

# DESIGN CRITERIA MANUAL

# **CHAPTER 8 PLANS & SPECS**

**MUNICIPALITY OF ANCHORAGE** 

PROJECT MANAGEMENT & ENGINEERING DEPARTMENT

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### DESIGN CRITERIA MANUAL REVISION LOG Chapter 8 – Plans & Specs

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### **Acronyms and Abbreviations**

AASHTO	American Association of State Highway and Transportation Officials
	asphalt concrete
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
ADEC	Alaska Department of Environmental Conservation
ADOT&PF	Alaska Department of Transportation and Public Facilities
ADT	average daily traffic
AMC	Anchorage Municipal Code
AMCR	Anchorage Municipal Code of Regulations
	Alaska Society of Professional Land Surveyors
	American Society for Testing and Materials
Ç	center line
DCM	Design Criteria Manual
	feet
GPS	global positioning system
	height of instrument
	Percent of ADT in PHT
	miles per hour
NCHRP	
	Official Streets and Highways Plan
	property line
	Point of Curve
	AASHTO A Policy on the Geometric Design of Highways and Streets
	peak hour traffic
	Project Management and Engineering
PT	Point of Tangency
	radius
	recycled asphalt pavement
	right-of-way
	Traffic Impact Analysis
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#### **SECTION 8.1 INTRODUCTION**

#### 8.1 A Objective

The objective of this Chapter is to establish standards for the preparation of plans and specifications for the improvements discussed in this Design Criteria manual (DCM). Sample drawings of various types of plan sheets are provided in Appendix 8A. Sample specifications are provided in Appendix 8C. The information provided is the framework for plan and specification preparation for both in-house and consultant design projects. The Municipal Engineer shall approve exceptions.

Use this chapter in conjunction with PM&E's Project Management Manual (PMM) and the Municipality of Anchorage Standard Specifications (M.A.S.S.). The PMM identifies design procedures including plan submittal, plan review, design phases, and public input. M.A.S.S. provides standard construction specifications and details. Consultants performing design work for the Municipality shall also design in accordance with their professional services contract (PSC).

#### 8.1 B Definitions

In the design process, several entities are involved. They include the Municipality, Project Management and Engineering Department (PM&E), Department of Parks and Recreation, the Municipal project manager, the project engineer, and the consultant. For clarification of the role of each, the following discussion is provided:

- 1. The owner of all Municipality design projects is the Municipality of Anchorage (MOA) or the managing authority.
- 2. The managing authority for street and drainage improvements is PM&E.
- 3. The managing authority for all completed pathway and park projects is the Department of Parks and Recreation, unless otherwise defined.
- 4. The Municipal Project Manager is the person established as contract administrator for the municipality and is the consultant's contact with the Municipality. The Municipal Project Manger has authority to transmit instructions, receive information and interpret and define the

Municipality's policies and decisions with respect to materials, equipment elements and systems pertinent to the work covered by the PSC. The Municipal Project Manager is identified in the consultant's notice to proceed and should be contacted for verification of any information pertaining to the PSC, the information contained in this DCM, or the project in general.

- 5. The project engineer is the person identified by PM&E as the project designer responsible for the preparation of plans, specifications, and bid documents.
- 6. The consultant is the consulting firm (and its representatives) hired by the Municipality to function as the project engineer.

**END OF SECTION 8.1** 

#### **SECTION 8.2 PLAN PREPARATION**

#### 8.2 A General

Construction documents for Municipal projects should be consistent in appearance and format. This section provides guidelines to assist the designer in achieving that consistency. In addition, Appendix 8A contains a sample set of drawings, which illustrates the standard format and appearance. An AutoCAD drawing file has also been created which includes standard information such as symbols, line weights, text styles, and sheet borders. The documentation to accompany this file in included in Appendix 8B.

Prepare plans on 22 inches by 34 inches sheets. This size allows for half-scale plan sets that are 11 inches by 17 inches. Present all information provided on the plans in black ink. "Sticky back" and machine-lettered attachments are not acceptable. The following criteria apply to the preparation of all sheets.

- Line weights and symbols shall conform with Municipal standards as shown in Appendix 8B of this DCM. The Municipal Project Manager shall approve departure from the standards.
- 2. Standard information blocks are provided on all but the cover sheets. The project engineer shall complete all standard information blocks with the following:
  - a. Project name;
  - b. Project number;
  - c. Individual park name and number (where applicable);
  - d. Sheet title;
  - e. Sheet number (n of n);
  - f. Date:
  - g. Scale;
  - h. Grid number:
  - i. PM&E file and account numbers;

- j. Engineer, architect, or landscape architect registration stamp;
- k. Consultant's name and address;
- 1. Survey field book number;
- m. Benchmark (PM);
- n. Basis of Datum and Basis of Bearings;
- o. Plan check data; and
- p. Revisions, as necessary.
- 3. Arrange construction notes on the plan sheets so they do not conflict with the base and design information. Avoid long leader lines. The project engineer should make an effort to group items for each schedule in one area of the plan sheet.

Present notes in a direct and consistent manner throughout the contract documents. Identify existing features as "existing" when not identifiable by legend symbol. Notes that identify bid items on the plan sheets shall correspond exactly to the item description under M.A.S.S. "Basis of Payment" or in the special provisions. Notes shall identify methods and materials of construction, but not treatment, quality of materials, or standards of workmanship, which should be addressed in the specifications.

Plans including traffic signals, illumination, or thaw wire improvements shall clearly identify electrical hook-up responsibilities of the contractor, unless specifically addressed in the specifications.

- 4. Reproduce plans and drawings only on quality paper. Collate plan sets and staple along the left edge. Individually roll plan sets.
  - The Municipal Project Manager will determine the number of plan sets to be printed and submitted in each phase of project development.
- 5. Begin stationing at section lines and increase northward and eastward, unless otherwise approved by the Municipal Project Manager. Do not duplicate project stationing. Further, Station 0+00 shall not be used.

#### 8.2 B Cover Sheet

The cover sheet is the first sheet of the plan set of construction drawings. A sample title sheet is available in AutoCAD drawing file from PM&E. The cover sheet shall include the following information as shown in the sample in Appendix 8A:

- 1. The MOA seal and name;
- 2. Project name;
- 3. Project number;
- 4. Location of proposed improvements on the vicinity map;
- 5. Signature and signature blocks for the mayor and the Municipal Engineer; and
- 6. The name, address, and/or logo of the consultant under "Prepared by:"

#### 8.2 C Key Map and Legend Sheet

All plan sets shall include key map and legend sheet which should follow the cover sheet. A sample key map and legend sheet is available in an AutoCAD drawing file from PM&E. This sheet shall include the following information:

- 1. A completed standard information block as discussed in Section 8.2 A.
- A Municipal standard legend, vertical or horizontal, which defines all symbols used on the drawings, including non-standard symbols.
- 3. A key map showing:
  - a. Project limits (100-scale);
  - b. North arrow, pointing to the top or the right side of the sheet;
  - c. Existing manholes, catch basins, and cleanouts;
  - d. Proposed storm drains, including manholes, catch basins, and cleanouts;
  - e. Proposed edge of paving or curb and gutter line;
  - f. Schedule designation (where applicable); and

- g. Existing pavement.
- 4. An index for all drawing sheets.
- 5. General notes, including a statement of compliance with M.A.S.S.
- 6. Consultant's name, address, and/or logo.

#### 8.2 D Detail Sheets

Provide details and typical sections to clarify and define elements within the plans. Detail sheets may be obtained from PM&E. Reference standard Municipal; do not repeat standard details in the drawing set. When possible, non-standard details shall appear on the plan sheet where construction notes occur. Organize detail sheets to depict details and sections of similar construction on the same sheet. Clearly and prominently mark pay limits on all details. A sample detail sheet for load centers is provided in Appendix 8A.

The Traffic Department has several additional standard detail sheets that they provide on traffic engineering projects. These are listed and discussed in Chapters 5 and 6 of this Design Criteria Manual.

Draw each detail or section to scale when possible. Note the scale for each detail, unless otherwise directed by the Municipal Project Manager. Provide reference numbers to allow cross-reference between plan sheets and detail sheets.

#### 8.2 E Plan and Profile Sheet

These sheets provide plan and profile views of the project and are used primarily for street, storm drainage, and trail projects. A sample plan and profile sheet is available as an AutoCAD drawing file. The sheets shall include survey information identified in DCM Chapter 1 and the following information as shown in the sample in Appendix 8A:

#### 1. Plan View

Prepare the plan view at a scale of 1 inch equals 50 feet (1" = 50'). Some projects may require a larger scale for clarity. In such cases, a scale of 1 inch equals 20 feet (1" = 20') may be used when approved by the Municipal Project Manager. Utilize and reference standard details provided in

M.A.S.S., unless directed by the Municipal Project Manager. When applicable, the plan view should contain the following information:

- a. Rights-of-way and street names;
- b. Lots, blocks, tracts, and parcel designations;
- c. Easements and permits, including public use easements, temporary access permits, and access or entry permits;
- d. Section lines and corners;
- e. North arrow, pointing to the top or right;
- f. Typical cross section, when not shown on detail sheet(s);
- g. Top back of curb elevations at curb returns, P.C., P.T., and, where applicable, P.R.C. of curves and any location varying from typical sections:
- h. Horizontal location of survey monuments and benchmarks, including name (or number), elevations, etc.;
- Centerline stationing increasing from left to right. Align stationing on both plan and profile views;
- j. Graphic scale (2-inch bar scale);
- k. Pertinent site features discussed in Design Criteria Manual 1.5;
- 1. Existing and proposed street lines, curbs, sidewalks, aprons, and pads;
- m. Existing sanitary sewer manholes, services, and cleanouts:
- Existing water lines, services, valves, and fire hydrants;
- o. Existing gas lines and services;
- p. Existing telephone, light, and guy poles;
- q. Existing underground and overhead electric, telephone, and fiber-optic facilities, including television lines, manholes, hand holes, services, and vaults;
- r. Other pertinent features (e.g., trees, shrubs, street furniture, etc.);

- s. Basis of bearing and stationing;
- t. Existing and proposed storm drain lines, manholes, catch basins, cleanouts, culverts, ditches, and swales;
- u. Horizontal location of test holes within project limits;
- v. Necessary construction notes;
- w. Perimeter outline of existing buildings and show street address number for street and alley paving;
- x. Cut or fill limits for proposed construction;
- y. Spot elevations and stationing and offsets for grade breaks and pavement end not shown in profile;
- z. Arrow to indicate surface drainage direction for intersection streets;
- aa. Centerline stationing of proposed manholes, catch basins, and other structures;
- bb. Locations affected by wetland, flood hazard, or other permits, where appropriate; and
- cc. Erosion and sediment control measures required.
- 2. Profile View

Prepare the profile view at a vertical scale of 1 inch equals 5 feet (1"=5") for storm drain and 1 inch equals 2 feet (1"=2") for streets, alleys, and pathways or trails. A scale of 1 inch equals 5 feet (1"=5") may be used where steep slopes are encountered, when approved by the Municipal Project Manager. The profile view should contain the following information:

- a. Existing ground profiles for the right-of-way centerline and the right and left property lines;
- b. Proposed street or pathway profile showing vertical curves and appropriate curve data (P.V.I. station, P.V.I. elevation, and vertical curve length), grades and centerline elevations at grade breaks, vertical points of tangency (P.V.C., P.V.T.), and 25-foot stations on vertical curves;

- c. Soils logs showing soils letter classifications and percent passing #200 sieve, unified frost classification, and water table level. "NWT" shall be noted where no water table is encountered:
- d. Vertical location, size, and type of existing water, sewer, storm drain, and other underground utilities. When vertical location is unknown, a caution note to this effect should be shown;
- e. Estimated depth of excavation;
- f. Stationing, invert, and top elevations of proposed storm drain manholes, catch basins, and culverts. If a specific cone rotation is required, this should be specifically noted;
- g. Storm drain top of pipe and invert profile with percent slopes;
- h. Top locations of existing manholes for street and alley plan sheets;
- Locations of existing culverts on street and alley plan sheets;
- j. Centerline station of any intersecting streets; and
- k. Erosion and sediment control measures required.

#### 8.2 F Other Plan Sheets

Site plan sheets are used primarily for projects involving parks, landscaping, grading, and other land development. A prototypical plan sheet is available from PM&E. Prepare the site plan at a scale of 1 inch equals 20 feet (1" = 20'), unless otherwise approved by the Municipal Project Manager. Information required for specific types of site plans is discussed below.

- 1. Park Site Plans
  - a. Rights-of-way and street names;
  - b. Lots, blocks, tracts, and parcel designations;
  - c. Subdivision names;

- d. Dimensioned easements and permits, including public use easements, utility, slope and drainage easements, temporary construction permits, and access or entry permits;
- e. Section lines and corners:
- f. North arrow, pointing to the top or right;
- g. Horizontal location of survey monuments and benchmarks, including name (or number), elevations, etc.;
- h. Graphic scale (2-inch bar scale);
- i. Pertinent site and topographic features;
- j. Existing pavement, curbs-and-gutter, sidewalks, aprons, and pads;
- k. Existing vegetation;
- 1. Existing utilities;
- m. Existing structures;
- n. Horizontal location of test holes within project limits;
- o. Location and exact dimensioning of proposed park elements;
- p. Identification of materials and keys to details;
- q. Location of stockpile, staging and storage sites, if applicable;
- r. Notes detailing special construction techniques, as appropriate;
- s. Locations affected by wetland, flood hazard, or other permits, where appropriate; and
- t. Erosion and sediment control measures required.

#### 2. Grading and Drainage Plans

Site grading and drainage sheets are used primarily for park, landscaping, and other land development projects where substantial recontouring is involved. The grading and drainage sheet should follow the site plan when assembling the plan set of drawings.

Where applicable, the grading and drainage sheet shall contain the following information:

- Rights-of-way and street names;
- b. Lots, blocks, tracts, and parcel designations;
- c. Subdivision names;
- d. Dimensioned easements and permits, including public use easements, utility, slope and drainage easements, temporary construction permits, and access or entry permits;
- e. Section lines and corners;
- f. North arrow, pointing to the top or right;
- g. Horizontal location of survey monuments and benchmarks, including name (or number), elevations, etc.;
- h. Graphic scale (2-inch bar scale);
- Existing and proposed contours, including spot elevations for critical points;
- j. Existing utilities;
- k. Existing structures;
- 1. Existing pavement, including streets, drives and parking areas;
- m. Other pertinent features (e.g., trees, shrubs, lawn and street furniture, etc.);
- n. Horizontal location of test holes within project limits;
- o. Location of proposed utilities;
- p. Necessary construction notes detailing earthwork;
- q. Locations affected by wetland, flood hazard, or other permits, where appropriate; and
- r. Erosion and sediment control measures required;
- s. utilization of standard grading abbreviations fund in the legend.

#### 3. Landscape Plans

The landscape plan sheets are primarily for park, trail, and street projects, where applicable. The landscape plan shall contain the following information:

- a. Rights-of-way and street names;
- b. Lots, blocks, tracts, and parcel designations;
- c. Subdivision names;
- d. Dimensioned easements and permits, including public use easements, slope or drainage easements, temporary construction permits, and access or entry permits;
- e. Section lines and corners;
- f. North arrow, pointing to the top or right;
- g. Horizontal location of survey monuments and benchmarks, including name (or number), elevations, etc.;
- h. Graphic scale (2-inch bar scale);
- i. Schematic layout of pertinent streets, bodies of water, and park elements;
- j. Schematic layout of plants, planting beds, and lawn areas;
- k. Planting notes identifying typical planting-related requirements and jobor site-specific conditions;
- Existing vegetation identifying location, species, canopy diameter, and approximate size;
- m. Planting details;
- n. Plant schedule to address botanical name (including genus, species and variety), common name, quantity, plant size (caliper, height, or container size), root requirement, symbol (if applicable), spacing (if applicable), and special requirements.

#### 8.2 G Traffic Signal Plans

The Traffic Department Engineering Division has three types of base sheets specifically for MOA projects. They include a traffic signal plan sheet, a hardware schedule sheet, and a detail sheet. Guidelines for preparing a traffic signal plan sheet are described below:

- All sheets shall have the intersection oriented with north to the top. However, if significantly better space utilization results, the intersection may be oriented with north to the right of the sheet. Designate North with an arrow in either case.
- 2. Prepare the traffic signal plans at a scale of 1 inch equals 20 feet (1" = 20'). Generally, it is not necessary to size plan sheets to show loop detectors at the scaled distance from the intersection. If geometrics or other conditions dictate that the loops be located to scale, develop an auxiliary map or detail at a scale of 1 inch equals 50 feet (1" = 50'). Signal plans for the Central Business District (CBD) may be drawn at a scale of 1 inch equals 10 feet (1" = 10'), as there are more conflicting utilities in a limited space and detector loops are not used.
- 3. Information provided on the traffic signal plan drawings shall include existing conditions. Present the existing conditions using a 50 percent screen, to result in a gray tone for existing conditions. The plan sheet shall include, but not be limited to, the following information as shown on the sample sheet in Appendix 8A:
  - a. Rights-of-way, easements, and street names:
  - b. Curbs and medians;
  - c. Lane lines and channelization;
  - d. Sidewalks;
  - e. Existing traffic signal equipment and underground features;
  - f. Utilities (underground and overhead), including electric, gas, telephone, communications and cable TV, traffic and

- illumination, sanitary sewer, storm sewer, and water lines:
- g. Utility manholes, vaults, and valves;
- h. Monuments and benchmarks;
- i. Driveways;
- j. Signs and poles;
- k. Centerline and stationing;
- 1. Angle of intersecting streets;
- m. Building lines; and
- n. Other pertinent features (e.g., trees, shrubs, street furniture, etc.);
- o. Pre-emption detectors.
- 4. Proposed improvements shown on the traffic signal plan sheets shall include, but not be limited to, the following information:
  - a. Lane lines and channelization;
  - b. Mast arms and poles;
  - c. Vehicle signal head locations;
  - d. Pedestrian signal head locations;
  - e. Detector loop locations;
  - f. Junction boxes;
  - g. Conduit runs (runs must be labeled);
  - h. Controller cabinet location:
  - i. Load center location;
  - j. Power source;
  - k. Luminaires;
  - 1. Traffic signs; and
  - m. Pavement markings;
  - n. Pre-emption detectors.

Show station reference and offset dimensions on the plans to clearly identify the location of each item listed (except junction boxes and conduits). The project engineer shall include information as shown on the sample sheet in Appendix 8A and in accordance with DCM Chapter 6.

- 5. Group construction notes, which are applicable to the specific intersection, on the traffic signal plan sheet. Use a symbol and number to the specific location on the diagram to refer to the note.
- 6. Each traffic signal plan sheet shall include a conduit list similar to that shown in the sample plan sheets in Appendix 8A. Number conduit runs sequentially, each with a different number. The numbering scheme shall start with the controller and work outwards to all runs on the same quadrant. The numbering shall continue with the street crossing serving only one additional quadrant. Number all runs on the second quadrant sequentially. The numbering shall continue with the street crossing serving two quadrants with each run on a quadrant being numbered sequentially before continuing to the next quadrant.
- 7. Prepare a wiring diagram for each intersection following the format of the sample plan sheet in Appendix 8A. Diagram shall identify the poles.
- 8. Pole schedules and notes on each traffic signal plan sheet shall include a signal display diagram showing each unique signal head configuration for the intersection. The diagram shall show the indication color, size of section (8" or 12"), and identify the signal head numbers for each display (see Appendix 8A). Pedestrian signal diagrams shall also be provided.
- 9. Each traffic signal plan sheet shall include a phasing sequence diagram as shown in Appendix 8A. If the signal is being upgraded, show both the existing and proposed phasing. The assigned phases shall adhere to the phase identification scheme outlined below.
  - a. Show the sequence of operations with a phasing sequence diagram for each intersection on the plan sheet in accordance with DCM Chapter 6.
  - b. Designate phases on the traffic signal plan sheet in accordance with DCM Chapter 6.
- 10. Prepare the lane configuration for each intersection following the format of the sample plan sheet in Appendix 8A.

11. Identify detector loops on the plan sheets by the three-digit number as discussed in DCM Chapter 6.

#### 8.2 H Hardware Schedule Sheet

Hardware schedule sheets are used primarily for traffic signal projects. Base plan sheets may be obtained from the Traffic Department Engineering Division. Each sheet shall include the following information as shown on the sample in Appendix 8A.

