

Leduc County

# Parks & Recreation



## Parks Design Standards

November, 2009



#101, 1101 - 5 Street | Nisku, AB T9E 2X3  
p: 780-955-4535 | f: 780-979-0032 | [www.leduc-county.com](http://www.leduc-county.com)

## TABLE OF CONTENTS

1.0	INTRODUCTION	2
1.1	PARKS CLASSIFICATION	2
2.0	INTENT OF THIS DOCUMENT	4
3.0	HOW TO USE PARKS DESIGN STANDARDS	5
3.1	GENERAL	5
3.2	SUBMISSION	5
3.3	CONSTRUCTION COMPLETION CERTIFICATE/ FINAL ACCEPTANCE CERTIFICATE (CCC/FAC) PROCESS	6
4.0	LANDSCAPE ARCHITECT'S RESPONSIBILITIES	8
5.0	PARKS DESIGN STANDARDS TABLE	10
6.0	PARKS AND OPEN SPACE CONSTRUCTION	13
6.1	SITE PROTECTION, PREPARATION, TESTING AND RESTORATION	13
6.2	CLEARING & GRUBBING	14
6.3	EXCAVATION AND EMBANKMENT	14
6.4	TOPSOIL & SEEDING	16
6.5	SOIL MIX AND PLANTING	16
6.6	PLANT MATERIALS	17
6.7	MAINTENANCE	18
7.0	PARKS DESIGN STANDARD DETAILS	21
8.0	PARKS MAINTENANCE STANDARDS CHECKLIST	23

## 1.0 Introduction

Leduc County has provided public recreation services for decades to the residents of Leduc County and the greater Edmonton area. The goals of maintaining the quality of life and the environmental quality of its Parks and Open Spaces are driving forces that direct the management of these areas. By providing access to outdoor recreation opportunities, and protecting the natural environment for the benefit of future generations, Leduc County strives to meet and exceed those goals.

The County operates two regional parks which are Jubilee Park on Wizard Lake and Centennial Park on Joseph Lake. The County also maintains a number of district parks such as Mission Beach Day Use Park, Genesee Heritage Park and Nisku Recreation Centre Park. The smallest parks and open spaces, but also the most numerous are the local parks throughout the County which include many parks in subdivisions, community halls and small community parks such as Sunnybrook.

In addition, Leduc County also owns numerous parcels of undeveloped lands that are held as municipal reserves and environmental reserves, Public Utility Lots (PUL) and Storm Water Management Facilities (SWMF). Some of these reserve lands have the potential to provide future recreational services or play the role of conserving open space for environmental stewardship within the County. These spaces also serve as some of the only vegetated areas left unaltered in many of the new subdivisions being developed, and are remnants of the natural parkland vegetation that once existed.

The Parks and Recreation department receives referrals for input on new subdivision developments and improvements to its' current open spaces. These new developments are often more urban in nature than once occurred in the County. Residential densities are increasing in areas and the needs and expectations for parks and open space and the quality of facilities is increasing. To meet the increased development and ongoing upgrading of existing parks and open spaces the County has developed this comprehensive parks design standards document. This document establishes the quality for park development and redevelopment and shall be continually updated.

### 1.1 Parks Spaces Classification

**Regional Parks** – major outdoor recreational areas that provide facilities for County residents, as well as visitors from the greater Edmonton region and beyond. Can include campgrounds, large sports/recreational areas, historical/natural sites that provide a regional draw, etc.

**District Parks** – generally smaller in size than regional parks and provide outdoor opportunities to a more localized population (ie. Within 20kms).

**Local Parks** – small sites that meet the outdoor recreation needs of the residents in the immediate vicinity of the park (ie within 1-2 kms).

**Industrial/Commercial Parks** – sites within commercial/industrial/business parks that are small in size and used passively as picnic locations or areas for walking.

Arterial/Major Roads adjacent Subdivisions – areas where a major roadway runs adjacent to a subdivision and there is no distinct buffer between the two.

Linear Parks - sites that are used as a physical connection to parks, schools, and adjacent subdivisions. It may also include areas of natural habitat that provides a wildlife corridor.

Municipal Reserves - As per the Municipal Government Act.

Environmental Reserves - As per the Municipal Government Act.

Public Utility Lots (PUL's) (including Storm Water Management Facilities (SWMF's)) – As per the Municipal Government Act.



## 2.0 Intent of this Document

The intent of the Leduc County Parks Design Standards is to assist Land Developer's Representatives and Consultants, Contractors, Land Developers and Leduc County Departments in meeting the planning, design, construction and maintenance requirements in parks and other open spaces in the County. These are to be considered minimum park development standards and will ensure consistency of development and conservation of open spaces as development projects move through conceptual planning, Master Plan approval, detailed design approval, construction approval, and ongoing maintenance through the two year warranty period.

Parks and open spaces include existing and future public outdoor recreation facilities within the County as well as vacant reserve lands that have the potential to provide recreation opportunities or environmental stewardship. Also included are Public Utility Lots (PUL's) which include Storm Water Management Facilities (SWMF) for the duration of this document. The following points should be taken into account when using this document:

1. All proposals and detailed designs shall be in compliance with statutory planning and development approvals as well as County bylaws and policies.
2. Where these standards refer to bylaws, acts, regulations and standards, this shall mean the most recent edition of amendments of the referenced document.
3. Where due to amendment of statutory requirements, conflicts or inconsistencies with these standards arise; the Landscape Architect shall refer the issue to the County for clarification or decision by the County.
4. Natural areas may be considered to become a part of the urban/rural park system.
5. Any upland or wetland habitat disturbances are to be in accordance with the approved Municipal Development Plan (MDP), Area Structure Plan (ASP), Land Use Bylaw (LUB), latest version of Provincial and Federal Regulations, this document and required approved permits.
6. This document attempts to identify Leduc County's preference when there are alternative technical options available to address a particular open space development issue.
7. This document attempts to ensure the provision of locating and planning for Municipal Reserves (MR), Environmental Reserve (ER), and Conservation Easements (CE). This should be reflected in preliminary stages of ASP preparation, to ensure that the requirements for municipal reserve balance with total land dedication requirements.

## **3.0 How to Use Parks Design Standards**

### **3.1 General**

When required, all Land Developers and Leduc County will retain Landscape Architects who are members of the Alberta Association of Landscape Architects (AALA) as prime consultants for parks and open space development projects. Most often this will be at time of development but may be brought in sooner during the subdivision phase if appropriate.

The Landscape Architect may retain sub-consultants if necessary.

Geo-technical Engineers, who are members of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA), will be required to recommend depth of piles for major signs, trail sub-base course, base course and surface course type and compaction requirements, and design & inspection for walls higher than 1.0 metre in height, and provide materials and compaction testing during construction.

Structural Engineers, who are members of APEGGA, will be required to design and inspect all pre-cast and poured-in-place concrete structures such as entrance walls and sign features.

Electrical Engineers, who are members of APEGGA, will be required to design and inspect all site lighting, scoreboard, public address sound systems, and other electrical installations.

The Landscape Architect may also require the services of hydrological engineers for storm water management and turf irrigation purposes, historic resource and risk assessment practitioners, wildlife biologists and arborists, and other “professionals” that might ensure the best plan and design solutions for the parks and open spaces.

### **3.2 Submission**

The Landscape Architect will submit a conceptual plan for development or redevelopment for comment and approval by the County. Plans shall be submitted to Planning and Development (P&D) and will be referred out to other departments as necessary. The components of the park or open space will be based on the standards table presented as Table 1 in the Parks Design Standards section. The conceptual plan will also provide a site assessment of the existing natural and cultural resources and will prescribe the methods for protecting and managing those resources located within the parks and open space system. Should a Developer wish to exceed the standards outlined in this document, it is preferred that it be expressed at the conceptual planning stage.

The Landscape Architect will resubmit a Final Master Plan and Report for the project after direction is provided by the County. In the report the Landscape Architect will discuss how Crime Prevention Through Environmental Design (CPTED), Low Impact Development, Xeriscape Landscaping (Eco-Landscaping), and Fire Smart principles have been incorporated.

The Landscape Architect will submit construction drawings, specifications and cost estimates to P&D who will forward on to departments for approval prior to commencing construction. The approvals being applied for municipally, provincially, and federally should also be included in this package (e.g. Alberta Environment, Navigable Waters).

Any and all items not included in the Parks Design Standards such as boat docks and playground equipment to be included in the park development shall be identified and approved by Parks and Recreation (P&R) before installation. Suitable aluminum and floating docks may be supplied and installed by companies experienced with the products. Playground equipment may be supplied and installed by experienced and qualified companies. The submission for approval shall provide full details, specifications, and CSA certifications.

If the project is to be irrigated a detailed irrigation design with specifications prepared by a qualified irrigation designer will be required to be submitted for approval.

### **3.3 CONSTRUCTION COMPLETION CERTIFICATE/ FINAL ACCEPTANCE CERTIFICATE (CCC/FAC) PROCESS**

In order for a development agreement to be drafted by Leduc County, amongst other items, a cost estimate for one hundred percent (100%) of construction costs for the whole development is required. For the landscaping component of these costs, the Developer shall submit, on the letterhead of a qualified Landscape Architect, the total amount of landscaping supplies, labour and maintenance for construction and the following two (2) year warranty period, including any Government Sales Tax. Prior to the start of construction, the Developer shall provide an irrevocable letter of credit for the full amount of security (100% of construction costs) specified in the endorsed development agreement. All parks and open space construction shall occur within the construction timeframe outlined in the endorsed development agreement.

When all construction has been complete, the Developer must request a Construction Completion Certificate (CCC) inspection by Leduc County. If there are no deficiencies in the construction or landscaping, the County will issue the CCC and reduce the irrevocable letter of credit to fifteen percent (15%) of its original value. The fifteen percent (15%) will be retained by the County for a warranty/maintenance period of two (2) years. After this time period has expired, the Developer must request a Final Acceptance Certificate (FAC) inspection by the County. If no deficiencies are found, the County will issue the FAC and release the remaining amount of the irrevocable letter of credit, with the exception of any accumulated charge backs for work completed by the County. With the issuance of the FAC, the County then assumes the maintenance of infrastructure, parks and/or open space.

Landscape Architects will be responsible to provide copies of all construction materials testing reports, as-builts drawings in an Autocad format and maintenance logs during the two year warranty period.

Compaction tests of subgrade, sub-base, base course and asphalt surface, concrete surfaces, unit pavers surfaces will be taken at a minimum of one per every 1000 square metres of surface area.

Playground equipment inspection will be provided by a qualified representative of Leduc County. If any repairs are required during the warranty period then the Contractor and Developer will be required to make the repairs in a timely fashion. If these are not made to the satisfaction of the County, then the County will make them and charge back the costs including 10% administration costs.

The Landscape Architect will inspect the site with the Developer prior to CCC and FAC inspections. If the site is not ready and plant replacements and turf repairs have not been made then the site inspection will not be undertaken. If the Landscape Architect determines that the project is ready for inspection then the County will be asked in writing by the Landscape Architect to schedule an inspection.

If the project is a street tree and boulevard turf project only then the CCC can be requested at 90% completion to start the warranty time period to FAC. The project has to be completed to 100% before approval of FAC.

All turf areas, planting beds and pits, trails and playing surfaces are to be weed free; all tree stakes removed; and all mulch is to be topped up to specified depths prior to FAC approval. The cost of replacements resulting from theft, vandalism, carelessness, or neglect on the part of others, or any replacements caused due to circumstances beyond the control of the County shall be borne by the Contractor before the issuance of FAC.

All asphalt cracks and bird baths, all gravel dips and low spots, all playing surface irregularities are to be repaired prior to FAC issuance.

All discoloured paint, chips and rust spots shall be repaired to look like new prior to FAC issuance.

## 4.0 Landscape Architect's Responsibilities

It shall be the Landscape Architect's Responsibility to:

1. Meet with Leduc County's Planning and Development Services (P&D) at the conceptual stage of the design process to ensure that all parties have an understanding of the design elements, timing, County concerns, standards and confirm the level of public input prior to finalizing design.
2. Coordinate the preparation of all landscape designs in accordance with the architectural and engineering designs and reports including but not limited to: geotechnical, hydrological, civil, mechanical, electrical, structural and utility.
3. Coordinate all base plan preparations with other Consultants to ensure utility, survey and base plan details are consistent with all other drawings forming part of the engineering drawing submission. Ensure utilities are located on landscape drawings, where feasible with regards to legibility.
4. Provide a tree clearing plan prior to tree clearing in accordance with this document.
5. Prepare all grading plans at time of subdivision for Municipal Reserve, Public Utility Lots, Open Space Plans, and Playground Sites. These shall be reviewed by P&D as well as other departments as necessary (i.e. Parks and Recreation (P&R), Public Works (PW), etc.).
6. Upon receipt of comments, re-submit revised drawings to Leduc County.
7. Coordinate a construction start up meeting with P&D, P&R, and PW prior to construction to ensure there is a clear understanding of the County's requirements, to establish a construction start date, agree on the progress schedule and subsequent inspection stages.
8. Inspect existing natural landscape features to be conserved, throughout development.
9. Approve plant material prior to installation. Joint inspection with County Staff is optional.
10. Submit written requests for substitution of plant materials to Leduc County for approval 1 month prior to planting substitution. The letter shall be addressed to P&D and will be referred out to P&R or Agricultural Services (AG) as required.
11. Ensure the contractor is responsible for the location of all underground utilities.
12. Ensure the applicable permits have been obtained including any municipal, provincial, or federal permits as necessary.
13. Ensure all playground equipment and installation is completed in accordance with this document and CSA standards.

14. Verify final grading and topsoil spreading and subsequent seeding and/or sodding are completed in accordance with this document. If grading differs from the original grading plans but is acceptable to Leduc County, a revised final grading plan shall be submitted.
15. Ensure plant material is installed properly, staked where required and is in a healthy, disease and pest free growing condition.
16. Ensure the protection of parks and open space development by installing barricades and/or fencing. Signs shall be erected as required for public safety. Security measures such as twenty-four hour on-site monitoring may be required at the discretion of the County.
17. Inspect all stages of Parks and Open Space Development; from construction through to the warranty/maintenance period in accordance with this document.
18. Be responsible for the coordination of all inspection documentation during the construction and maintenance periods in accordance with this document.
19. Verify that construction is complete prior to requesting a CCC inspection.
20. Ensure CCC/FAC process is followed in accordance with this document and County policy.

## 5.0 Parks Design Standards Table

The table below and continued on the following two pages outlines the minimum standards for parks and open spaces in the County and is applicable for developed and undeveloped areas. Items labeled as Discretionary will be dealt with on a case by case basis and decision as to whether they are required or not will be up to Leduc County.

DETAIL NUMBER	LEDUC COUNTY PARKS DESIGN STANDARDS R = Required, D = Discretionary N = Not Required	ARTERIAL/MAJOR ROADS ADJACENT SUBDIVISIONS INDUSTRIAL/COMMERCIAL PARKS MUNICIPAL PARKS REGIONAL PARKS DISTRICT PARKS LOCAL PARKS ENVIRONMENTAL RESERVES PUL AND SWMF LOTS LINEAR RESERVES									
	<b>Fencing</b>	R	R	R	R	R	D	D	D	D	
1A	Paige Wire Fence	D	D	D	D	N	D	D	D	D	
1B	Post & Double Rail Fence	D	D	D	D	N	D	D	D	D	
1C	Chain Link Fence and Gate	D	D	D	D	N	D	D	D	D	
1D	1850mm Wood Screen Fence and Gate	D	D	D	D	N	D	D	D	D	
1E	1800-2500mm Noise Attenuation Fence	N	N	N	N	R	N	N	N	N	
	<b>Trails</b>	R	R	D	R	N	D	D	D	D	
2A	Shredded Bark Mulch Trail - 1500mm Wide	D	D	D	D	N	D	D	D	D	
2B	Road Crushed Gravel Trail - 1500mm Wide	D	R	D	D	N	D	D	N	D	
2C	Boardwalk Without Footing	D	D	D	D	N	D	D	D	D	
2D	Asphalt Trail - 3000mm Wide	R	D	D	D	N	D	D	N	D	
2E	Asphalt Trail Line Painting	R	D	D	D	N	D	D	N	D	
2F	Trail Root Guard	D	D	D	D	N	D	D	N	D	
2G	Trail Culvert	D	D	D	D	N	D	D	D	D	
3A	Steel Pipe Bollard	D	D	D	D	N	D	D	D	D	
3B	Steel T-Bollard	D	D	D	D	N	D	D	D	D	
4	Steel Pipe Access Gate	R	R	D	D	N	D	D	D	D	
5	Pressure Treated Timber Stairs	D	D	D	D	N	D	D	N	D	
6	Galvanized Steel Stairs	D	D	D	D	N	D	D	D	D	
7A	Timber Retaining Wall - to 1000mm High	D	D	D	D	N	N	D	N	N	
7B	Stacked Rock Retaining Wall - to 1000mm High	D	D	D	D	N	D	D	D	D	
8	Haul-A-Way Waste Receptacle	R	R	R	R	N	D	D	N	D	

DETAIL NUMBER	LEDUC COUNTY PARKS DESIGN STANDARDS R = Required D = Discretionary N = Not Required	ARTERIAL/MAJOR ROADS ADJACENT INDUSTRIAL/COMMERCIAL SUBDIVISIONS REGIONAL PARKS DISTRICT PARKS LOCAL PARKS ENVIRONMENTAL RESERVES MUNICIPAL PARKS PUL AND SWMF LOTS									
9A	Portable Picnic Table	D	R	D	D	N	N	D	N	D	
9B	Stationary Pedestal Picnic Table	R	D	D	R	N	N	D	N	D	
10	Backed Bench	R	R	R	R	N	R	R	D	D	
11	Fire Pit	R	D	D	N	N	N	D	N	N	
12	Tree Planting	R	R	R	R	D	R	R	R	R	
13A	Shrub Planting	R	R	R	R	D	R	R	R	R	
13B	Seeding and Sodding	R	R	R	R	R	R	R	R	R	
14	Storm Water Management Facility (SWMF) Planting	N	N	N	N	N	N	N	N	R	
15	Park Entrance Signs	R	R	D	D	N	D	D	D	D	
16A	Park Signage	D	D	D	D	D	D	D	D	D	
16B	Park Signage	D	D	D	D	D	D	D	D	D	
17	Park Interpretive Signs	R	R	D	N	N	D	D	D	D	
18	ER/MR Designation Signs	N	N	N	N	N	N	R	R	N	
19	Park Area Activity Signs	R	R	D	N	N	N	N	N	N	
	<b>Playgrounds</b>	<b>R</b>	<b>R</b>	<b>D</b>	<b>N</b>	<b>N</b>	<b>N</b>	<b>D</b>	<b>N</b>	<b>N</b>	
19A	Playground Edger	R	R	D	N	N	N	D	N	N	
19B	Playground Signage	R	R	D	N	N	N	D	N	N	
20A	Senior Soccer Field	D	D	D	N	N	N	D	N	N	
20B	Intermediate Soccer Field	D	D	D	N	N	N	D	N	N	
20C	Junior Soccer Field	D	D	D	N	N	N	D	N	N	
20D	Goal Posts	D	D	D	N	N	N	D	N	N	
20E	Goal Post - Permanent	D	D	D	N	N	N	D	N	N	
20F	Goal Post w/ Sleeve	D	D	D	N	N	N	D	N	N	



DETAIL NUMBER	LEDUC COUNTY PARKS DESIGN STANDARDS R = Required D = Discretionary N = Not Required	<div> <div>ARTERIAL/MAJOR ROADS</div> <div>INDUSTRIAL/COMMERCIAL PARKS</div> <div>REGIONAL PARKS</div> <div>DISTRICT PARKS</div> <div>LOCAL PARKS</div> <div>ENVIRONMENTAL RESERVES</div> <div>MUNICIPAL PARKS</div> <div>PUL AND SWMF LOTS</div> </div>								
21A	Senior Baseball Diamond	D	D	D	N	N	N	D	N	N
21B	Little League Baseball Diamond	D	D	D	N	N	N	D	N	N
21C	Fastball/Slopitch Ball Diamond	D	D	D	N	N	N	D	N	N
21D	Backstop Details	D	D	D	N	N	N	D	N	N
21E	Player's Bench	D	D	D	N	N	N	D	N	N
22	Outdoor Rink	D	D	D	N	N	N	D	N	N
23	Sand Volleyball Court	D	D	D	N	N	N	D	N	N
24	Horseshoe Pitch	D	D	D	N	N	N	D	N	N
25	Parking Lot Layout	R	D	D	D	N	N	N	N	N
26	Campsite Layout and Surfacing	D	N	N	N	N	N	N	N	N
27	Sewage Dump Station	D	N	N	N	N	N	N	N	N
28	Seasonal Water Tap & Sump	D	N	N	N	N	N	N	N	N
29	Fish Cleaning Stand	D	D	D	N	N	N	D	N	N
30	Double Vault Toilet Building	R	R	D	N	N	N	D	N	N
31	Wildlife Viewing Platform	D	D	D	N	N	N	D	D	D

## 6.0 Parks and Open Space Construction

### 6.1 Site Protection, Preparation, Testing and Restoration

All parks and open space construction undertaken by Developers and the County by Landscape Contractors will provide the following during the construction period and subsequent maintenance periods should it be deemed necessary by the County.

**6.1.1 Protection of Property and Underground Utilities:** provide protection, restore, and make good any damage to private and public property and underground services. A digital photo record of all existing damage to the site prior to construction is to be submitted to the County before commencement of any work on the site. Prior to commencement of work, confirm and establish the location and extent of underground utilities in the area. Notify the County and Utility Companies before excavating in the vicinity of utility lines.

**6.1.2 Traffic Control:** All traffic and pedestrian control planning and procedures are to be submitted to the County for approval prior to commencement of construction.

**6.1.3 Testing:** All testing of materials, compaction testing and all associated costs for testing are the responsibility of the Developers and/or their Contractors. The items requiring testing are to be identified in the construction drawings and specifications. Test results for the project proving all requirements have been met are to be submitted electronically to the County with the as-built drawings.

**6.1.4 Survey:** During construction the Developer and/or their Contractor are responsible for all surveying of the project. An accurate log of control and survey work is to be maintained as the project progresses. The surveyor must be qualified and a current member of the Alberta Land Surveyors Association (ALSA). During construction the Surveyor must be prepared to submit documentation to verify accuracy of field engineering work should it be requested. On completion of the project a certificate is to be submitted by the Surveyor to certify that elevations and locations of completed work are in conformance or non-conformance with the construction drawings and specifications. In areas of non-conformance this certificate is to identify the areas and reasons for non-conformance. Final as-built drawings are to be submitted to the County within fourteen (14) days of completion of the work and before the Construction Completion Certificate approval.

**6.1.5 Digital Photo Record:** A digital record is to be provided that has recorded the existing site conditions prior to construction, construction progress at minimum a weekly basis (minimum 10 photos per week), all components which are to be covered by other components including but not limited to: lengths and depths of cutting and demolition and removals, subgrade preparation, base course, reinforcing bars and ties, formwork, construction joints, tack coats, root pruning. A digital record is to be provided to record changes in weather, damage to components by others and any adverse site conditions. All photos to be complete with date and time stamp on the photo and are to be submitted to the County with the as-built drawings.

**6.1.6 Security:** The security of the site is the responsibility of the Developer and or their Contractor during construction. During critical periods, such as ensuring finished surfaces and line markings are not driven across or otherwise vandalized, manned site security is to be maintained.

## **6.2 Clearing and Grubbing**

All areas requiring clearing are to be identified by flagging (do not use paint) the area and submitting a written request for approval to the County. Written approval from P&D with P&R recommendations must be received before commencement of any clearing.

The method of felling the trees shall be undertaken to occur within the clearing area as flagged. No trees shall be felled into adjacent treed areas. The stumps and underbrush within the clearing area shall be grubbed to remove all roots and debris greater than 50 mm in diameter. Burning of root and stump material will not be allowed. All roots and stump material is to be loaded, hauled and disposed off site at no expense to the County. All wood, appropriate for firewood, is to be cut, loaded, hauled and placed in a suitable pile as directed by the County. All branches may be loaded hauled and chipped in locations as directed by the County or disposed off site at no expense to the County. The preferred method of woody material disposal is to chip or mulch as much as deemed possible on site and then hauled to a location determined by the County.

## **6.3 Excavation and Embankment**

Prior to any excavation work, a site survey is to be conducted and submitted to the County or their representative. If a project is Developer driven, a survey shall be undertaken, at no cost to the County, which will digitally record the condition of existing buildings, trees, other vegetation, lawns, fencing, service poles, wires, concrete, asphalt, survey bench marks and monuments located on the lands that may be impacted by the work. All existing buildings and surface features that may be negatively impacted by the work must be protected from damage while the work is in progress. Any damage resulting from the excavation shall be repaired by the Developer at no cost to the County. Where excavation necessitates root or branch cutting, approval by the County is required prior to work commencing. If works are to take place in proximity to watercourses or environmentally sensitive areas, provincial/federal policies and approvals must be followed and copies of such approvals forwarded to the County prior to construction.

**6.3.1 Excavation:** Advance notice must be provided to the County prior to excavation operations commencing. To prepare the site for excavation, remove obstructions including ice and snow from the surfaces to be excavated within the limits indicated. Cut hard surfaces neatly along limits of proposed excavation in order that surface may break evenly and cleanly. Excavate to designated cross-sections as indicated in approved construction drawings and specifications. Complete initial excavation from property line to property line, unless permitted otherwise by the County. Exercise caution to preserve bank stabilization where necessary and stage excavation to allow for related work. Do not disturb soil within branch spread or root spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with a sharp axe or saw. Seal cuts with approved tree wound dressing immediately after cutting.

County approved excavated soil can be used to construct embankments, subgrade, berms, boulevard fill, trench backfill and for other purposes as directed by the County. Borrow excavation material obtained from off-site sources to only be used where there is insufficient suitable excavated material on the jobsite and only if approved by the County. In situations where excavation exposes unsuitable materials below the subgrade elevation and the County directs removal, excavate such materials as directed and make the bottom of the cut level with no loose materials. Where over-excavation occurs, restore grades by backfilling, compacting and regrading as directed by the County or their representative. If over-excavation is the result of the Contractor's error, no claim shall be made for the excess excavation and grade restoration. Remove and dispose of all surplus and unsuitable excavated material off site as directed by the County. The obstruction of flow of surface drainage or natural watercourses will not be permitted.

**6.3.2 Fill:** To prepare the site for fill, clear and grub the base of fill where necessary, remove topsoil and other unsuitable materials and scarify the base to ensure bond with fill material. Compaction of fill can best be achieved if the soil is dried or moistened to within  $\pm 3\%$  of optimum moisture content. Place and compact fill in hard surface areas by spreading fill material in successive horizontal lifts, each lift not to exceed 150 mm thickness when compacted. Compact each lift to the required density, as per the approved construction drawings and specifications, using suitable equipment. When constructing berms build the area by spreading layers of approved material not more than 300 mm thick and compacting each lift. Grade each layer using at least three (3) passes of the spreading equipment. For turf areas spread approved fill material in 150 mm lifts, compact and fine grade.

