SPEAKER WITH "x" CANDELA STROBE | |
| F | FIRE ALARM SPRINKLER FLOW SWITCH | | |
| | SYSTEMS AND DIAGRAM | | |
| | PHONE, DATA, OR COMBINATION OUTLET | FUSE | |
| | FLUSH FLOOR MOUNTED PHONE, DATA, OR COMBINATION OUTLET | FUSED SWITCH | |
| | INTERCOM OUTLET | CIRCUIT BREAKER | |
| | SECURITY DOOR CONTACT | DRAW OUT LOW VOLTAGE POWER CIRCUIT BREAKER | |
| B | BUZZER | GROUND | |
| C | CHIME | VOLTAGE (POTENTIAL) TRANSFORMER | |
| B | BELL | CURRENT TRANSFORMER | |
| TV | WALL MOUNT TELEVISION OUTLET | UTILITY METER SOCKET | |
| TV | CEILING MOUNT TELEVISION OUTLET | CLOCK | |
| V | VOLUME CONTROL | COMBINATION CLOCK/SPEAKER | |
| M | MICROPHONE OUTLET | BED-SIDE NURSE CALL STATION | |
| S | CEILING SPEAKER | EMERGENCY NURSE CALL STATION | |
| S | WALL MOUNT SPEAKER | NURSE CALL CODE BLUE STATION | |
| T | THERMOSTAT | NURSE CALL STAFF STATION | |
| | CABLE TRAY | NURSE CALL DUTY STATION | |
| | LOW VOLTAGE CABLING "J" HOOKS | NURSE CALL DOME LIGHT WITH SINGLE RED LENS | |
| | LOW VOLTAGE CABLING CONDUIT PATHWAY | NURSE CALL DOME LIGHT WITH SINGLE WHITE LENS | |
| | TELEPHONE CABINET-SURFACE MOUNTED | DOUBLE NURSE CALL DOME LIGHT WITH RED AND WHITE LENS | |
| | TELEPHONE CABINET-FLUSH MOUNTED | CAMERA | |
| | TELEPHONE BACK BOARD | | |
| | CIRCUITING | | |
| | CONCEALED CIRCUITING-ARROWS INDICATE # OF HOME RUNS | SURFACE OR EXPOSED CIRCUITING | |
| | CIRCUIT WITH BREAK CONTINUED ELSEWHERE | CIRCUIT DOWN | |
| | CIRCUITING CONCEALED IN FLOOR OR BELOW GRADE | CIRCUIT UP | |
| | | CAPPED CONDUIT | |

ELECTRICAL DETAILS
SYMBOLS, SCHEDULES
Scale: NONE

ISSUED FOR BID

Revisions: Date

CONSULTANTS:

LAMP RYNEARSON & ASSOCIATES
14710 West Dodge Road, Suite 100
Omaha, Nebraska 68154-2027
www.LRA-Inc.com
402.496.2498 | P
402.496.2730 | F

ARCHITECT/ENGINEERS:

21 Delta Engineers
21 Delta Engineers, LLC
3824 North 108th Street
Omaha, Nebraska 68164
PH: (402) 496-4115
Fax: (402) 493-2744

Drawing Title: ELECTRICAL DETAILS, SYMBOLS, SCHEDULES

Approved: COTR

Project Title: UPGRADE ROADWAY, PARKING PHASE I

Location: DES MOINES VA MEDICAL CENTER

Date: MAY 7, 2012 | Checked: PJM | Drawn: TLS

Project Number: 636A6-11-301

Building Number:

Drawing Number: EL101

Dwg. 24 of 24

VACIHCS
3600 30th ST
Des Moines, Iowa

Department of Veterans Affairs

VA FORM 08-6231