- 1. A junction box schedule (which includes the junction box number, street name, station, offset, type, and applicable remarks, if any), the controller cabinet type, station and offset, and the load center station and offset.
- 2. A detection schedule which includes the detection number, street name, station, offset, type, dimensions in reference to north, and number of turns.
- 3. A controller wiring schematic detail showing the conduit number for each signal head, pedestrian push buttons, opticom detectors, and loop detectors following the format of the sample hardware schedule sheet in appendix 8A.
- 4. A load center schedule showing the circuits, ratings, remarks, photocell mounting, transformer mounting, volts, and KVA.
- 5. A loop detector schedule showing the phase, the loop number, and other information as shown on the sample in Appendix 8A.
- 6. Group construction notes, which are applicable to the specific intersection, with the hardware schedule plan sheet. Where applicable, a symbol and number shall be used on the specific location on the diagram to refer to the note.

#### **END OF SECTION 8.2**

## SECTION 8.3 SPECIFICATIONS - PREPARATION

#### 8.3 A General

The specifications for contract documents consist of the ten major components listed below:

- 1. Title page;
- 2. Master index;
- 3. Invitation to bid;
- 4. Index to Special Provisions;
- 5. Special provisions;
- 6. Acquired easements and access permits;
- 7. Soils logs or geotechnical report;
- 8. Standard forms insert;
- 9. Bid proposal; and
- 10. List of plan sheets.

This information is referred to as the Project Manual in M.A.S.S. Each component shall contain the information shown on the sample in Appendix 8C.

The project engineer shall use M.A.S.S. as the basis for and primary source of information during plan and specification preparation. Incorporate M.A.S.S. by reference into the contract documents. All parts of the specifications shall be clear and intelligible. The technical parts of the documents must be understandable to qualified contractors. Utilize standard specifications and bid items whenever possible and not modified or repeated in the special provisions. Specific discussion of some of the components is provided below.

#### 8.3 B Invitation to Bid

The Invitation to Bid page is a standard Municipal form that is provided to the consultant or the designer by the Municipal Project Manager. The project engineer shall complete the top of the page with the project name and work description as shown in Appendix 8C. The project work description is used for advertising purposes and should be brief, but shall contain specific

information as to the quantity and description of major bid items.

The project bid numbers, and the dates and times for the conferences and the bid opening, are furnished by the Municipal Purchasing Department and is coordinated through the Municipal Project Manager. The Municipal Project Manager will provide a copy of the Invitation to Bid, completed and signed by the Municipal Purchasing Department, to the project engineer by for final printing of bid documents.

#### 8.3 C Special Provisions

#### 1. General

The special provisions are specific clauses, which present conditions or requirements specific to a project and are supplementary to M.A.S.S. The project engineer shall use standard bid items and specifications whenever possible with additions and/or deletions included in the special provisions when required. In no case shall special provisions refer to "the standard specification". In all cases the reference shall be to the "M.A.S.S."

Number special provisions sequentially beginning with 95.01. Number the special provision pages in sequence, beginning with "SP-1". Provide a special provision for each project for the following items using the format in the sample in Appendix 8C.

- a. Location and scope, including information on whether the project is located in the State or Municipal right-of-way;
- b. Reference to M.A.S.S.:
- c. Time of completion, which refers to the number of calendar days to complete the required work after the notice to proceed has been issued, or a set completion date; and
- d. Permits or agency agreements where conditions may impact the construction contract.

Additional items may be provided by the Municipal Project Manager for inclusion in the special provisions. Non-standard bid items unique to each project should be included as special

provisions only when the M.A.S.S. does not contain an applicable bid item that may be used or amended to apply to the project requirements.

2. Modifications of M.A.S.S. Standard Provisions

Special provisions which modify existing standard provisions in the M.A.S.S. will only delete, add to, or replace existing descriptions or provisions. Do not restate existing descriptions in the special provisions. Clearly state the division, section, and article being modified. Follow the format in Appendix 8C.

The Municipality has modifications to the M.A.S.S. that are updated periodically. Include the most current modifications applicable to the project in the special provisions.

#### 3. New Work Items

Develop special provisions in full, which create new work items that are not modifications of the M.A.S.S. standard provisions. Add new work items to the end of the division which relates to the new work item. Designate new special provisions for the new items AA.XX, where AA is the M.A.S.S. division under which the work falls and XX is the next available section number within that M.A.S.S. division. The special provisions for new work items shall include the following:

Article XX.1 General

Article XX.2 Material

Article XX.3 Construction

Article XX.4 Measurement

Article XX.5 Basis of Payment

List the special provisions in the same order as the M.A.S.S. divisions. For example, all special provisions pertaining to General Items (Division 10) appear first, then earthwork items (Division 20), Portland cement concrete items (Division 30), asphalt surfacing items (Division 40), etc.

Nomenclature used in the special provisions shall conform to the M.A.S.S. general provisions, Section 10.01 Definitions, (i.e., use of "Engineer" or "Owner" rather than "Municipal Representative" or "Municipality").

#### 8.3 D Standard Forms Insert

The standard forms insert contains, as a minimum, the following forms:

- 1. Equal Opportunity Bidding and Reporting Requirements;
- 2. Minority/Women Business Enterprise (MBE/DWE) Requirements (if applicable);
- 3. Minimum rates of pay;
- 4. Contract forms;
- 5. Contract performance and payment bond forms;
- 6. Certificate of insurance;
- 7. Bidder's checklist; and
- 8. Bid bond form.

The standard forms insert is subject to continual revision by the Municipality and the State of Alaska. Only the most current information can be used. Therefore, the most current insert pages are provided to the project engineer by the Municipal Project Manager immediately prior to final review for advertisement and bidding. When submitting documents for the preliminary reviews, the engineer should insert a single page stating "standard forms insert of approximately 30 pages" in place of the forms package.

#### 8.3 E Bid Proposal

The bid proposal section is the last section in the document and consists of four parts: a title page, unit bid price sheet(s), a bid summary page, and a bid proposal (certification). Number the bid proposal pages consecutively starting with "BP-1 of BP-n".

Utilize bid proposal sheets similar to those provided in Appendix 8C, unless otherwise directed by the Municipal Project Manager.

- 1. Arrange the bid items in the same numerical order in which they appear in the M.A.S.S., as modified by the project's special provisions.
- 2. Separate the unit bid price sheets into separate schedules, as required.

3. Bid item titles shall correspond <u>exactly</u> to work items as listed under Basis of Payment in the M.A.S.S. or the special provisions.

#### 8.3 F Printing and Binding

Print and bind the specifications according to the following criteria, unless directed otherwise by the Municipal Project Manager:

- 1. All sheets shall be  $8-\frac{1}{2}$ " x 11":
- 2. Duplex "Xerox-quality" printing on white paper for all pages, except the bid proposal sheets, which shall be single-sided copies;
- 3. Cover stock paper for the front cover;
- 4. Cover stock for the back cover;
- 5. Bound along the left-hand 11-inch vertical margin with GBC fasteners or equivalent.

The Municipal Project Manager will determine the number of documents required for submittals, if not specified in the PSC. A number shall be affixed to each copy of the bid documents, corresponding with the copies of the drawings.

#### 8.3 G Delivery

The project engineer shall deliver final contract bid documents to the Purchasing Officer and the Municipal Project Manager upon request, unless otherwise indicated in the PSC or directed by the Municipal Project Manager. Delivery shall be made to the Purchasing Office before 9:00 a.m. on the date of advertisement.

**END OF SECTION 8.3** 

## SECTION 8.4 ADDENDA PREPARATION

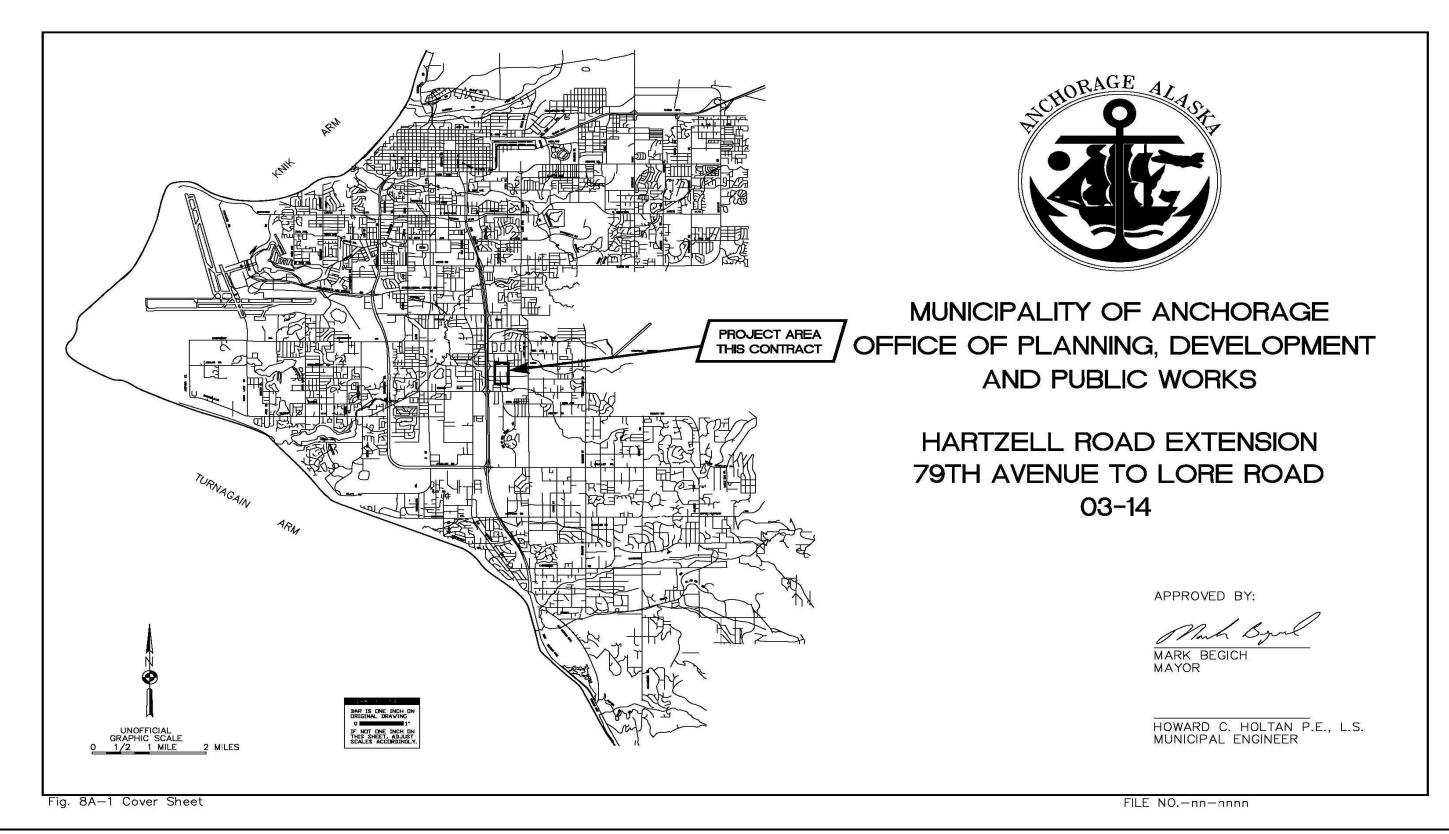
When required, prepare addenda on Municipal letterhead. The letter shall explicitly outline all changes, additions, and deletions to be incorporated in the plans and specifications with attached prints or sketches, as necessary.

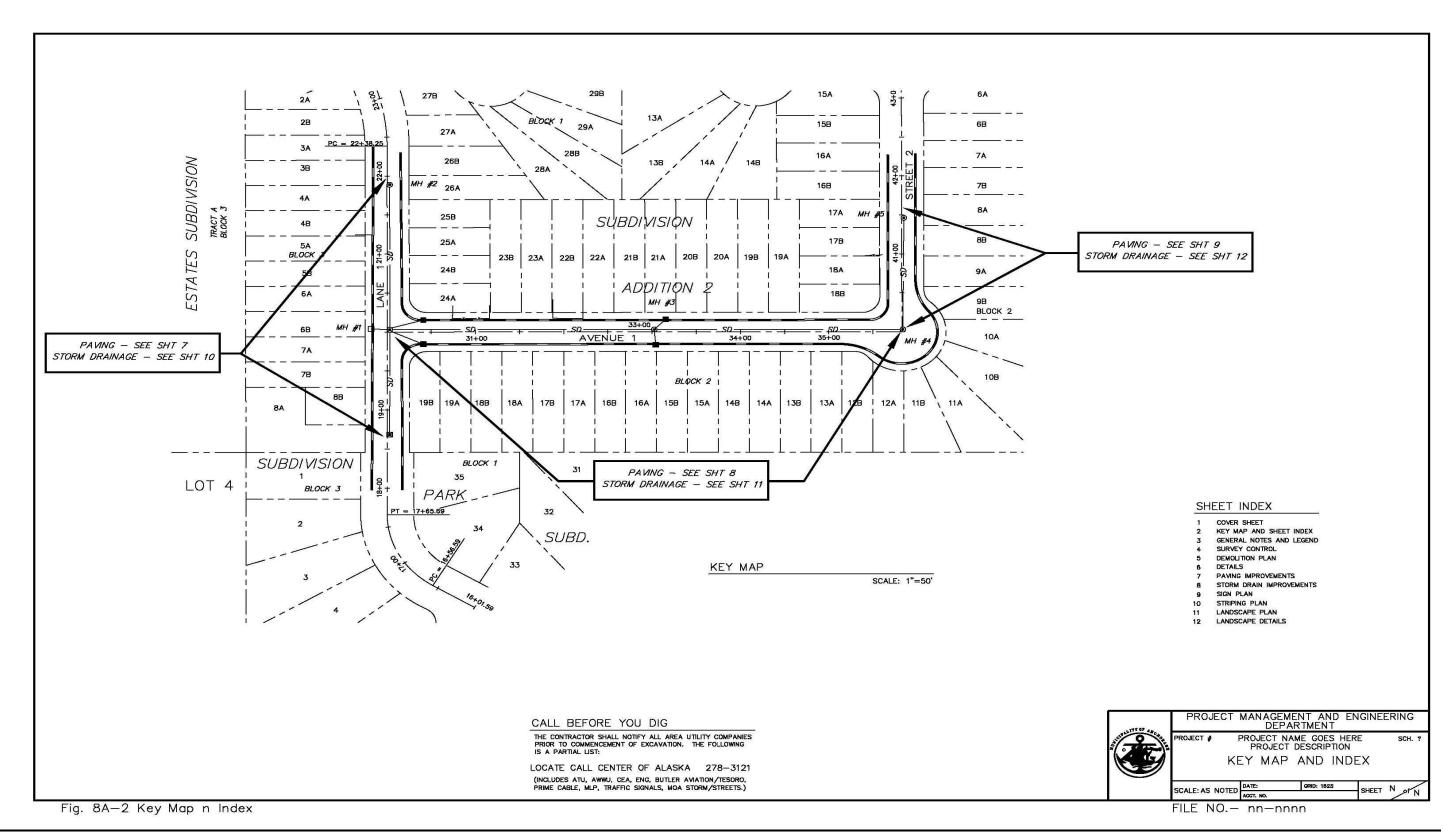
Deliver the addendum letter to the Municipal Project Manager with the exact number of copies required in the final document submittal in the PSC.