Stockpile fill materials in areas designated by the County. Stockpile granular materials in a manner that will prevent segregation. Native backfill material shall be free of all boulders larger than 200 mm in maximum dimension, roots, stumps or other debris that would prevent consolidation of the backfill when compacted. Any material found to have moisture content in excess of 5% over the plastic limit is not approved for backfill. All unsuitable backfill material is to be replaced with suitable select excavated material.

**6.3.3 Side Slopes:** Trim slopes of cuts, fills and berms from top to bottom leaving the base of the slope neatly trimmed by removing lumps and loose material, or by blending loose material into the base. Finish slopes true to designated alignment, grade and shape.

**6.3.4 Field Quality Control:** Check graded surfaces to ensure they meet a grade tolerance of  $\pm 25$  mm maximum variation from designated grade elevations and that crossfalls and bottoms of swales and ditches are graded to create positive flow. When tolerances are exceeded trim high areas to with tolerance and scarify low areas, backfill with approved material, compact to required density and regrade to within tolerance.

The compacted density requirements in the dry unit mass of sample at optimum moisture content as determined in the laboratory according to the American Society for Testing of Materials (ASTM) D698 Method A. The required density for fill under prepared and compacted subgrade for asphalt concrete paving, portland cement concrete paving, gravel structures, timber stairs and retaining walls and planted and turf areas is identified in the County Standard Construction Details and/or the approved construction drawings and specifications. Depending on the type of construction the

frequency of testing by a quality assurance laboratory, retained by the Contractor, is outlined in the approved construction drawings and specifications in accordance with ASTM D1556, ASTM D2167 or ASTM D2922 for comparison with a maximum density determined according to ASTM D698 Method A. If a density test result is less than the required density, that test result is discarded and 3 retests shall be performed on the area represented by the failed test. The average of the 3 retests shall represent the density of the area. If this average is less than the required density, the area shall be reworked to the full depth of the lift, the soil moisture altered as necessary and recompacted to the required density. If the area is not retested but is reworked and recompacted the area shall be tested at normal testing frequencies. If the failed lift is covered before the County has accepted the test results then the Contractor assumes the risk of uncovering and reworking the compacted lift.

**6.3.5 Protection:** All excavations are to be kept free of water while work is in progress. Protect open excavations against flooding and damage due to surface run-off. If the work areas floods, drain immediately by natural flow or by pumping into catch basins, manholes or ditches. All finished grades are to be protected from damage. with Repair and retesting shall be required by the County in the event that damage should occur. Erosion and sediment control to be provided to prevent migration of suspended sediments in downstream areas and erosion of on-site soils/sediments during the execution of the work.

## **6.4 Topsoil and Seeding**

All disturbed and re-graded areas will be topsoiled with native topsoil and sodded or seeded with an appropriate seed mix (Detail 13B). Area to be utilized for neighbourhood parks and sports field areas will be mowed; all other areas will be considered native grass areas and will not be mowed after FAC. The minimum topsoil depth for sodding is 100 mm and for seeding is 150 mm. The subgrade will be compacted to 95% Standard Proctor Density and scarified to a minimum depth of 50 mm prior to topsoil spreading and preparation. All stones larger than 25 mm will be removed from the surface of the subgrade. The quality of the topsoil will be tested and submitted to the County for approval before construction. Approved topsoil will have 30% sand, 5% organic matter, neutral in pH and good erosion control. The County may require the topsoil be amended to make it more sandy and organic. Fertilizer will be required based on the soil analysis and shall be applied in accordance with the manufacturer's directions. The seedmix and seeding rate will be in accordance with detail 13B and submitted by the Landscape Architect to the County for approval.

## **6.5 Soilmix and Planting**

The planting soilmix will be 2 parts approved topsoil, 1 part approved compost or peat moss, and one part approved horticultural medium coarse sand.

The planting requirements for private land of various land uses, roadways, and public utility lots are as prescribed in the land use by-law which will be revised from time to time.

The planting requirements for Parks and Open Spaces are 75 trees per hectare with shrubs being substituted at a rate of 5 shrubs to one tree. The minimum size of the plant material is as follows:

- deciduous tree minimum 50 mm caliper measured at 0.5 m (3 columnar aspen = 1 tree)
- coniferous tree minimum 1.8 m height with an overall average height of 2.4 m
- deciduous shrub minimum 400 mm height
- coniferous shrub minimum 400 mm height or spread

For Naturalization planting the planting area should consist of the following:

- 25% caliper stock that meets the requirements above
- 25% mix of shrubs
- 50% whips and cutting where live staking is permitted, minimum 10 per m<sup>2</sup>.

## 6.6 Plant Materials

All plant material shall meet Horticultural Standards of Canadian Nursery Trades Association (CNTA) regarding grading, quality, and nomenclature or other standards where stated otherwise and approved by Leduc County. Plant material may be rejected should the roots be dried out, large branches broken, rootball broken/loosened or areas of bark torn.

Recommended and prohibited species for the purposes of landscaping are as follows. The following list is not exclusive. Other species may be approved by Leduc County for use in landscaping.

(a) Recommended Species – Deciduous trees:

American Mountain Ash – *Sorbus americana*  
 Amur Chokecherry – *Prunus maackii*  
 Bailey Select Schubert Chokecherry – *Prunus virginiana* ‘Bailey Select’  
 Balsam Poplar – *Populus balsamifera*  
 Brandon Elm – *Ulmus americana* “Brandon”  
 Burr Oak – *Quercus macrocarpa*  
 Cutleaf Weeping Birch – *Betula pendula* Lanciniata  
 Dropmore Linden – *Tilia x flavescens* “Dropmore”  
 European Mountain Ash – *Sorbus aucuparia*  
 Goldrush Amur Chokecherry - *Prunus maackii* “Jefree”  
 Green Ash – *Fraxinus pensylvanica lanceolata*  
 Ivory Silk Tree Lilac – *Syringa reticulata* “Ivory Silk”  
 Ohio Buckeye – *Aesculus glabra*  
 Paper Birch – *Betula papyrifera*  
 Pink Spire Flowering Crabapple – *Malus* “Pink Spire”  
 Radiant Flowering Crabapple – *Malus* “Radiant”  
 Red Jade Flowering Crabapple – *Malus* “Red Jade”  
 Royal Beauty Flowering Crabapple – *Malus* “Royal Beauty”  
 Royalty Flowering Crabapple – *Malus* “Royalty”  
 Showy Mountain Ash – *Sorbus decora*  
 Silver Cloud Maple – *Acer saccharinum*  
 Snowbird Hawthorn – *Crataegus mordensis* “Snowbird”  
 Strathmore Flowering Crabapple – *Malus* “Strathmore”  
 Swedish Columnar Aspen – *Populus tremula* “Erecta”  
 Trembling Aspen – *Populus tremuloides*  
 Toba Hawthorn – *Crataegus mordensis* “Toba”



Thunderchild Flowering Crabapple – *Malus* “Thunderchild”  
Ventura Amur Maple – *Acer* X “Ventura”

(b) Recommended Species – Coniferous Trees

Colorado Spruce – *Picea pungens*  
Lodgepole Pine – *Pinus contorta latifolia*  
Norway Spruce – *Picea Abies*  
Siberian Larch – *Larix Sibirica*  
Scots Pine – *Pinus Sylvestris*  
White Spruce – *Picea glauca*

(c) Prohibited species

Baby’s Breath – *Gypsophila panucolata*  
Bladder campion - *Silene cucubalus*  
Blueweed - *Echium vulgare* L.  
Canada thistle - *Cirsium zrvense* L.  
Cleavers - *Galium zparine* L. and *Galium spurium*  
Common tansy - *Tanacetum vulgare* L.  
Creeping Bellflower – *Campanula rapunculoides*  
Cypress spurge - *Euphorbia cyparissias* L.  
Dame’s Rocket – *Hesperis matronalis*  
Diffuse knapweed - *Centaurea diffusa* L.  
Dodder - *Cuscuta* spp.  
Eurasian Water Milfoil - *Myriophyllum spicatum* L.  
Field bindweed - *Convolvulus arvensis* L.  
Field scabious - *Knautia arvensis* (L.) duby  
Himalayan Balsam – *Impatiens glandulifera*  
Hoary cress - *Cardaria* spp.  
Hound's-tongue - *Cynoglossum officinale* L.  
Knapweed - *Scleranthus annuus* L.  
Leafy spurge - *Euphorbia esula* L.  
Maltese Cross – *Lychnis chalcidonica*  
Nodding thistle - *Carduus nutans* L.  
Oxeye daisy - *Chrysanthemum leucanthemum* L.  
Perennial sow thistle - *Sonchus arvensis* L.  
Persian dandelion - *Lolium persicum*  
Purple Loosestrife - *Lythrum allicaria*  
Queen Anne’s Lace – *Daucus carota*  
Red bartsia - *Odontites serotina* L.  
Russian knapweed - *Centaurea repens* L.  
Russian Olive – *Elaeagnus angustifolia*  
Salt-Cedar – *Tamarix* spp.  
Scentless Chamomile - *Matricaria maritima* L.  
Spotted knapweed - *Centaurea maculosa* L.  
Spreading dogbane - *Apocynum androsaemifolium* L.  
Stork's bill - *Erodium cicutarium* L.  
St. John's Wort – *Hypericum perforatum*  
Tall buttercup - *Ranunculus acris* L.  
Teasel – *Dipsacus fullonum*

Toadflax - *Linaria vulgaris*  
White Cockle - *Lychnis alba*  
Wild Caraway – *Carum carvi*  
Yellow Clematis – *Clematis tangutica*  
Yellow star thistle - *Centaurea solstitialis* L.

## **6.7 Maintenance**

The maintenance of plant material and mowed turf will be provided by the landscape contractor every week during the growing season from May 15 until October 15 and a log report identifying the tasks undertaken will be transmitted every week to the Landscape Architect and County as a record and confirmation that the maintenance has been undertaken. If soil conditions identify the need for fertilizers, plant material will be watered with a soluble fertilizer additive every two weeks and just prior to freeze-up to ensure vigorous growth. Plant material will also be pest controlled and pruned as required. Best practices will be used when applying fertilizer/pesticide and will not be used when in close proximity to water courses. Plant material will be inspected monthly for any damage however caused. Maintained turf, both sodded and seeded, will be mowed with litter pick-up weekly, fertilized three times per year, weed controlled twice per year, wear areas top dressed and over seeded and watered to maintain 100% turf coverage. Native seeded areas will be mowed with litter pick-up twice per year, fertilized if required three times per year, weed controlled twice per year, wear areas top dressed and over seeded and watered to maintain 100% turf coverage. If turf clippings during mowing are too moist or too deep then the Contractor will pick up and dispose of the clippings.

The maintenance of all other park components including but not limited to fencing, trails, site furnishings, and signs will be inspected and repaired on a monthly basis year round during the two year warranty period and a maintenance report identifying the tasks undertaken will be transmitted every month to the Landscape Architect and County as a record and confirmation that the maintenance has been undertaken.

Haul-a-way garbage receptacle emptying will be provided by the County starting at approval of the Construction Completion Certificate. When the Contractor is mowing, litter pick-up in all turf and planting bed areas will be provided by the Contractor before mowing.

If maintenance and repair is not being attended to then the County will undertake the maintenance and charge back the costs including and additional 10% administration cost.

### **6.7.1 Natural Area Maintenance**

- As part of the maintenance reporting, identify and describe existing vegetation and site conditions to determine site specific goals and indicate best management strategies:
  - Prepare a site map
  - Vegetation and wildlife inventory (Rare or Endangered)
  - Non-native species and management



- Biodiversity
  - Ecological Health
  - Soil
  - Microclimate
- In existing natural areas restore any disturbed areas to original condition.
  - Where wetlands, stream courses and/or water bodies are part of the natural area, ensure erosion control measures are maintained until establishment of plant material and grasses.
  - Use preventative measures against weed development. Non-native species management is required. Selective cutting, hand-pulling and spot spraying may be required.
  - Coarse woody debris (downed wood, logs, stumps, branches and roots) are to be maintained in remnant tree stands. Management typically includes retention of existing coarse woody debris, introduction of new coarse woody debris (manual and natural methods), distribution and positioning of coarse woody debris, enhancement of coarse woody debris by cutting, shaping and companion planting. Stumps and roots should be retained on site. Consideration for the risk of fire hazard should also occur.
  - Monitor Environmental Reserve areas to ensure function has not been impacted by Development. Where problems occur, restoration plans are to be approved by Leduc County prior to implementation.

## 7.0 Parks Design Standard Details

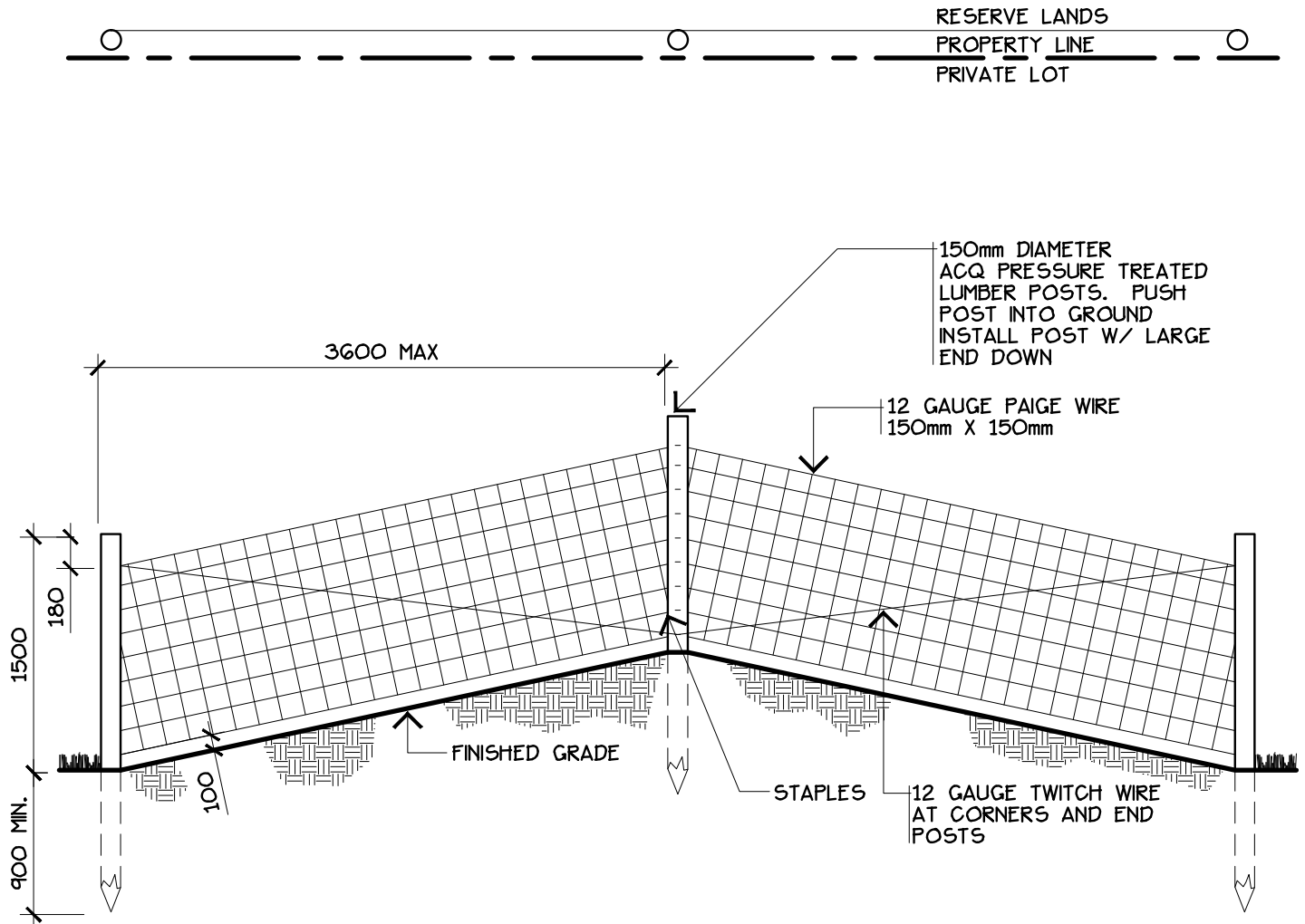
1A	Paige Wire Fence
1B	Post & Double Rail Fence
1C	Chain Link Fence and Gate
1D	1850mm Wood Screen Fence and Gate
1E	1800-2500mm Noise Attenuation Fence
2A	Shredded Bark Mulch Trail – 1500mm Wide
2B	Road Crushed Gravel Trail – 1500mm Wide
2C	Boardwalk Without Footing
2D	Asphalt Trail – 3000mm Wide
2E	Asphalt Trail Line Painting
2F	Trail Root Guard
2G	Trail Culvert – All Surfaces
3A	Steel Pipe Bollard
3B	Steel T-Bollard
4	Steel Pipe Access Gate
5	Pressure Treated Timber Stairs
6	Galvanized Steel Stairs
7A	Timber Retaining Wall – to 1000mm High
7B	Stacked Rock Retaining Wall – to 1000mm High
8	Haul-A-Way Waste Receptacle
9A	Portable Picnic Table
9B	Stationary Pedestal Picnic Table
10	Backed Bench
11	Fire Pit
12	Tree Planting
13A	Shrub Planting
13B	Seed and Sod Detail
14	Storm Water Management Facility (SWMF) Planting
15	Park Entrance Signs
16A	Park Signage
16B	Park Signage
17	Park Interpretive Signs
18	ER/MR and Campsite Designation Signs
19	Park Area Activity Signs
19A	Playground Edger
19B	Playground Signage
20A	Senior Soccer Field
20B	Intermediate Soccer Field
20C	Junior Soccer Field
20D	Goal Posts
20E	Goal Post – Permanent
20F	Goal Post w/ Sleeve
21A	Senior Baseball Diamond
21B	Little League Baseball Diamond
21C	Fastball/Slopitch Ball Diamond
21D	Backstop Details
21E	Player's Bench

22	Outdoor Rink
23	Sand Volleyball Court
24	Horseshoe Pitch
25	Parking Lot Layout
26	Campsite Layout and Surfacing
27	Sewage Dump Station
28	Seasonal Water Tap & Sump
29	Fish Cleaning Stand
30	Double Vault Toilet Building
31	Wildlife Viewing Platform

## 8.0 Parks Maintenance Standards Checklist

Table 2 Parks Maintenance Standards Checklist on this page indicates the requirements for maintaining the constructed parks and open spaces for the two year warranty period.

TABLE 2 PARKS MAINTENANCE STANDARDS CHECKLIST	Litter Pick-up	Lawn Turf Mowing	Native Seed Turf Mowing	Turf Fertilizing	Turf Weed Control	Water Turf As Required	Topdress & Overseed	Water Trees & Shrubs	Weed Beds & Tree Pits	Mulch Beds & Pits	Prune Trees & Shrubs	Trees & Shrubs Fertilizing	Inspect Trees & Shrubs	Gopher/Ground Squirrel Control
JANUARY	1												1	
FEBRUARY	1												1	
MARCH	1										1		1	
APRIL	1												1	1
MAY 1-15	1							1						1
MAY WEEK 3	1	1		1	1							1		
MAY WEEK 4	1	1						1						
JUNE WEEK 1	1	1												
JUNE WEEK 2	1	1						1						
JUNE WEEK 3	1	1	1						1	1				
JUNE WEEK 4	1	1						1						
JULY WEEK 1	1	1												
JULY WEEK 2	1	1						1				1		
JULY WEEK 3	1	1		1	1									
JULY WEEK 4	1	1						1						
AUGUST WEEK 1	1	1							1					
AUGUST WEEK 2	1	1						1						
AUGUST WEEK 3	1	1												
AUGUST WEEK 4	1	1						1						
SEPTEMBER WEEK 1	1	1												
SEPTEMBER WEEK 2	1	1	1				1	1						
SEPTEMBER WEEK 3	1													
SEPTEMBER WEEK 4	1							1	1			1		
OCTOBER WEEK 1	1													
OCTOBER WEEK 2	1							1			1			
NOVEMBER	1												1	
DECEMBER	1												1	
TOTAL	27	16	2	2	2	0	1	11	3	1	2	3	6	2




#### NOTES:

- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS OF CLEAR ACQ.
- ALL HARDWARE TO BE GALVANIZED
- ALL TREES, BRUSH AND OTHER OBSTACLES WHICH INTERFERE WITH THE CONSTRUCTION AND ALIGNMENT OF THE FENCE TO BE REMOVED PRIOR TO CONSTRUCTION OF THE FENCE
- GATES TO BE SHOWN ON A PLAN AND LOCATED ACCORDINGLY OR AS DIRECTED BY THE CONSULTANT

## ELEVATION

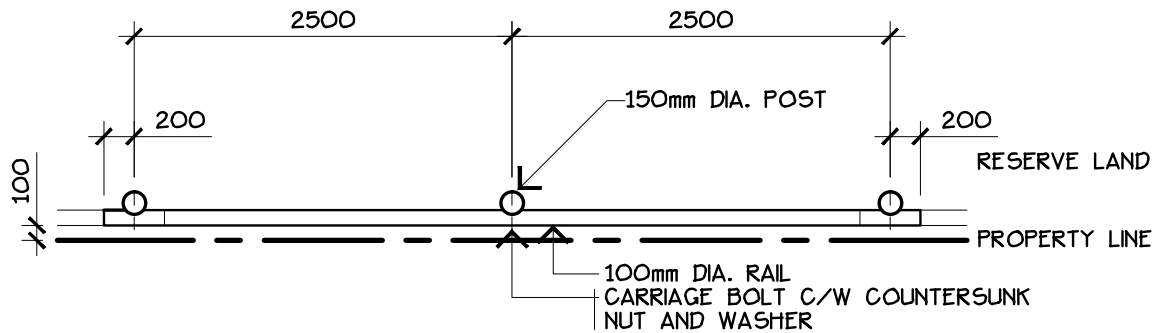
DRAWING: PAIGE WIRE FENCE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  1A
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

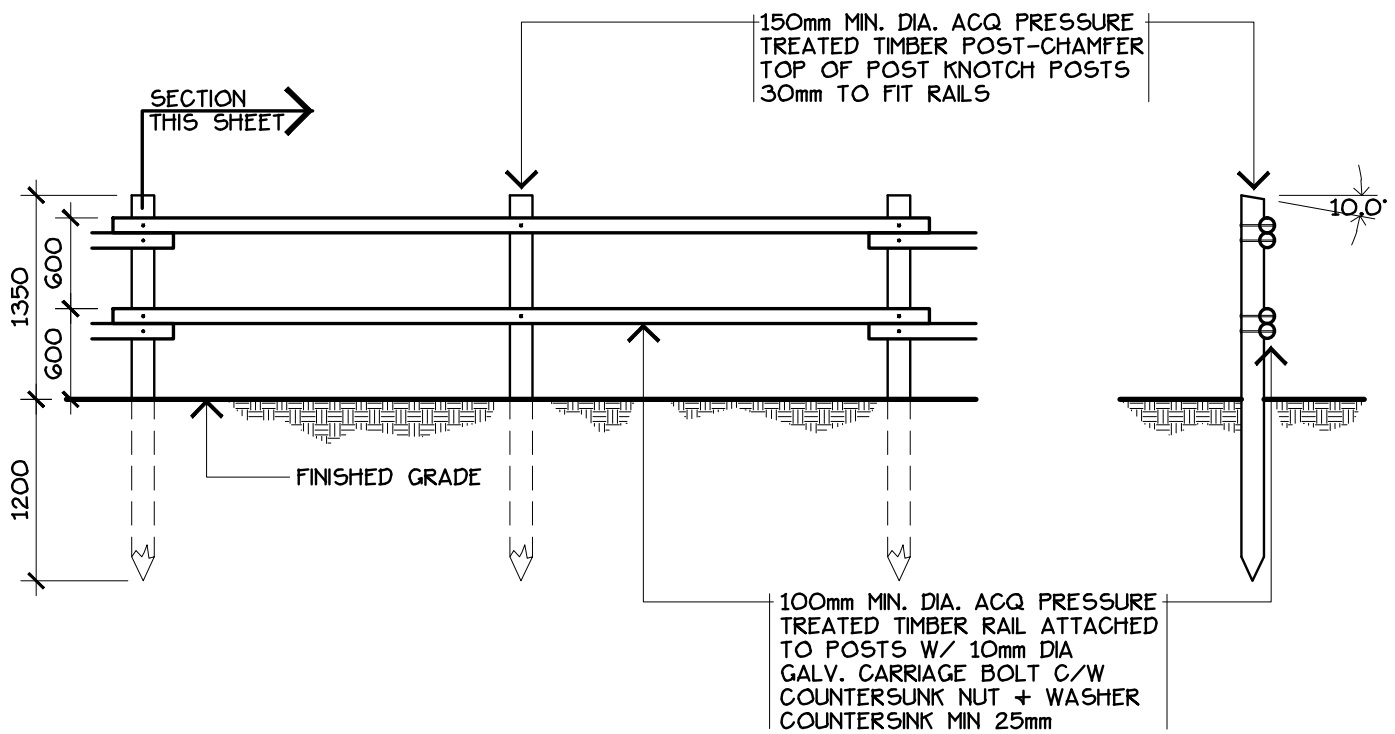
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

# RESERVE LAND IMPROVED FENCE IN HIGH VISIBILITY LOCATIONS



PLAN VIEW




## NOTES:

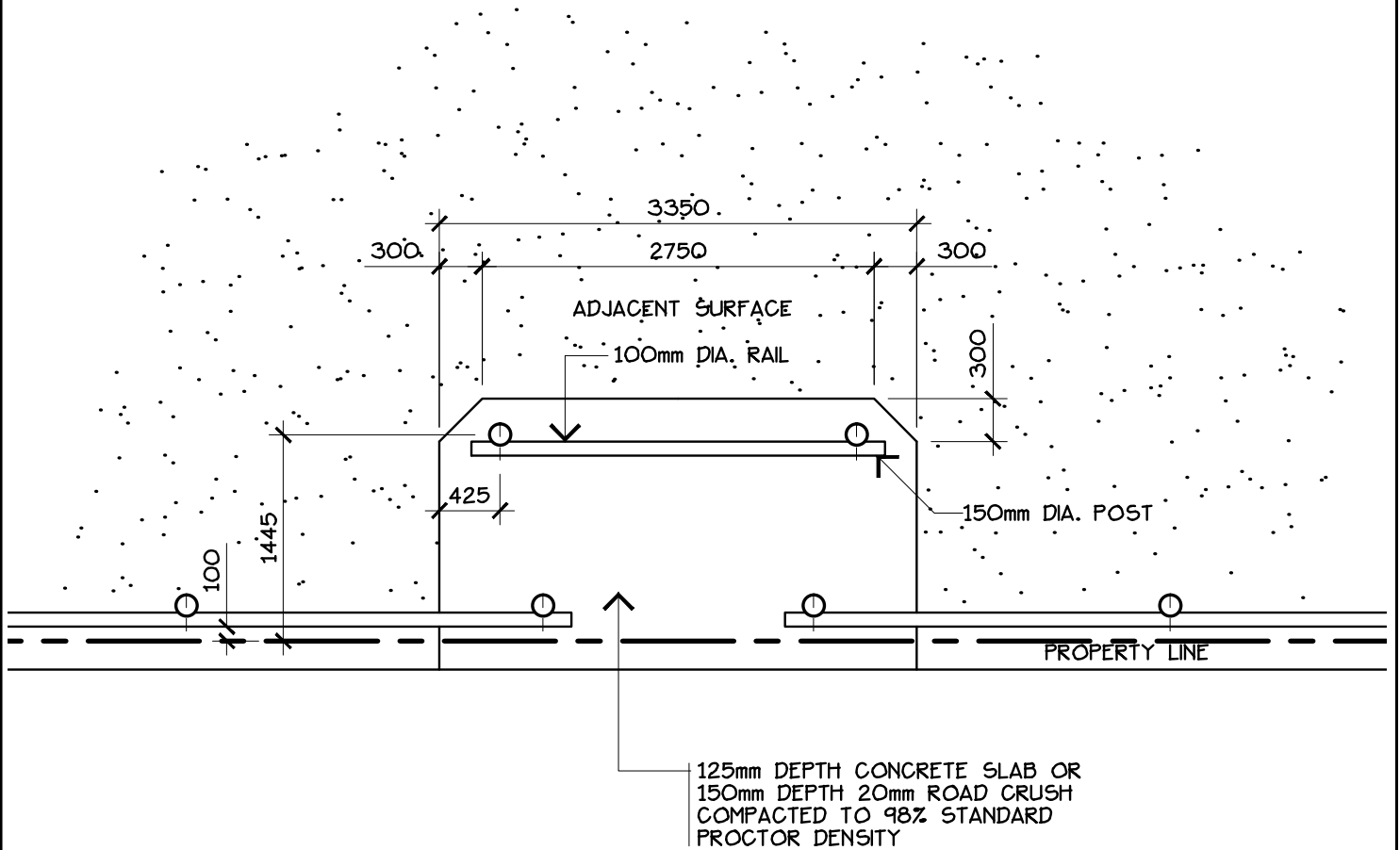
- PUSH POSTS INTO GROUND MIN. 1200mm.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS OF CLEAR ACQ.