**END OF SECTON 8.4** 

## **APPENDIX 8A**

**Sample Plans** 





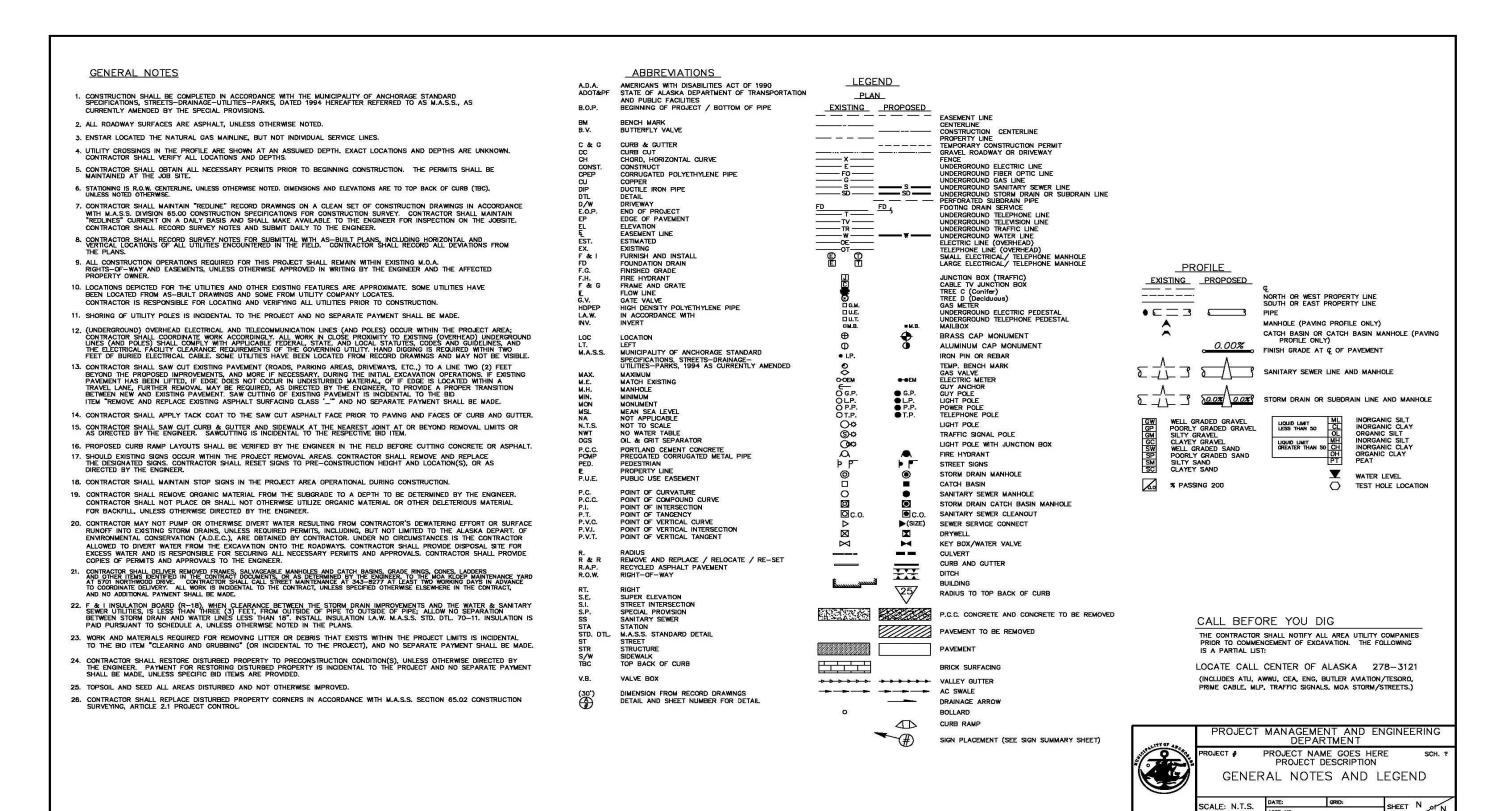
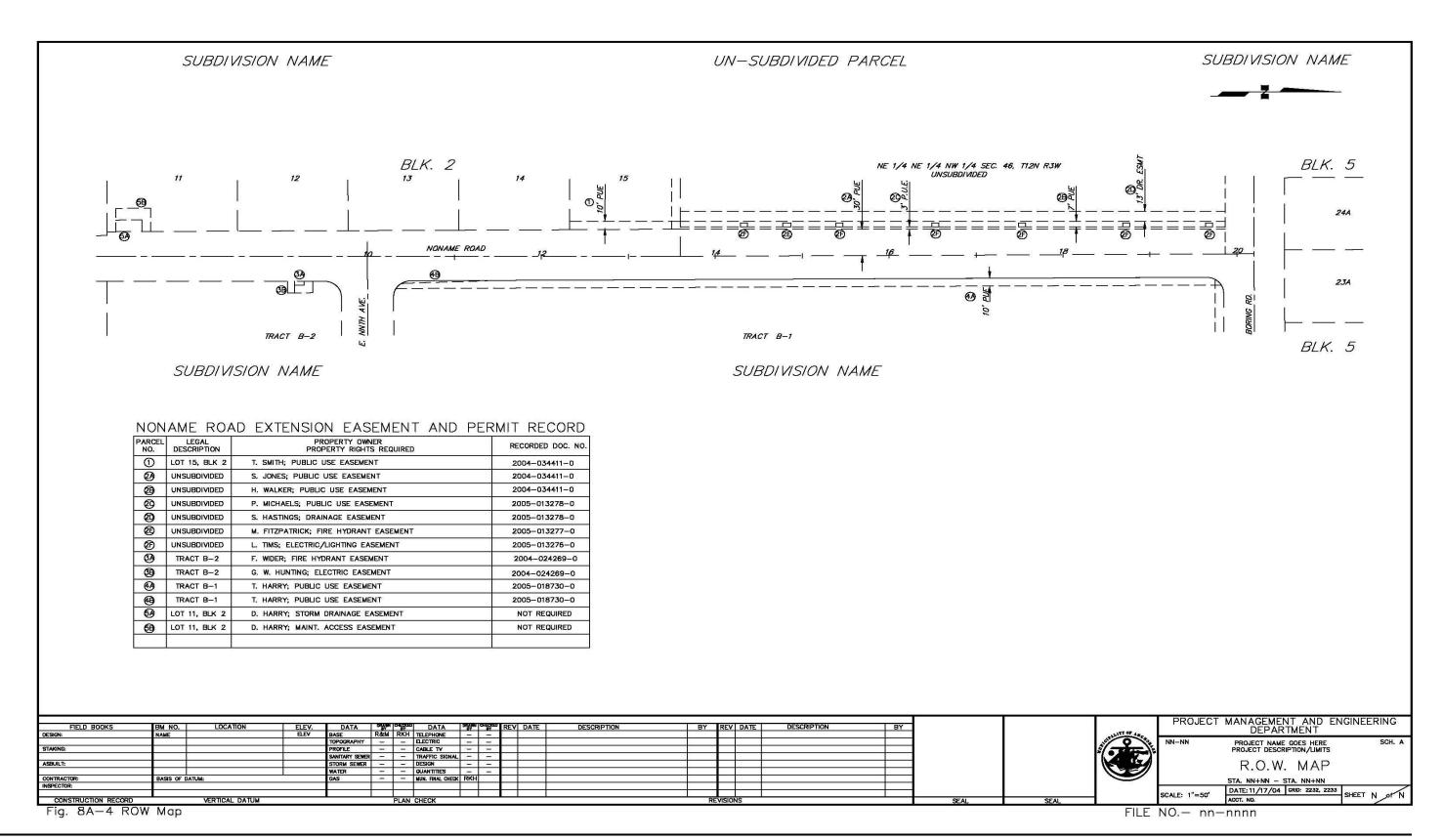
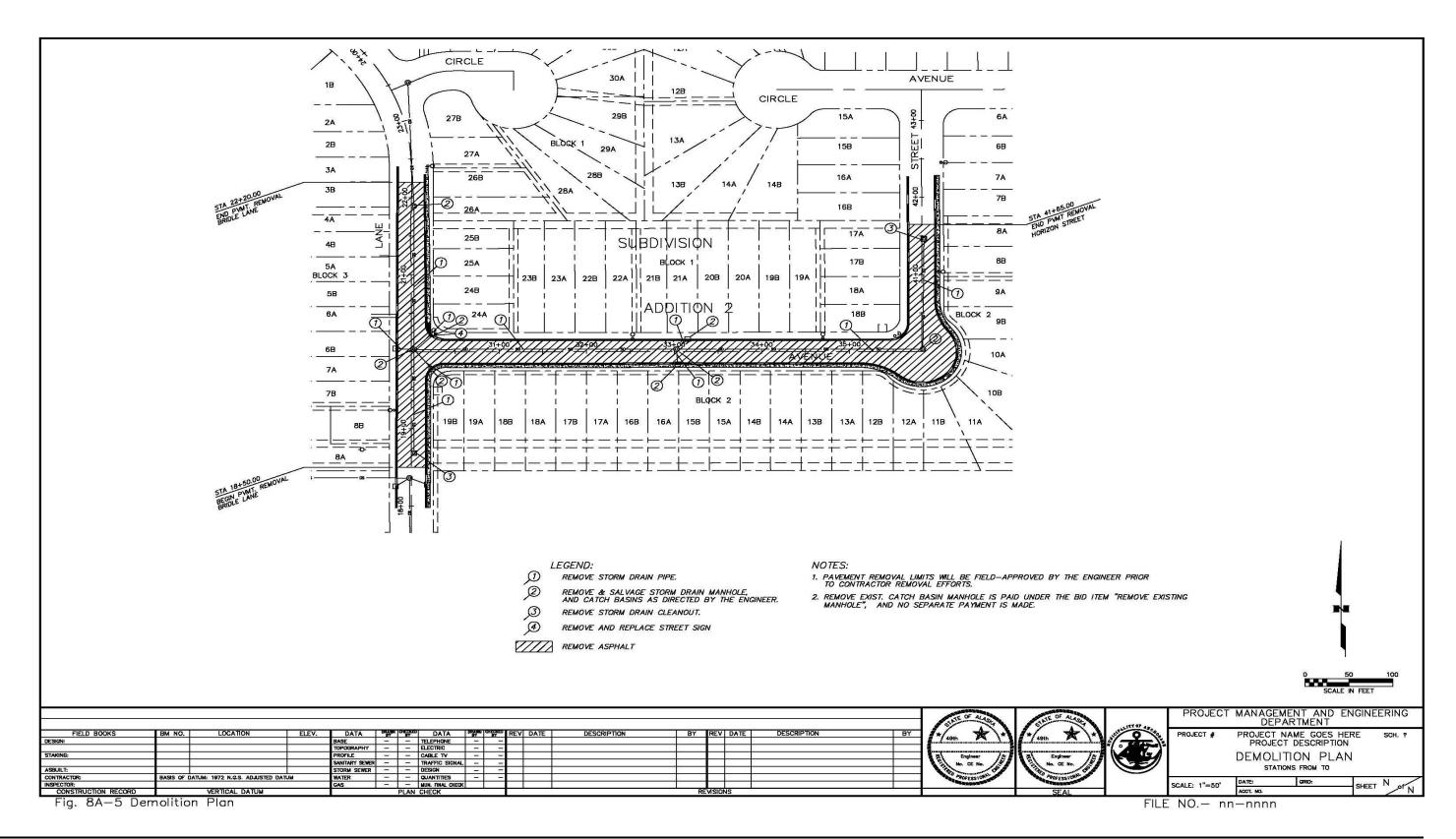


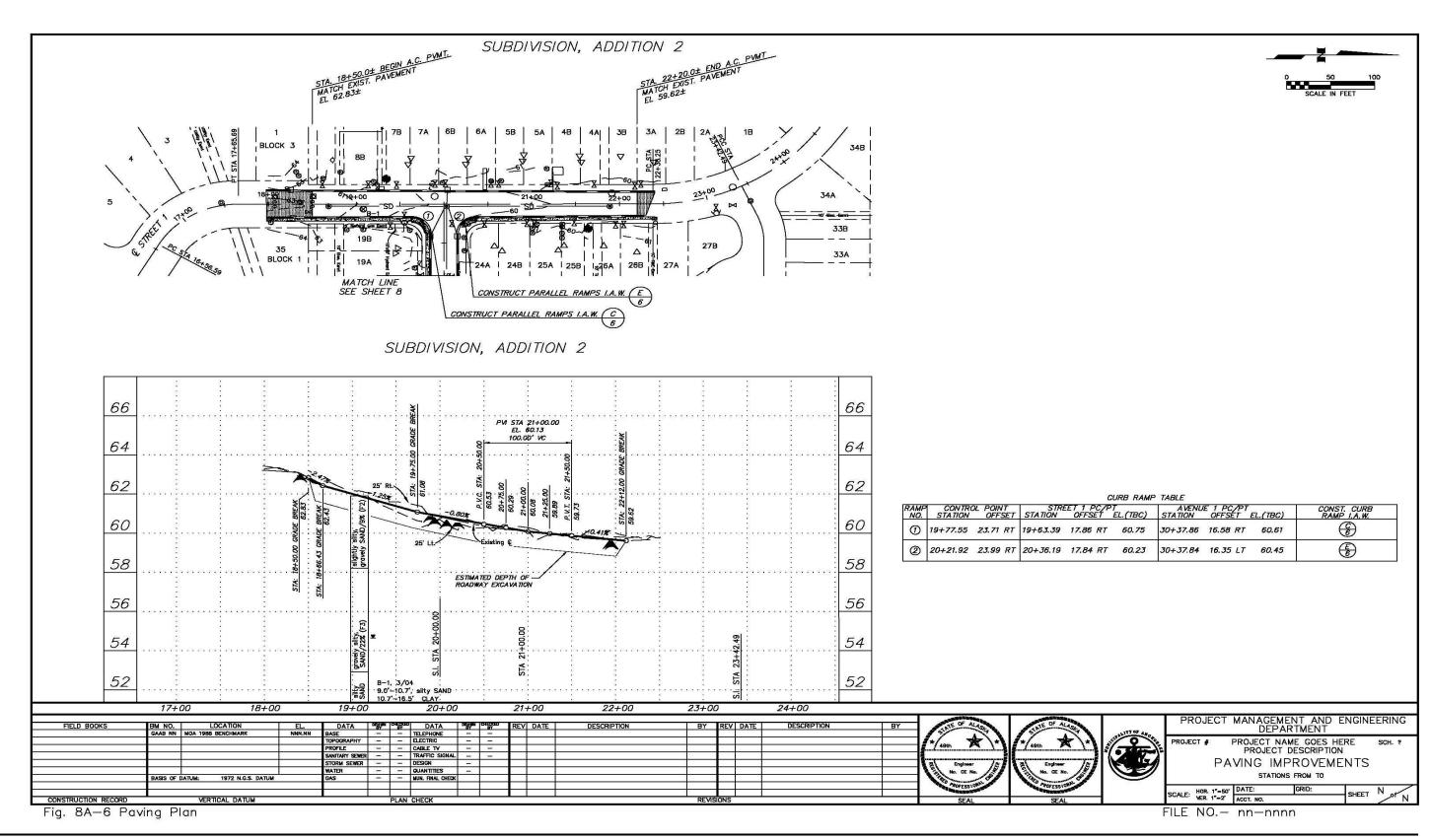
Fig. 8A—3 General Notes and Legend

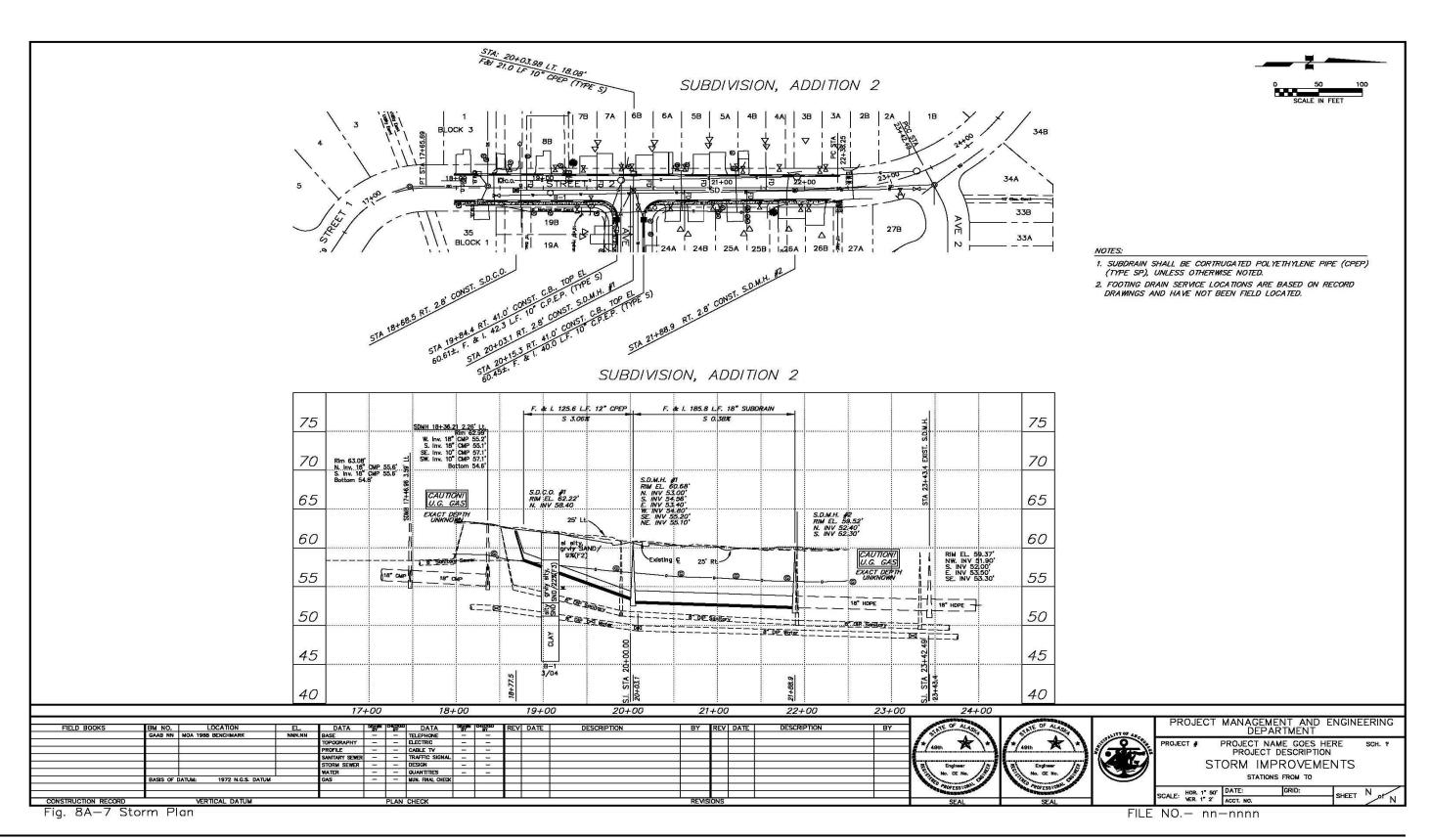
FILE NO.- nn-nnnn

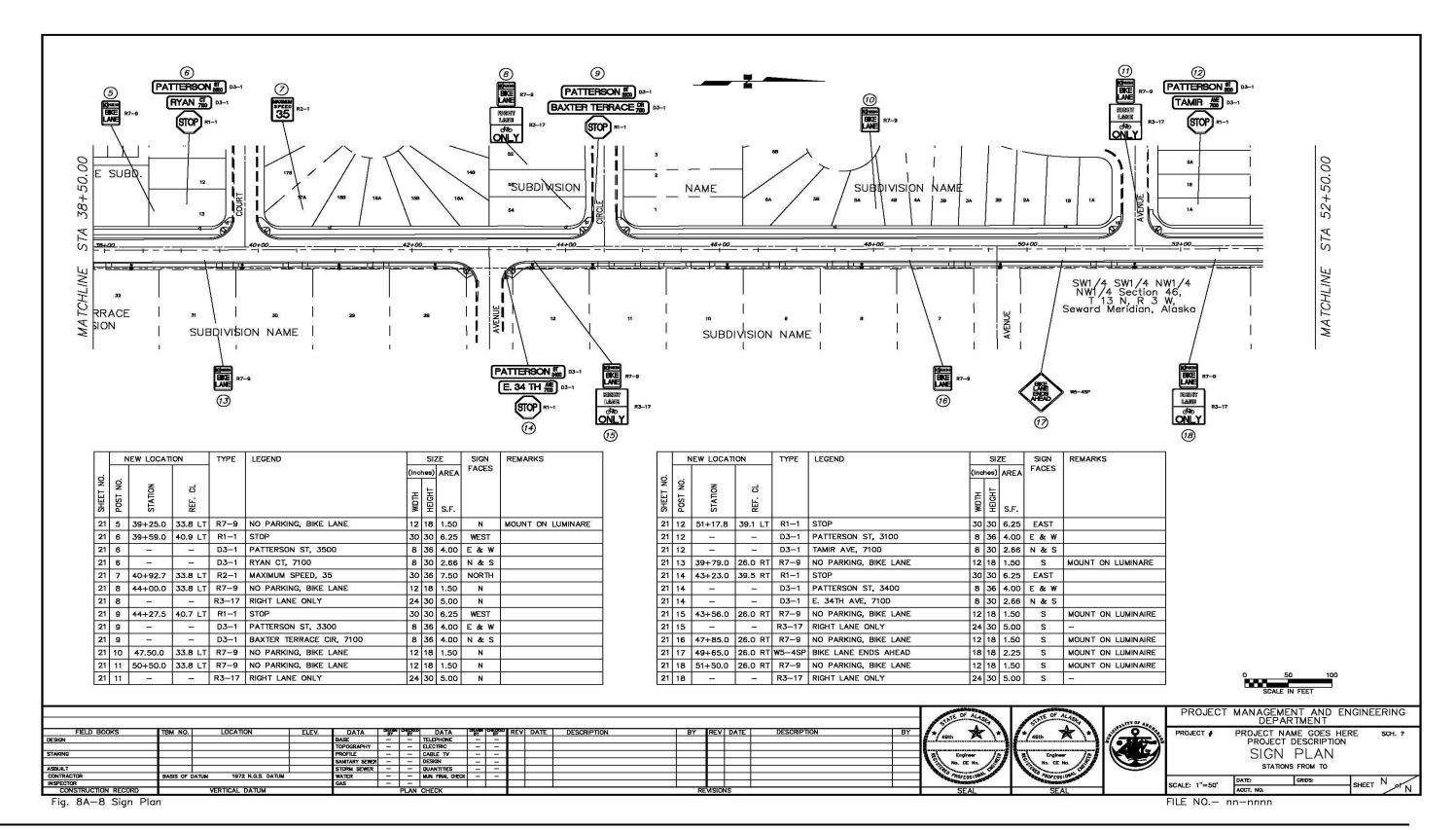


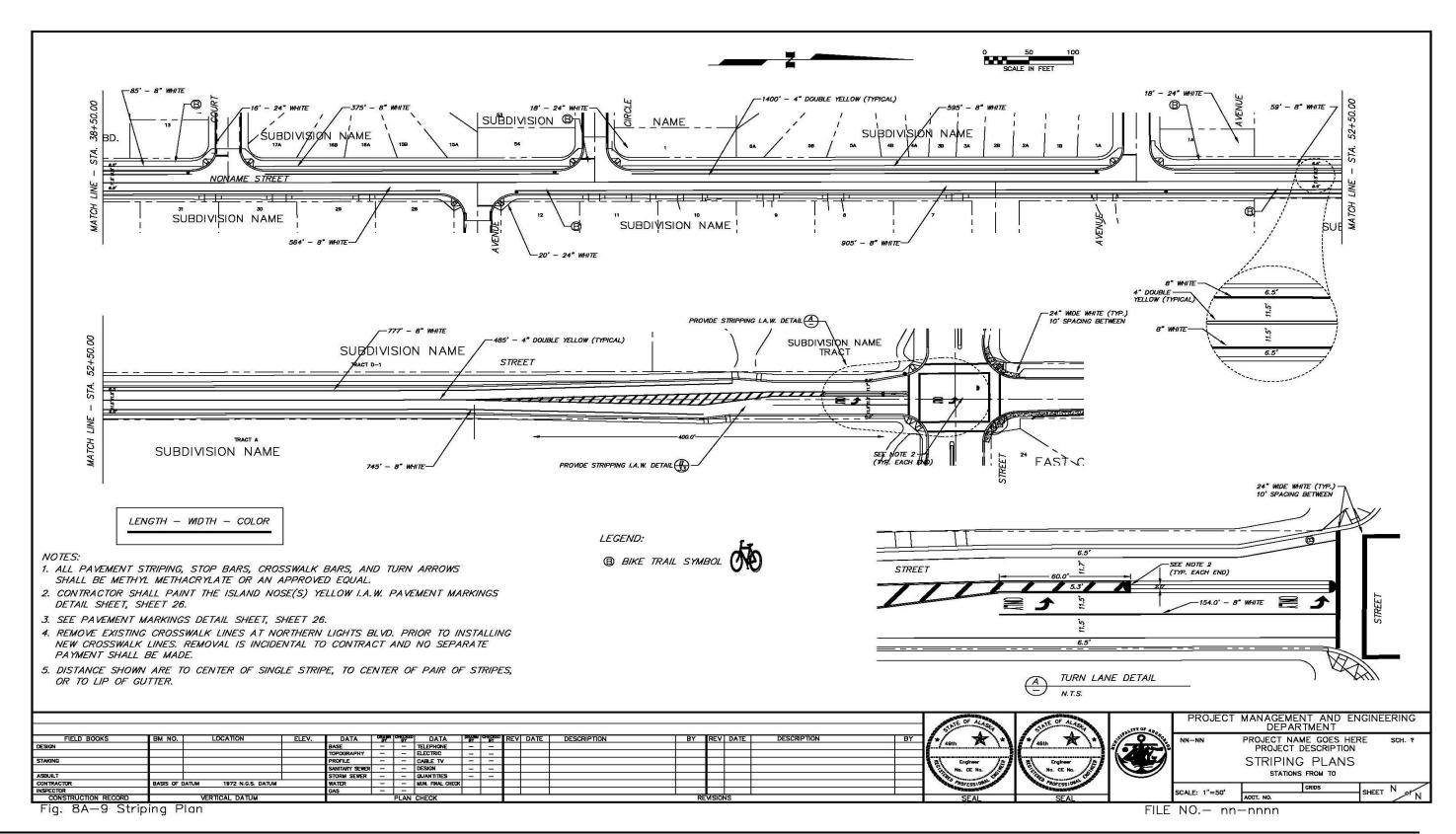


MOA Project Management & Engineering Design Criteria Manual

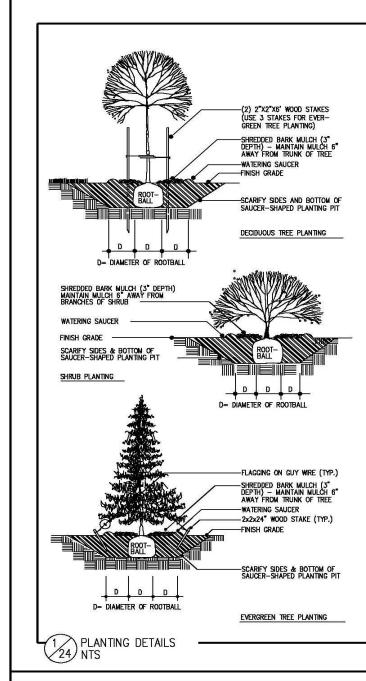


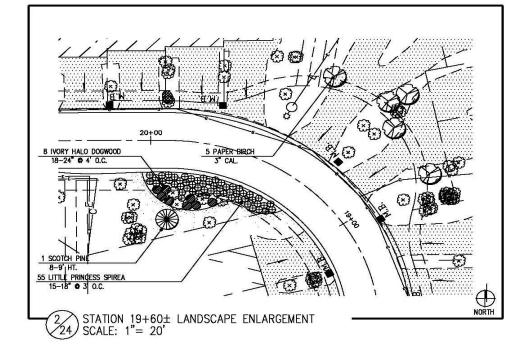






MOA Project Management & Engineering Design Criteria Manual



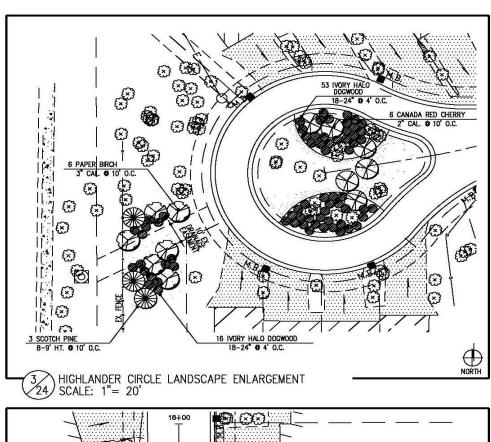


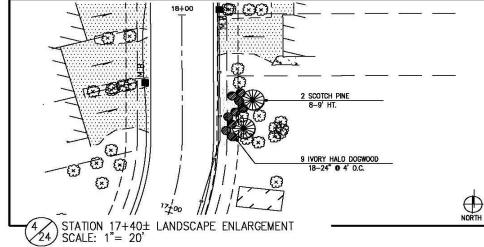
#### -PLANT SCHEDULE

BOTANICAL NAME	COMMON NAME	QUAN.	SIZE	ROOT	REMARKS		
BETULA PAPYRIFERA	PAPER BIRCH	19	3" CAL	B&B	NURSERY GROWN		
PINUS SYLVESTRIS	SCOTCH PINE	7	8-9' HT.	B&B	NURSERY GROWN WITH FULL BRANCHING TO BASE		
PRUNUS VIRGINIANA 'SCHUBERT'	CANADA RED CHERRY	6	2" CAL	B&B			
CORNUS ALBA 'BAILHALO'	IVORY HALO DOGWOOD	98	18-24" HT.	CONT.			
SPIRAEA JAPONICA 'LITTLE PRINCESS'	LITTLE PRINCESS SPIREA	87	15-18" HT.	CONT.			

#### -PLANTING NOTES

- 1. CUT BURLAP AND WIRE BASKET, PEEL DOWN, REMOVE OR LAY FLAT IN BOTTOM OF PLANT PIT. REMOVE CONTAINERS.
- 2. DEPTH OF PLANT PIT VARIES DEPENDING ON ROOTBALL THICKNESS, SOIL LOOSENED AND SUITABLE FOR ROOT GROWTH, 4-5 TIMES ROOTBALL DIAMETER, SET ROOTBALL ON SOLID GROUND TO PREVENT SETTLING. PLANT TREE TRUNK WITH TRUNK FLARE AT OR UP TO 1° ABOVE FINISHED GRADE.
- STAKE TREES ONLY IN CONDITIONS OF HIGH WINDS OR ADJACENT TO HIGH TRAFFIC AREAS. USE THREE 2"X2"X24" WOOD
  STAKES; EMBED AT ANGLE DO NOT PENETRATE ROTIFICAL USE SOFT, FLESH ATTENDED AT THE CONTINUATELY
  1/3" TREE HEIGHT. DO NOT STAKE TREE RIGID; IT MUST MOVE IN THE WIND. REMOVE STAKES AFTER ONE GROWING SEASON.
- 4. BACKFILL WITH TOPSOIL & THOROUGHLY WATER BACKFILL TO PREVENT AIR POCKETS. DO NOT TAMP, COMPACT, OR FERTILIZE AT TIME OF PLANTING.
- 5. EXCAVATED MATERIAL FROM PLANTING PITS SHALL BE REMOVED FROM THE SITE AND SHALL BE INCIDENTAL TO THE CONTRACT.
- 6. CONTRACTOR SHALL STAKE TREE LOCATIONS AS SHOWN ON THE PLANS. ENGINEER SHALL APPROVE STAKED TREE LOCATIONS PRIOR TO EXCAVATION.





FIELD BOOKS	BM NO.	LC	CATION	ELEV.	DATA	DRAM	CHECKED	DATA	DRAWN	CHECKED	REV	DATE	DESCRIPTION	BY	REV	DATE	DESCRIPTION	B,
DESIGN:					BASE	155	1,-1	TELEPHONE	I	-				î î		1		
					TOPOGRAPHY	-	27—33	ELECTRIC	Ĺ	_								
STAKING:					PROFILE	-	10-31	CABLE TV	-	-								Т
					SANITARY SEWER	8-55	10-31	TRAFFIC SIGNAL	_	_								1
ASBUILT:					STORM SEWER	725	35—36	DESIGN		-				0.00				$\top$
					WATER	- C	_	QUANTITIES	1	1000								
CONTRACTOR:	BASIS OF D	DATUM:	1972 N.G.S. DATUM		GAS	-	70-31	MUN. FINAL CHECK	L	-				T				T
INSPECTOR:														ALC:				
CONSTRUCTION RECORD	***	VERTI	CAL DATUM		1		PLAN	CHECK					*	R	EVISIO	NS	*	

Fig. 8A-10 Landscape Plan FILE NO.-nn-nnnn



PROJECT MANAGEMENT AND ENGINEERING
DEPARTMENT

PROJECT # PROJECT NAME GOES HERE

LANDSCAPE DETAILS

SCALE: DATE: GRIDS: SHEET NOT

MOA Project Management & Engineering Design Criteria Manual

Chapter 8	Plans and Specifications

## **APPENDIX 8B**

## **AutoCAD Standards**

#### INTRODUCTION

This Appendix is an accompaniment to the MOA AutoCAD standard drawings which were created in AutoCAD 2000, though they are usable in AutoCAD R14. These standards were developed to establish base criteria for the exchange and compatibility of information. These files provide the designer with sample drawings for use on MOA projects. Users should familiarize themselves with Section 8.2 of this DCM which gives detailed information about the required content and presentation of plan sheets. An example of each dwg file is also included in this appendix.

The MOA AutoCAD standards drawings include the following dwg files:

- 1. COVERSHT.DWG sample cover sheet (Figure 8B-1).
- 2. KEYMAP.DWG sample key map and legend sheet (Figure 8B-2).
- 3. P\_P.DWG sample plan and profile sheet (Figure 8B-3).
- 4. PLAN.DWG sample plan sheet (can also be used for detail sheets) (Figure 8B-4).
- 5. SYMBOLS.DWG listing of the most common symbols found on MOA projects. The appropriate layer name and pen weight is also given for each symbol. (Figures 8B-5 through 8B-8).
- 6. FONTS.DWG lettering legend for title blocks, plan views and profile views. Font style, text height, and pen weight are given for each type of feature typically found on MOA plan sheets (Figures 8B-9 through 8B-11).

## COLOR AND LINE WIDTH RELATIONSHIP

For presentation and plotting consistency, standard colors and assigned pen widths have been developed and are illustrated in Figure 8B-12. Shaded line types should not be used.

#### LAYER NAMING CONVENTION

AutoCAD drawings produced for MOA shall follow the standard layering convention for MOA. The layer naming convention is a hierarchical system reflecting the most distinctive features of the drawing first, with a single character for each subsequent further definition. Figure 8B-13 illustrates the layering scheme.

#### Level 1

The first letter of the layer name indicates which general type of information is contained on that layer, such as plan view (P), profile view (R), and sheet information (S). A fourth option for the first character is N for notes. This layer would contain information to users of the drawing and not information that is shown on the drawing when plotted.

#### Level 2

The second character of the layer name indicates the accuracy or condition of the entities represented. Most entities are either proposed (P) or existing (E). However, more descriptive information about the accuracy of the entity may be communicated with the second character. These include:

- (A) If the entity is abandoned or vacated.
- (D) If the entity is slated for demolition, it is helpful to know this because that entity may not appear on the site in the future.

It is important to identify existing information not gathered from an actual field survey because these entities may present problems in the present and in the future. In a few cases, proposed information may also be digitized and not actually computed or calculated. A designer needs to know what can be relied upon and at what accuracy. It is also helpful to know the origin of the information for future updates. For these reasons, information collected or estimated from the following sources or methods are specifically delineated by the layer name:

- (1) aerial photography
- (4) digitized existing information
- (5) computed existing information
- (6) digitized proposed information
- (7) as-builts (this is also used to add contractor's as-built information after completion of a project)
- (8) unknown—use when the origin of the entity is unknown

#### Level 3

The third character of the layer name identifies the type of AutoCAD entity that is shown. These include: text (T), lines (L), symbols (S), details (D), and points (P).

#### Level 4

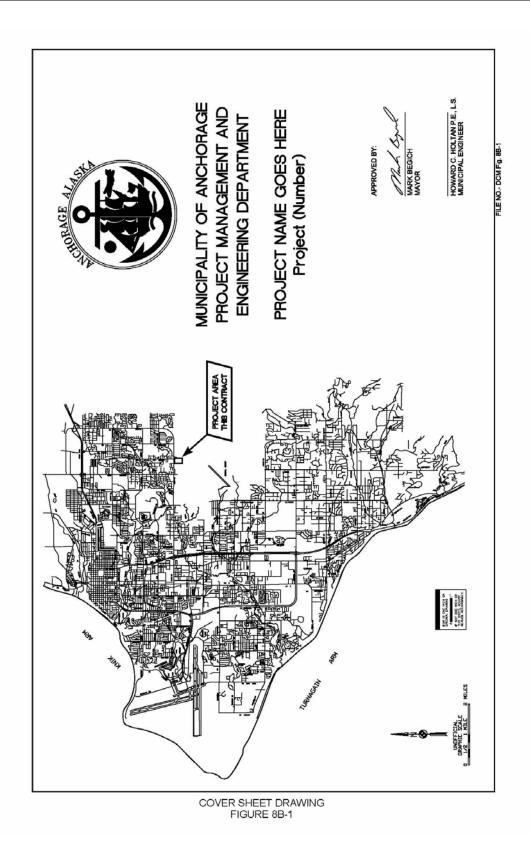
The fourth character identifies a general grouping for the entity—property (P), utility (U), topography (T), and roadway (R). The fourth character is also used for point entities to indicate if the point is usable for terrain modeling.

#### Levels 5 and up

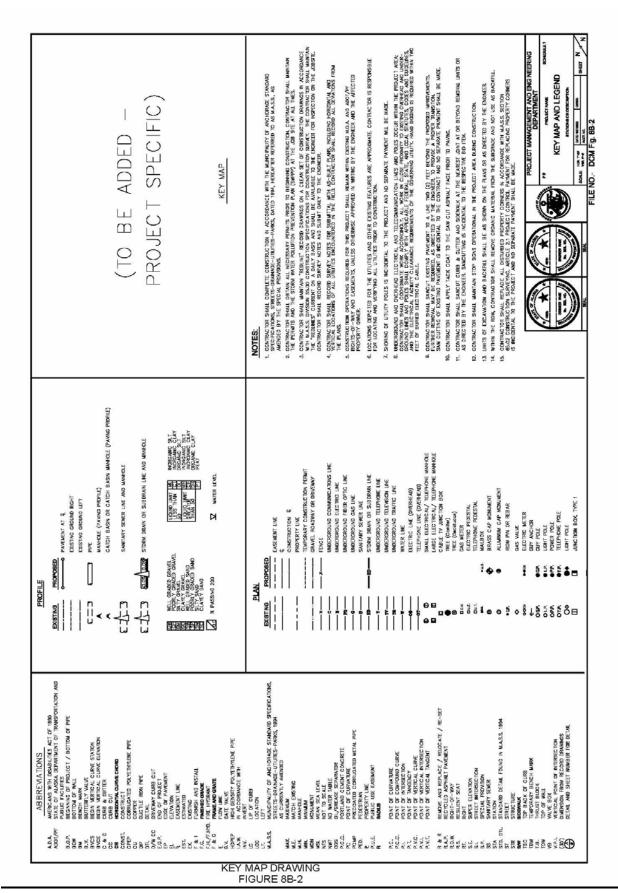
The last characters of the layer name are used to give specific information about the entity. The designer may choose to get very specific, such as communicating the width of a pavement marking. For example, a 24-inch stop bar would be on layer PPLRR24 for Plan, Proposed, Line, Roadway, Striping, 24.

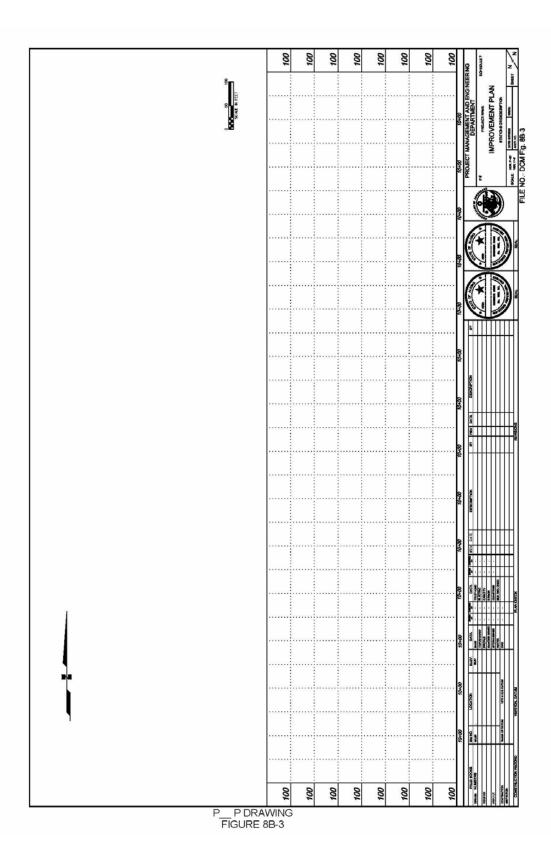
#### **Customizing Layer Names**

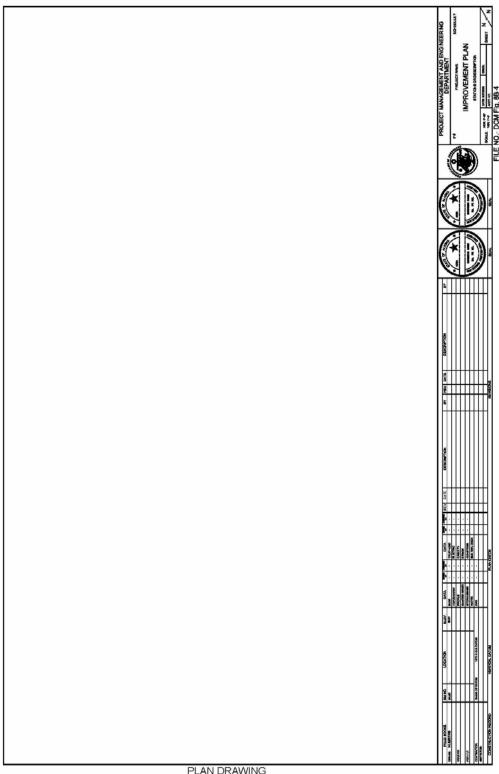
Occasions may arise when an entity cannot be properly described using the standard layer naming convention beyond the fourth level; or, additional descriptive information in the layer name may be useful. In these cases, the designer may add other information to the end of a standard layer name. The customized information shall be preceded by a "-". For example, an existing bridge would go on layer PELTS-BRIDGE for Plan, Existing, Line, Topo, Structures, BRIDGE.