ELEVATION

SECTION

DRAWING: POST & DOUBLE RAIL FENCE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  1B-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	



#### NOTES:

- CONCRETE SLAB:  
CONCRETE - CLASS C, TYPE GU, 30MPa • 28 DAYS, SLUMP 50-70, AIR ENTRAINED >5.5%, MAXIMUM 20mm AGGREGATE, MAXIMUM WATER 0.45, CEMENT 335kg/m<sup>3</sup>  
BROOM FINISH SURFACE, EDGES TOOLED, 50mm TOOLED JOINTS MAXIMUM 3000mm O.C.  
REINFORCING WELDED STEEL WIRE FABRIC 152X152 MW9.9/9.1  
50mm DEPTH LEVELLING SAND  
150mm DEPTH COMPACTED SUBGRADE TO 98% STANDARD PROCTOR DENSITY

## PLAN VIEW

DRAWING: POST & DOUBLE RAIL FENCE PEDESTRIAN ACCESS



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

DATE: 2009 08

SCALE: 1:50

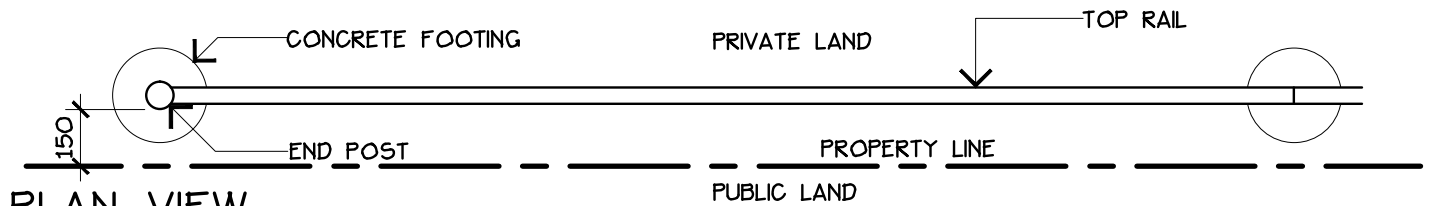
APPROVED: D.O.

DRAWING NO.

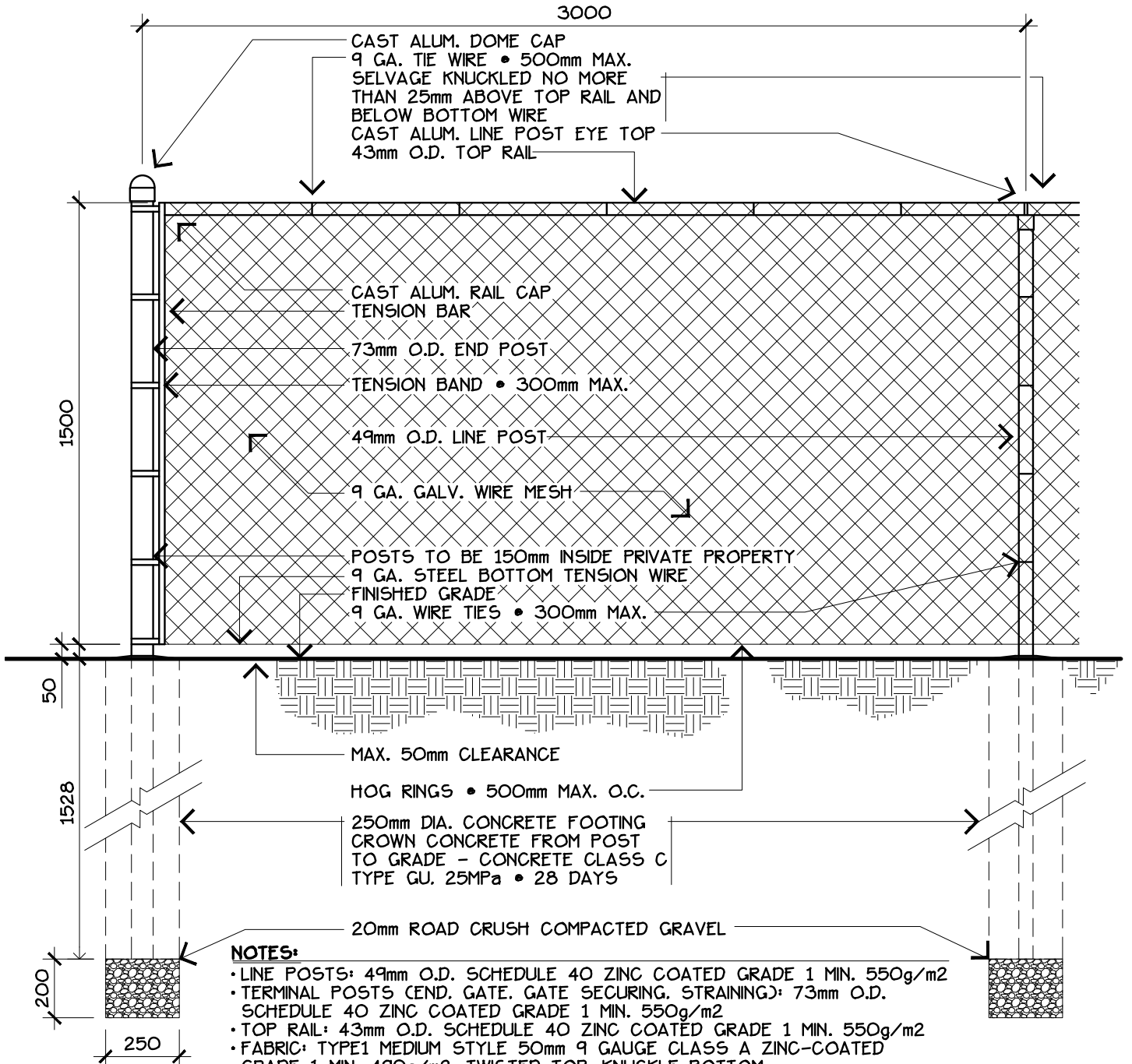
1B-2

LEDUC COUNTY PARKS AND RECREATION

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




## PLAN VIEW



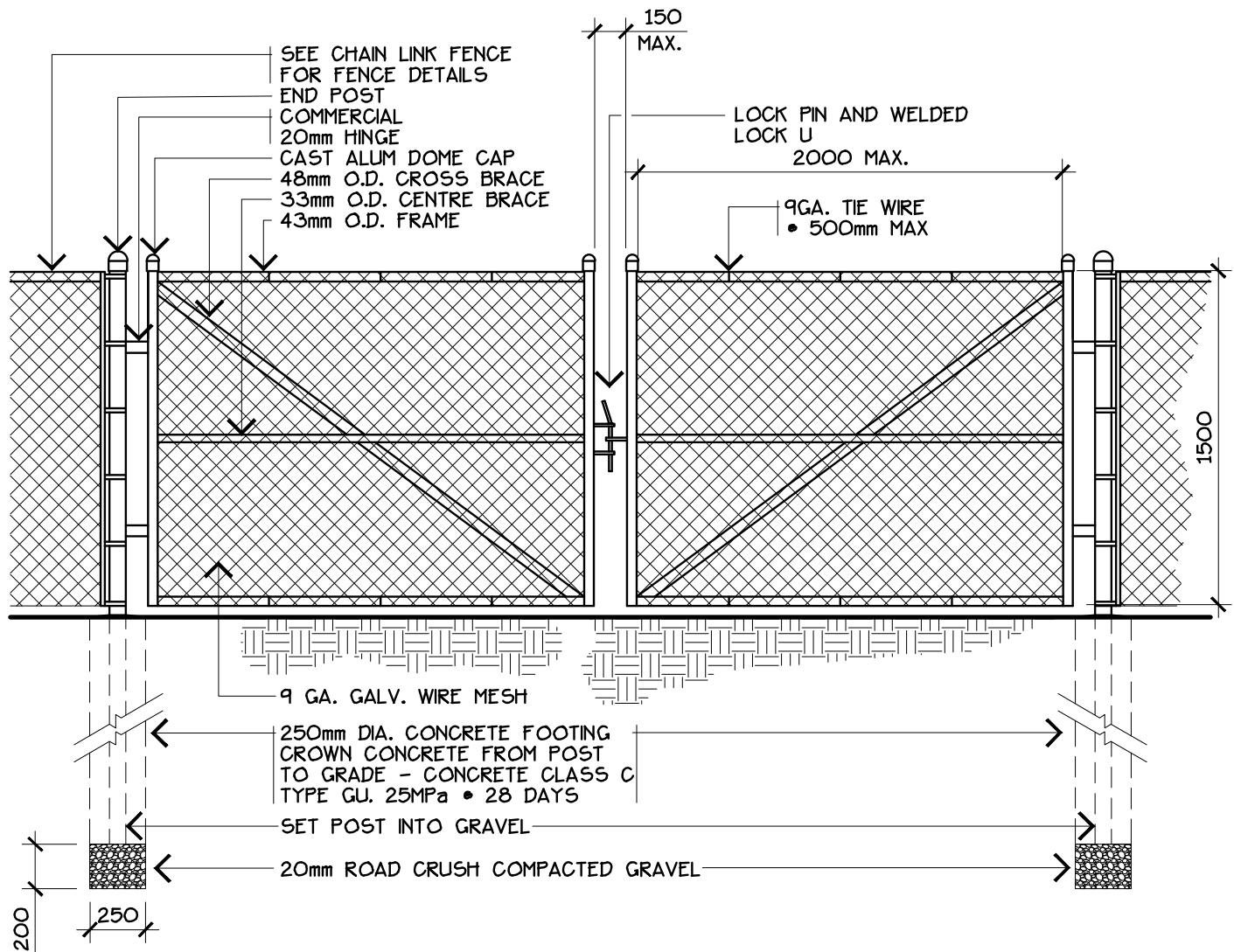
## ELEVATION

DRAWING: CHAIN LINK FENCE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  1C-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3






#### NOTES:

- CROSS BRACE, CENTRE BRACE AND FRAME: SCHEDULE 40 ZINC COATED GRADE 1 MIN. 550g/m<sup>2</sup>
- TERMINAL POSTS (END, GATE, GATE SECURING, STRAINING): 73mm O.D. SCHEDULE 40 ZINC COATED GRADE 1 MIN. 550g/m<sup>2</sup>
- FABRIC: TYPE1 MEDIUM STYLE 50mm 9 GAUGE CLASS A ZINC-COATED GRADE 1 MIN. 490g/m<sup>2</sup>, TWISTED TOP, KNUCKLE BOTTOM

## ELEVATION

DRAWING: CHAIN LINK FENCE GATE

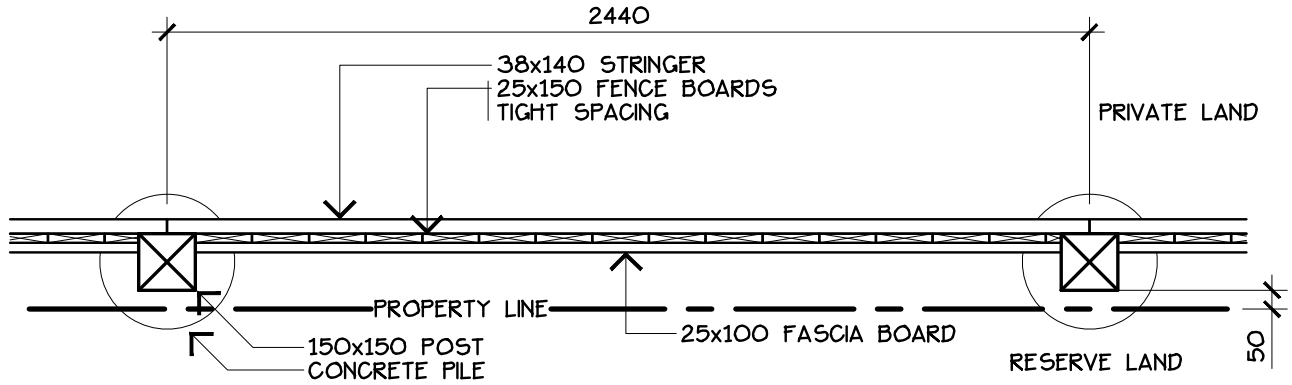
 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>1C-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

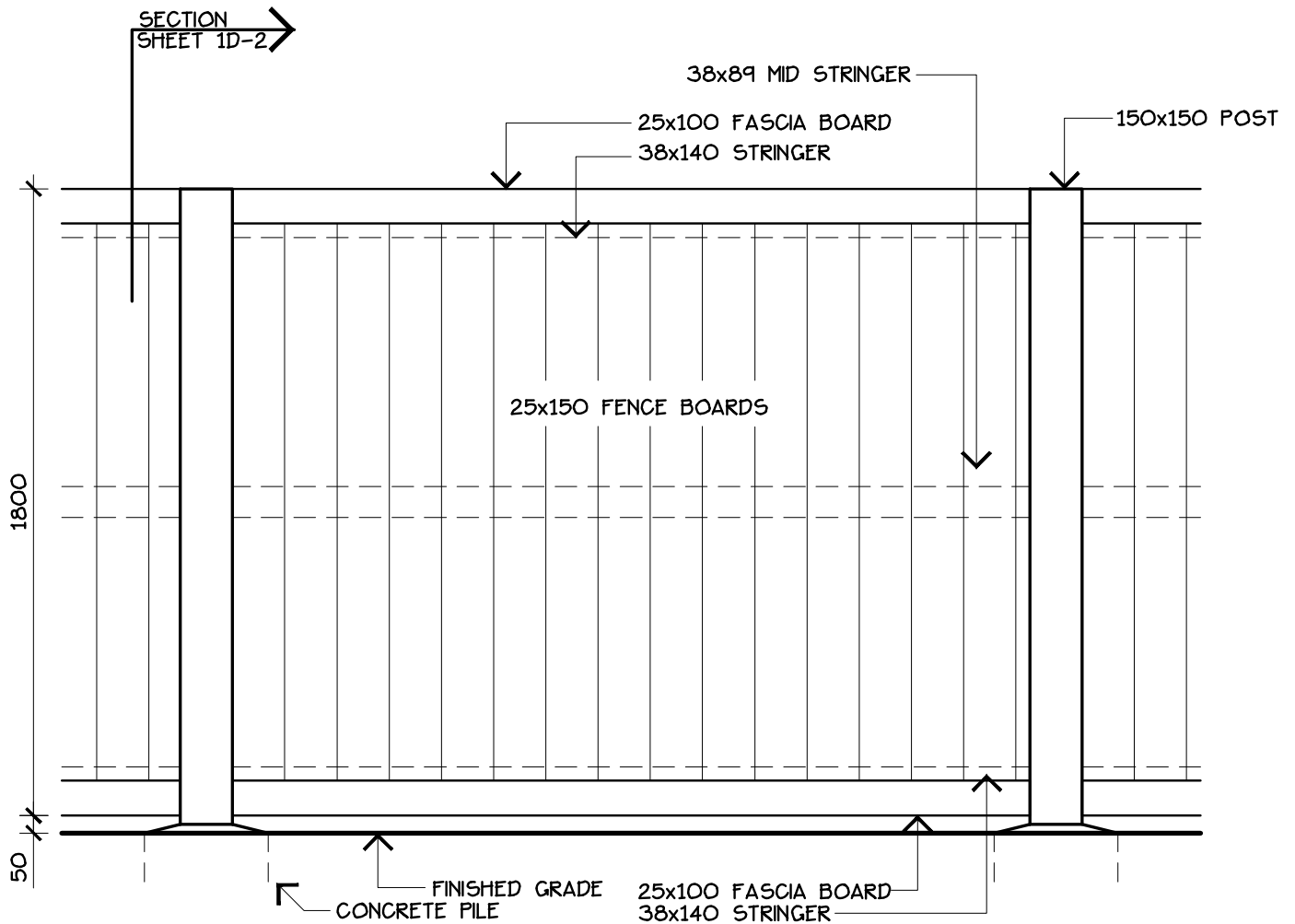
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



# RESIDENTIAL PROPERTY AND RESERVE LAND




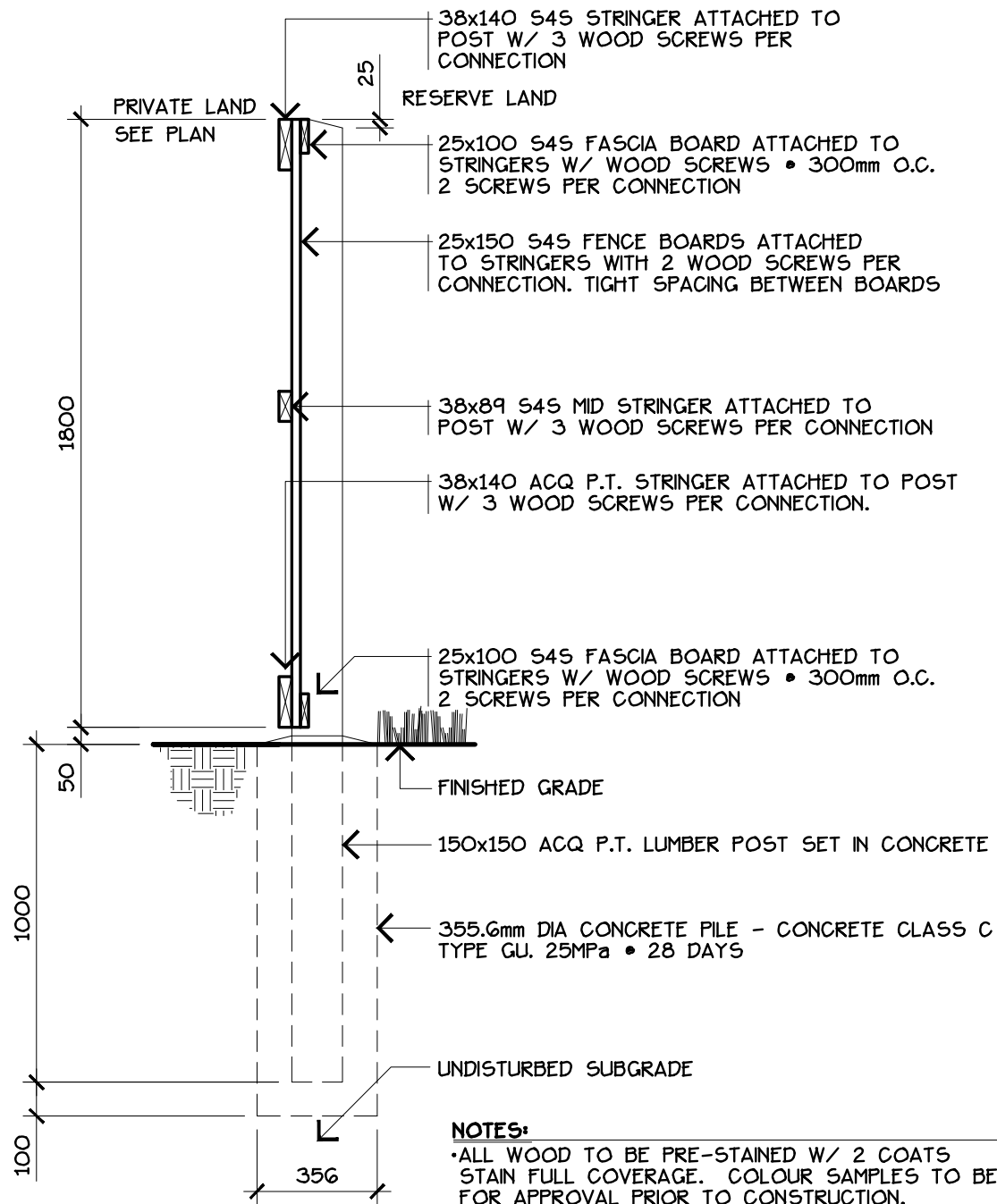
## PLAN VIEW



## ELEVATION

DRAWING: 1850mm WOOD SCREEN FENCE - PLAN VIEW & ELEVATION

	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>ID-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION			SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- ALL WOOD TO BE PRE-STAINED W/ 2 COATS STAIN FULL COVERAGE. COLOUR SAMPLES TO BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
- TOUCH UP STAIN AFTER CONSTRUCTION.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.
- POSTS - CRACKS MORE THAN 50% OF DEPTH. 25% OF WIDTH OR MORE THAN 12mm OR MECHANICALLY DAMAGED WILL BE REJECTED
- RESAWN LUMBER WILL NOT BE ACCEPTED
- CRACKS 6-12mm ARE TO BE RE-STAINED INSURING STAIN PENETRATES TO CORE WOOD

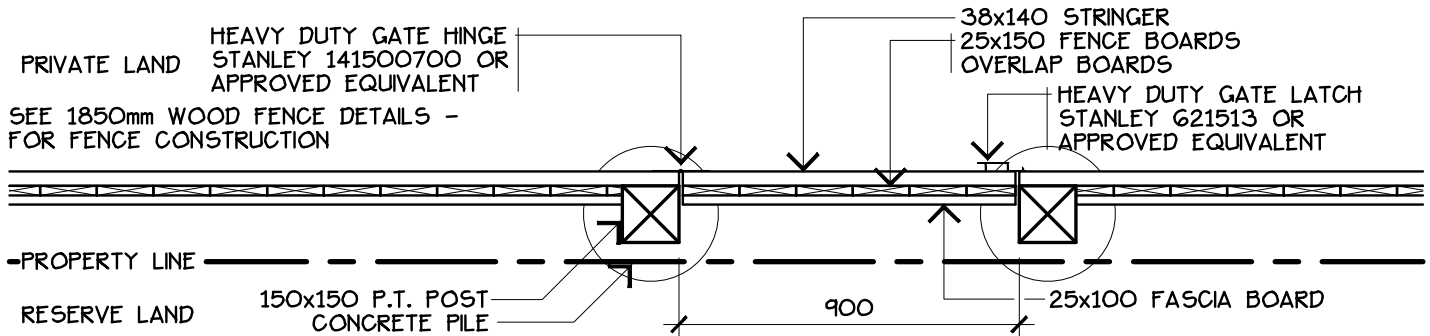
**SECTION**

DRAWING: 1850mm WOOD SCREEN FENCE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  ID-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

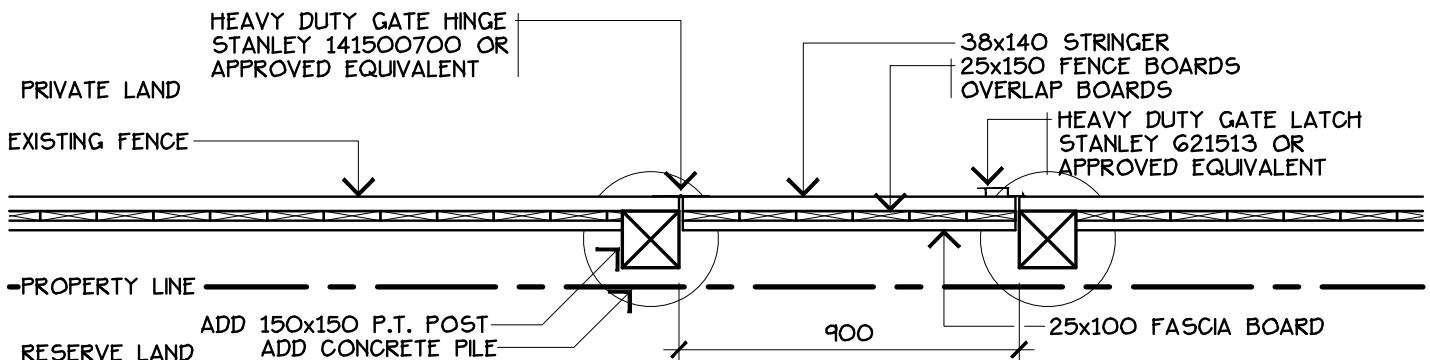
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

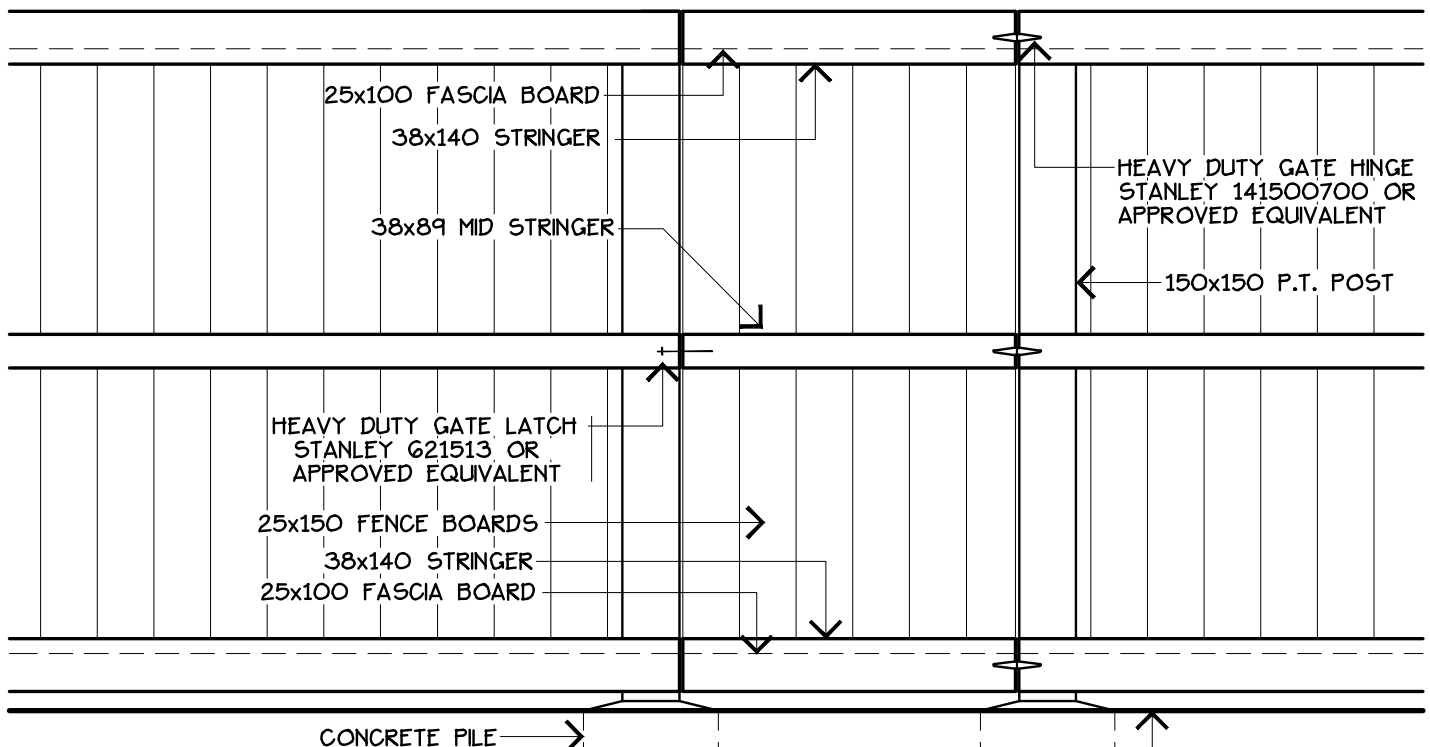


## PLAN VIEW - NEW FENCE

•FIELD TREAT ALL CUT ENDS AND DRILLED HOLES  
W/ 2 COATS ACQ (PRESSURE TREATED WOOD ONLY).