MOA Project Management & Engineering Design Criteria Manual







PLAN DRAWING FIGURE 8B-4

SYMBOL		PLAN LEGEND	LAYER NAME	LINE WIDTH (inches)		
EXISTING (E)	PROPOSED (P)	I BAN LEGENS	(*) = (E)(P)	(E)	(P)	
		CENTERLINE	P*LRCL	.010	.022	
		PROPERTY LINE	P*LPP	.012	.022	
		EASEMENT LINE	P*LPE	.010	.014	
		SECTION LINE	P*LPS	.011	.014	
		UNPAVED (GRAVEL) EDGE OF ROAD	PELRG	.005		
		EDGE OF PAVEMENT	P*LRP	.005	.014	
		PAVEMENT REMOVAL	PPLRPR		.005	
===		TYPE 1 CURB & GUTTER	P*LRPC	.005	.014	
===	=====	TYPE 2 CURB & GUTTER	P*LRPC	.005	.014	
25	25	RADIUS TO BACK OF CURB	P*TRCB	.005	.010	
<del></del>	, v	DRAINAGE SWALE	P*LT?	.005		
_		DRAINAGE ARROW	P*ST?	.005	.022	
$\rightarrow \rightarrow \rightarrow \rightarrow \rightarrow$	$\rightarrow \rightarrow \rightarrow$	P.C.C. VALLEY GUTTER	P*LT-VG	.005	.022	
V _V	Y A Y	DITCH	P*LTD	.005	.014	
Y	Y	BLUFF AREA / EARTHWORK SLOPE	P*LRS-	.005	.014	
)======(		CULVERT	P*SUV	800.	.022	
××	_ <del>×_×</del> _×	FENCE (AS NOTED)	P*LTF	.005	.014	
$\Box$	0	DECIDUOUS TREE/SHRUB	PESTV-	.005		
**	*	CONIFEROUS TREE/SHRUB	PESTV	.005		
~~		VEGETATION & BRUSH	P*SRU-GR	.005	.014	
00000	*****	GUARDRAIL	P*SRU-HR	.005	.014	
p b	• • •	STREET SIGN (1S, 2S)	P*SRI-	.005	.022	
	G.	HANDICAPPED PARKING	PPSRI-HCP		.022	
$\bigcirc$	•	TEST BORING OR TEST HOLE	P*STO	.005	.014	
		RAILROAD TRACKS	PELTRR	.005		
□ M.B.	■ M.B.	MAILBOX	P*STB	.005	.014	
		HOUSE OR STRUCTURE	P*STS	.008		
		LAKE OR POND	PELTR	.008		
(123)	123	CONTOUR LINE	P*LTC-	.005	.022	
SPT EL. SPT EL	SPTEL SPTEL	SPOT ELEVATION	VARIES	.008	.014	
DATE: MAY 200	5	STANDARD SYMBOLS	5			
REVISED:		FIGURE 8B-5				

SYMBOL		PLAN LEGEND	LAYER NAME		WIDTH
EXISTING (E)	PROPOSED (P)	PLAN LEGEND	(*) = (E)(P)	(E)	(P)
●IP		IRON PIN (REBAR) / IRON PIPE	PESPZ	.008	
		BENCHMARK	PESPZ	.008	
lacktriangle		TEMPORARY BENCHMARK	PESPZ	.008	
lacktriangle		BRASS CAP MONU./BLM CORNER	PESPZ	.008	
₩		PK NAIL, SPIKE OR CONCRETE NAIL	PESPZ	.008	
•		ALCAP OR PLASTIC CAP	PESPZ	.008	
		FILL SLOPE LIMITS	PPLRSF		.022
		CUT SLOPE LIMITS	PPLRSC		.014
		RETAINING WALL	P*SRE	.009	
	sp	STORM DRAIN LINE	P*LUD	.005	PLINE
— s —	s	SANITARY SEWER LINE	P*LUS	.005	PLINE
— w—	w	WATER LINE	P*LUW	.005	PLINE
— G—		GAS LINE	P*LUG	.005	
— E —		UNDERGROUND ELECTRIC LINE	P*LUE-UG	.005	
— OE —		OVERHEAD ELECTRIC LINE	P*LUE-OH	.005	
— оет —		OVERHEAD ELECT. & TELE. LINE	P*LUE-OH	.005	
— т —		UNDERGROUND TELEPHONE LINE	P*LUT-UG	.005	
— от —		OVERHEAD TELEPHONE LINE	P*LUT-OH	.005	
- c $-$		UNDERGROUND CABLE TV	P*LUC-UG	.005	
— oc —		OVERHEAD CABLE TV LINE	P*LUC-OH	.005	
- FO $-$		UNDERGROUND FIBER OPTIC	P*LUC-F0	.005	
0	•	STORM DRAIN MANHOLE	P*SUD	.005	.022
	•	CATCH BASIN MANHOLE	P*SUD	.005	.022
		CATCH BASIN	P*SUD	.005	.022
$\bigcirc$		SANITARY SEWER MANHOLE	P*SUS	.005	.022
Oc.o.	<b>■</b> c.o.	SANITARY SEWER CLEANOUT	P*SUS	.005	.022
$\triangleright$	<b> </b>	SEWER SERVICE CONNECTION	P*SUS	.005	.022
CP	œ	CESSPOOL / SEPTIC TANK	P*SUS-	.005	.022
	<b>+</b>	WATER WELL	P*SUW	.005	.022
$\bigcirc$	<b>⋈</b>	WATERTIGHT SANITARY SEWER MANHOLE	P*SUS	.005	.022
DATE: MAY 2005		STANDARD SYMBOLS			
REVISED:		FIGURE 8B-6			

SYMBOL		DIAN LEGEND	LAYER NAME		WIDTH
EXISTING (E)	PROPOSED (P)	PLAN LEGEND	(*) = (E)(P)	(E)	hes) (P)
$\bowtie$	*	WATER SERVICE KEY BOX/VALVE MARKER		.005	.022
$\bowtie$	*	WATER MAIN LINE VALVE BOX	P*SUW-VB	.005	.022
$\bigcirc$	*	FIRE HYDRANT	P*SUW	.005	.022
$\boxtimes$	*	DRY WELL	P*SUW	.005	.022
	-	STUBOUT	P*SU?	.005	PLINE
	-	CAPPED OR PLUGGED END	P*SU?	.005	PLINE
$\Diamond$		GAS VALVE	P*SUG	.005	
□ G.M.		GAS METER	P*SUG	.005	
□ U.E.		UNDERGROUND ELECTRIC PEDESTAL	P*SUE-UG	.005	
(E)		ELECTRICAL MANHOLE / J- BOX	P*SUE	.005	.022
O-O EM	<b>●</b> ●EM	ELECTRIC METER	P*SUE	.005	.022
		JUNCTION BOX (TYPE I, II, & III)	P*SUE	.005	.022
E	Е	ELECTRICAL VAULT / MANHOLE	P*SUE	.005	.022
<b>○</b>	• *	LUMINAIRE	P*SUE	.005	.022
-0-	-	UTILITY POLE	P*SUE	.005	.022
$\overline{}$		GUY POLE	PESUE	.005	
$\leftarrow$		GUY ANCHOR	P*SUE	.005	
[2223]	$\bowtie$	CONTROLLER OR ATR CABINET	P*SUE	.005	.022
K-N   X     X	$\boxtimes$	LOAD CENTER	P*SUE	.005	.022
sc		SWITCH CABINET	P*SUE	.005	
≕		ELECTRIC TRANSFORMER	P*SUE	.005	
-Ø-	•	JOINT USE POWER & TELE. POLE	P*SUE	.005	.022
		TELEPHONE MANHOLE	P*SUT	.005	
□ U.T.		UNDERGROUND TELE. PEDESTAL	P*SUT	.005	
□ U.C.		UNDERGROUND TV CABLE PEDESTAL	P*SUC-UG	.005	
☐ FO		UNDERGROUND FIBER OPTIC PEDESTAL	P*SUF0	.005	
* WATER VA	ALVE SYMBOLS SHA	ALL BE ALIGNED IN THE DIRECTION OF WATE	R FLOW		
STANDARD STMBOLS					
REVISED:		FIGURE 8B-7			

SYMBOL		PROFILE LEGEND	LAYER NAME		WIDTH hes)
EXISTING (E)	PROPOSED (P)	PROFILE LEGEND	(*) = (E)(P)	(E)	(P)
		CENTER LINE (R.O.W.)	R*LRCL	.008	
		WEST OR NORTH PROPERTY LINE	R*LPP-	.005	
		EAST OR SOUTH PROPERTY LINE	R*LPP-	.005	
	0.00%	GRADE OF PAVEMENT AT Q	R*LRP	.005	PLINE
		EXISTING GROUND OVER PIPE	RELTG-	.005	
٣3	0.00%	PIPE	R*SUS	.005	.022
•	0	PIPE	R*SUS	.005	.022
		STORM DRAIN MANHOLE	RESUD	.005	
		CATCH BASIN OR CATCH BASIN MANHOLE (PAVING PROFILE)	RESUD	.005	
▼(NWT)		WATER LEVEL (NO WATER TABLE)	RESTG	.005	
Å	l A i				
$\bigcap$	/\	STORM DRAIN MANHOLE & STORM DRAIN PIPE	R*SUD	.005	.022
803	2 0 x 3				
l ă l					
<u></u>		SOILS CLASSIFICATION & % PASSING 200	REDTO	.005	
CM/983					
7////	////	INSULATION	R*HU?I	.XX	.xx
8/A154/SA	*****	CONCRETE	R*HTN	.xx	.xx
	5000000	GRAVEL	R*HTO	.XX	.xx
		COMPACTED SOIL	R*HTO	.XX	.xx
SAN MARKETAN	ISSENTIMESSUS	NATURAL SOIL	R*HT0	.XX	.xx
KDFDFDF	25253	METAL GRATING	R*HTS	.xx	.xx
DATE: MAY 2005		STANDARD SYMBOLS	 }		
REVISED:		FIGURE 8B-8			

ITEM	FONT STYLE	TEXT HEIGHT	LINE WEIGHT
FIELD BOOK NUMBER	SIMPLEX	.12	.010
DATUM INFORMATION	SIMPLEX	.12	.010
PROJECT TITLE	SIMPLEX	.12	.010
AREA OR STREET NAME	SIMPLEX	.20	.022
SECTION OF PROJECT	SIMPLEX	.12	.010
SCALE	SIMPLEX	.12	.010
DATE	SIMPLEX	.12	.010
GRID NUMBER	SIMPLEX	.12	.010
ACCOUNT NUMBER	SIMPLEX	.12	.010
PROFESSIONAL ENGINEER'S NUMBER	SIMPLEX	.12	.010
SHEET NUMBER	SIMPLEX	.12	.014
FILE NUMBER	SIMPLEX	.24	.022
REVISIONS	SIMPLEX	.12	.010

#### NOTES:

- 1. All lettering in title block shall be vertical and SIMPLEX font.
- 2. For lettering, use text height and pen weight recommended in these standards.

Date: May, 2003

LETTERING LEGEND - TITLE BLOCK FIGURE 8B-9



ITEM	FONT STYLE	TEXT HEIGHT	LINE WEIGHT
SUBDIVISION NAME	DOT	.24	.014
BLOCK NUMBER	DOT	.24	.014
LOT NUMBERS	SIMPLEX	.12	.014
STREET NAMES	SIMPLEX	.175	.014
100' STATION TEXT (EXIST) (PROPOSED)	SIMPLEX	.12	.014
STREET WIDTHS	SIMPLEX	.12	.010
SPECIFIC ELEVATIONS (EXIST)	SIMPLEX	.12	.010
PROPERTY AND EASEMENT NOTES	SIMPLEX	.12	.010
EXISTING FEATURES AND UTILITY SYMBOLS	SIMPLEX	.12	.010
CONSTRUCTION NOTES	SIMPLEX	.12	.014
GENERAL NOTES	SIMPLEX	.12	.014
SHEET REFERENCE	SIMPLEX	.12	.014
EXISTING UTILITY LINE LABEL	SIMPLEX	.12	.005
PROPOSED UTILITY LINE LABEL	SIMPLEX	.12	.022
TABLES (COORDINATE, CURVE DATA, ETC)	MONOTXT	.12	.014

#### NOTES:

- All lettering in plan view directly related to new design or proposed construction shall have an oblique angle of 15°.
- For lettering, use font style, text height and pen weight recommended in these standards.

Date: May, 2003

LETTERING LEGEND - PLAN VIEW FIGURE 8B-10



ITEM	FONT STYLE	TEXT HEIGHT	LINE WEIGHT
STATIONING SCALE	SIMPLEX	.12	.014
ELEVATION SCALE	SIMPLEX	.24	.022
Ç STATIONING	SIMPLEX	.20	.022
P. & C REFERENCE	SIMPLEX	.12	.014
CONSTRUCTION NOTES	SIMPLEX	.12	.014
SOILS CLASSIFICATION	SIMPLEX	.12	.010
GRADE & VERTICAL CURVE DATA	SIMPLEX	.12	.014
EXISTING UTILITY DATA	SIMPLEX	.12	.010

#### NOTES:

- All lettering in profile view directly related to new design or proposed construction shall have an oblique angle of 15°.
- For lettering, use font style, text height and pen weight recommended in these standards.

Date: May, 2003

LETTERING LEGEND - PROFILE VIEW FIGURE 8B-11



	COLOR NUMBER	FULL SCALE LINE WIDTH	HALF SCALE LINE WIDTH
#1	(RED)	0.0079	0.0039
#2	(YELLOW)	0.0098	0.0051
#3	(GREEN)	0.0138	0.0079
#4	(CYAN)	0.0276	0.0138
#5	(BLUE)	0.0098	0.0051
#6	(MAGENTA)	0.0118	0.0059
#7	(WHITE)	0.0098	0.0051
#8	(GREY)	0.0079	0.0035
#9	(LT. GREY)	0.0051	0.0020
#10	(RED ORANGE)	0.0118	0.0059

DATE: MAY 2005

REVISED:

COLOR/LINE WIDTH RELATIONSHIPS (In Inches)
FIGURE 8B-12



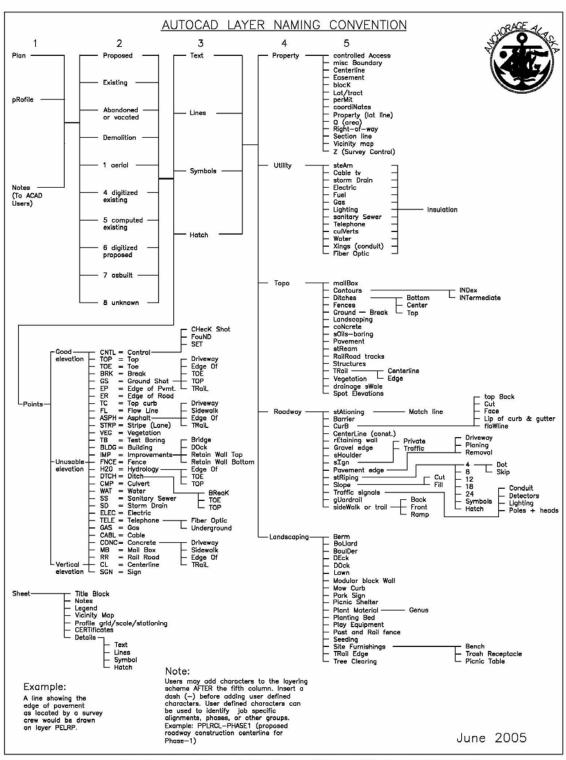


FIGURE 8B-13 AUTOCAD LAYER NAMING CONVENTION

**APPENDIX 8C** 

**Project Manual** 

## HARTZELL ROAD EXTENSION E. 79<sup>th</sup> Avenue to Lore Road

03-14

Invitation to Bid No. \_\_\_\_\_

#### PROJECT MANUAL

Municipality of Anchorage Project Management & Engineering Department 4700 Bragaw Street Anchorage, Alaska 99507

# MUNICIPALITY OF ANCHORAGE PROJECT MANAGEMENT & ENGINEERING DEPARTMENT

#### HARTZELL ROAD EXTENSION E. 79<sup>th</sup> Avenue to Lore Road

03-14

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MUNICIPALITY OF ANCHORAGE GENERAL PROVISIONS, STANDARD SPECIFICATIONS STREETS-DRAINAGE-UTILITIES-PARKS, DATED 1994, MAY BE PURCHASED FOR \$60.00 PER SET AT THE OFFICE OF THE PURCHASING OFFICER.

# MUNICIPALITY OF ANCHORAGE PROJECT MANAGEMENT & ENGINEERINGDEPARTMENT

## HARTZELL ROAD EXTENSION E. 79<sup>th</sup> Avenue To Lore Road

03-14

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**INVITATION TO BID** 

# MUNICIPALITY OF ANCHORAGE PURCHASING DEPARTMENT

# Invitation to Bid No.

Sealed bids will be received in accordance with the time schedule shown below by the Municipality of Anchorage at the Purchasing Department, 632 West 6th Avenue, Suite 520; Anchorage, Alaska, 99501, for:

Hartzell Road Extension, E. 79th Avenue to Lore Road, Project No. 03-14

consisting of approximately 34,000 C.Y. of Excavation; 55,000 Tons of Classified Fill and Backfill; 2,260 of Curb and Gutter Removal; 3,600 S.Y. of Pavement Removal; 1,200 Tons A.C. Pavement; 8 Catch Basins; 11 Storm Drain Manholes; 1,900 L.F. of Storm Pipe; 1 Oil and Grit Separator; 10 Electroliers; and related miscellaneous appurtenances.

# ESTIMATED CONSTRUCTION COST: Between \$1,000,000 and \$2,000,000 Site Visit(s) at Pre-Bid Conference at Bids Opened at Post-Bid Conference at

At the above-indicated time, the bids will be opened publicly and read. Bids must be received by the Purchasing Officer prior to the time fixed for opening of the bids to be considered. Time of receipt will be as determined by the time stamp in the Purchasing Office, Suite 520.

Drawings, specifications, and contract documents may be examined and will be available for pickup at 632 West 6th Avenue, Suite 520; Anchorage, Alaska; Monday through Friday, 8 a.m. until 12 noon and 1 p.m. until 5 p.m. These documents are available for sale on a non-refundable basis at \$ per set.

Fees stated above include parcel post charges (4th class mail). Should expedited handling be desired, Federal Express or equivalent service will be utilized on a collect-on-delivery basis.

The Municipality of Anchorage reserves the right to reject any and all bids and to waive any informalities in the bids. No bidder may withdraw his bid after the hour set for the opening of bids or before the Award of Contract unless said award is delayed for a period exceeding forty-five (45) days from the time of the opening.

The Municipality of Anchorage shall not be responsible for bid preparation costs, nor for costs, including attorney fees, associated with any (administrative, judicial, or otherwise) challenge to the determination of the lowest responsive and responsible bidder and/or Award of Contract, and/or rejection of bids. By submitting a bid, each bidder agrees to be bound in this respect and waives all claims to such costs and fees.

Contracts shall be awarded by written notice issued by the Purchasing Officer to the lowest responsive and responsible bidder; however, preference will be given to local bidders in compliance with Anchorage Municipal Code, Section 7.20.040.

A Pre-Bid Conference will be held at the above-indicated time in the Purchasing Office for the purpose of answering questions bidders may have and to consider suggestions they may wish to make. Changes resulting from this conference will be made by Addendum immediately following the conference. This conference is held for the benefit of the bidders. It is requested that some person of authority from the office of the prospective bidder attend this meeting.

The Municipality of Anchorage assumes no responsibility for interpretations or presentations made by its officers or agents unless such interpretations or presentations are made by written addendum to this Invitation to Bid.

Bonding requirements are per M.A.S.S.B./M.A.S.S. or as per Special Provisions.

#### PUBLISH ONE TIME

Date			
LPO <u>L</u>			
		Bart Mauldin Purchasing Officer	

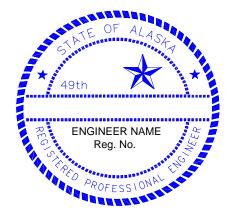
# MUNICIPALITY OF ANCHORAGE PROJECT MANAGEMENT & ENGINEERINGDEPARTMENT

## HARTZELL ROAD EXTENSION E. 79<sup>th</sup> Avenue To Lore Road

03-14

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#### **SPECIAL PROVISIONS**



# MUNICIPALITY OF ANCHORAGE PROJECT MANAGEMENT & ENGINEERINGDEPARTMENT

#### HARTZELL ROAD EXTENSION

E. 79<sup>th</sup> Avenue to Lore Road

#### 03-14

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# MUNICIPALITY OF ANCHORAGE PROJECT MANAGEMENT & ENGINEERINGDEPARTMENT

# HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

03-14

#### SPECIAL PROVISIONS

#### SECTION 95.01 LOCATION AND SCOPE

All proposed Work is located within the Municipality of Anchorage corporate limits and is more particularly located on the design drawings. The Work included under this Contract consists of furnishing all labor, materials, equipment, supervision, and other facilities necessary to successfully complete the Work set forth in the Drawings and Specifications. It is the responsibility of the bidder to prepare the bid so that all material and/or fittings harmoniously conform to the intent of the Contract Drawings, Specifications, and Special Provisions.

Below are the schedules of Work that are presented in the Bid Proposal of this Contract:

#### SCHEDULE DESCRIPTION

- A Road Paving Improvements
- B Road Storm Drainage Improvements
- C Street Lighting Improvements

# SECTION 95.02 REFERENCE TO MUNICIPALITY OF ANCHORAGE STANDARD SPECIFICATIONS

This Contract is subject to and hereby incorporates by reference the Municipality of Anchorage Standard Specifications Streets Drainage Utilities Parks, dated 1994, hereinafter referred to as M.A.S.S.; the Municipality of Anchorage Sign Manual; the Alaska Traffic Manual (ATM) - Manual on Uniform Traffic Control Devices (MUTCD) Millennium Edition, with the Alaska supplement, dated January 17, 2003; the National Electrical Safety Code (NESC) as adopted and amended by the Municipality; the National Electrical Code as amended by the Municipality of Anchorage; and the 1994 Edition of the Standard Specifications for Structural Supports for Highway Sign, Luminaires and Traffic Signals. When conflicts exist between M.A.S.S. and MUTCD, the requirements of M.A.S.S. and these Special Provisions shall govern.

#### SECTION 95.03 TIME OF COMPLETION

This Project shall be completed within 60 calendar days after the Notice-to-Proceed is issued.

Contractor shall complete all Work Items in Schedule C, except those listed below, within 60 calendar days after the Notice-to-Proceed is issued.

Contractor shall complete the installation of the following Bid Items within 150 calendar days after the Notice-to-Proceed is issued:

- C3 30-foot fixed luminaire pole
- C4 Luminaire arm, 22-foot length
- C9 Luminaire, 400W, M-C, Type III

These Work Items are not eligible for winter shutdown pursuant to M.A.S.S. Section 10.05.24 Suspension of Work.

# SECTION 95.04 MODIFICATIONS AND/OR ADDITIONS TO MUNICIPALITY OF ANCHORAGE SPECIFICATIONS

The following listed provisions of M.A.S.S. are amended as hereinafter stated:

#### A. DIVISION 10 STANDARD GENERAL PROVISIONS

Add the following Section:

#### SECTION 10.00 ALL APPLICABLE M.A.S.S. ARTICLES

Delete all references to and requirements for compliance with Anchorage Municipal Code Chapter 7.60 the Disadvantaged/Women Owned Business (DBE/WBE) program and specifications.

#### SECTION 10.01 DEFINITIONS

Add the following definitions:

Record Drawings - Detailed drawings that accurately depict all changes in location (both horizontal and vertical), material, equipment, and other elements of Work accomplished by Contractor. The drawings shall also depict the horizontal and vertical locations of all utilities and obstructions <u>encountered</u> during construction. Contractor shall clearly mark final elevations and locations with actual dimensions, or existing dimensions with "ASB" if no changes occur.

ADA - The Americans with Disabilities Act of 1990. Public Law 101-336, which prohibits discrimination on the basis of disability by private entities in places of public accommodation.

ACS – Alaska Communications Systems.

ADEC - State of Alaska, Department of Environmental Conservation.

ADOT&PF - State of Alaska, Department of Transportation and Public Facilities.

AWWU - Anchorage Water and Wastewater Utility.

ENSTAR – ENSTAR Natural Gas Company.

GCI – General Communications, Incorporated.

ML&P – Municipal Light and Power.

OSHA – Occupational Safety and Health Administration.

#### SECTION 10.02 BIDDING REQUIREMENTS AND CONDITIONS

# Article 2.5 Disadvantaged and Woman-Owned Business Enterprises (DBE/WBE) Requirements

Delete this Article in its entirety.

#### SECTION 10.03 AWARD AND EXECUTION OF CONTRACT

#### Article 3.2 Receipt and Opening of Bids

Delete the second paragraph in its entirety and replace with the following paragraph:

The Municipality will not consider facsimile bids. Modification by facsimile of bids already submitted is considered if received in writing by the Purchasing Officer prior to the time of bid opening fixed in the Invitation to Bid. Facsimile modifications shall not reveal the amount of the original or revised bid. Modifications shall state a plus or minus to the affected bid item.

#### Article 3.4 Action on Bids

Add the following Subsection:

#### 3.4.1 Unbalanced Bids

The Municipality may reject any bid that is unbalanced if it is in the best interest of the Municipality to do so. A bid is unbalanced when, in the opinion of the Purchasing Officer, it allocates a disproportionate share of costs or profit, or both, to the price of one or more items of Work and reduces the share of costs or profit, or both, allocated to the price of another item or items of Work, and if there is a reasonable possibility that the bid will not result in the lowest overall cost of the Work to the Municipality.

#### Article 3.5 Bonds, Insurance, EEO and DBE/WBE Forms

Delete the first paragraph in its entirety and replace with the following paragraph:

If the amount of the Contract is \$100,000 or more, the successful Bidder shall furnish the Purchasing Officer a Performance and Payment Bond in the full amount of the Contract. If the amount of the Contract is less than \$100,000, the requirement for Performance and Payment Bond is the same as mentioned above. The Bond is for the faithful performance of this Contract in all respects including, but not limited to, payments for all material and labor. All alterations, extensions of time, additional work, and other changes authorized by the Contract Documents is made without securing the consent of the Surety or Sureties. Contractor shall provide the Bond with a good and sufficient corporate surety acceptable to the Municipality and

Power-of-Attorney for the person signing the Bond for the Surety must be submitted with the Bond.

#### Article 3.6 Execution of Contract

Delete the first paragraph in its entirety and replace with the following paragraph:

The Bidder whose bid is accepted shall execute the Contract and furnish the required bonding and insurance within 5 working days after Notice of Award of the Contract is issued.

Delete the first sentence of the third paragraph in its entirety and replace with the following sentence:

The Owner will execute the Contract within 10 working days after execution by the Contractor as set forth above.

#### SECTION 10.04 SCOPE OF WORK

#### Article 4.2 Interpretation of Contract, Specifications, and Drawings

Add the following paragraph:

A completed Design Clarification/Verification Request (DC/VR) form shall accompany all Contractor-initiated requests for interpretation or clarification of the Contract documents. Each request shall clearly and completely state the basis for lack of clarity in the Contract documents, and shall refer to the applicable specifications, plan sheets and details that give rise to the request. If not provided in the Contract documents, Contractor shall obtain a copy of the DC/VR form from the Engineer. Engineer will respond to the DC/VR in writing within ten (10) working days.

#### Article 4.3 Estimates of Quantities

Delete the first paragraph in its entirety and replace with the following paragraphs:

The quantities shown in the Bid, whether for a unit price contract or a combination of a lump sum contract and unit price contract, are approximate only and are not to be taken as either representations or warranties. Since quantities in the Contract Documents are estimates only, actual quantities may increase or decrease without constituting a change in the Work, unless the increase or decrease involves a major bid item that varies by more than 25 percent as provided below.

The cumulative variations in quantities, together with other changes in the Work, shall not cause the total value of the contract to exceed the limits stated in AMC 7.15.080 without approval by the Assembly.

#### Article 4.8 Reference Stakes and Surveying

Delete this Article in its entirety and replace with the following paragraphs:

Bench Marks and/or reference points have been identified and/or placed initially by the Engineer, and the horizontal and vertical reference locations are indicated in the plan drawings. It is Contractor's responsibility to determine that all construction surveying Work required is completed in strict conformity with M.A.S.S. Division 65 Standard Construction Specifications for Construction Survey.

At various points throughout the Work, Contractor's operations may disturb existing survey monuments, bench marks, or referenced points. If Contractor disturbs these items, Contractor shall replace them at Contractors' expense. Contractor shall replace, at Contractor's expense, survey monuments, bench marks, or reference points which, in the judgment of the Engineer, are outside the limits of the Work area and which are disturbed or destroyed by Contractor.

#### Article 4.9 Disposal Sites

Add the following paragraph:

Contractor shall furnish a disposal site for trees, brush, outsized boulders, and other objectionable debris. Contractor shall dispose unusable excavation, unsuitable or surplus material at either the Anchorage Regional Landfill off Hiland Road or at a Contractor-furnished disposal site. The Anchorage Regional Landfill will charge the current disposal fee for unusable excavation or any material containing stumps, brush, or other construction debris. Contractor furnished disposal sites shall conform to AMC 23.105 Grading, Excavation, and Fill.

#### Article 4.12 Public Convenience and Access

Add the following paragraphs:

Contractor shall at all times comply with this Article while constructing this project. Under no circumstances is the public denied access to adjoining lots unless Contractor has provided proper notification to owners and/or tenants, and Contractor has provided an alternate access approved by the Engineer. It is the Contractor's responsibility to provide the property owners and/or tenants written notification no less than 48 hours prior to any closure of access.

If Contractor's Work is delayed because of any construction and/or transportation activities of nearby construction, whether municipal or private projects regardless of whether authorized by the Owner, Contractor is not entitled to additional compensation from the Owner, but may be entitled to an extension of time to the extent that such delay was unavoidable through reasonable efforts on Contractor's part. Except as to a possible entitlement to such an extension of time, Contractor shall hold harmless, defend, and indemnify the Owner from and against any and all claims, damages, losses, and expenses, including attorney fees, by Contractor or third-parties, arising directly or otherwise out of the construction and/or transportation activities as indicated above.

#### Article 4.13 Street Closures

Add the following paragraphs:

Contractor shall prepare and submit 4 copies of an acceptable Traffic Control Plan (TCP) to employ during construction. Contractor shall deliver the TCP to the Engineer within 10 days of the effective date of the Notice-to-Proceed, or 5 days before commencement of Work, whichever is the earlier date. Engineer will review and accept or reject the plan within 5 working days of submission, and review successive submittals within 5 working days.

The TCP shall conform to the standards in the Alaska Traffic Manual (ATM), dated January 17, 2003 and Part 6 of the Manual of Uniform Traffic Control Devices (MUTCD), Millennium Edition, Revision 1. When conflict exists between M.A.S.S. and the ATM, the requirements of M.A.S.S. and these Special Provisions shall govern.

Contractor shall submit the TCP to the Engineer for approval and acceptance. Payment for all work, services and materials for the TCP is pursuant to M.A.S.S. Section 70.21 Traffic Maintenance, and no separate payment will be made.

(NOTE: The Alaska Traffic Manual (ATM) is comprised of the Alaska Traffic Manual Supplement AND the Manual on Uniform Traffic Control Devices (MUTCD), Millennium Edition, Revision 1).

#### Article 4.14 Maintenance and Drainage

Add the following to the first paragraph:

Contractor shall provide water or other dust palliatives and appropriate distribution equipment as required for dust control on the haul roads and in the work area. Contractor shall assure that all loose material and debris are removed from the sides of haul vehicles prior to their leaving or entering the work area to minimize material spills on road surfaces.

In the first sentence of the second paragraph, delete the word "will" and replace with the word "shall."

Add the following paragraphs:

Contractor shall maintain existing drainage patterns disturbed as a result of construction, including reestablishment of drainage ditches, swales, and gutter flowlines to their preconstruction condition, grade, and elevation. Contractor shall repair or replace catch basins, storm drain manholes, or storm drains damaged during construction as an incidental item of construction at no additional cost to the Owner.

All costs associated with maintenance of drainage patterns and repair or replacement of drainage ditches, swales, catch basins, storm drain manholes, storm drains, gutter flowlines, and other drainage appurtenances is incidental to the Contract or to the item under construction, and no separate payment will be made.

#### Article 4.15 Utilities

Add the following paragraphs:

Certain utility companies presently have facilities within the project limits and Contractor is hereby notified.

In addition, certain utility companies may relocate their facilities and install crossings within the project limits. Except to the extent specified within this Article, Contractor shall have no right to proceed first with the Work under this Contract in advance of any utility company.

Contractor shall schedule the preliminary and post-construction inspections (walk-through) of the project with Brian Baus in AWWU Planning (telephone 564-2765) and check the existing condition prior to street reconstruction of sanitary sewer manholes, cleanouts and services, and water mainline valves, key boxes, and hydrants. If adjustments are made to AWWU water or sanitary sewer facilities, Contractor shall schedule and complete a final acceptance inspection (walk-though) of said facilities prior to scheduling this project's prefinal inspection, provide a record drawing, and list any new facility components.

ENSTAR Natural Gas Company's natural gas pipelines shall have continuous support during excavation and backfill in accordance with ENSTAR's *Safety Requirements for Excavation Adjacent to Natural Gas Pipeline*, dated April 1, 2003. Contractor shall exercise extreme caution during excavation and backfill operations to prevent damage to the pipe and pipe coating. Contractor shall place at least 12 inches of classified fill and backfill and compact below exposed gas pipelines, in accordance with M.A.S.S. Section 20.05 Classified Fill and Backfill.

Contractor shall accomplish all Work in close proximity to electrical or telecommunications facilities in conformance with clearance requirements in the National Electrical Code (NEC) and the established codes and guidelines of the affected utilities, as well as applicable federal and state laws and regulations.

If excavation is required within 5 feet of utility poles, pad-mounted equipment or concrete ductwork, shoring is required. Prior to shoring, Contractor shall provide the serving-utility with the proposed method in writing for utility approval. Contractor shall support and protect exposed cables as prescribed by the respective electric and communications utilities. If Contractor damages an electric or communications cable, installed in accordance with an approved municipal Right-of-Way permit, cable will be repaired by or replaced by the respective utility at Contractor's expense.

Within a minimum of 48 hours in advance, and as required by the respective utility, Contractor shall notify and coordinate for all Work in close proximity, as defined by the respective utility, to the following facilities and personnel:

Alaska Communications Systems, Greg Schmid, 564-1820 Alaska Fiber Star, Network Operations Control Center, 365-7214 Chugach Electric Association, Phyllis Henderson, 762 7659/7669 ACS, Outside Plant Construction Supervisor, Don Sherwood, 564-1455 GCI Cable, Kurt Anderson, 868-8557 ENSTAR Gas Company, Joe Lepley, 264-3748

Contractor shall provide the Engineer a minimum of 48-hours notice of all utility walk-through inspections and area sweeps. Contractor shall conduct the utility walk-through inspection in the presence of the Engineer, unless the Engineer directs otherwise. Contractor shall furnish a copy of all utility inspection reports to the Engineer prior to commencing construction activities, and provide copies of post-construction inspection reports prior to applying for final payment.

The requirements of this Section are incidental to the Contract and no separate payment will be made. Further, Contractor shall hold harmless, defend, and indemnify the Owner from and against any and all claims, damages, losses, and expenses, including attorney fees, by Contractor or third-parties arising directly or otherwise out of any conflict between the Work under this Contract and any claim, interference, or delay for whatever reasons.

#### Article 4.17 Record Documents

Delete this Article in its entirety and replace with the following paragraphs:

Contractor shall maintain Record Documents on the job site consisting of a complete set of blue-line drawings, survey line and grade books, and all Contract Documents. Contractor shall record (on Record Documents) and keep current on a daily basis all changes in location (both vertical and horizontal), material, equipment, or all changes in the Work and all horizontal and vertical locations of all utilities encountered in conformance with the requirements of M.A.S.S. Section 65.02 Construction Surveying, Article 2.14 As-built Surveys and Record Drawings. Contractor shall identify design dimensions, elevations, and grades with no change as being accurate by noting "ASB" adjacent to the design value. At all times, Contractor shall make the Record Documents available to the Engineer. Contractor shall provide horizontal and vertical locations of all water and sanitary sewer service connections at the property line or lease lot line, including swing ties, and offsets to property or lease lot corners.

Contractor shall ensure all additions and corrections are neat, clean, and legible. If additional plan sheets are required, Contractor shall prepare them on reproducible mylar of like material and size as the original Drawings. Contractor shall replace Drawings damaged or lost by Contractor at his expense and to the satisfaction of the Engineer.

Engineer will review all Record Documents for completeness and conformance to the standards stated above. Contractor shall make all corrections, changes, additions, and deletions required to conform to the standards. The Engineer may periodically review the status of the Record Documents during the course of the Work. Failure of Contractor to keep the Record Documents current and in the required condition will be considered cause for additional withholding from the progress payments as provided in M.A.S.S. Section 10.07 Measurement and Payment, Article 7.5 Progress Payments.

Contractor shall deliver approved final Record Documents, bearing certification by

Contractor that the Record Documents are a complete and accurate representation of the project as constructed, to the Engineer within 30 days after Substantial Completion or prior to final acceptance of the project, whichever is earlier.

#### **Article 4.19 Temporary Erosion Control During Construction**

Replace the last paragraph with the following:

Payment for this Work is incidental to the Work performed in Special Provision Section 20.25 Stormwater Pollution Prevention Plan, and no separate payment is made.

Add the following Articles:

#### Article 4.20 Submittal List

Contractor shall complete, submit, and/or comply with all requirements as indicated in the Submittal List located in Section III Submittal List of this project manual. The Submittal list is not an all-inclusive document. The Submittal List does not relieve Contractor from his obligation to comply with all submittals, certifications, or other requirements as specified in M.A.S.S., these specifications, or the Drawings. Whether or not the Submittal List specifically addresses, it is Contractor's responsibility to determine that he completes and complies with all submittals, certifications, and or requirements.

#### Article 4.21 Responsibility of Contractor to Act in Emergency

In the event of an emergency that threatens injury, loss of property, and/or safety of life, Contractor shall act, without previous instructions from the Engineer, as the situation may warrant. Contractor shall notify the Engineer immediately after the incident. Contractor shall submit any claim for compensation, together with substantiating documents in regard to expense, to the Owner through the Engineer and the amount of compensation shall be determined by agreement.

Contractor shall supply the Engineer with an emergency telephone number through which a responsible Contractor's representative can be contacted at any time, 24-hours a day.

#### **Article 4.22 Ownership of Contract Documents**

Owner-furnished Drawings, Specifications, and copies thereof are the Owner's property. Contractor shall not use them on other Work and, with the exception of the signed Contract set, shall return them to the Owner on request at the completion of the Work. Reuse of these materials without specific written authorization or adaptation by the Owner will be at the risk of the user and without liability or legal expense to the Owner or their consultants. Contractor shall hold harmless the Owner, Engineer, and Design Engineer and their consultants from any liability arising out of reuse of Drawings, and Specifications supplied to the Contractor under Contract.

SECTION 10.05 CONTROL OF WORK

#### Article 5.1 Authority of the Engineer

Delete the second paragraph in its entirety and replace with the following paragraphs:

The Engineer has the authority to order changes in the Work requiring an adjustment in the Contract amount and/or time. Contractor shall perform such changes in the Work in accordance with supplemental Drawings and instructions as the Engineer may issue.

Any single change in the Work, or cumulative changes in the Work, which will cause the total value of the contract to exceed the limits stated in AMC 7.15.080 requires Assembly approval.

#### Article 5.6 Product Data

Delete the first paragraph in its entirety and replace with the following paragraph:

Contractor shall submit for approval six copies of complete Product Data for those items for which submittals are required by the Contract Documents including, but not limited to, specific performance data, material description, rating, capacity, working pressure, material gage or thickness, brand name, catalog number, and operating and maintenance data. Contractor shall submit submittals with reasonable promptness and in such sequence as to not cause a delay in the Work, in the Work of the Owner, or any separate Contractor. With reasonable promptness, the Engineer will review and approve or take other action on the submittals. Contractor shall obtain Engineer's approval prior to ordering equipment or materials.

#### Article 5.7 Materials

Delete the third paragraph in its entirety and replace with the following paragraph:

Contractor shall furnish the Engineer the <u>complete</u> list of proposed substitutions within 10 days of the effective date of the Notice-to-Proceed, together with complete engineering and catalog data in sufficient time prior to their use to give the Engineer adequate time for review. Contractor's failure to obtain the necessary approval prior to ordering or using such alternate material or equipment shall not relieve the Contractor of furnishing acceptable material or equipment as required by the Contract Documents.

#### Article 5.9 Contractor's Authorized Representatives and Employees

Delete the second paragraph in its entirety and replace with the following paragraph:

The Superintendent is the Contractor's representative at the site and has authority to act on Contractor's behalf. All communications given to the Superintendent are as binding as if given to Contractor. A qualified Superintendent is one who is completely familiar with the requirements of the Contract documents, has experience and ability to direct all Work at the site, is able to speak and communicate effectively using English, and is present at the job site, or readily available at all times while Work is in progress.

#### Article 5.11 Right of the Municipality to do Work

Delete this Article in its entirety and replace with the following paragraph:

Contractor expressly understands that the Municipality has the right to do Work and may award other Contracts in connection with the Work under this Contract or nearby projects. Contractor shall conduct his operations so as to interfere as little as possible with contractors or subcontractors on or near the Work.

#### Article 5.12 Safeguarding of Excavation

Add the following paragraphs:

Contractor shall properly barricade all trench excavations with appropriate signs and warning lights placed to prevent inadvertent entry by vehicular or pedestrian traffic.

Contractor shall backfill all trench excavations to the top of the trench at the end of each working day, except, at Contractor's option, a "bell-hole" may be left open if properly barricaded and adequate signing and warning lights are placed to prevent inadvertent entry by vehicular or pedestrian traffic.