## PLAN VIEW - EXISTING FENCE (RETRO-FIT)



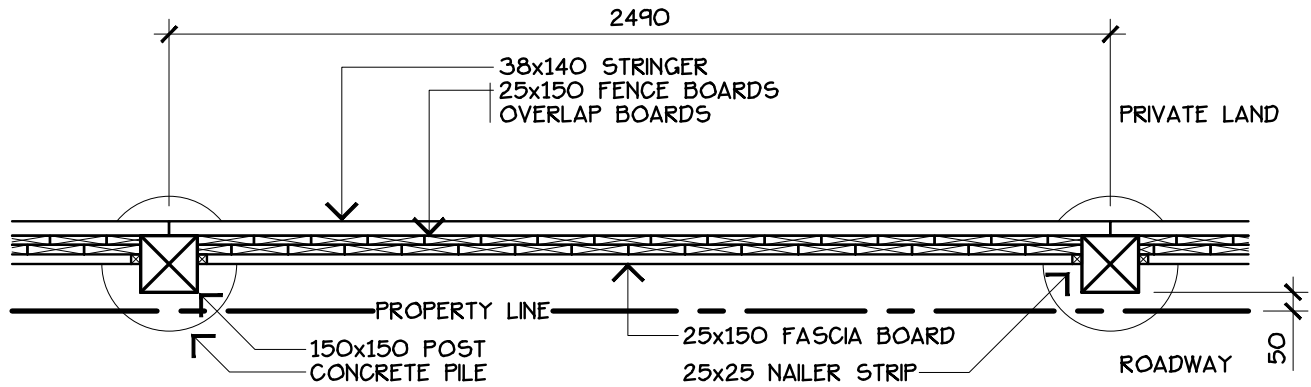
## ELEVATION

•POST HOLES TO BE EXCAVATED TO REACH A  
DEPTH OF UNDISTURBED SUBGRADE.

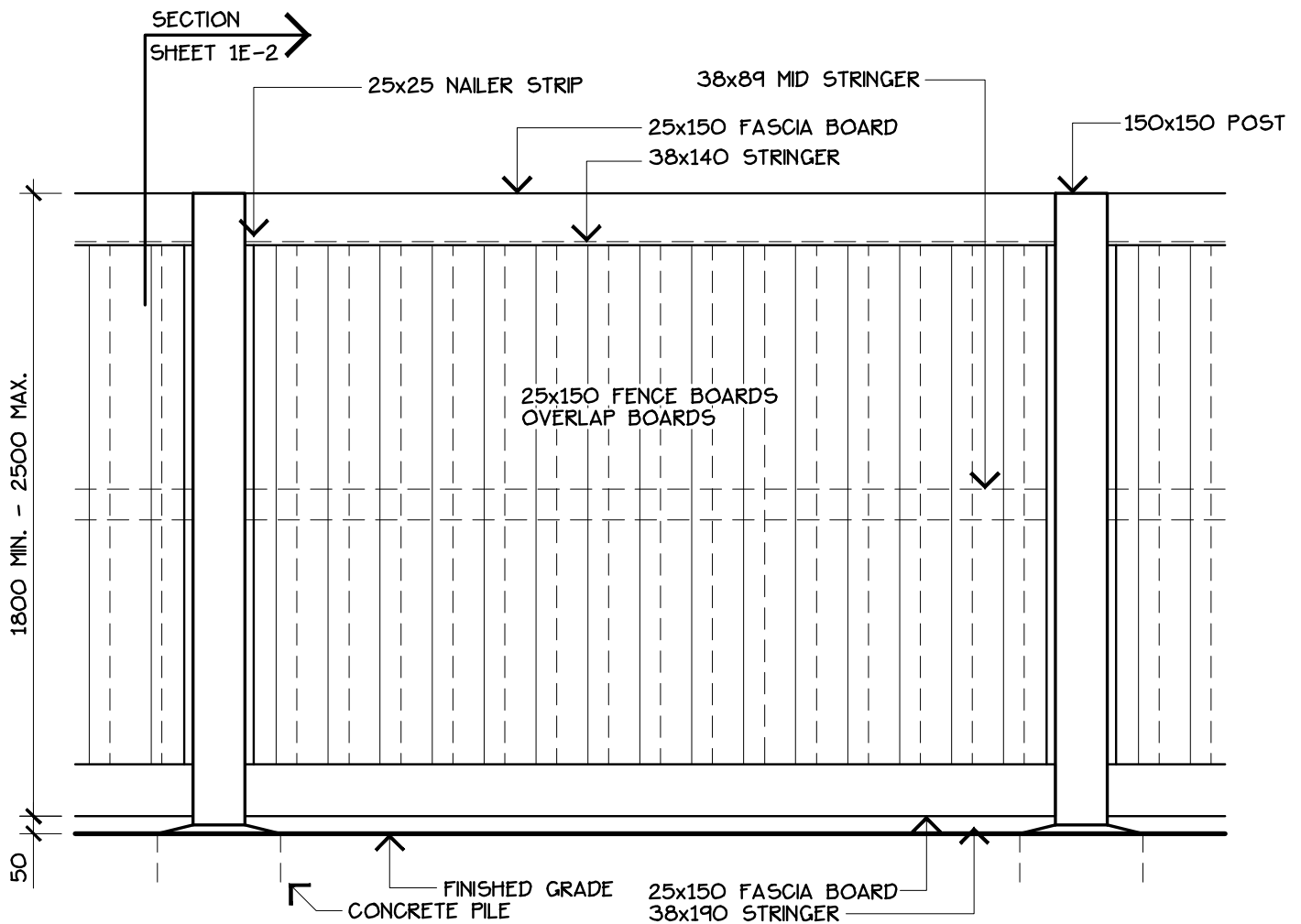
DRAWING: 1850mm WOOD GATE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>ID-3</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	

# TOP OF BERMS ALONG MAJOR ROADWAYS




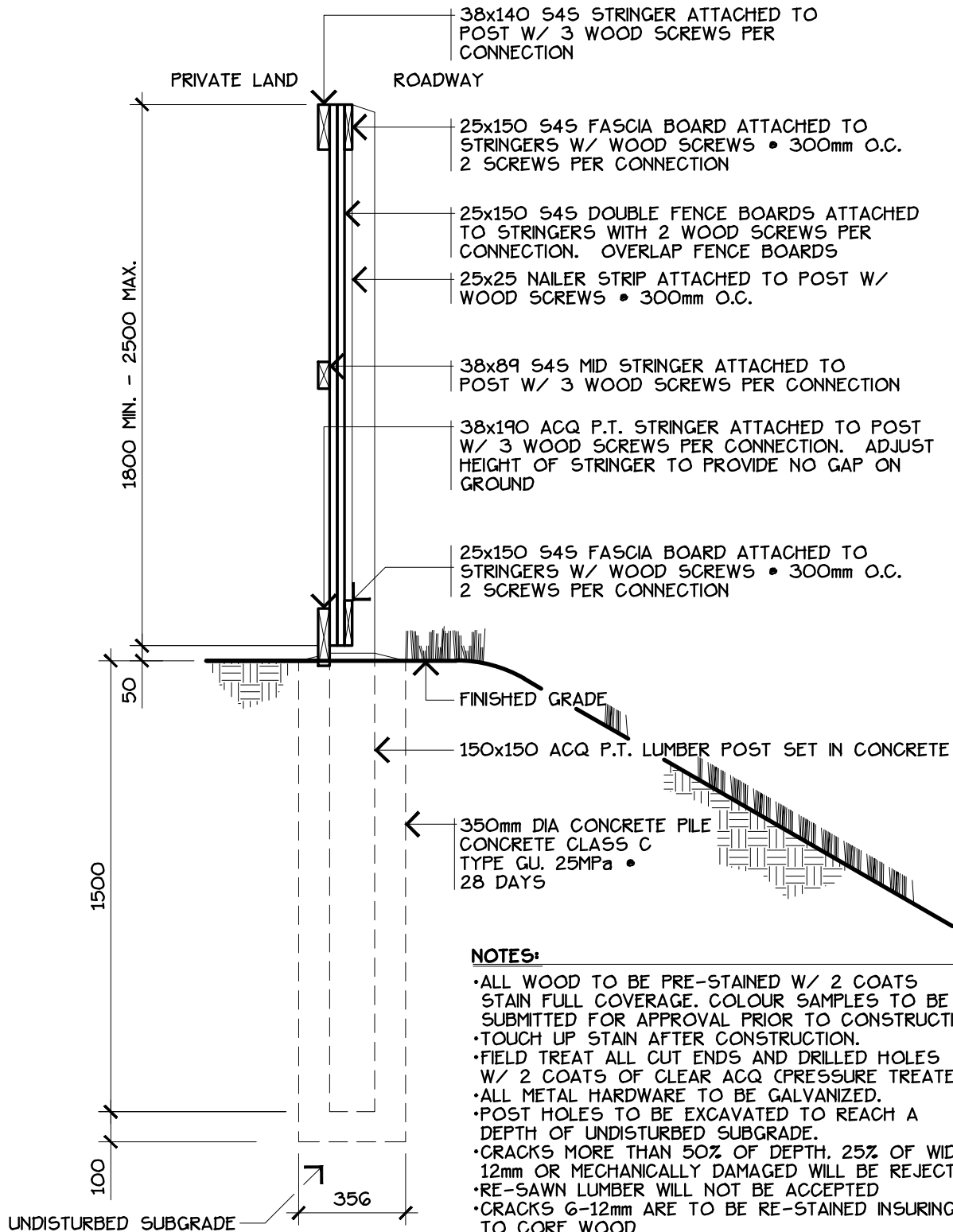
## PLAN VIEW



## ELEVATION

DRAWING: 1800 - 2500mm NOISE ATTENUATION FENCE - PLAN VIEW & ELEVATION

	REVISION NO:	DATE: 2009 08	DRAWING NO.  1E-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	




#### NOTES:

- ALL WOOD TO BE PRE-STAINED W/ 2 COATS STAIN FULL COVERAGE. COLOUR SAMPLES TO BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
- TOUCH UP STAIN AFTER CONSTRUCTION.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS OF CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.
- CRACKS MORE THAN 50% OF DEPTH, 25% OF WIDTH OR MORE THAN 12mm OR MECHANICALLY DAMAGED WILL BE REJECTED
- RE-SAWN LUMBER WILL NOT BE ACCEPTED
- CRACKS 6-12mm ARE TO BE RE-STAINED INSURING STAIN PENETRATES TO CORE WOOD

## SECTION

DRAWING: 1800 - 2500mm NOISE ATTENUATION FENCE - SECTION

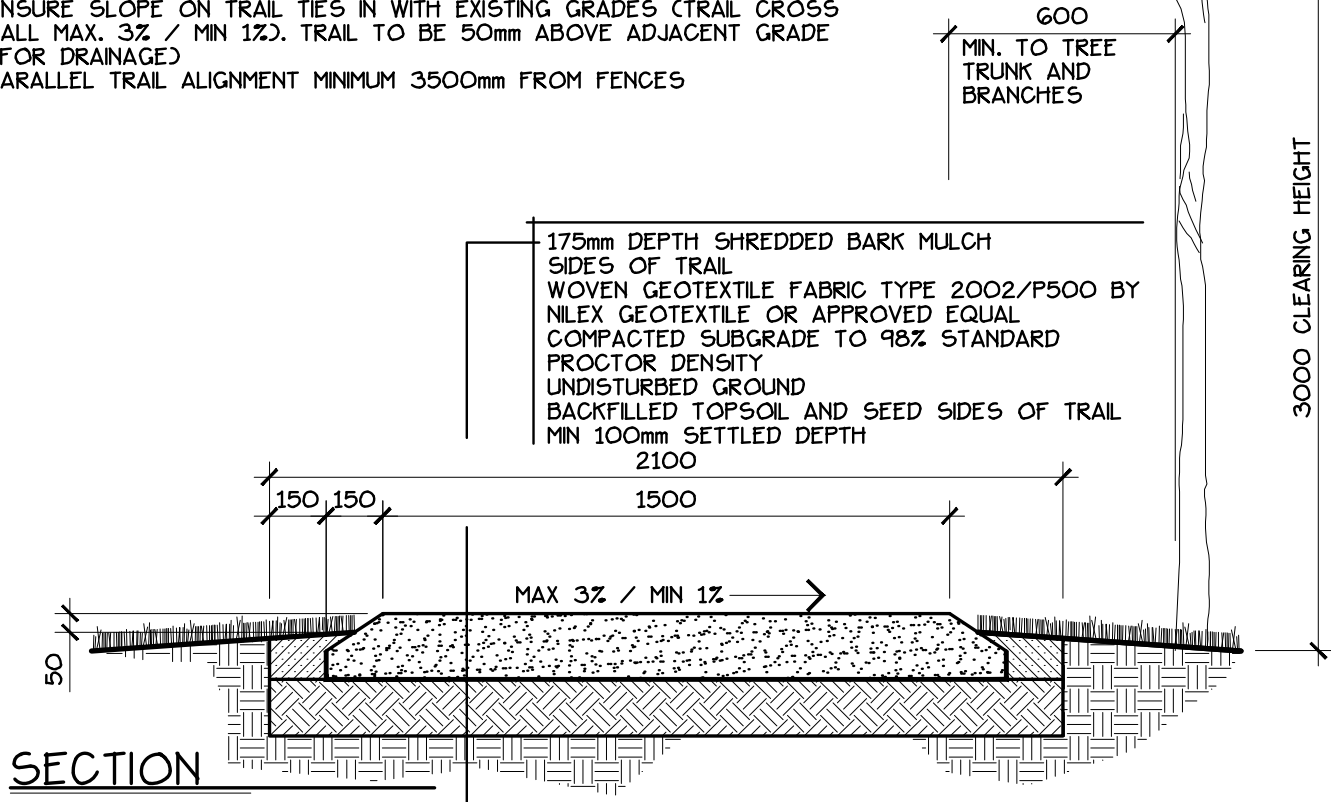
	REVISION NO:	DATE: 2009 08	DRAWING NO.  1E-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

# NOTES:

- EXCAVATION OF TOP MATERIAL TO BE DONE TO A WIDTH OF 2100mm
- DO NOT PULL OR RIP OUT ROOTS OF TREES THAT REMAIN. IF EXCAVATION THROUGH ROOTS IS REQUIRED EXCAVATE BY HAND AND BY HAND AND CUT ROOTS WITH A SHARP AXE
- UNNECESSARY TREE DESTRUCTION WILL NOT BE TOLERATED
- DISPOSE OF ALL EXCAVATED MATERIAL FROM THE SITE AS DIRECTED BY LEDUC COUNTY
- WHEN TRANSPORTING MATERIAL OFF-SITE USE TRAIL ALIGNMENT WHERE POSSIBLE
- ALL TRAIL EXCAVATION TO MATCH EXISTING NATURAL GRADE
- APPROVED EXCAVATED MATERIALS MAY BE USED FOR TRAIL CONSTRUCTION ON STEEP SIDE SLOPES OR LOW AREAS TO PROVIDE PROPER GRADES AND DRAINAGE THIS IS PREFERABLE TO CUTTING INTO THE SLOPE WHICH MAY INITIATE EROSION ISSUES
- DISTURBED AREAS ALONG TRAIL EDGE TO BE SEEDED WITH APPROVED SEED MIXTURE ACCORDING WITH DETAIL 13B
- COMPACTION REQUIREMENTS MAY BE MODIFIED ACCORDING TO SITE CONDITIONS
- ENSURE SLOPE ON TRAIL TIES IN WITH EXISTING GRADES (TRAIL CROSS FALL MAX. 3% / MIN 1%). TRAIL TO BE 50mm ABOVE ADJACENT GRADE (FOR DRAINAGE)
- PARALLEL TRAIL ALIGNMENT MINIMUM 3500mm FROM FENCES



DRAWING: SHREDDED BARK MULCH TRAIL - 1500mm WIDE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>2A</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	

LEDUC COUNTY PARKS AND RECREATION

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



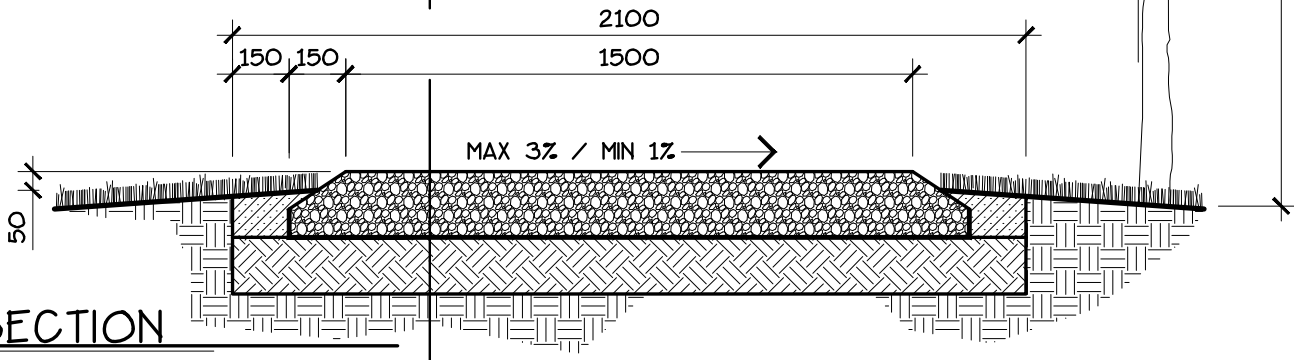
# **NOTES:**

- EXCAVATION OF TOP MATERIAL TO BE DONE TO A WIDTH OF 2100mm
- DO NOT PULL OR RIP OUT ROOTS OF TREES THAT REMAIN. IF EXCAVATION THROUGH ROOTS IS REQUIRED EXCAVATE BY HAND AND BY HAND AND CUT ROOTS WITH A SHARP AXE
- UNNECESSARY TREE DESTRUCTION WILL NOT BE TOLERATED
- DISPOSE OF ALL EXCAVATED MATERIAL FROM THE SITE AS DIRECTED BY LEDUC COUNTY
- WHEN TRANSPORTING MATERIAL OFF-SITE USE TRAIL ALIGNMENT WHERE POSSIBLE
- ALL TRAIL EXCAVATION TO MATCH EXISTING NATURAL GRADE
- APPROVED EXCAVATED MATERIALS MAY BE USED FOR TRAIL CONSTRUCTION ON STEEP SIDE SLOPES OR LOW AREAS TO PROVIDE PROPER GRADES AND DRAINAGE THIS IS PREFERABLE TO CUTTING INTO THE SLOPE WHICH MAY INITIATE EROSION ISSUES
- DISTURBED AREAS ALONG TRAIL EDGE TO BE SEEDED WITH APPROVED SEED MIXTURE ACCORDING WITH DETAIL 13B
- COMPACTION REQUIREMENTS MAY BE MODIFIED ACCORDING TO SITE CONDITIONS
- ENSURE SLOPE ON TRAIL TIES IN WITH EXISTING GRADES (TRAIL CROSS FALL MAX. 3% / MIN 1%). TRAIL TO BE 50mm ABOVE ADJACENT GRADE (FOR DRAINAGE)
- PARALLEL TRAIL ALIGNMENT MINIMUM 3500mm FROM FENCES


600  
MIN. TO TREE  
TRUNK AND  
BRANCHES

3000 CLEARING HEIGHT

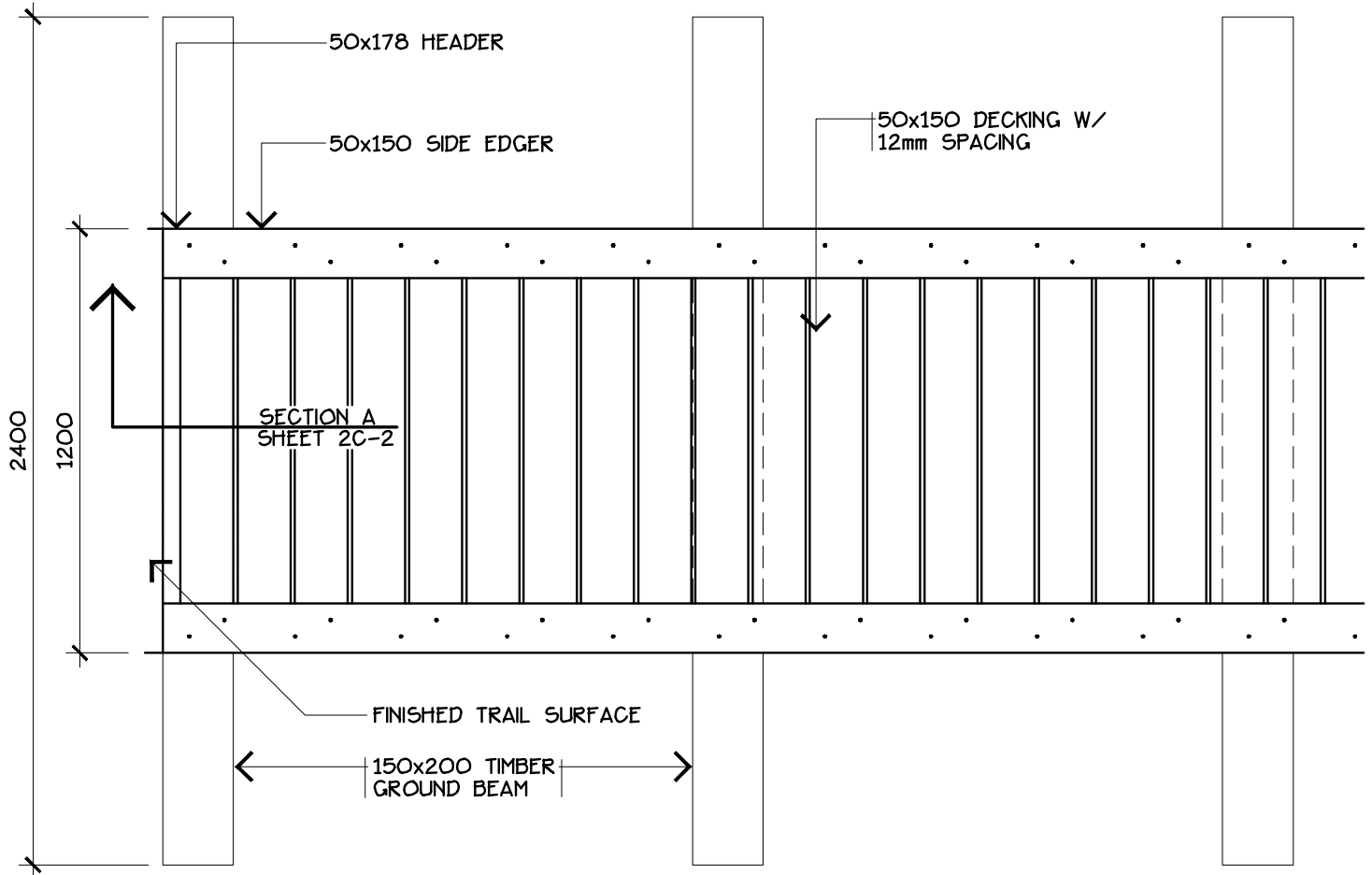
175mm DEPTH 20mm ROAD CRUSH GRAVEL  
COMPACTED TO 98% STANDARD PROCTOR DENSITY  
WOVEN GEOTEXTILE FABRIC TYPE 2002 BY  
NILEX GEOTEXTILE OR APPROVED EQUAL  
TENSAR STRUCTURAL GEOGRID BX1100 BY NILEX  
GEOTECHNICAL  
COMPACTED SUBGRADE TO 98% STANDARD  
PROCTOR DENSITY  
UNDISTURBED GROUND  
BACKFILLED TOPSOIL AND SEED SIDES OF TRAIL  
MIN. 100mm SETTLED DEPTH



DRAWING: ROAD CRUSH GRAVEL TRAIL - 1500mm WIDE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  2B
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION			
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			

# AREAS TOO WET FOR SHREDDED BARK MULCH OR GRAVEL TRAIL




## NOTES:

- AREAS TOO WET FOR SHREDDED BARK MULCH TRAIL OR GRAVEL TRAIL
- ALL WOOD TO BE ALLOWED TO WEATHER.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.