If ground water or surface water results in standing water in the remaining excavation, Contractor shall provide continuous pumping during the non-working hours to maintain the excavation in a dewatered condition.

Contractor shall maintain all roadways in a drivable condition for normal vehicular and transport operations at the end of each day's operation.

These requirements shall in no way relieve Contractor of the obligation to restore private property to its preconstruction condition.

#### Article 5.18 Repair of Damages Caused by Contractor

Add the following paragraph:

This provision also applies to areas used by Contractor for staging of the construction and shall include restoring those properties to their original condition to the satisfaction of the Engineer.

#### Article 5.20 Changes in the Work

Delete the first paragraph in its entirety and replace with the following paragraphs:

The Engineer has the authority to order changes in the Work requiring an adjustment in the Contract amount and/or time. Contractor shall perform such changes in the Work in accordance with supplemental Drawings and instructions as the Engineer may issue.

Single or cumulative changes in the Work, which will cause the total value of the contract to exceed the limits stated in AMC 7.15.080 requires Assembly approval.

#### Article 5.23 Delays and Extensions of Time

Add the following paragraph:

The above paragraph shall not apply to the supply of insulation. The timely delivery of insulation is a schedule-critical item and Contractor shall include in his bid unit price the cost (if any) of expedited insulation delivery to assure that construction can be completed within the time of completion specified in Section 95.03. No extension of time or changes to bid unit prices will be granted to expedite the delivery of insulation.

#### Article 5.24 Suspension of Work

Add the following:

Where the Work is suspended for adverse winter weather conditions, Contractor is not entitled to additional compensation.

Delete the third and fourth paragraphs and replace with the following:

Unless otherwise specified in these Special Provisions, the Engineer may suspend the Work when adverse winter weather conditions make it impractical to secure the desired results. Contractor is responsible for all maintenance costs during the winter suspension period, unless all provisions of this section are fulfilled. If the Engineer determines all required conditions are met, the Owner will perform the routine winter maintenance operations specified below during the winter suspension period. During the winter suspension period, routine winter maintenance shall include and is restricted to the following:

- 1. maintaining the traveled way and/or detour surface;
- 2. maintaining drainage facilities except final cleaning of storm drains; and
- 3. maintaining access to abutting properties.

The Owner will assume no other responsibilities and will not accept maintenance responsibilities for incomplete Work adjacent to accepted roads.

If, in the opinion of the Engineer, Contractor has completed all of the following requirements, then the Owner will assume winter maintenance responsibilities as outlined above.

Contractor shall stage all operations to assure the Work is sequenced in a manner such that suitable maintenance conditions are established prior to the winter suspension period. Suitable maintenance conditions are determined by the Engineer and include, but are not limited to, a safe, smooth, and unobstructed travel way through the construction area (at or near the final grade of the proposed Work), well-established and functional drainage facilities, and proper access to abutting properties and display the following characteristics prior to winter suspension:

- 1. Areas that are to be paved in their final condition as a part of the contract shall be paved.
- 2. Drainage ways that are to be paved with curb and gutter, valley gutter, paved shoulders or paved swales in their final condition as a part of the contract shall be paved. For temporary drainage facilities to be deemed suitable, all collection points included in the project design shall be functional.

- 3. Illumination, traffic signals, and signing are in proper working order.
- 4. All existing roads affected by the Work shall be returned to full operation.

Contractor shall meet with the Engineer within the week prior to September 15th to outline the Work to be completed before winter suspension. At the meeting, Contractor shall provide a written plan describing the Work for completion prior to the winter suspension period, including an updated progress schedule, clear definitions of the Work underway and the proposed condition of each element of the Work at the time of the anticipated winter suspension.

Prior to winter suspension, Contractor shall, at his own expense, do all Work necessary to establish suitable maintenance conditions. Contractor shall then schedule a field review for acceptance by the Engineer for winter maintenance. Within two days following the field review, the Engineer will prepare a punch list of deficiencies Contractor shall correct prior to acceptance for winter maintenance. In order to relieve Contractor's responsibility for winter maintenance costs, Contractor shall correct all items on the punch list by October 10<sup>th</sup> to the satisfaction of the Engineer. During this period, Contractor may continue the Work in a manner that results in suitable conditions for winter maintenance.

If, after September 20<sup>th</sup>, the Contractor has not presented a written winter suspension plan, or at any time in the opinion of the Engineer the Contractor does not appear to be preparing the Work for winter suspension in a reasonable manner, or if the Contractor fails to correct punch list items for winter suspension, the Engineer will:

- 1. direct the Contractor to complete the Work required to prepare for winter suspension at the Contractor's expense; or
- 2. direct the Contractor to complete all winter maintenance that may be necessary in deficient areas at the Contractor's expense; or
- 3. complete the Work required to prepare for winter suspension with the forces of the Owner or a separate contractor at the Contractor's expense; or
- 4. complete any or all winter maintenance with the forces of the Owner or a separate contractor at the Contractor's expense.

Costs incurred by the Owner due to Contractor's failure to prepare the Work for winter suspension is borne by Contractor.

All existing roads affected by this project are to remain in full and safe operation for the benefit of the traveling public throughout the winter suspension period.

#### Article 5.27 Liquidated Damages

Delete the first paragraph in its entirety and replace with the following paragraph:

The Owner may withhold from any progress payment the sum of \$500 per day as Liquidated Damages for each and every calendar day that the Substantial Completion Date is delayed beyond the Contract Completion Date. After substantial completion, the Owner may withhold out of any progress payment the sum of \$100 per day as Liquidated Damages for each and every calendar day that the Final Acceptance Date is delayed beyond the Contract Completion Date. If no money is due Contractor, the Owner will have the right to recover said sums from Contractor, the Surety, or both.

Add the following Article:

#### **Article 5.31 Pre-Construction Conference**

Before starting the Work at the site, the Owner will hold a Pre-Construction Conference to review the Contractor's schedules and Plans, to establish procedures for handling shop drawings and other submissions, for submitting and processing applications for payment, and to establish a working understanding between the parties as to the project. Contractor and his Superintendent and Subcontractors shall attend the conference to meet with the Owner or his Representative, Engineer, and Inspector.

#### SECTION 10.06 LEGAL RELATIONS AND RESPONSIBILITIES

#### Article 6.1 Laws to be Observed

Add the following paragraph:

Owner is not aware of any contaminated material within the project limits. If such material is encountered, Contractor shall notify the Engineer immediately for direction. This will be treated as a changed condition, unless the contamination was caused by Contractor's operation.

#### Article 6.2 Notice to Contractors

Add the following paragraph:

Owner will not use electronic facsimile transmissions to serve notice to Contractor; however, Owner may use electronic facsimile transmissions to informally notify Contractor of impending official notification.

#### Article 6.3 Notice by Contractors

Add the following paragraph:

Contractor shall not use electronic facsimile transmissions to serve notice to the Owner. Contractor may use electronic facsimile transmissions to informally notify the Owner of impending official notification. Contractor shall deliver the official notification to the Engineer by mail or in person.

#### Article 6.6 Permits

Add the following paragraphs:

The payment of basic and special fees, established under Anchorage Municipal Code (AMC) Chapter 24.30, AMC 24.30.100.A, AMC 24.30.100.B, and AMC 24.30.100.G Permit Fees For Permanent Uses of Public Places (street use ordinance), and which are applicable to the project, is not the Contractor's responsibility.

Contractor shall apply for permits and fulfill all other requirements of the M.A.S.S., Municipal Code, and the Director of Street Maintenance pertinent to the approval and issuance of the permits.

## Article 6.9 Insurance

Add the following paragraphs:

### NOTICE TO "OUT OF STATE" CONTRACTORS

A Certificate of Insurance for Alaska Worker's Compensation, or an "other states" endorsement on Contractor's home state Worker's Compensation policy, is required prior to execution of a Contract or commencement of any contract performance, if any in-state visits or Work is required or anticipated.

## Article 6.16 Nondiscrimination

Delete the last paragraph and replace with the following:

Contractor shall include the first 2 paragraphs of this section in every subcontract or purchase order under this Contract, so as to be binding upon every such Subcontractor or vendor of Contractor under this Contract.

Add the following Section:

### SECTION 10.08 WORKING TITLES

Working titles that are adjectives or have masculine genders such as "workman" and "flagman" or are pronouns such as "he," "his," and "him" are utilized in the Contract Documents for the sake of brevity and are intended to refer to persons of either gender.

## B. DIVISION 20 STANDARD CONSTRUCTION SPECIFICATIONS FOR EARTHWORK

SECTION 20.01 GENERAL

## Article 1.6 Subsurface Investigation

Add the following paragraph:

The soils information for the project is located in Section V Soils Information. The soils classifications and geotechnical designations recorded are informational only and represent only those subsurface conditions at the specific location as indicated on each soils log and on the Drawings. The ground water levels indicated on the test hole logs and shown on the Drawings were recorded at the time when the test holes were performed. These water levels may vary seasonally and are shown for design and informational purposes only. Contractor shall assume responsibility for

any conclusions that may be drawn from such information. Contractor should obtain and analyze such additional information as Contractor may feel necessary and shall be responsible for any conclusions drawn from that information.

Add the following Article:

## Article 1.8 Underground Utilities

Contractor shall continuously support underground utilities during backfill placement and compaction. During backfill placement and compaction, Contractor shall place geotextile fabric with a minimum 12-inch separation from underground utilities, unless directed otherwise by the Engineer.

### SECTION 20.04 EXCAVATION FOR TRAFFIC WAYS

#### Article 4.4 Unusable and Usable Excavation

Add the following after the first paragraph:

When grubbing of the surface organic or root mat is not required elsewhere in the drawings or specifications, unusable excavation shall include the surface mat.

## SECTION 20.06 LEVELING COURSE

## Article 6.2 Material

a. Coarse Aggregate

In the first sentence, substitute the word "wear" for "weather."

## SECTION 20.07 TRENCH EXCAVATION AND BACKFILL

### Article 7.3 Construction

Delete Subsection b. in its entirety and replace with the following:

## b. Dewatering of Trench

Contractor shall protect adjacent utilities and property by trench dewatering and to successfully install the new utility lines. Contractor shall dispose all water from trench dewatering in accordance with Anchorage Municipal Code, Section 15.40, and an ADEC-approved dewatering plan. Contractor shall screen all ground water to prevent debris from entering creeks, lakes, ponds, wetland areas, and drainage systems. When dewatering is required during the course of construction, Contractor shall submit an ADEC-approved dewatering plan and permit prior to any dewatering activity.

Acceptance of Contractor's Dewatering Plan by the Engineer shall not relieve Contractor of his responsibilities for the exercise of reasonable precaution, sound engineering judgment, prudent construction practices, overloading or misuse of existing or new structures, the adequacy and safety of such Work, and potential damage or undermining of existing or completed Work.

## Article 7.5 Basis of Payment

Add the following pay item:

ITEM UNIT

Trench Dewatering Lump Sum

## SECTION 20.11 FURNISH BEDDING MATERIAL

### Article 11.2 Materials

Under the Class "C" Bedding paragraph, revise the first sentence by substituting "C" for "B."

## SECTION 20.16 SHORING, SHEETING AND BRACING / SHORING AND SHEETING LEFT IN THE TRENCH AND PORTABLE

## Article 16.4 Measurement

Delete this Article in its entirety and replace with the following paragraph:

The method of measurement for sheeting, shoring and bracing is per linear foot of trench to be supported.

## Article 16.5 Basis of Payment

Add the following pay item:

ITEM UNIT

Shoring, Sheeting and Bracing Linear foot of trench

## SECTION 20.17 REMOVAL OF EXISTING SIDEWALK AND CONCRETE APRON

## Article 17.1 General

Delete this Article in its entirety and replace with the following paragraph:

The Work under this Section consists of performing all operations pertaining to the removal and disposal of sidewalks and concrete aprons designated for removal, including wire mesh or steel reinforcement within the concrete sidewalk and apron, in accordance with the limits shown on the drawings or as directed by the Engineer.

## SECTION 20.18 REMOVAL OF EXISTING CURB AND GUTTER

#### Article 18.1 General

Add the following paragraph:

The Work under this section consists of performing all operations pertaining to the removal and disposal of curb and gutter designated for removal, including any wire mesh or steel reinforcement within the curb and gutter, in accordance with the limits shown on the Drawings or as directed by the Engineer.

## SECTION 20.19 REMOVAL OF EXISTING PAVEMENT

## Article 19.1 General

Add the following paragraph:

Contractor shall remove all A.C. pavement designated for removal, including A.C. pavement placed within the gutter pan. Removal of the A.C. pavement within the gutter pan is incidental to the bid item "Remove Existing Pavement" and no separate payment will be made.

## Article 19.2 Construction

Delete the last sentence and replace with the following paragraph:

Contractor shall keep all A.C. pavement designated for removal, free from objectionable material (concrete, steel, etc.) and dispose of it at the Kloep Maintenance Station, 5701 Northwood Street. Contractor shall coordinate exact location and time of delivery with Street Maintenance Control Center of the Maintenance & Operations Department, Street & Park Maintenance Division (343-8277). If the removed pavement material under this Section contains objectionable material, as identified by the Engineer, then Contractor shall dispose of this material in accordance with M.A.S.S. Section 10.04 Scope Of Work, Article 4.9 Disposal Sites.

Add the following Sections:

### SECTION 20.25 STORMWATER POLLUTION PREVENTION PLAN

#### Article 25.1 General

This Work shall consist of providing all labor, equipment, materials, and services to prepare, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) for construction sites that disturb an area one acre or larger and other sites that may adversely impact receiving waters of the United States.

## Article 25.2 Preparation of SWPPP

Prior to the commencement of construction activities, Contractor shall develop and implement the SWPPP in accordance with the Alaska Department of Transportation and Public Facilities "Storm Water Contractor Guidance for Preparing and Executing Storm Water Pollution Prevention Plans," dated October 2001, and the Municipality's "Stormwater Treatment Plan Review Guidance Manual", dated August 1998, to comply with the NPDES General Permits for Storm Water Discharges from Construction Activities that are classified as "Associated with Industrial Activity," as provided in the Clean Water Act, 33 U.S.C. 1251 et seq., as amended by the Water Quality Act of 1987, P.L. 100-4.

Contractor and each Subcontractor participating in any of the construction activities shall sign the SWPPP. The signing of the SWPPP by Contractor and all subcontractors is required prior to any services being rendered.

At all times, Contractor shall maintain a current SWPPP and ensure it is available on-site at the facility generating the storm water discharge. At a minimum, a current SWPPP shall include:

- Site specific and activity description and clearing limits including site map;
- Schedule and timeline, updated as construction schedule changes;
- All sources of non-storm water discharges and control methods;
- List of all BMP's used including details and schedules for maintenance;
- Endangered species documentation, including letters of non-objection from U.S. Fish and Wildlife Service, the EPA, or the U.S. National Marine Fisheries Services as applicable;
- Schedule for inspections and sample inspection reports;
- All potential sources of pollution which may reasonable be expected to affect the quality of storm water discharges from the construction site;
- Practices to be used to reduce pollutants;
- Revisions made to the SWPPP:
- A current list of all subcontractors who will be implementing SWPPP stormwater mitigation measures and over what areas of the project that each has operational control:
- A current list of construction activities that require implementation of one of more SWPP mitigation measures;
- Final stabilization plan.

Contractor is responsible for conducting inspections in accordance with the SWPPP, writing Inspection Reports, and appending said reports to the SWPPP, including the on-site SWPPP. Contractor shall amend the SWPPP throughout the duration of the project, keeping the SWPPP current at all times.

Upon completion of the project, Contractor shall submit the original SWPPP with all amendments and reports to the Municipality of Anchorage (Municipality).

Contractors and subcontractors shall comply with all state and local regulatory requirements for the collection, control and discharge of storm water in addition to complying with the requirements of the NPDES General Permits for Stormwater Discharges from Construction Activities that are classified as "Associated with Industrial Activity.

Contractor shall incorporate as part of the Plan all project updates and revisions that affect the SWPPP. Contractor shall also append to the Plan the Updates/Revisions.

Additionally, Contractor shall prepare and update the SWPPP Record of Revision to document changes to the SWPPP, Inspection Report, Project Update or Revision, and construction activities of Contractors/Subcontractors.

## Article 25.3 Pre-Construction Activities

The Contractor shall complete a description of the nature of the construction activities and the intended sequence of the construction activities that disturb soils for major portions of the site. The description of a construction activity should include the following information:

- 1. Type of activity.
- 2. Estimated dates of the activity (both start and finish dates).
- 3. Name of Contractor or Subcontractor who is to accomplish the activity.

Contractor shall write and attach to the Plan the description of the Construction activities and any amendments to the SWPPP.

### Article 25.4 Construction Activities

Contractor is responsible for installation and maintenance of all site controls as specified in the SWPPP.

Contractor is responsible for providing a list of the contractors and subcontractors participating in each construction activity. Contractor shall keep the list current throughout the duration of the project. Each Contractor or Subcontractor shall sign the Signature Page of this SWPPP document prior to the commencement of services.

Contractor shall list the current activities and the names of the contractors or subcontractors who complete each construction activity.

## Article 25.5 Maintenance and Inspection

Contractor shall periodically inspect the controls identified in the SWPPP for the project site and begin maintenance as soon as a deficiency is observed.

Inspections must be conducted in accordance with one of the following two schedules, and the SWPPP must identify which schedule is being utilized:

- 1. At least once every 7 calendar days, or
- 2. At least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater.

Inspection frequencies may be reduced in accordance with the Construction General Permit (CGP).

The Contractor shall provide a qualified person to inspect the disturbed areas of the construction site that have not been stabilized, the areas used for storage of materials that are exposed to precipitation, the structural control measures, and the locations where vehicles enter or exit the site.

Contractor shall inspect disturbed areas and areas used for storage of equipment and materials that are exposed to precipitation for evidence of, or the potential for, pollutants entering the drainage system. Contractor shall observe control measures identified in the Contractor's Plan to ensure that they are effective in preventing impacts to receiving waters.

Contractor shall write an inspection report summarizing the scope of the inspection, the name(s) and qualifications of personnel making the inspection, the date of the inspection, major observations relating to the implementation of the SWPPP, and the actions and modifications taken to correct insufficiencies identified during the inspection. The report shall identify any incident of non-compliance. If no incidents of non-compliance are observed during the inspection, the report shall contain a certification that the facility is in compliance with the SWPPP and the general NPDES permit. Contractor's project superintendent or a duly authorized representative of the Contractor shall sign the inspection report. Any person signing a document for the SWPPP shall add the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system design to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Contractor shall prepare and retain all inspection reports as part of the SWPPP. Contractor shall append each inspection report to the original SWPPP.

### Article 25.6 Measurement

All Work in this Section is measured by Lump Sum and includes all labor, equipment, materials, and services to prepare, implement, and maintain a SWPPP.

## Article 25.7 Basis of Payment

Payment for this Work is in accordance with M.A.S.S. Section 10.07 Measurement and Payment, and will include final payment for all Work described in this section.

Payment is made under the following item:

ITEM UNIT

Storm Water Pollution Prevention Plan Lump Sum

## SECTION 20.26 EXPLORATORY TEST PITS

### Article 26.1 General

Work under this Section consists of furnishing an excavator, operator, and all related supplies in order to dig and fill exploratory test pits as directed by the Engineer prior to the commencement of construction activities.

### Article 26.2 Materials

Contractor shall furnish an excavator capable of excavating to a minimum depth of 12 feet.

### Article 26.3 Construction

Contractor shall excavate as directed by the Engineer. After inspection of the test pit is complete, Contractor shall backfill test pits with native material and compact them so that the ground is returned to its original condition. If directed by the Engineer, Contractor shall segregate the cast piles to avoid contamination.

### Article 26.4 Measurement

Work performed under this section is measured by the cost per hour for all personnel, equipment, and supplies necessary for completion of said work. Down time or delays caused by equipment failure is included in the measurement and no additional payment will be made.

## Article 26.5 Basis of Payment

Payment for this Work is in accordance with M.A.S.S. Section 10.07 Measurement and Payment, as amended in these specifications, and shall include final payment for all Work described in this section.