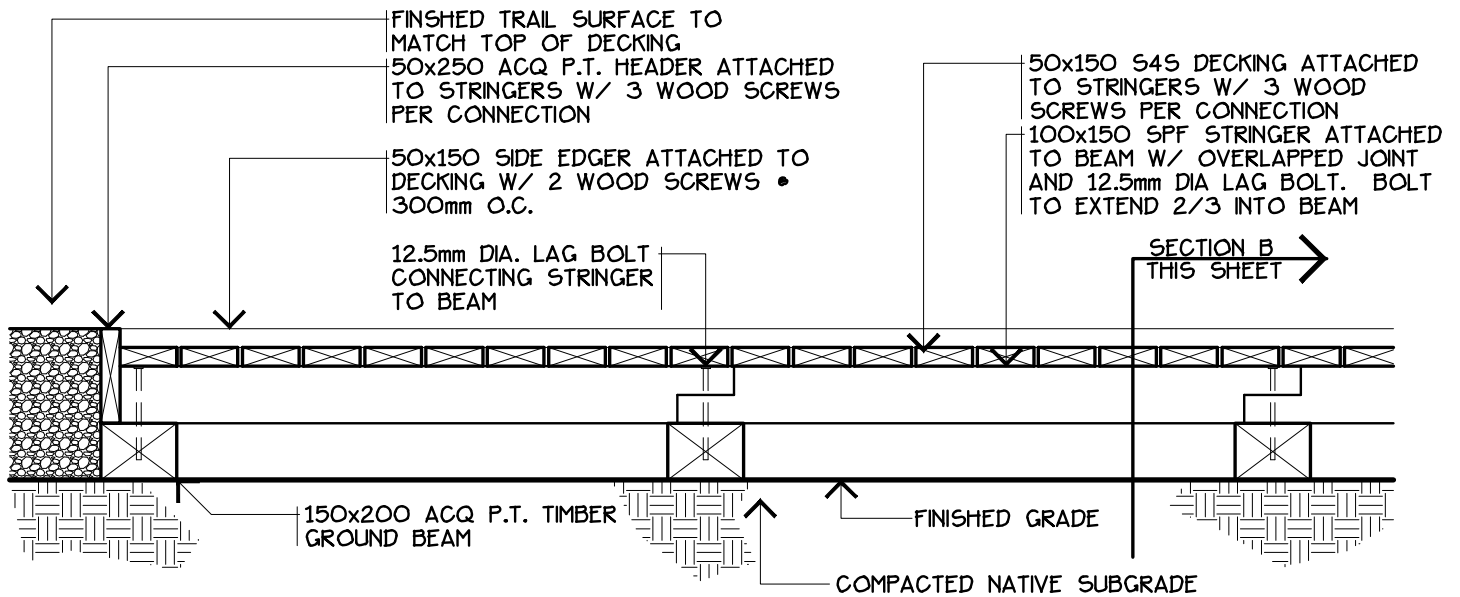
## PLAN VIEW

DRAWING: BOARDWALK WITHOUT FOOTING - PLAN VIEW

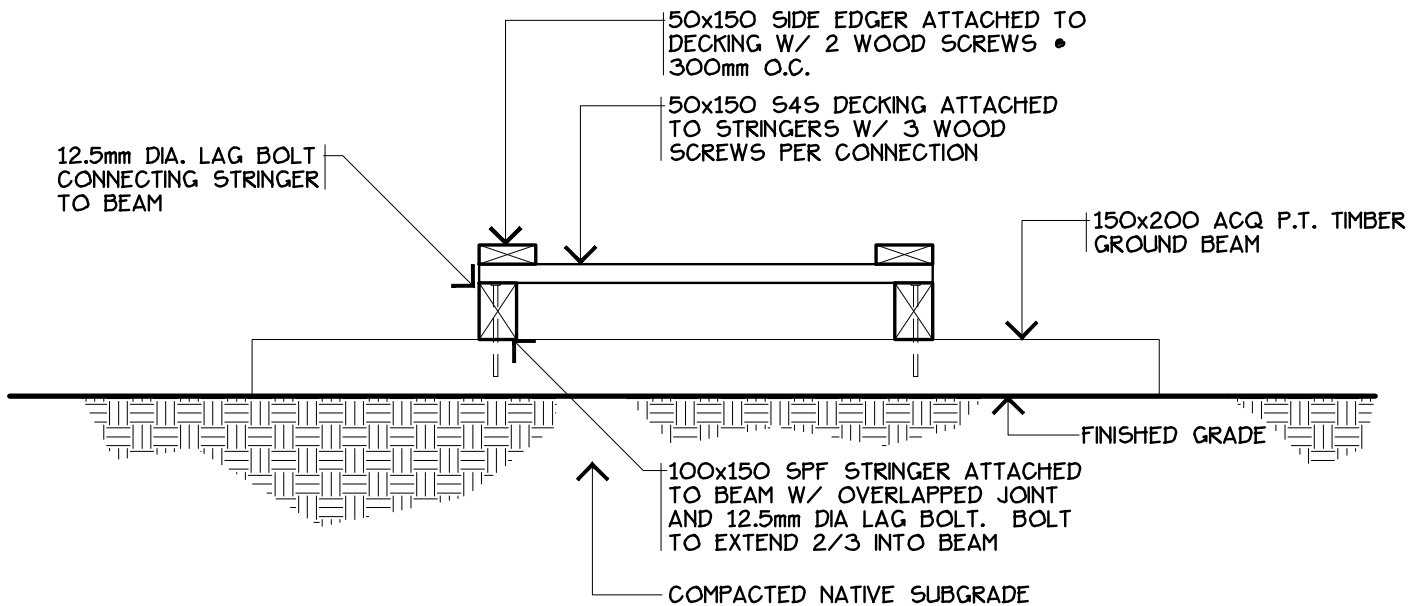
	REVISION NO:	DATE: 2009 08	DRAWING NO.  2C-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## SECTION A




### NOTES:

- ALL WOOD TO BE ALLOWED TO WEATHER.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.

## SECTION B

DRAWING: BOARDWALK WITHOUT FOOTING - SECTION

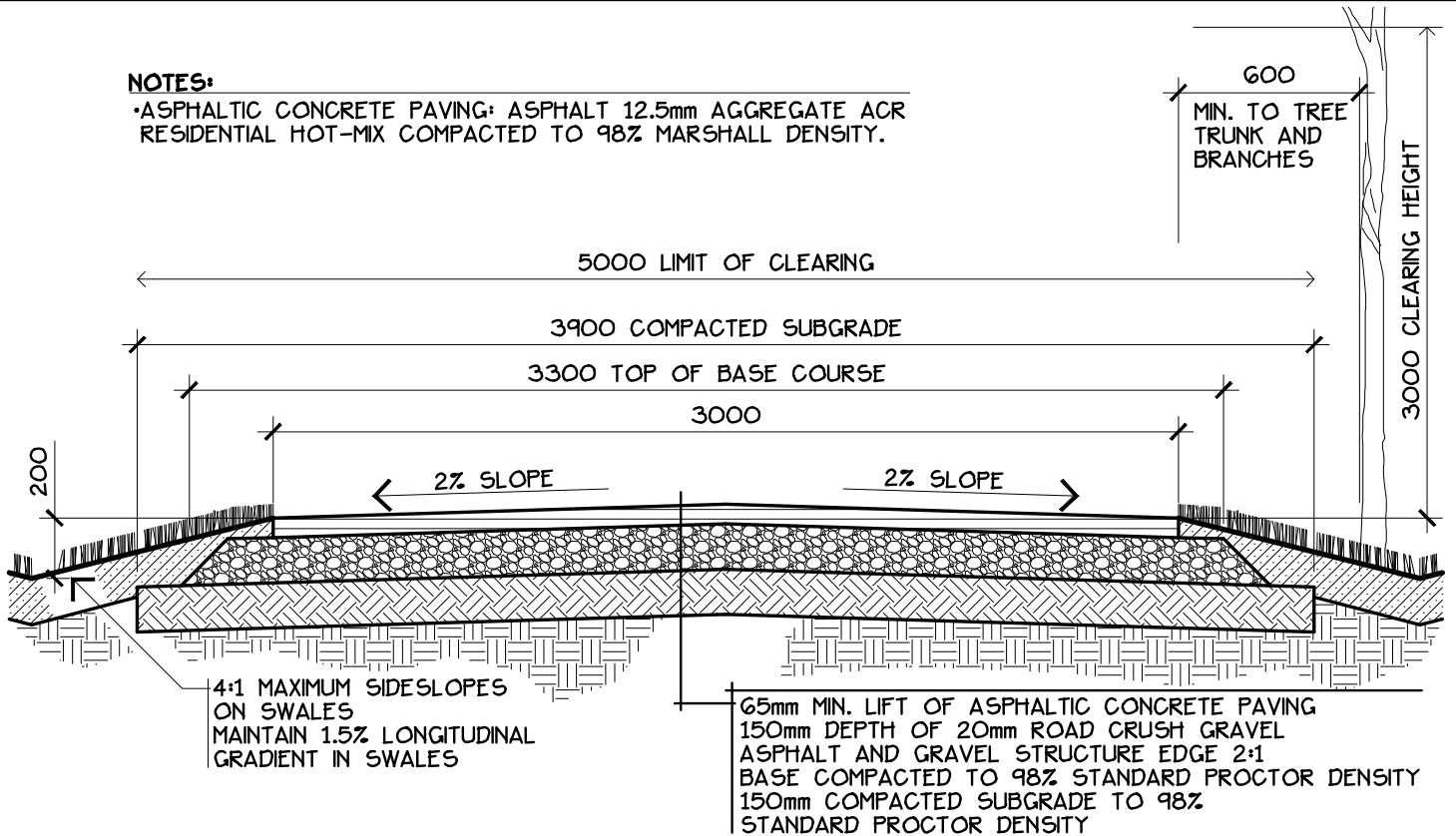
	REVISION NO:	DATE: 2009 08	DRAWING NO.  2C-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: NM	APPROVED:	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

### NOTES:

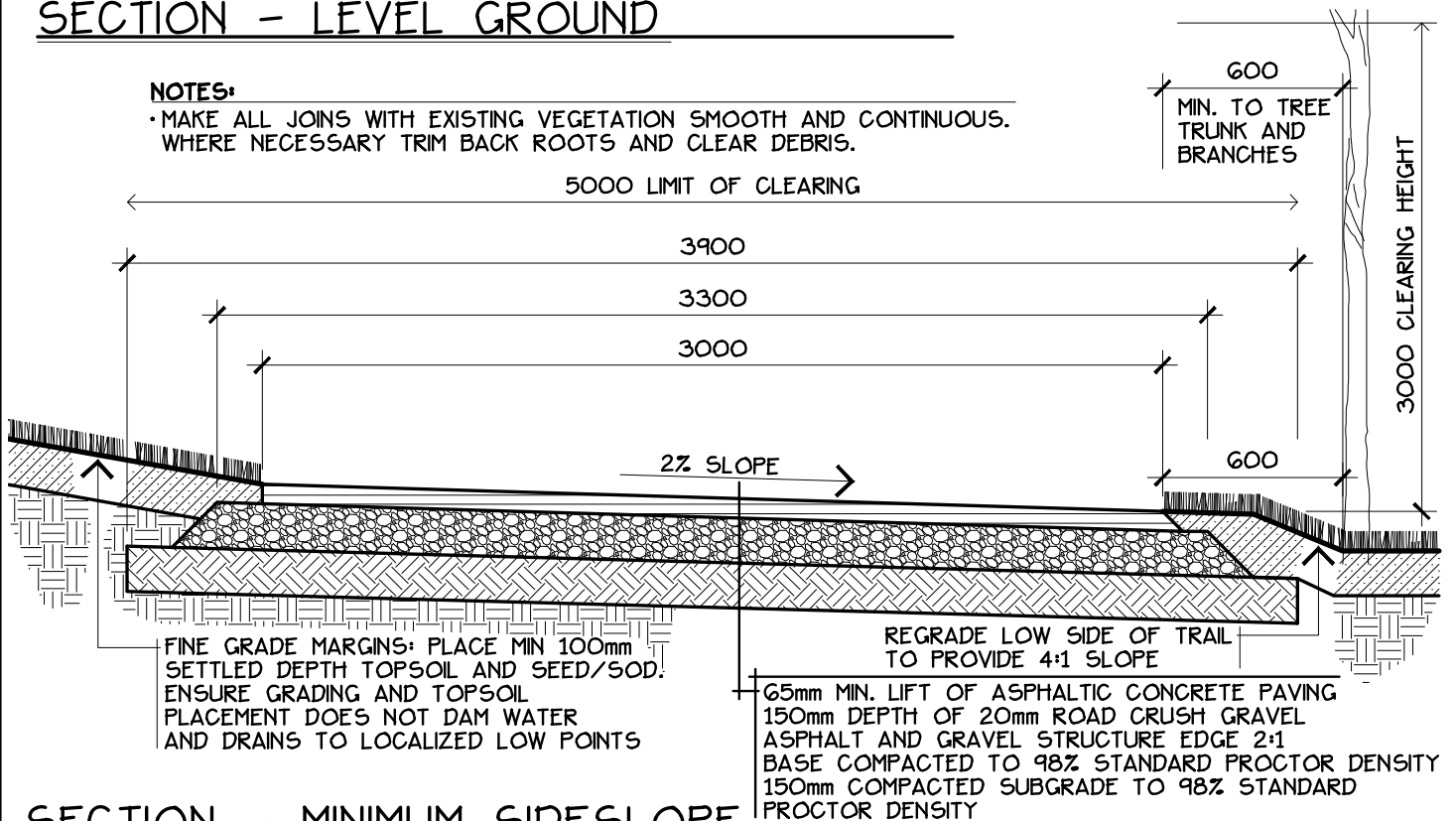
- ASPHALTIC CONCRETE PAVING: ASPHALT 12.5mm AGGREGATE ACR RESIDENTIAL HOT-MIX COMPACTED TO 98% MARSHALL DENSITY.



## SECTION - LEVEL GROUND


### NOTES:

- MAKE ALL JOINS WITH EXISTING VEGETATION SMOOTH AND CONTINUOUS. WHERE NECESSARY TRIM BACK ROOTS AND CLEAR DEBRIS.



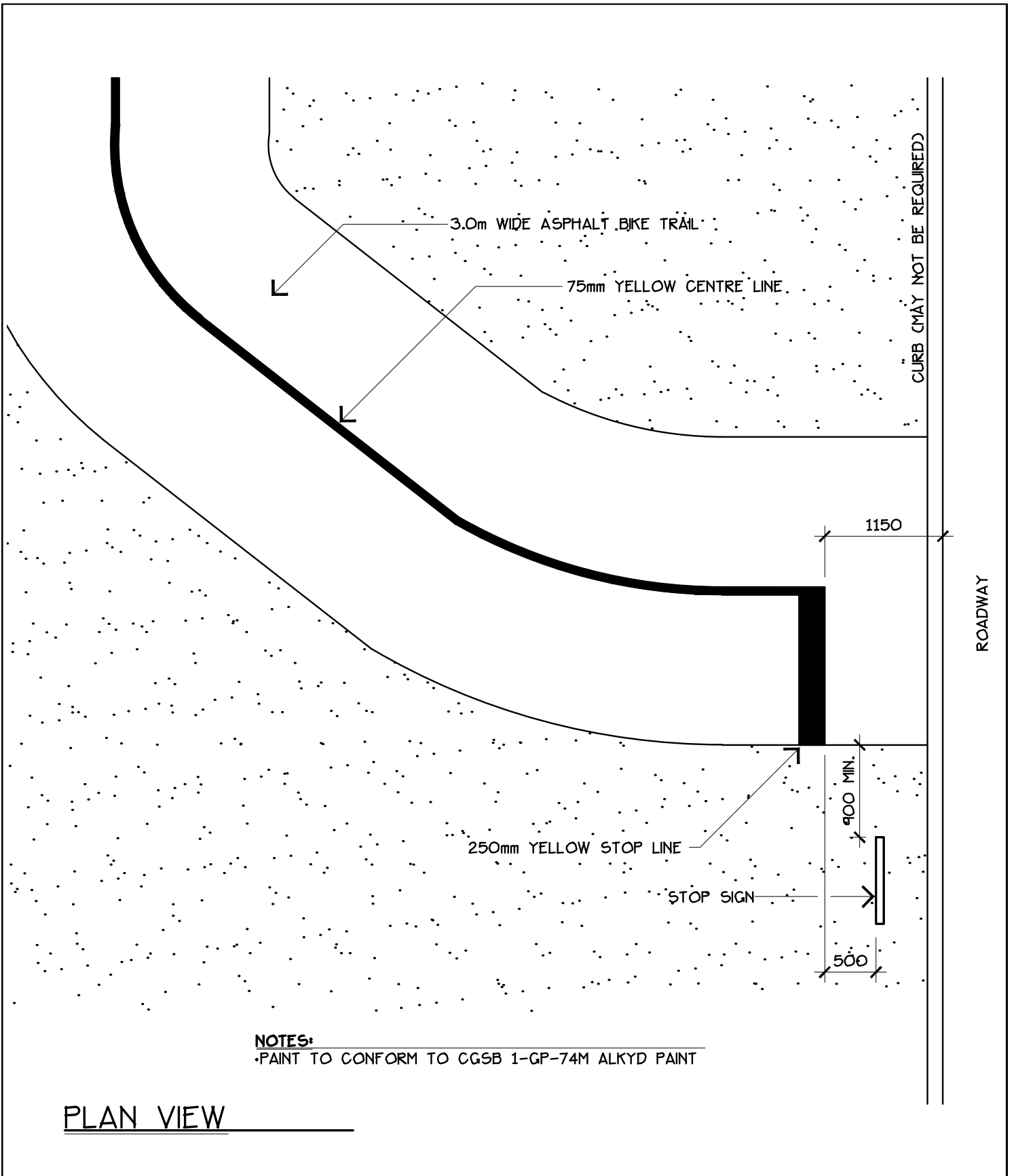
## SECTION - MINIMUM SIDESLOPE

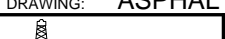
DRAWING: ASPHALT TRAIL - 3000mm WIDE

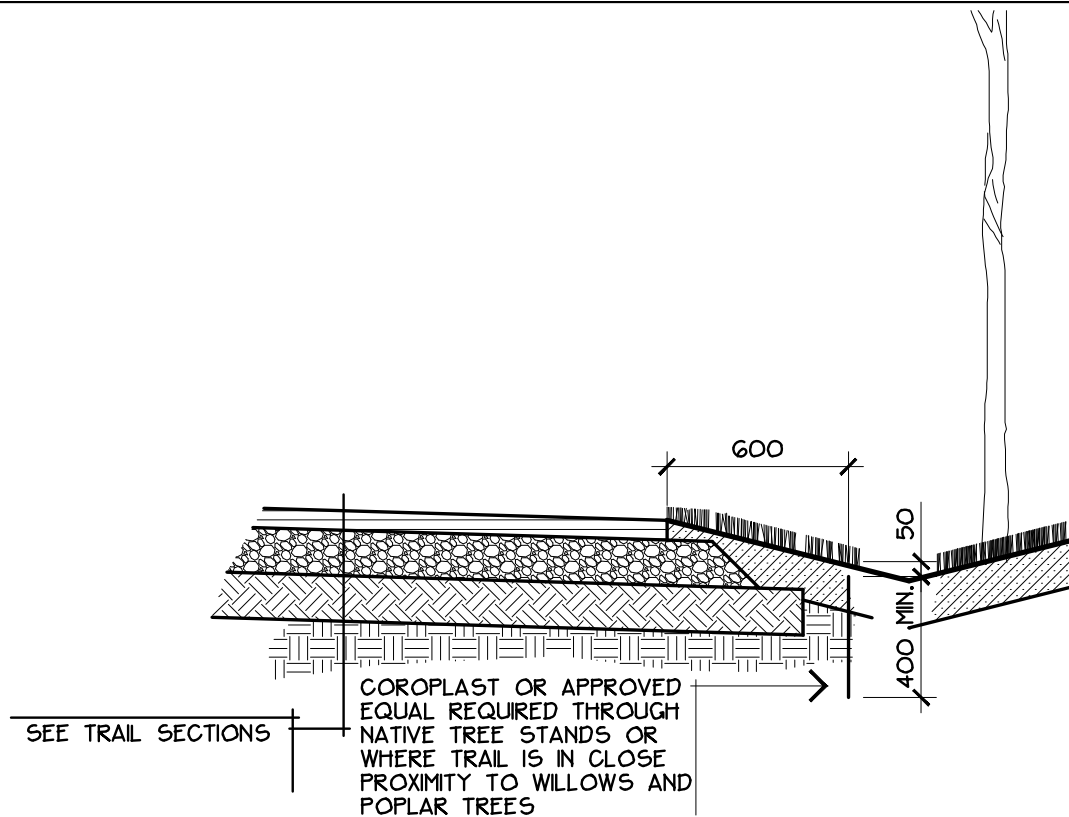
	REVISION NO:	DATE: 2009 08	DRAWING NO.  2D
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:25	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

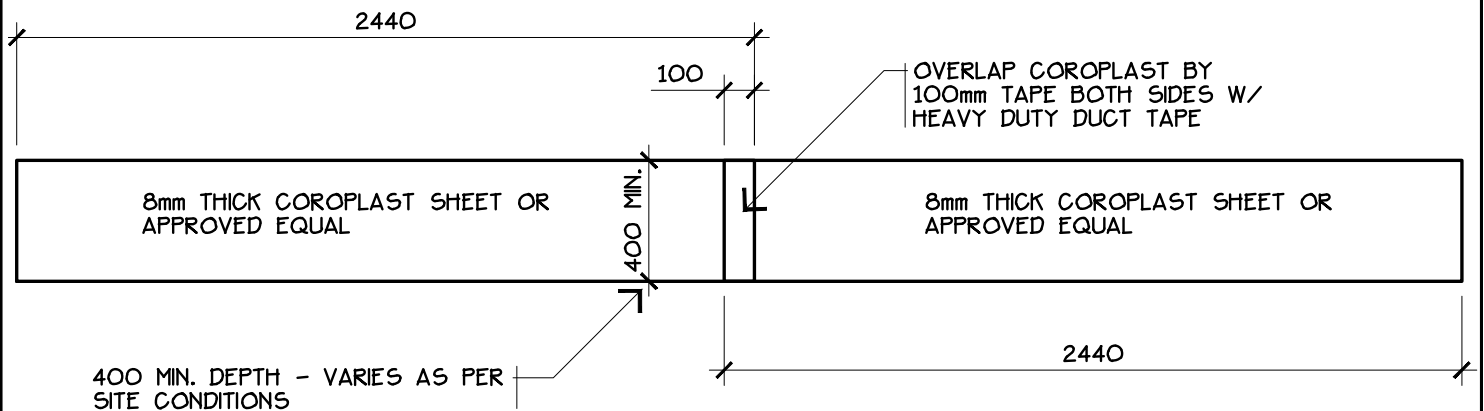
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



DRAWING: ASPHALT TRAIL LINE PAINTING				
 LEDUC COUNTY	REVISION NO:		DATE: 2009 08	DRAWING NO.  2E
	DRAWN BY: EARTHSCAPE CONSULTANTS		SCALE: 1:50	
	CHECKED: N.M.		APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION			SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	




## TRAIL SECTION



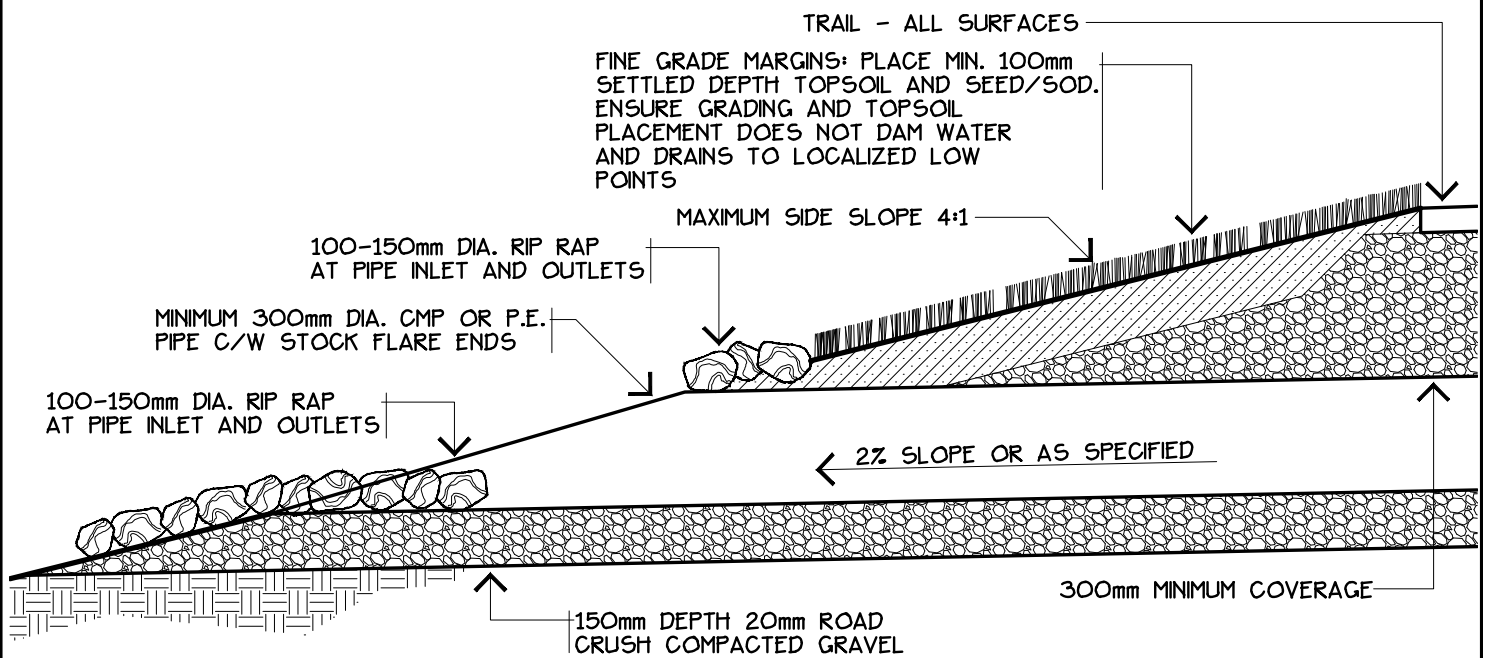
## ELEVATION

DRAWING: TRAIL ROOT GUARD

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>2F</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:25	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

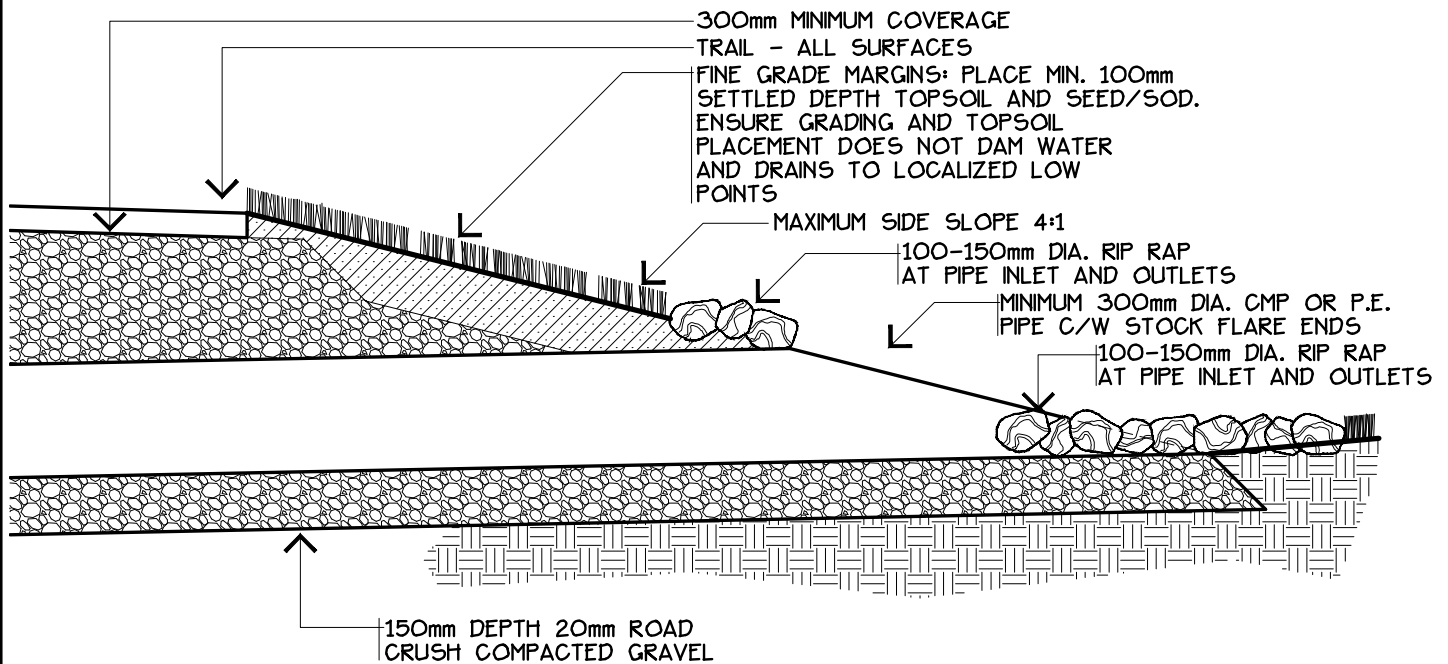
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## SECTION - OUTLET


### NOTES:

- CULVERT IS REQUIRED WHERE TRAIL ALIGNMENT IMPOUNDS DRAINAGE



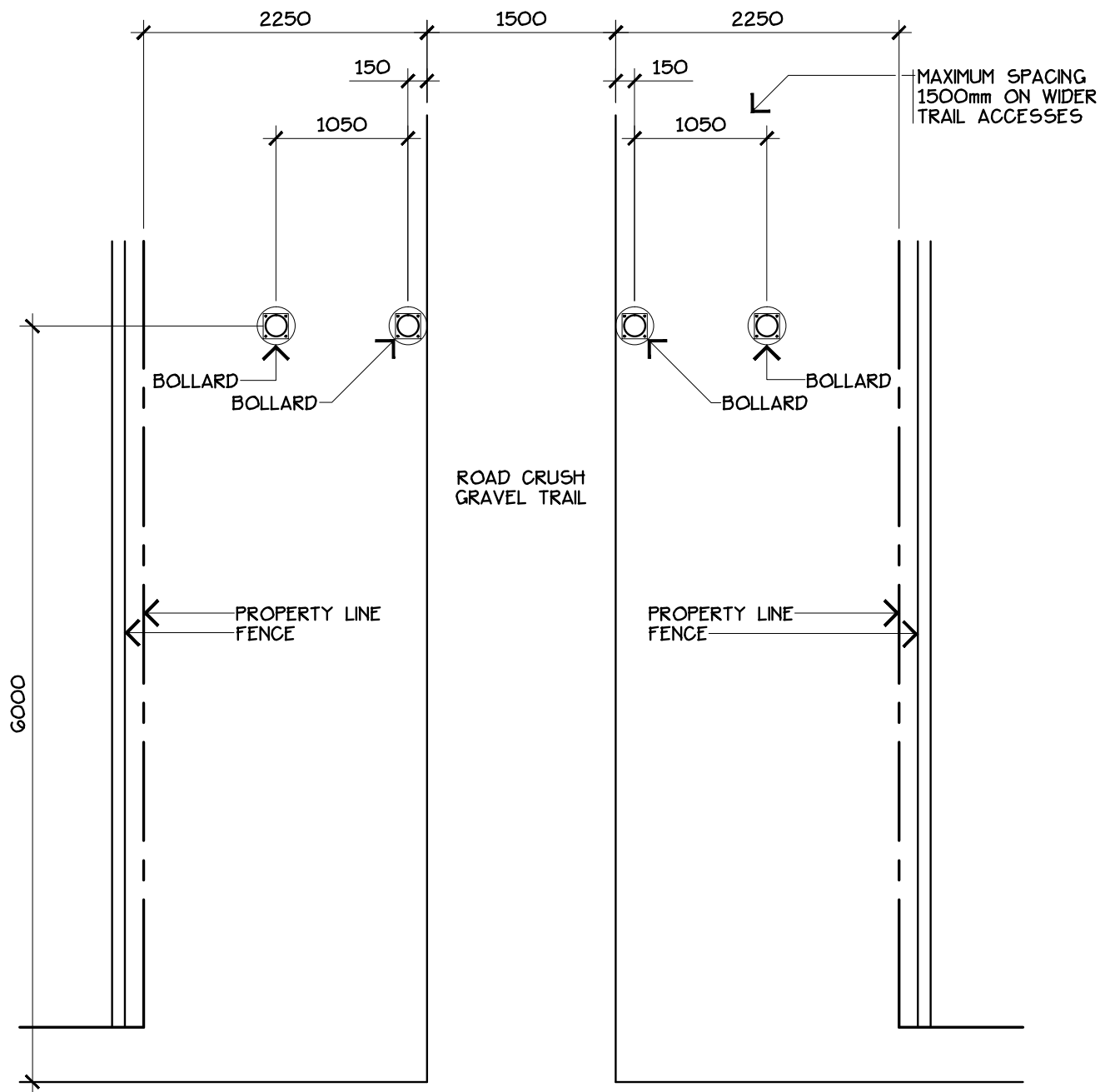
## SECTION - INLET

DRAWING: TRAIL CULVERT - ALL SURFACES

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>2G</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- FOOTING LOCATIONS MAY VARY BASED ON TRAIL TYPE AND WIDTH
- ALL EXPOSED METAL SURFACES TO BE POWDER COATED TO COUNTY COLOUR PANTONE BLUE-301C
- PROVIDE KEY LOCK ON BOLLARDS - ALL LOCKS KEYED TO COUNTY MASTER
- ALL WELDS TO BE FILLET WELDS AND GROUND SMOOTH
- ALL BOLTS, CHAINS, NUTS + WASHERS TO BE GALVANIZED
- BOLLARDS AND COLLARS TO HAVE A 6mm STEEL THICKNESS

## SITE PLAN

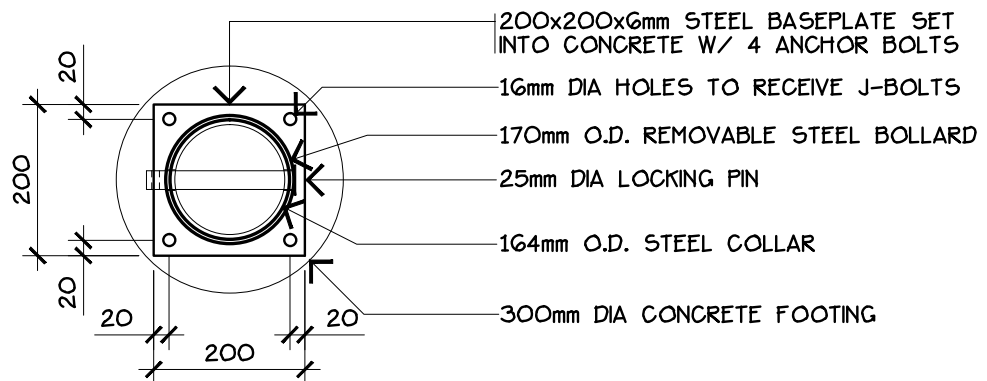
DRAWING: STEEL PIPE BOLLARD

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>3A-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

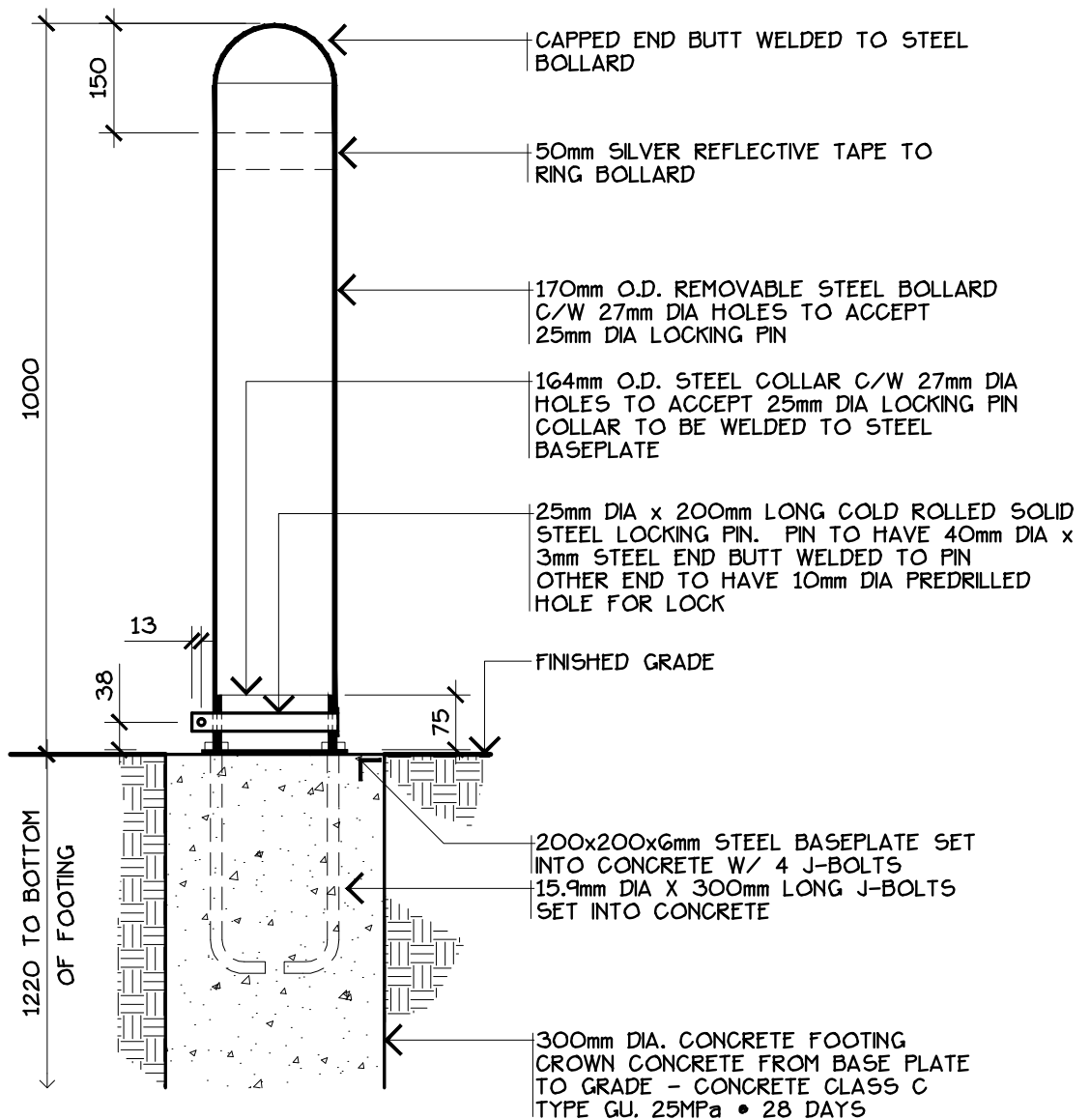
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3






• PROVIDE KEY LOCK ON BOLLARDS - ALL LOCKS KEYED TO COUNTY MASTER

## PLAN VIEW



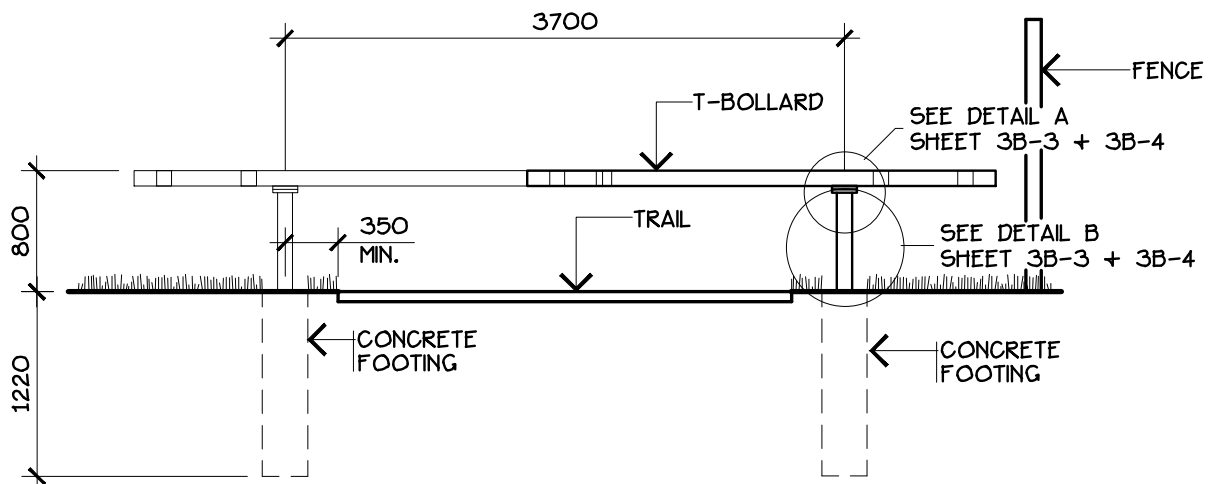
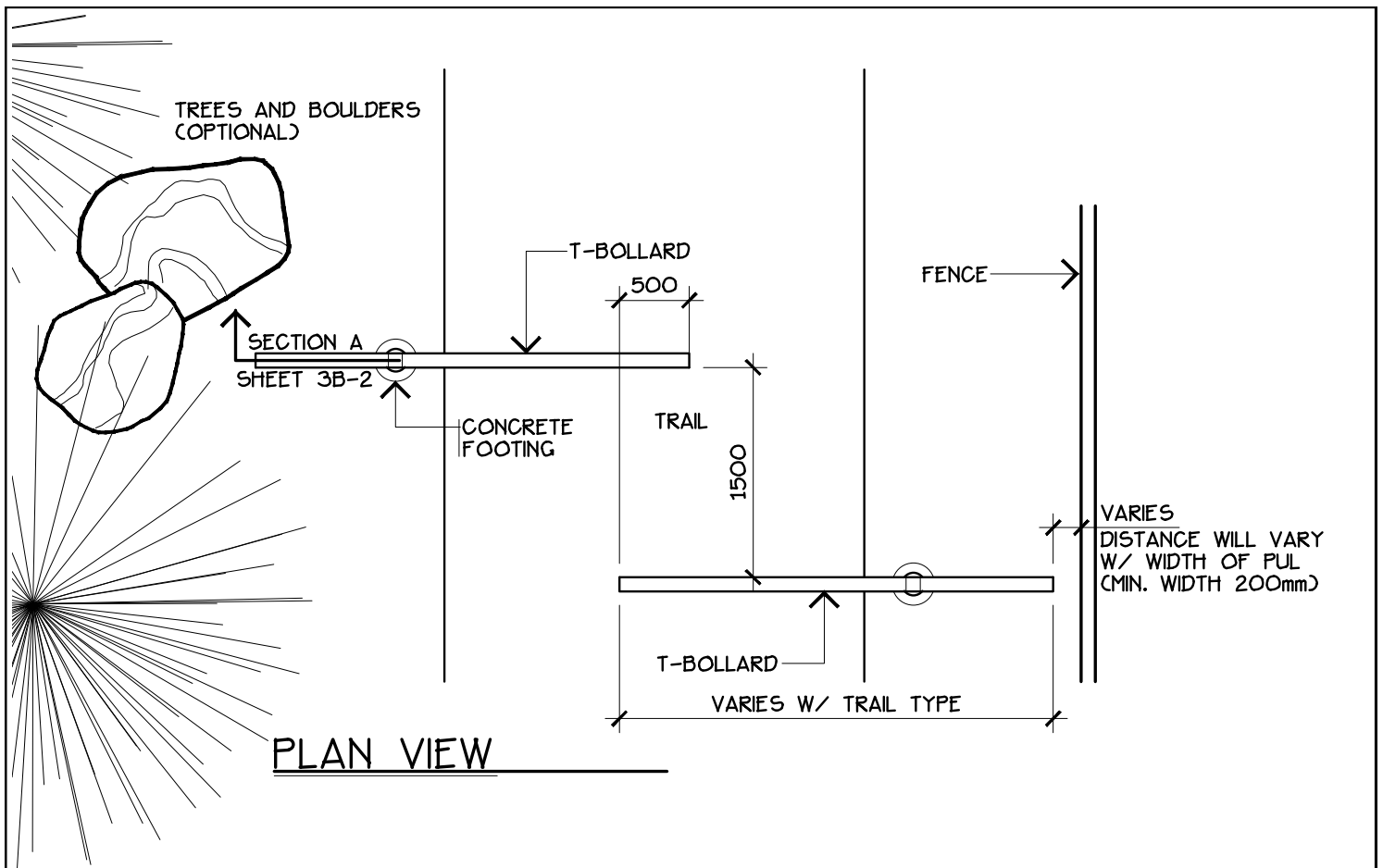
## SECTION

DRAWING: STEEL PIPE BOLLARD

	REVISION NO:	DATE: 2009 08	DRAWING NO.  3A-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



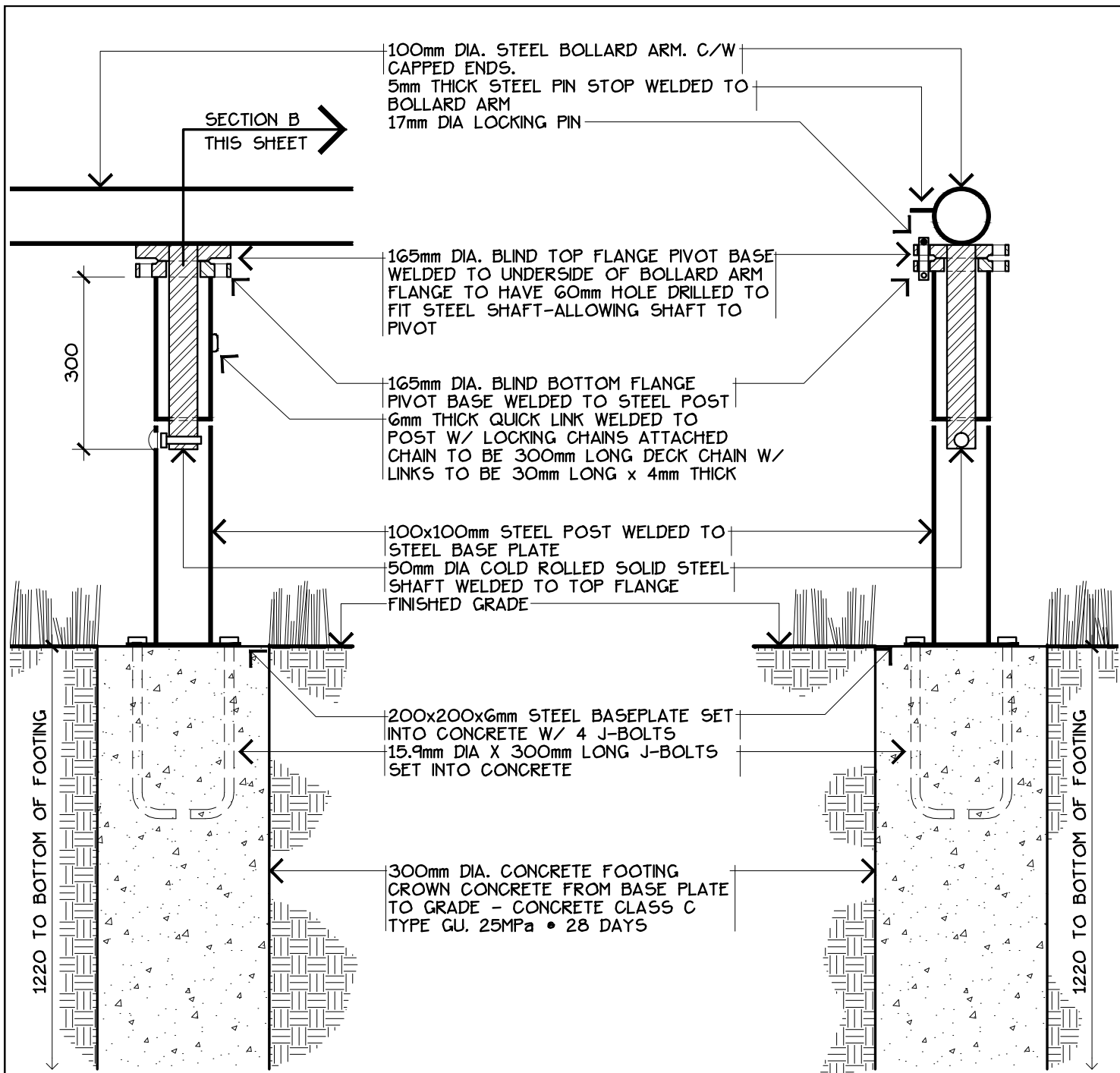
#### NOTES:

- ENSURE THAT BOLLARD ARMS ARE EVEN WITH EXISTING FENCE STRUCTURES
- FOOTING LOCATIONS MAY VARY BASED ON TRAIL TYPE AND WIDTH
- ALL EXPOSED METAL SURFACES TO BE POWDER COATED TO COUNTY COLOUR PANTONE BLUE-301C
- ALL WELDS TO BE FILLET WELDS AND GROUND SMOOTH
- ALL BOLTS, CHAINS, NUTS + WASHERS TO BE GALVANIZED
- POSTS AND BOLLARD ARMS TO HAVE MIN. 5mm STEEL THICKNESS
- PROVIDE KEY LOCK ON BOLLARDS - ALL LOCKS KEYED TO COUNTY MASTER

DRAWING: **STEEL T-BOLLARD**

	REVISION NO:	DATE: 2009 08	DRAWING NO.  3B-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- ENSURE THAT BOLLARD ARMS ARE EVEN WITH EXISTING FENCE STRUCTURES
- FOOTING LOCATIONS MAY VARY BASED ON TRAIL TYPE AND WIDTH

SECTION A

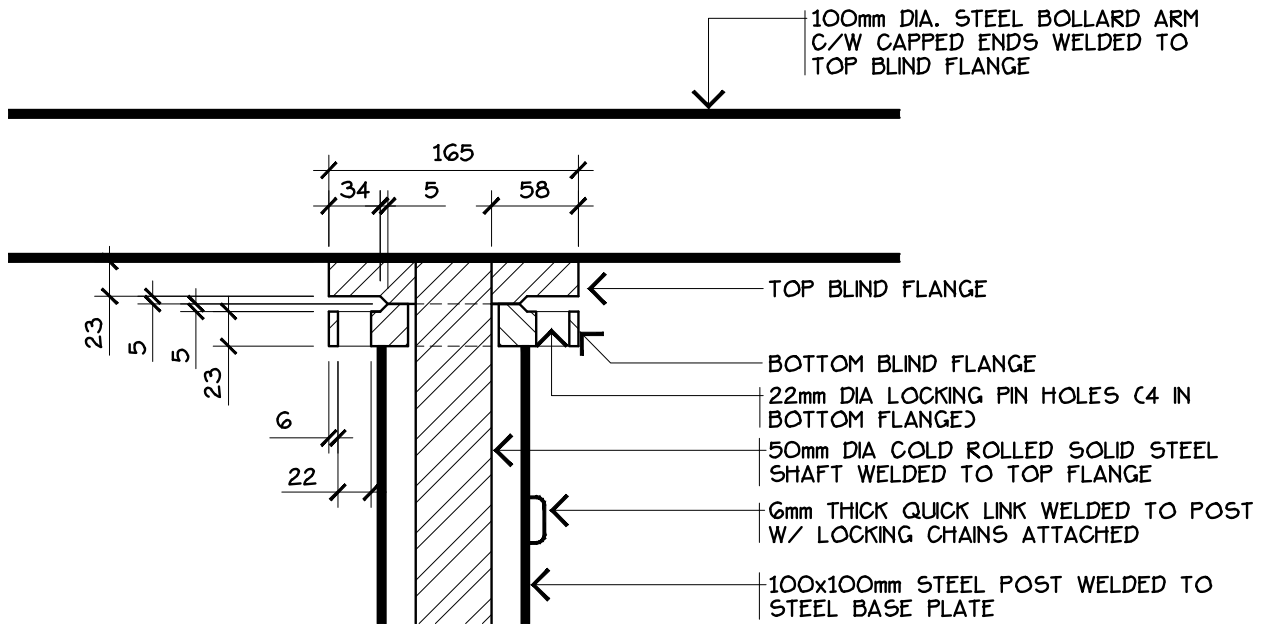
SECTION B

DRAWING: STEEL T-BOLLARD

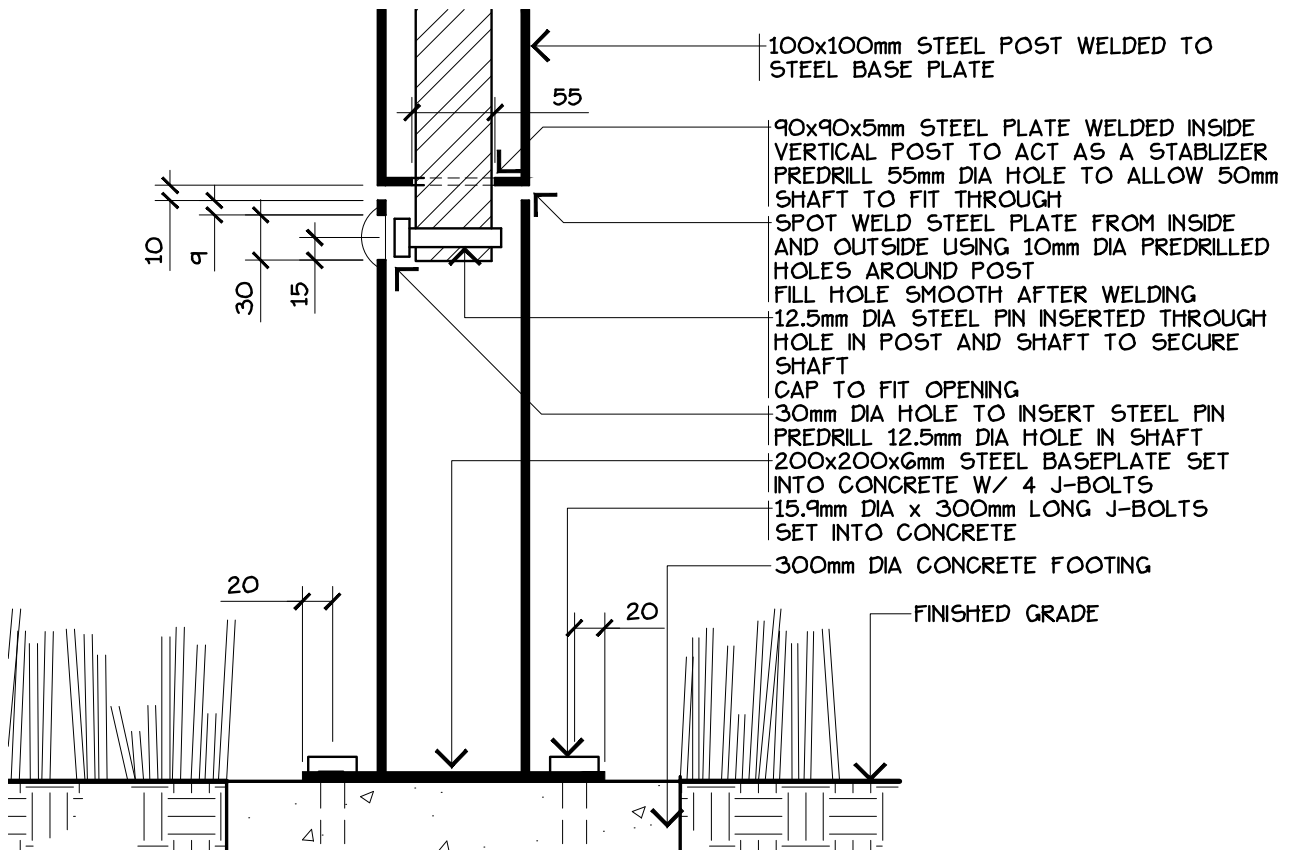
	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>3B-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	