Payment is made under the following item:

TEM		UNIT
Exploratory Excavation		Hour
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### SECTION 80.16 MISCELLANEOUS

### Article 16.2 Field Tests

Delete the first paragraph in its entirety and replace with the following:

Prior to acceptance of the Work, Contractor shall perform the following tests on all lighting circuits, in the presence of the Engineer.

### SECTION 80.23 LUMINAIRES

## Article 23.2 Light Distribution

Add the following after the first paragraph:

Prior to installation, Contractor shall check the socket position in the luminaire to verify that it corresponds to the setting indicated in the instructions for the light distribution type shown on the drawings.

In the second paragraph, replace "verticle" with "vertical."

Delete the seventh paragraph in its entirety and replace with the following:

Contractor shall ensure all lenses are of the refractor type, and that the refractors are made of polycarbonate resin.

Delete the eighth paragraph in its entirety and replace with the following:

Contractor shall ensure the polycarbonate resin lenses are molded in a single piece. Contractor shall not use reworked compound whose properties have been impaired by previous molding operations. Contractor shall provide lenses free from cracks, blisters, burns and flow lines, furnished with the natural molded surface, uniform density throughout, free from air, gas, or moisture pockets, and uncured areas, as consistent with good manufacturing practice. Contractor shall provide transparent lenses having a clear bluish tint and produced from resin, which has been suitably ultraviolet stabilized to reduce the effects of ultraviolet radiation on their color properties. Resins used shall meet the requirements for the self-extinguishing classification of ASTM D 635. Resin shall have a minimum impact strength, Izod notched of 12.0 ft. lbs./inch when tested in accordance with ASTM D 256, Method A, using a ½ x ½-inch bar molded in accordance with ASTM-recommended practice.

#### Article 23.3 Measurement

Add the following paragraph:

No measurement for payment is made until a functional field test has been completed in accordance with M.A.S.S. Section 80.16, Article 16.2 Field Tests.

## SECTION 80.28 SALVAGING ELECTRICAL EQUIPMENT

### Article 28.1 General

Delete the first paragraph in its entirety and replace with the following paragraphs:

Unless otherwise indicated or specified on the Drawings or Specifications, Contractor shall remove and salvage, without damage, electrical equipment including but not limited to: luminaires, standards, mast arms, poles, caps, handhole covers, mounting bolts, service equipment, and junction box lids.

Contractor and Engineer shall inspect and document the condition of the poles prior to removal. Contractor shall use care to remove, deliver, and store the poles so that the poles are not damaged.

### Contractor shall:

- 1. strip salvaged poles and mast arms of all wire and hardware
- clean and paint damaged areas and exposed hole edges with cold galvanizing paint in accordance with M.A.S.S. Section 80.16, Article 16.3 Galvanizing
- 3. return all caps, handhole covers, mast arms, and mounting bolts with the pole(s)

Contractor shall deliver the salvaged electrical equipment to the Municipality of Anchorage Pole Yard (3<sup>rd</sup> Avenue and Orca Street). Contractor shall coordinate with Phil Saunders (343-4557) three working days minimum, prior to site delivery. Contractor shall place and neatly stack the poles, without contact to the ground, on timbers, at the Municipality of Anchorage Pole Yard at a site as directed by the Engineer.

Contractor shall dispose unwanted, removed, and salvaged electrical equipment at a Contractor-furnished disposal site in accordance with the provisions of M.A.S.S. Section 10.05 Scope of Work, Article 4.9 Disposal Sites.

Contractor shall remove and dispose existing luminaire foundations in accordance with M.A.S.S. Section 80.03 Removing and Replacing Improvements.

#### Article 28.2 Measurement

Measurement for removal of luminaire pole is per each unit removed; and includes all work and materials necessary to remove poles, illumination hardware disposal, cutting poles to render them unusable, disassemble, salvage, disposal, and delivery to the Municipality of Anchorage Pole Yard as specified in the Drawings or in these special provisions. Removal of the pole foundation, in accordance to M.A.S.S. Section 80.03 Removal and Replacing Improvements, and disposal of the pole foundation is incidental to the pay item "Remove Luminaire Pole." If Owner declines ownership, the poles, mast arms, and associated hardware become Contractor property.

When the Drawings or the Special Provision are unclear as to the method of pole removal, salvage, or disposal, Contractor shall contact the Engineer to receive specific instructions.

## Article 28.3 Basis of Payment

Add the following unit:

ITEM UNIT
Remove Luminaire Pole Each

**END OF SPECIAL PROVISIONS** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

03-14

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**SUBMITTAL LIST** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## **SUBMITTAL LIST**

Job #:	Contractor:

Submittal Number	Rev.	Description
10.04.9		Private Property Disposal Site Permission; Fill Permit
10.04.12		Property Owner 48-Hour Closure Notice
10.04.13		Street Closures; Traffic Control Plan
10.04.15		Utility Notification Verification
10.04.17		Record Drawings
10.04.18		Operating and Maintenance Manuals
10.04.19		Temporary Erosion Control Plan
10.05.3		Construction Progress Schedule
10.05.3		Schedule of Values
10.05.4		Notice of Unusual Working Hours
10.05.7		Proposed Substitutions
10.05.9		Contractor's Authorized Representative and Employees
10.05.10		Subcontractor's List
10.06.9		Certificate of Insurance
10.06.12		Certified Payroll
20.08.2		Trench Excavation Notice to Engineer and AWWU
20.15		Evidence of Jacking and Auger Methods
20.16		Trench Sheeting/Shoring Submittal
30.01.9		Concrete Temperature Maintenance Procedure Proposal
40.02.2		Certified Analysis of Asphalt for A.C. Pavement from Refining Laboratory
40.02.3		Asphalt Job Mix Formula for A.C. Pavement
40.02.4		Contractor's Certificate of Compliance for bituminous paver segregation mechanism installation

40.03.2	Certified Analysis of Asphalt for Seal Coat from Refining Laboratory				
40.04.2	Certified Analysis of Asphalt for Bituminous Surface Treatment from Refining Laboratory				
40.06.2	Certified Analysis of Asphalt for Tack Coat from Refinery Laboratory				
40.06.3	Tack Coat Test Strip and Notification				
40.10	Certified Analysis of Asphalt for Crack and Joint Sealant From Laboratory				
40.xx	Job-Mix Formula for Stone Mastic Asphalt Concrete				
40.xx	Certified Analysis of Stone Mastic Asphalt Concrete From Refinery Laboratory				
60.02.3	Survey Notes Submittal				
70.19.2	Manufacturer's Warranty for Preformed Pavement Traffic Marking Tape				
70.19.3	Manufacturer's Recommendations for Application of Preformed Pavement Traffic Marking Tape				
70.21	Traffic Control Plan (TCP)				
70.21	Identify Work-Site Safety Supervisors/Telephone Number				
70.21	Proof of Advertisements				
70.21	Street Closures – Traffic Control Plan				
70.21	Identify I.M.S.A./A.T.S.S.A. Person and Telephone Number				
75.02.4	Landscape Maintenance Schedule				
75.04.2	Topsoil Analysis Test Reports				
80.01.3	Electrical Equipment and Materials Submittal				
80.01.3	Record Drawings				
80.01.5	Traffic Signal Maintenance Name and Telephone Number				
80.05.1	Wind Stress Certification Submittal				
80.17.2	Controller Unit Documentation				
80.17.7	Controller Unit, Aux. Equipment, and Cabinet Submittal				
80.18	Loop Detector Test Reports				
80.23.2	Luminaire Lens Certified Compliance				
80.25	Falsework Lighting Submittal				

NOTE:	The above list of with all submittal Engineer directs.	submittals is not a requirements in a	all-inclusive. In a ccordance with	addition to the a the Plans, Spec	bove, Contractor cifications, M.A.S	shall comply S.S., or as the
						5 15

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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IV

**SPECIAL DETAILS** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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**SOILS INFORMATION** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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VI

**TEMPORARY CONSTRUCTION PERMITS AND EASEMENTS** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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VII

**EQUAL OPPORTUNITY BIDDING AND REPORTING REQUIREMENTS** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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VIII

**MINIMUM RATES OF PAY** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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IX

**CONTRACT** 

# HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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X

**CONTRACT PERFORMANCE AND PAYMENT BOND** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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**CERTIFICATE OF INSURANCE** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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XII

**BID BOND** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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XIII

**BIDDER'S CHECKLIST** 

### **BIDDER'S CHECKLIST**

## **INSTRUCTIONS TO BIDDER**

## I. GENERAL

Bidders are advised that, notwithstanding instructions or implications elsewhere in this Invitation to Bid, only the documents shown and detailed on this sheet need be submitted with and made part of their bid. Other documents may be required to be submitted after bid time, but prior to award. Bidders are hereby advised that failure to submit the documents shown and detailed on this sheet shall be justification for rendering the bid nonresponsive. Evaluation of bids for responsiveness shall be accomplished in accordance with Anchorage Municipal Code, Title 7.

## II. REQUIRED DOCUMENTS FOR BID:

NOTE:	"Only the following listed items as marked with an "X" are required to be completely filled out and submitted with the bid."
X	Bid Proposal consisting of pages BP-1 through BP-8. BP-8 must be manually signed.
<u>X</u>	Erasures or other changes made to the Bid Proposal Sheet must be initialed by the person signing the bid.
	Two identical sets of descriptive literature, brochures, and/or data must accompany the bid where specifically requested or when in support of an "or equal" offer.
<u>X</u>	Bid bond, certified check, cashiers check, money order or cash shall be submitted with the bid in the amount indicated.
X	All Addenda issued shall be acknowledged in the space provided on the Bid Proposal sheet <u>or</u> by manually signing the Addenda sheet and submitting it prior to the bid opening in accordance with Anchorage Municipal Code 7.20.020C.
	Disadvantaged and Women-Owned Business Enterprises, Form 10-029.
	Others

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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XIV

**BID PROPOSAL** 

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## BASIC BID SCHEDULE A: PAVING IMPROVEMENTS

ITEM NO.	SPEC. NO.	WORK DESCRIPTION		ESTIMATED QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
A-1	20.02 95.04	Clearing & Grubbing	per L.S.	1		
A-2	20.04 95.04	Usable Excavation	per C.Y.	5,100		
A-3	20.04 95.04	Unusable Excavation	per C.Y.	23,500		
A-4	20.05	Type II Classified Fill and Backfill	per Ton	43,500		
A-5	20.05	Type II-A Classified Fill and Backfill	per Ton	11,500		
A-6	20.06 95.04	Leveling Course	per Ton	600		
A-7	20.17 95.04	Remove Existing Sidewalk or Concrete Apron	per S.Y.	30		
A-8	20.18 95.04	Remove Existing Curb and Gutter	per L.F.	975		
A-9	20.19 95.04	Remove Existing Pavement	per S.Y.	2,700		
A-10	20.22	Geotextile (Separation)	per S.Y.	8,500		
A-11	20.26 95.04	Exploratory Test Pits	per Hour	10		
A-12	20.27	Unclassified Fill & Backfill	per C.Y.	5,000		
A-13	30.02 95.04	P.C.C. Curb and Gutter (Type 1)	per L.F.	2,260		
A-14	30.03	P.C.C. Sidewalk 4" Thick	per S.Y.	1,455		
A-15	30.03	P.C.C. Sidewalk 6" Thick	per S.Y.	155		

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## BASIC BID SCHEDULE A: PAVING IMPROVEMENTS

ITEM NO.	SPEC. NO.	WORK DESCRIPTION		ESTIMATED QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
A-16	30.07 95.04	P.C.C. Curb and Ramp	per S.Y.	85		
A-17	30.07 95.04	Detectable Warnings	per S.F.	90		
A-18	40.02 95.04	A.C. Pavement (Class D)	per Ton	500		
A-19	40.02 95.04	A.C. Pavement (Class E)	per Ton	650		
A-20	40.06 95.04	Asphalt for Tack Coat	per Ton	4		
A-21	60.04 95.04	Furnish and Install Fire Hydrant Assembly (Double Pumper)	per Each	2		
A-22	60.08 95.04	Remove Fire Hydrant Assembly	per Each	2		
A-23	65.02 95.04	Construction Survey Measurement	per L.S.	1		
A-24	65.02 95.04	Existing Monument Search	per L.S.	1		
A-25	65.02 95.04	Survey Monument Installed in Monument Case	per Each	3		
A-26	65.02 95.04	Two Person Survey Crew	per Hour	10		
A-27	70.02	Adjust Manhole Cone	per Each	1		
A-28	70.03	Adjust Manhole Ring	per Each	1		
A-29	70.08 95.04	Adjust Mainline Valve Box to Finish Grade	per Each	5		
A-30	70.09	Adjust Service Key Box to Finish Grade	per Each	1		

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## BASIC BID SCHEDULE A: PAVING IMPROVEMENTS

ITEM NO.	SPEC. NO.	WORK DESCRIPTION		ESTIMATED QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
A-31	70.14 95.04	Reset Fence	per L.F.	150		
A-32	70.19 95.04	Traffic Markings 4" White	per L.F.	2,110		
A-33	70.19 95.05	Traffic Markings 4" Yellow	per L.F.	2,080		
A-34	70.19 95.06	Traffic Markings 24" White	per L.F.	42		
A-35	70.20 95.04	Standard Sign	per S.F.	57		
A-36	70.20 95.04	Remove and Relocate Existing Signs	per Each	6		
A-37	70.21 95.04	Traffic Maintenance	per L.S.	1		
A-38	70.24 95.04	Remove Guardrail	per L.F.	40		
A-39	75.04 95.04	Topsoil (4" Depth)	per MSF	12		
A-40	75.05 95.04	Seeding (Type E)	per MSF	12		

	TOTAL SCHEDULE A:	\$ -
CONTRACTOR	DATE	

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## BASIC BID SCHEDULE B: STORM DRAIN IMPROVEMENTS

ITEM NO.	SPEC. NO.	WORK DESCRIPTION		ESTIMATED QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
B-1	20.07 95.04	Trench Excavation and Backfill (Various Depths)	per L.F.	1,893		
B-2	20.07 95.04	Trench Dewatering	per L.S.	1		
B-3	20.09	Furnish Trench Backfill (Type II)	per Ton	200		
B-4	20.10	Foundation Backfill (Type II)	per Ton	50		
B-5	20.11 95.04	Bedding Material (Class B)	per L.F.	651		
B-6	20.13	Disposal of Unusable or Surplus Material	per C.Y.	700		
B-7	20.14	Mechanical Compaction	per L.F.	1,893		
B-8	20.25 95.04	Storm Water Pollution Prevention Plan	per L.S.	1		
B-9	40.07	Remove and Replace Existing Asphalt Surfacing, Class E	per S.Y.	920		
B-10	55.02	Furnish and Install 10" CPEP (Type S)	per L.F.	95		
B-11	55.02	Furnish and Install 12" CPEP (Type S)	per L.F.	120		
B-12	55.02	Furnish and Install 10" HDPEP	per L.F.	154		
B-13	55.02	Furnish and Install 12" HDPEP	per L.F.	167		
B-14	55.02	Furnish and Install 18" HDPEP	per L.F.	58		
B-15	55.02	Furnish and Install 30" HDPEP	per L.F.	20		

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## BASIC BID SCHEDULE B: STORM DRAIN IMPROVEMENTS

ITEM NO.	SPEC. NO.	WORK DESCRIPTION		ESTIMATED QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
B-16	55.02	Furnish and Install 36" CPEP	per L.F.	37		
B-17		Subdrain with Geotextile (12" CPEP Type SP, Class B Filter Material, Drainage Textile)	per L.F.	207		
B-18		Subdrain with Geotextile (18" CPEP Type SP, Class B Filter Material, Drainage Textile)	per L.F.	386		
B-19	55.03 95.04	Subdrain with Geotextile (24" CPEP Type SP, Class B Filter Material, Drainage Textile)	per L.F.	410		
B-20	55.03 95.04	Subdrain with Geotextile (30" CPEP Type SP, Class B Filter Material, Drainage Textile)	per L.F.	239		
B-21	55.04 95.04	Construct Type I Manhole	per Each	8		
B-22	55.04 95.04	Construct Type I Catch Basin Manhole	per Each	3		
B-23	55.06	Construct Catch Basin	per Each	8		
B-24	55.07	Connect to Existing Storm Drain Manhole	per Each	4		
B-25	55.14 95.04	Oil and Grit Separator (Model STC 7200)	per Each	1		
B-26	65.02 95.04	Construction Survey Measurement	per L.S.	1		
B-27	70.07	Remove Existing Manhole	per Each	3		
B-28	70.07	Remove Existing Catch Basin	per Each	4		
B-29	70.14 95.04	Remove and Reset Fence	per L.F.	100		
B-30	70.23 95.04	Remove Pipe	per L.F.	883		

	TOTAL SCHEDULE B:	
CONTRACTOR	DATE	

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

## BASIC BID SCHEDULE C: STREET LIGHTING IMPROVEMENTS

ITEM NO.	SPEC. NO.	WORK DESCRIPTION	ESTIMATED QUANTITY	UNIT BID PRICE	TOTAL BID PRICE
C-1	80.02 95.04	Trench and Backfill, All widths and depths L.F.	1,035		
C-2	80.04 95.04	Driven Pile Luminaire Pole Foundations Each	10		
C-3	80.05 95.04	30 Ft. Fixed Base Luminaire Pole Each	10		
C-4	80.06 95.04	Luminaire Arm, 22ft. Length Each	10		
C-5	80.07 95.04	2" Steel Conduit L.F.	1,285		
C-6	80.08 95.04	Type I-A Junction Box Each	12		
C-7	80.10 95.04	3C-#6 AWG XHHW L.F.	2,500		
C-8	80.23 95.04	Luminaire, 250W, M-C Type III Each	10		
C-9	80.28 95.04	Remove Luminaire Pole Each	3	-	

	TOTAL SCHEDULE C:
CONTRACTOR	DATE
CONTRACTOR	DATE

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road 03-14

BASIC BID	BID
SCHEDULE A: PAVING IMPROVEMENTS	
SCHEDULE B: STORM DRAIN IMPROVEMENTS	
SCHEDULE C: STREET LIGHTING IMPROVEMENTS	
Total Basic Bid	
Total Amount Bid	
CONTRACTOR	DATE

# BID PROPOSAL (CERTIFICATION)

TO:	MUNICIPALITY OF ANCHORAGE PURCHASING DEPARTMENT 632 W. 6TH AVENUE, SUITE 52 ANCHORAGE, ALASKA 99501	
SUBJECT:	Invitation to Bid No	ension, E. 79th Avenue to Lore Road
bidder hereb the above re	y proposes to furnish all labor and	tation to Bid, and other bid documents relating thereto, the d materials and to perform all work for the construction of ce with the bid documents at the prices established in the nitted herewith.
	agrees, if awarded the Contract, he bid documents.	to commence and complete the Work within the time
The bidder a	cknowledges receipt of the followir	g Addenda:
Addenda No Addenda No Addenda No		Date of Addenda Date of Addenda Date of Addenda
Enclosed is I	Bid Bond in the amount of	(Dollar Amount of Percentage of Bid)
Type of Busi	ness Organization	
The bidder, b	by checking the applicable box, rep	resents that it operates as:
individual, 📙	ation incorporated under the laws of a partnership,  a nonprofit or a nonprofit or all parties on a separate page.	of the State of, an ganization, or a joint venture. If a partnership or joint
Bidder/Comp	pany Name	Alaska Contractor's License Number
Address of B	idder	Employer's Tax Identification Number
		Signature
Telephone N	lumber	

## HARTZELL ROAD EXTENSION E. 79th Avenue to Lore Road

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## **PLANS (18 SHEETS)**

Sheet	1	Cover Sheet
Sheet	2	Key Map
Sheet	3	Notes & Legend
Sheet	4	Survey Control
Sheet	5	R.O.W. Map
Sheet	6	<b>Demolition Plan</b>
Sheet	7	Paving Improvements
Sheet	8	Storm Improvements
Sheet	9	Typical Section and Details
Sheet	10	Storm Details
Sheet	11	<b>Curb Ramp Details</b>
Sheet	12	<b>Curb Ramp Details</b>
Sheet	13	Striping Plan
Sheet	14	Signing Plan
Sheet	15	Sign Summary
Sheet	16	Sign Installation Details
Sheet	17	<b>Electrical Schedules</b>
Sheet	18	Lighting Plan