LEDUC COUNTY PARKS AND RECREATION

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



**DETAIL A**



**DETAIL B**

DRAWING: **STEEL T-BOLLARD**



REVISION NO:

DRAWN BY: **EARTHSCAPE CONSULTANTS**

CHECKED: **N.M.**

DATE: **2009 08**

SCALE: **1:5**

APPROVED: **D.O.**

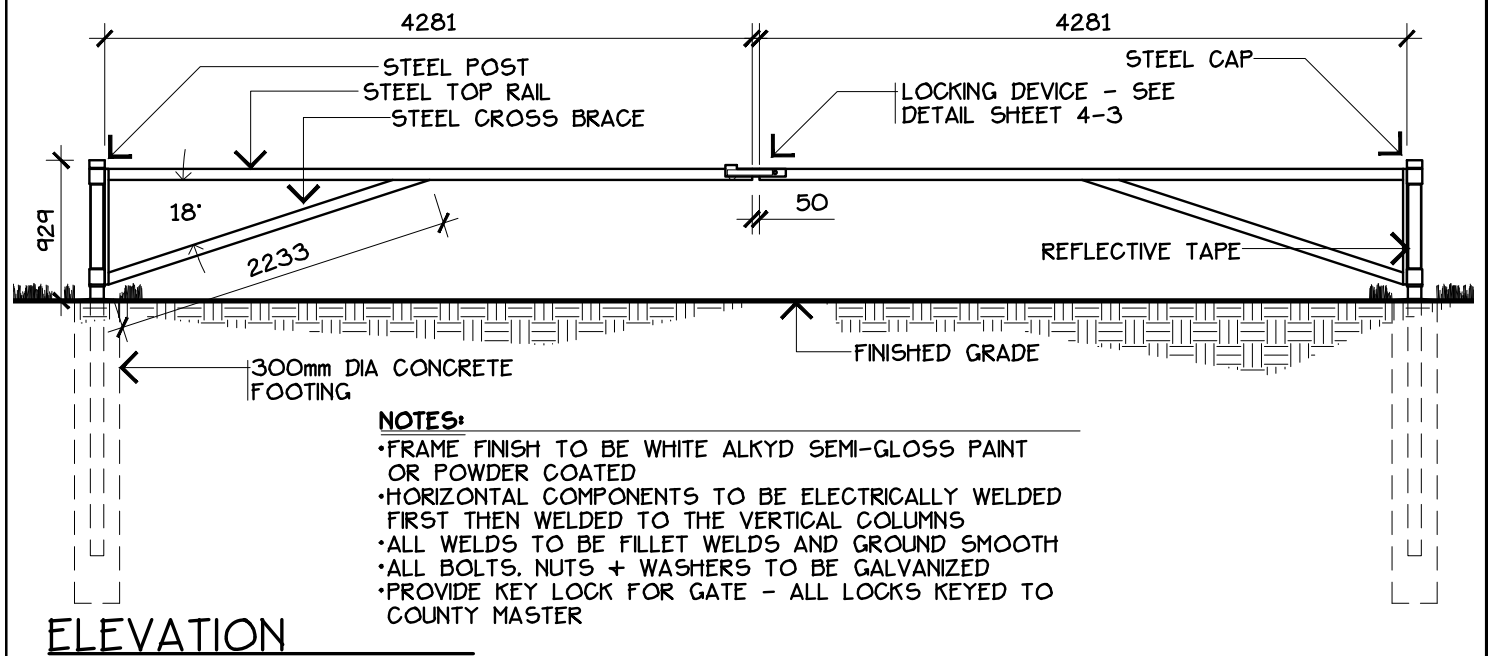
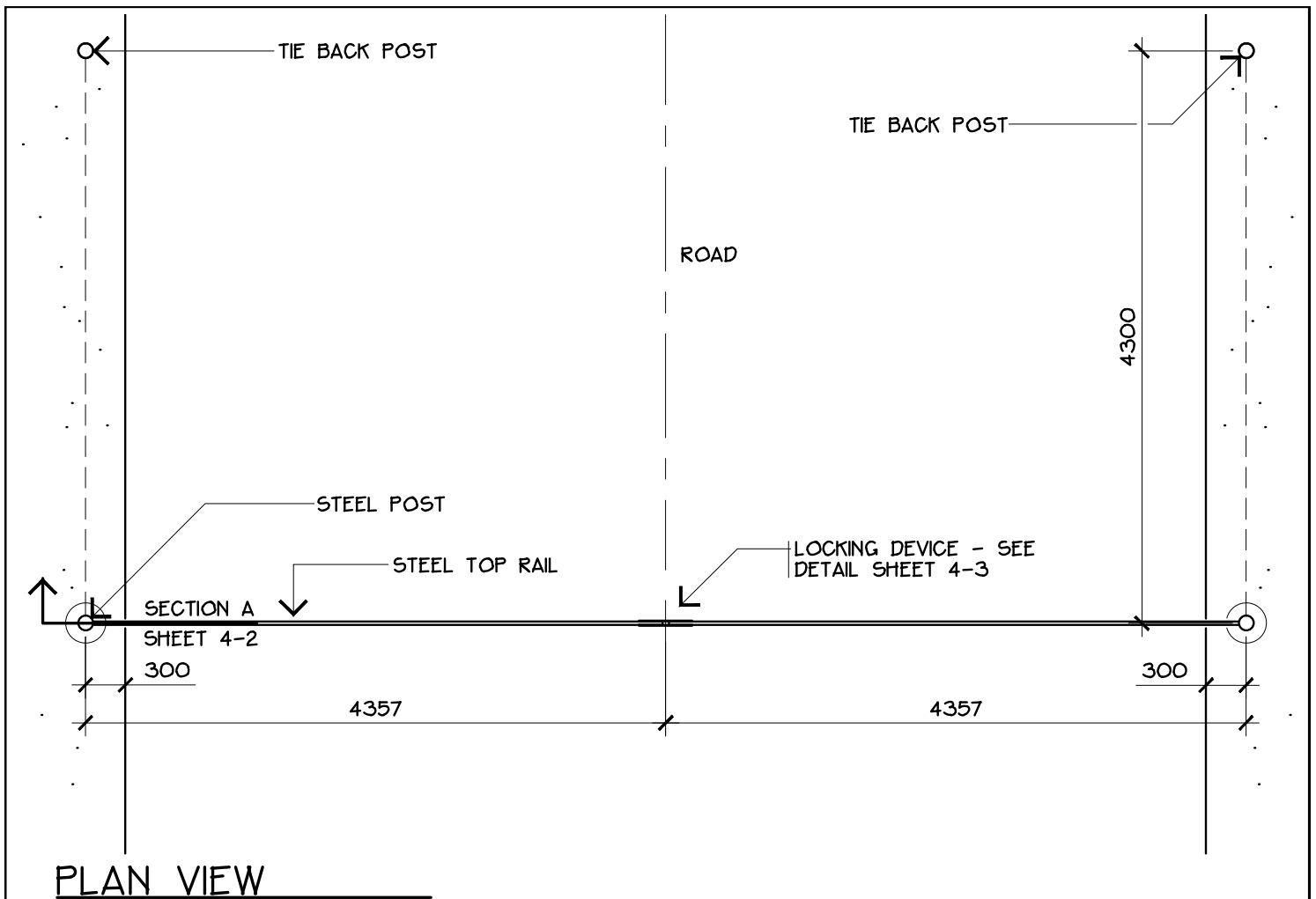
DRAWING NO.

**3B-3**


**LEDUC COUNTY PARKS AND RECREATION**

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



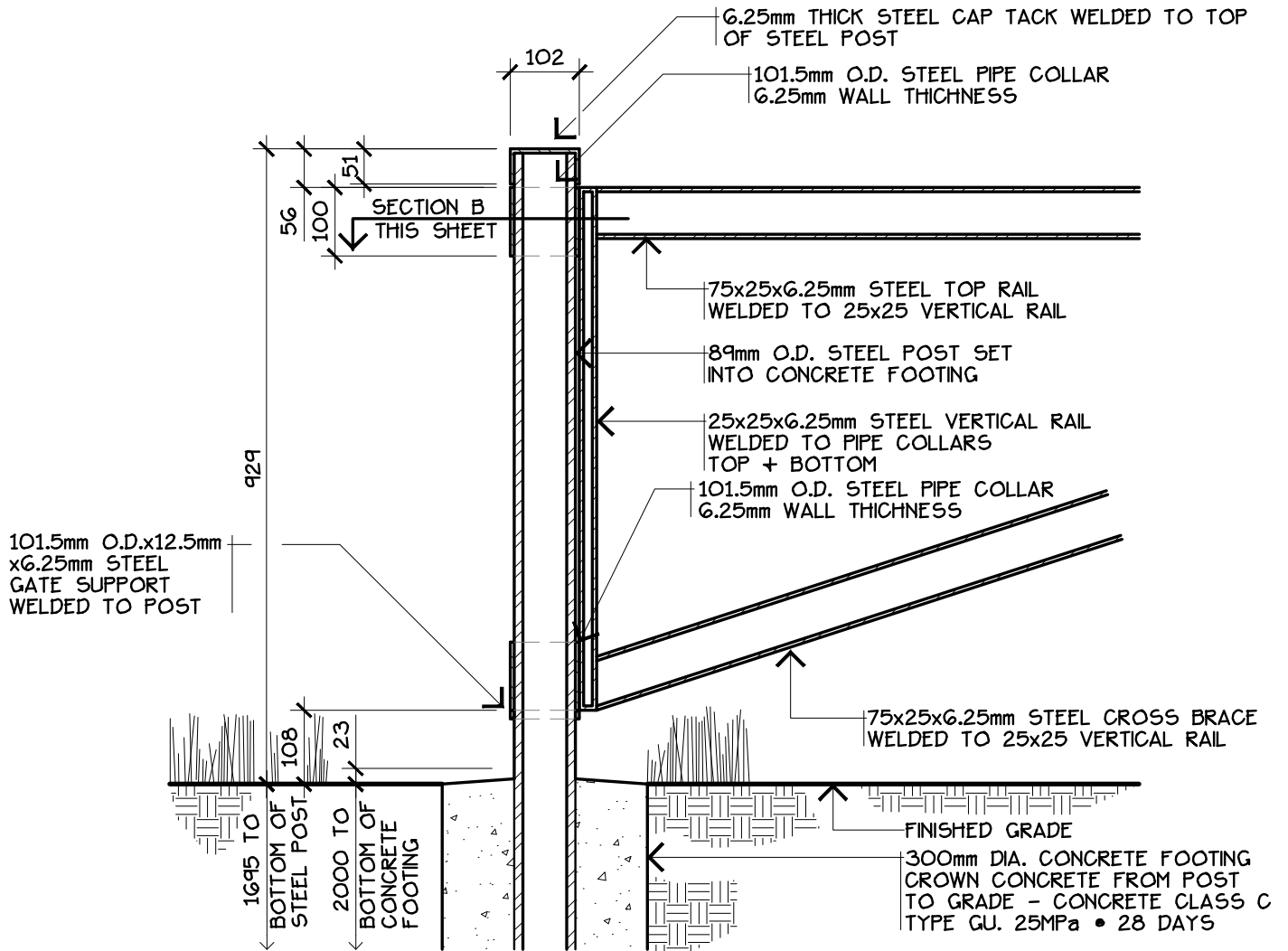


DRAWING: STEEL PIPE ACCESS GATE

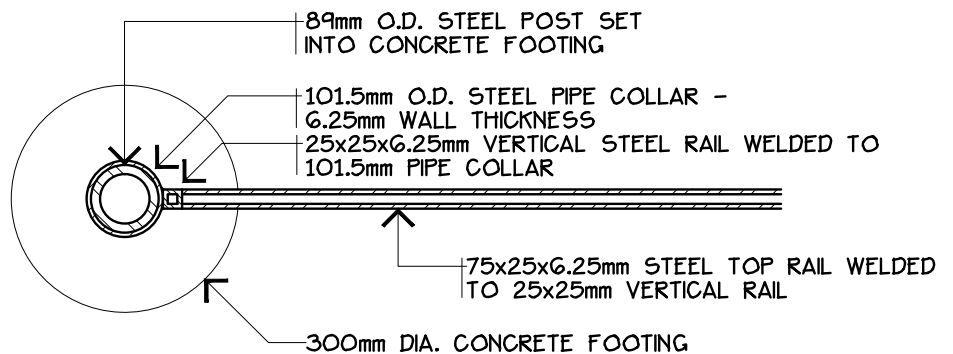
	REVISION NO:	DATE: 2009 08	DRAWING NO.  4-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




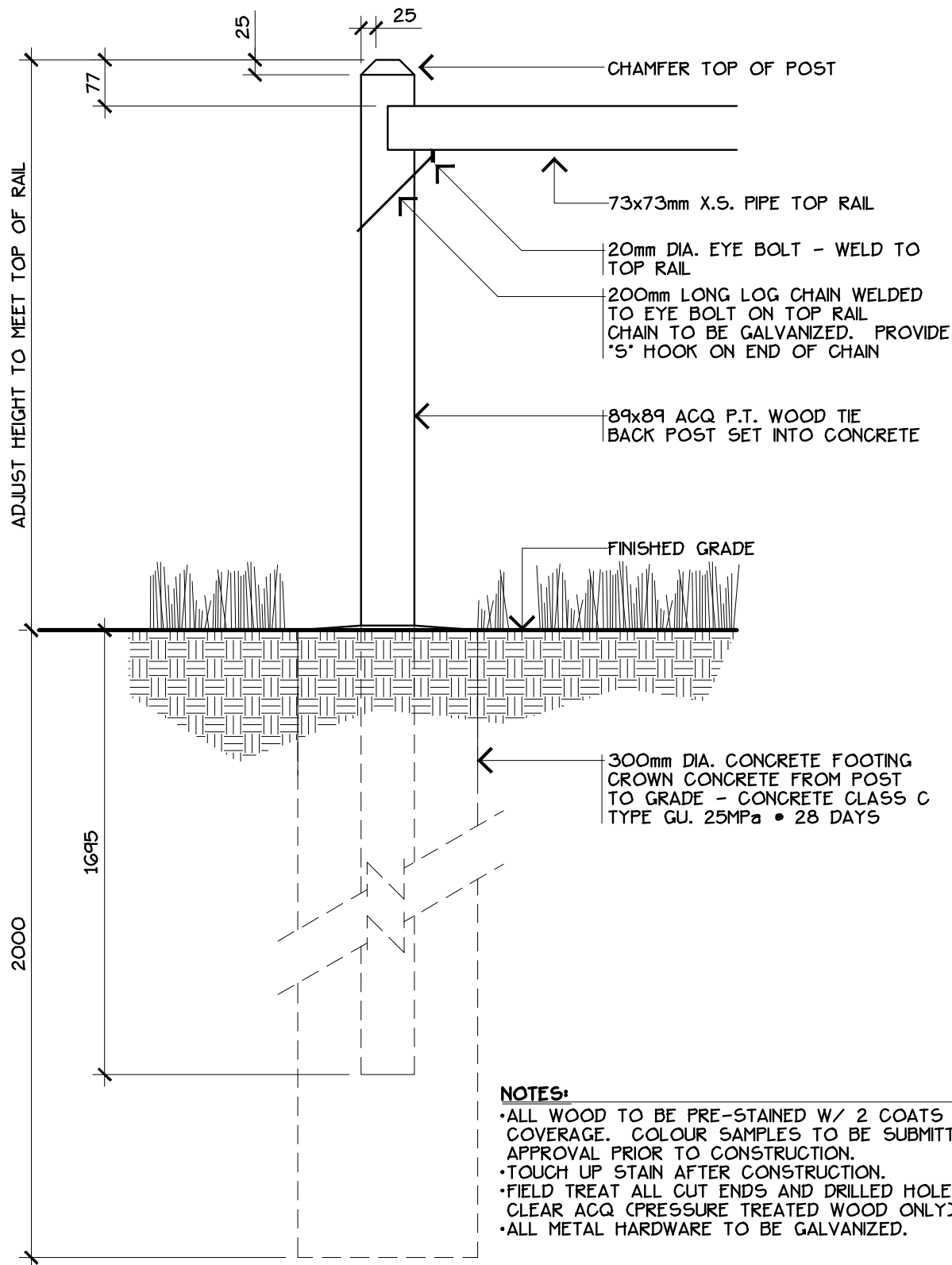
## SECTION



## SECTION B

DRAWING: STEEL PIPE ACCESS GATE

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>4-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	



#### NOTES:

- ALL WOOD TO BE PRE-STAINED W/ 2 COATS STAIN FULL COVERAGE. COLOUR SAMPLES TO BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.
- TOUCH UP STAIN AFTER CONSTRUCTION.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.

## TIE BACK POST ELEVATION

DRAWING: STEEL PIPE ACCESS GATE



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

DATE: 2009 08

SCALE: 1:10

APPROVED: D.O.

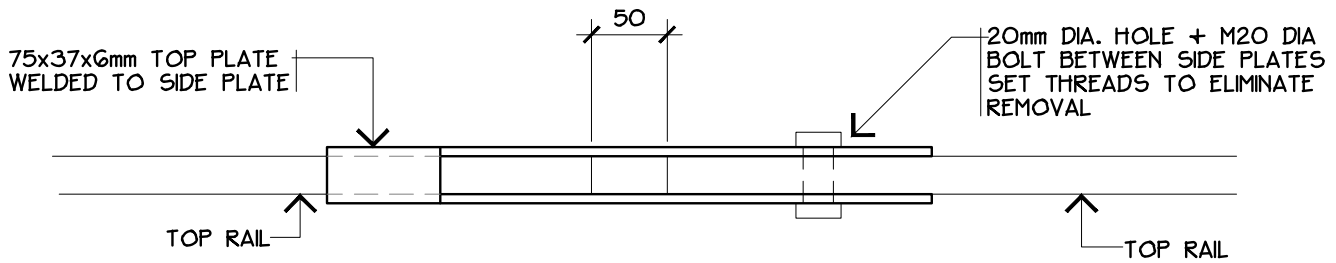
DRAWING NO.

4-4

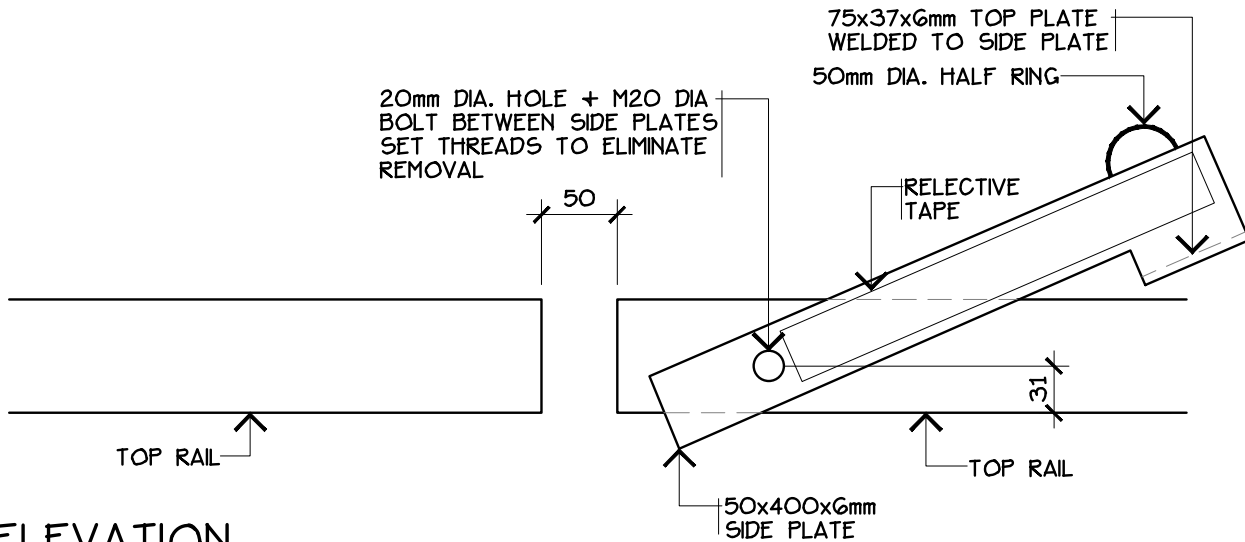
LEDUC COUNTY PARKS AND RECREATION

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

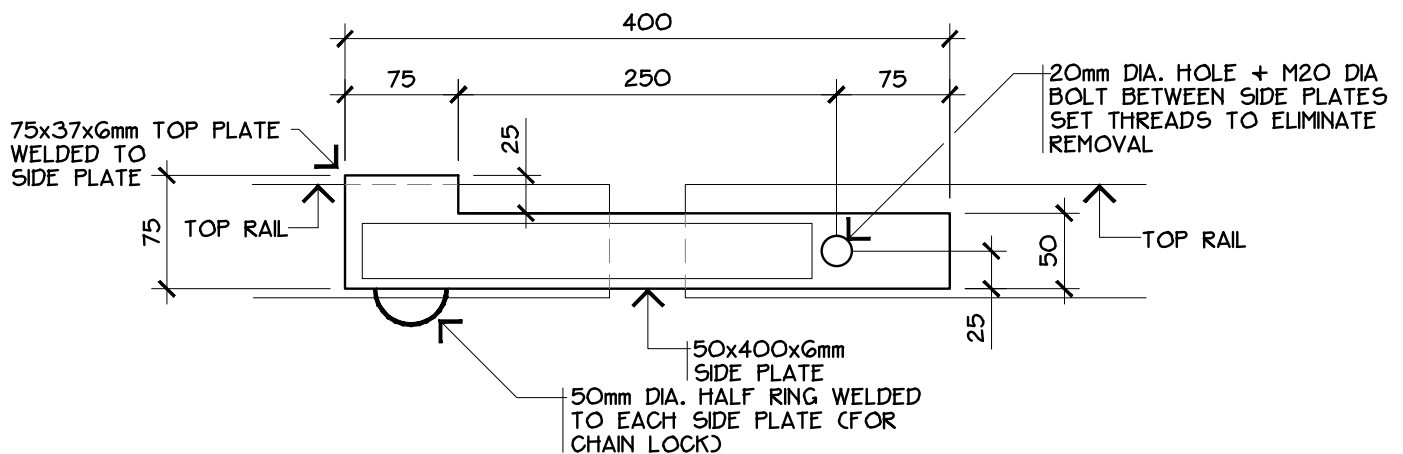




## PLAN VIEW



## ELEVATION



\*PROVIDE KEY LOCK FOR GATE - ALL LOCKS KEYED TO COUNTY MASTER

## DETAIL

DRAWING: STEEL PIPE ACCESS GATE



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

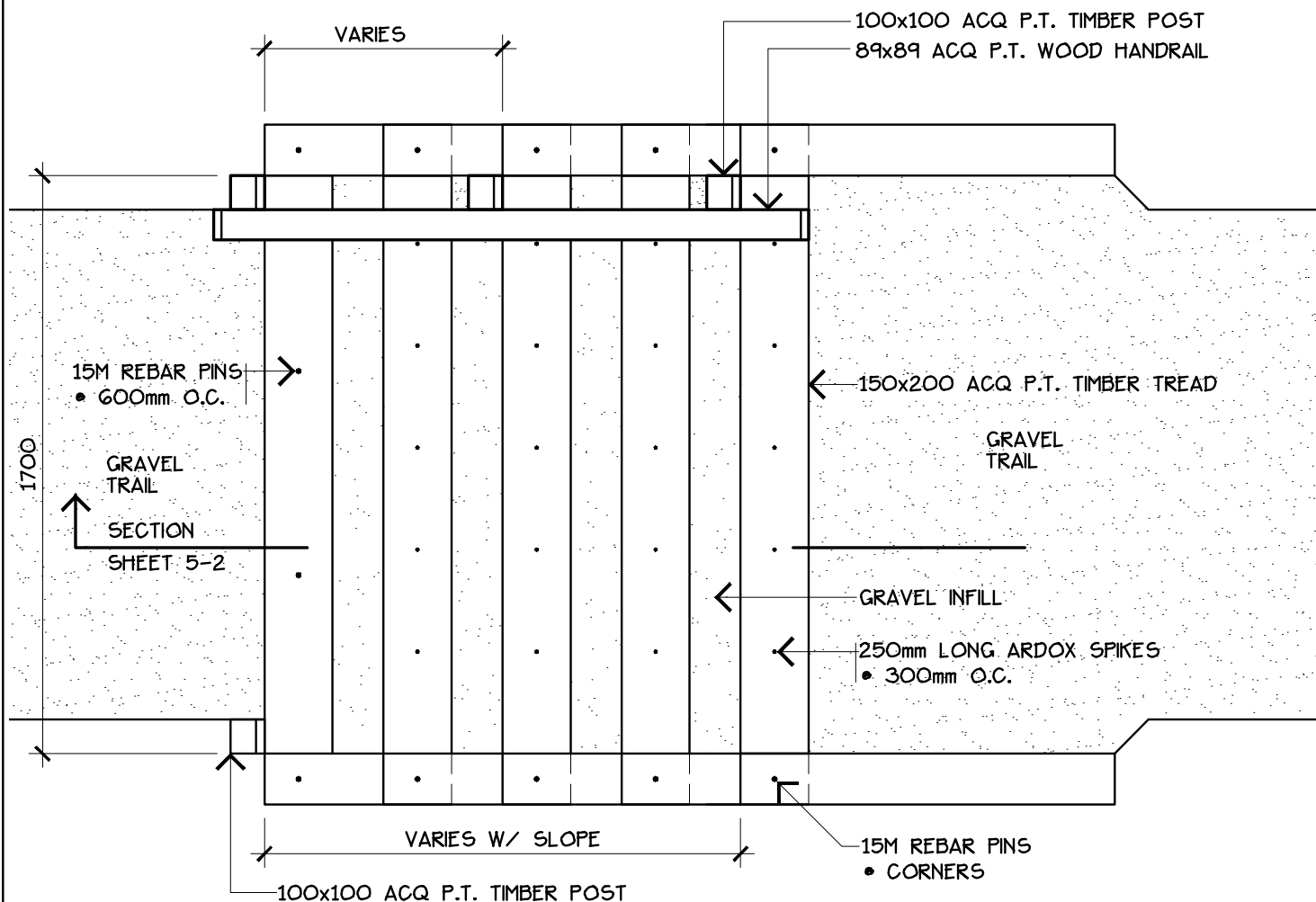
DATE: 2009 08

SCALE: 1:5

APPROVED: D.O.

DRAWING NO.

4-3




#### NOTES:

- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.
- STAIRS REQUIRED:
  - ANY SLOPE STEEPER THAN 1:1
  - ANY SLOPE BETWEEN 1:1 AND 2:1 THAT CANNOT EASILY BE DEVELOPED WITH A SWITCHBACK TRAIL

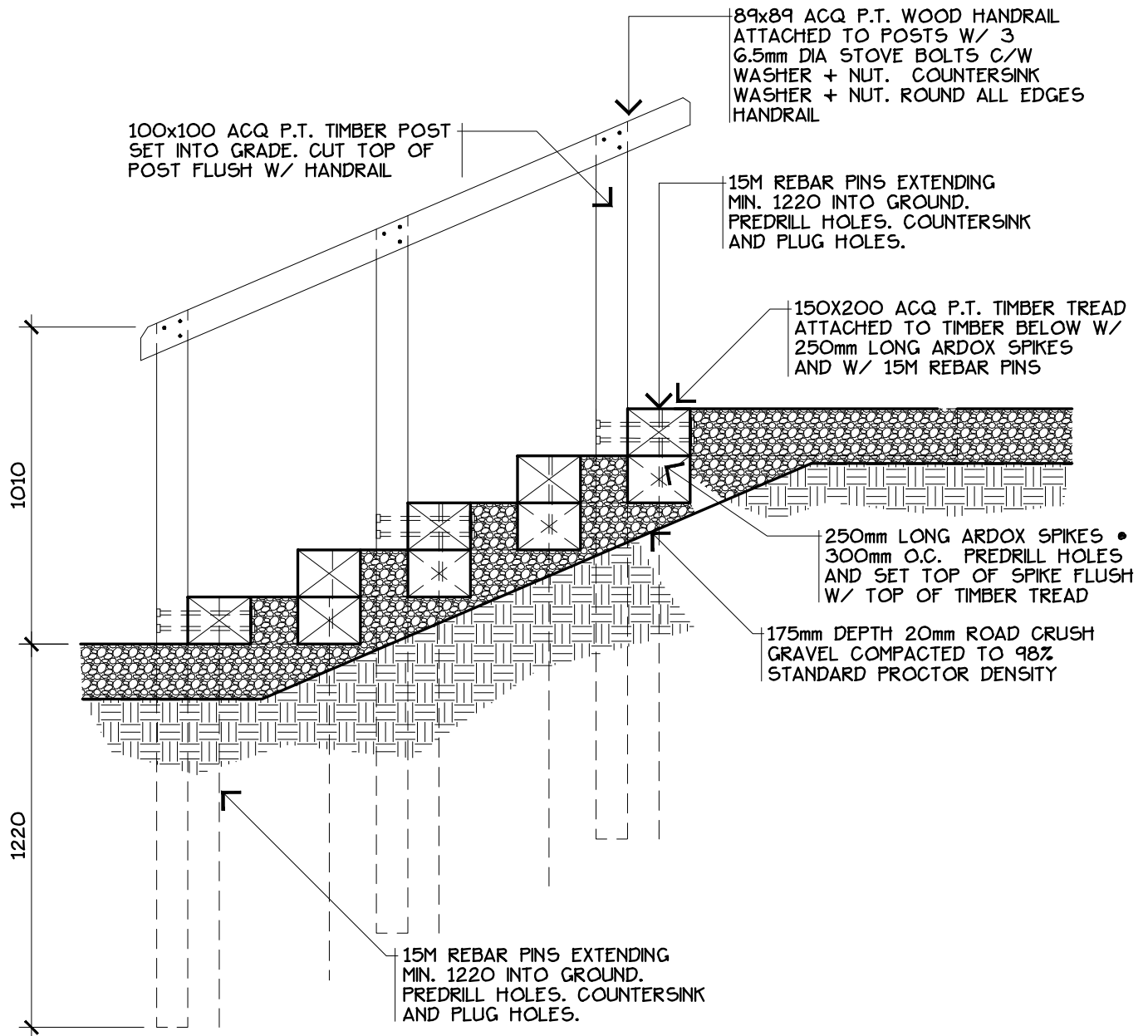
## PLAN VIEW

DRAWING: PRESSURE TREATED TIMBER STAIRS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>5-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.
- STAIRS REQUIRED:  
ANY SLOPE STEEPER THAN 1:1  
ANY SLOPE BETWEEN 1:1 AND 2:1 THAT CANNOT EASILY BE DEVELOPED WITH A SWITCHBACK TRAIL

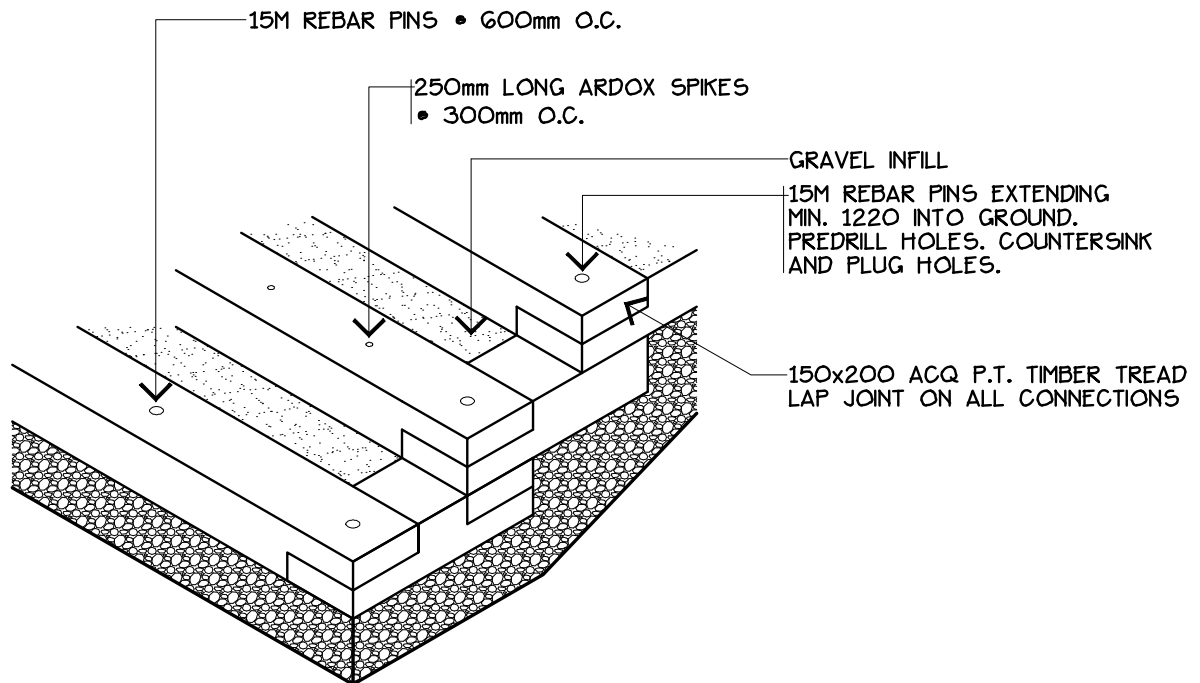
## SECTION

DRAWING: PRESSURE TREATED TIMBER STAIRS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>5-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




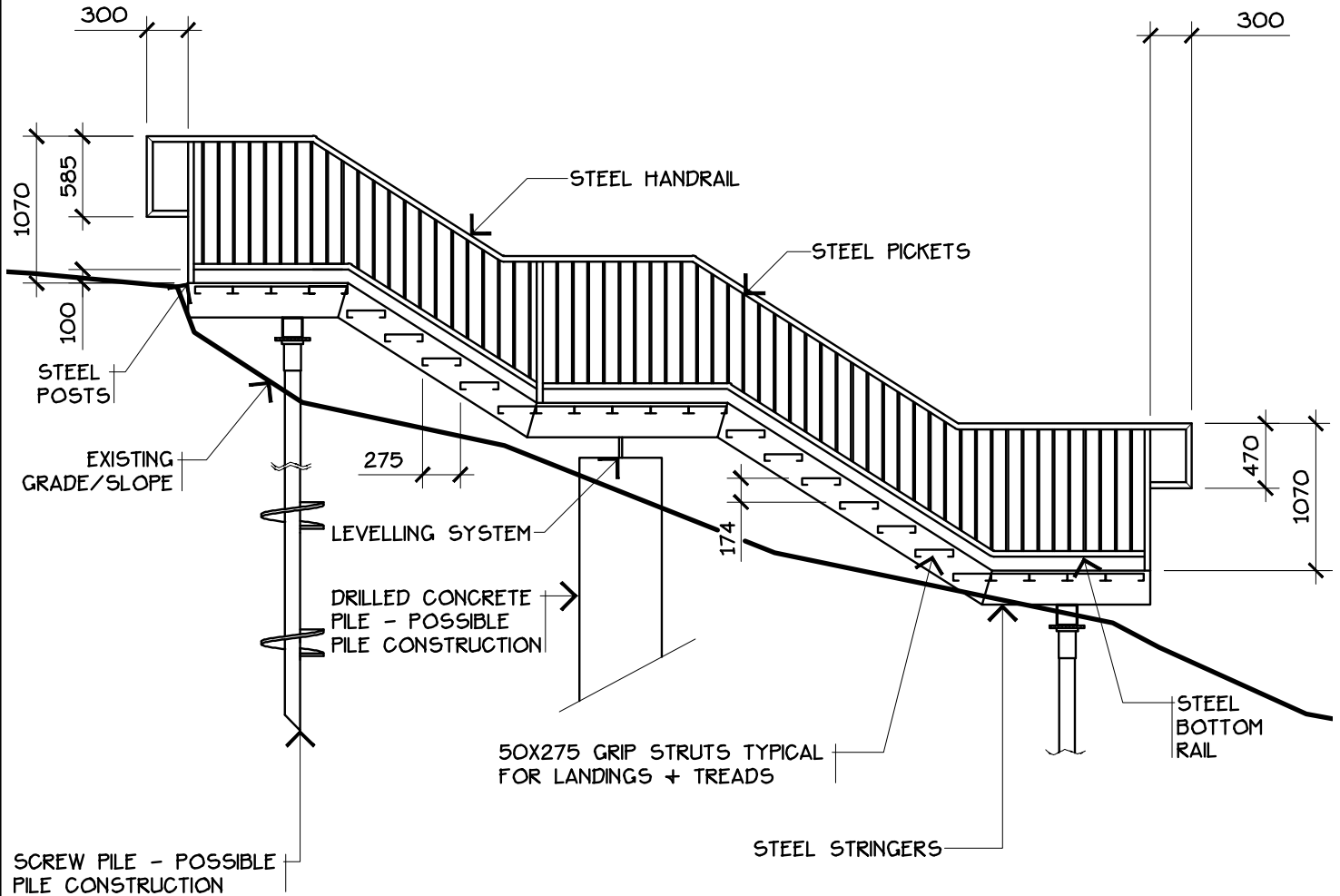
#### NOTES:

- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.
- STAIRS REQUIRED:
  - ANY SLOPE STEEPER THAN 1:1
  - ANY SLOPE BETWEEN 1:1 AND 2:1 THAT CANNOT EASILY BE DEVELOPED WITH A SWITCHBACK TRAIL

ISOMETRIC

DRAWING: PRESSURE TREATED TIMBER STAIRS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>5-3</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	




#### NOTES:

- DESIGN TO BE PREPARED BY GEO-TECHNICAL AND STRUCTURAL ENGINEERS TO ENSURE SUITABILITY FOR SITE
- ALL STEEL COMPONENTS TO BE GALVANIZED
- ALL WELDS TO BE FILLET WELDS AND GROUND SMOOTH
- ALL BOLTS, NUTS + WASHERS TO BE GALVANIZED

## SECTION

DRAWING: GALVANIZED STEEL STAIRS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>6</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

TIMBER RETAINING WALL  
TIMBERS TO BE 3000mm  
LONG. STAGGER LAP  
JOINT EVERY OTHER  
ROW OF TIMBERS  
JOINTS ONLY TO OCCUR  
A POST LOCATIONS

TIEBACK  
AT EVERY POST

ARDOX SPIKES

300

575

575

TIMBER POSTS

12.5mm DIA BOLTS

1500

## PLAN VIEW

SECTION A  
SHEET 7A-2

12.5mm DIA BOLTS

TIMBER RETAINING WALL  
TIMBERS TO BE 3000mm  
LONG. STAGGER LAP  
JOINT EVERY OTHER  
ROW OF TIMBERS  
JOINTS ONLY TO OCCUR  
A POST LOCATIONS

1000 MAX.

FINISHED GRADE

TIMBER POSTS


BURY ONE TIMBER  
DEPTH

### NOTES:

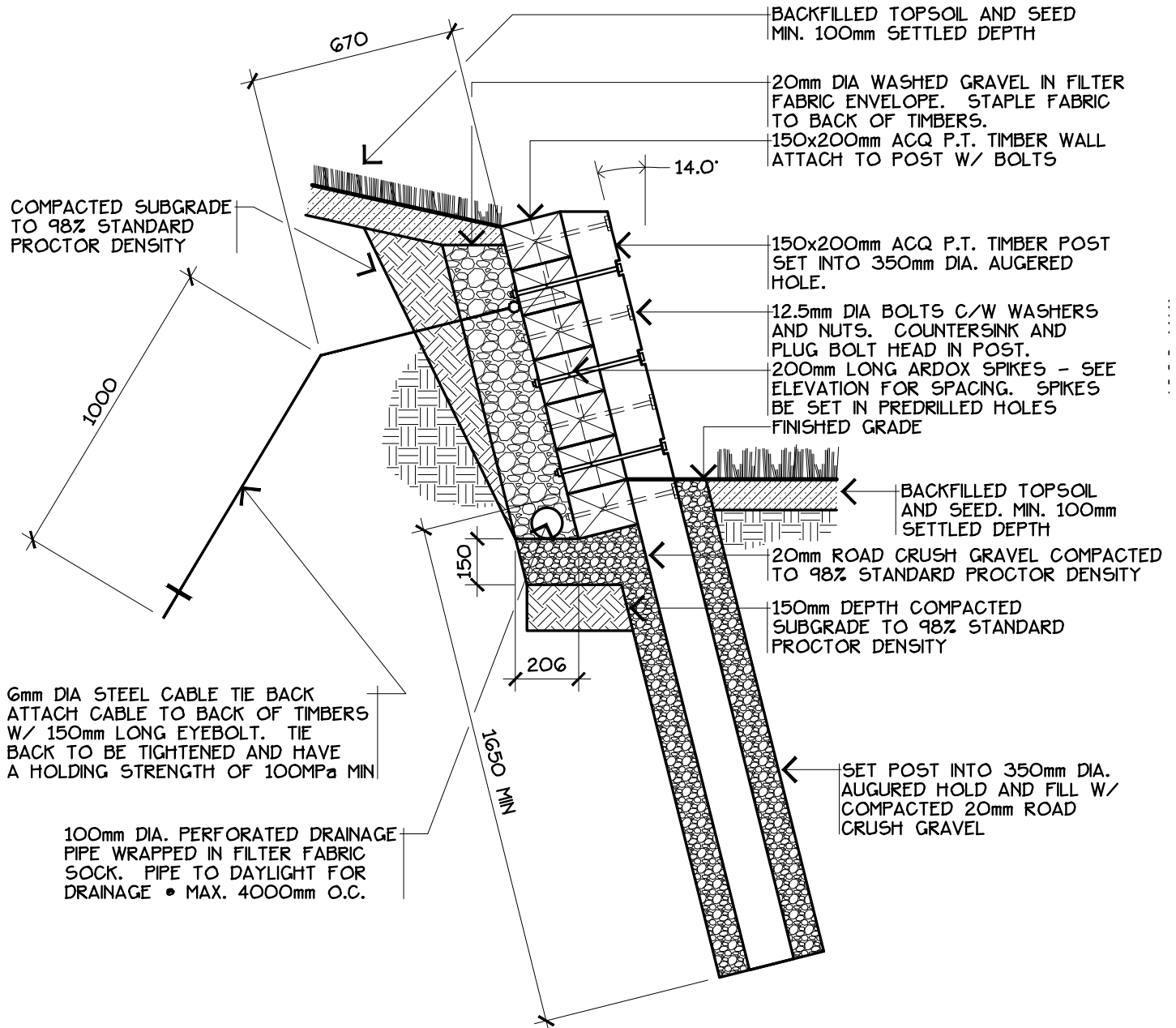
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES  
W/ 2 COATS CLEAR ACQ.
- ALL METAL COMPONENTS AND HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A  
DEPTH OF UNDISTURBED SUBGRADE.
- DESIGN TO BE CONFIRMED BY GEO-TECHNICAL/STRUCTURAL  
ENGINEER TO ENSURE SUITABILITY FOR SITE

## ELEVATION

DRAWING: TIMBER RETAINING WALL - TO 1000mm HIGH

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>7A-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ.
- ALL METAL COMPONENTS AND HARDWARE TO BE GALVANIZED.
- POST HOLES TO BE EXCAVATED TO REACH A DEPTH OF UNDISTURBED SUBGRADE.

## SECTION A

DRAWING: TIMBER RETAINING WALL - TO 1000mm HIGH

	REVISION NO:	DATE: 2009 08	DRAWING NO.  7A-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



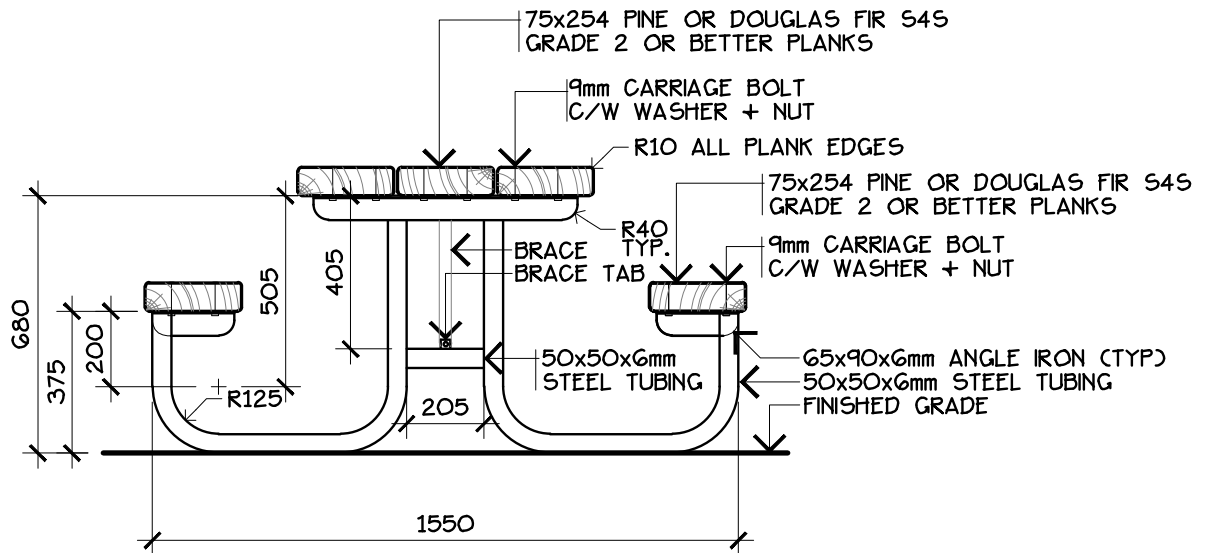




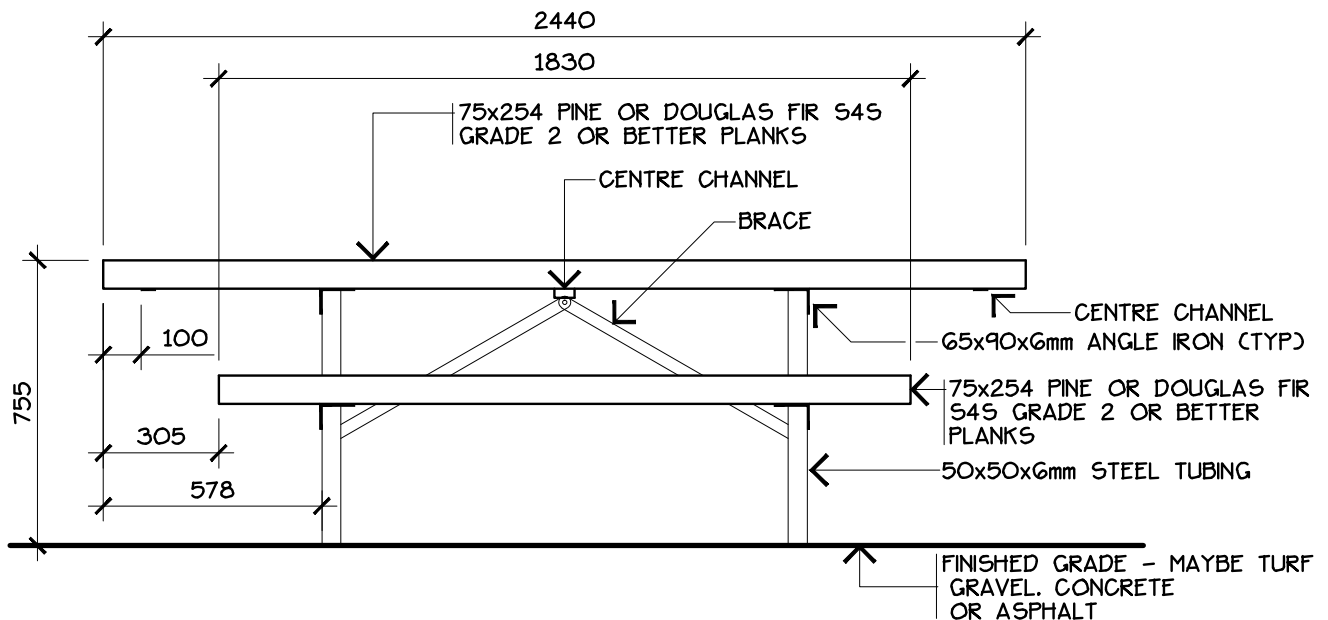
- TOP OF CONCRETE TO BE FLUSH WITH ADJACENT SURFACE
- ATTACH REFUSE CONTAINER TO BOLTS AS SHOWN
- PROVIDE KEY LOCK ON UNLOADING DOOR - ALL LOCKS KEYED TO COUNTY MASTER
- COLOUR OF WASTE RECEPTACLE UNIT TO BE COUNTY PANTONE BLUE-301C
- CONCRETE SLAB:
  - CONCRETE - CLASS C, TYPE GU, 30MPa • 28 DAYS, SLUMP 50-70, AIR ENTRAINED >5.5%, MAXIMUM 20mm AGGREGATE, MAXIMUM WATER 0.45, CEMENT 335kg/m<sup>3</sup>
  - BROOM FINISH SURFACE, EDGES TOOLED, 50mm TOOLED JOINTS MAXIMUM 3000mm O.C.
  - 10M REBAR - SEE DETAILS FOR SPACING
  - 150mm DEPTH 20mm ROAD CRUSH GRAVEL BASE COMPACTED TO 98% STANDARD PROCTOR DENSITY
  - 150mm DEPTH COMPACTED SUBGRADE TO 98% STANDARD PROCTOR DENSITY

APPROVED: D.O.

8



## SIDE ELEVATION




### **NOTES:**

- FRAME FINISH TO BE BLACK ALKYD SEMI-GLOSS PAINT OR POWDER COATED
- HORIZONTAL COMPONENTS TO BE ELECTRICALLY WELDED FIRST THEN WELDED TO THE VERTICAL COLUMNS
- ALL WELDS TO BE FILLET WELDS AND GROUND SMOOTH
- ALL BOLTS, NUTS + WASHERS TO BE GALVANIZED
- ALL WOOD COMPONENTS TO BE FINISHED W/ 2 COATS SEMI-TRANSPARENT STAIN COUNTY OF LEDUC STANDARDS

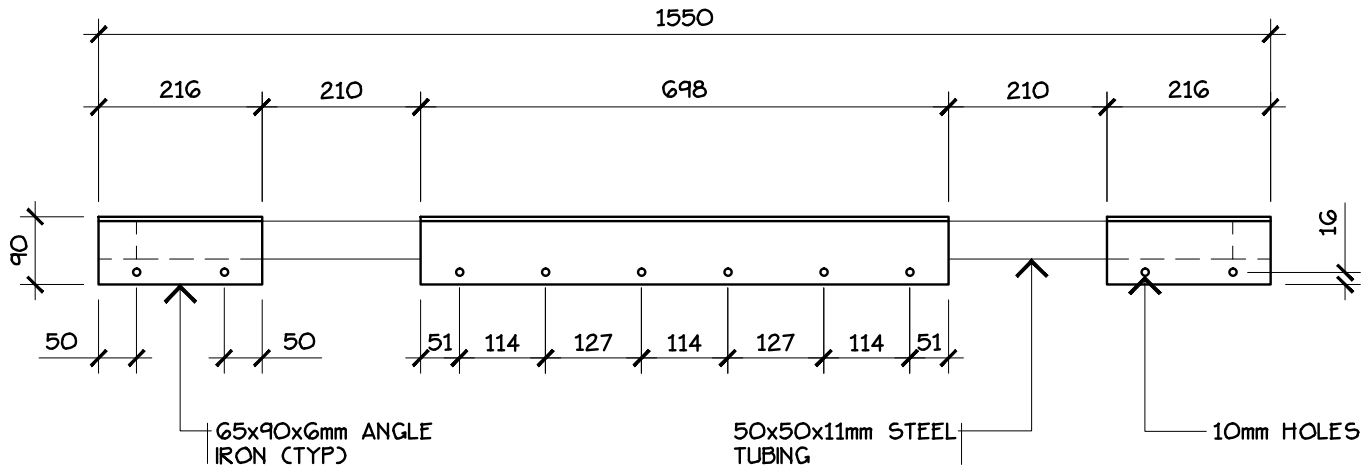
## FRONT ELEVATION

DRAWING: PORTABLE PICNIC TABLE - ELEVATIONS

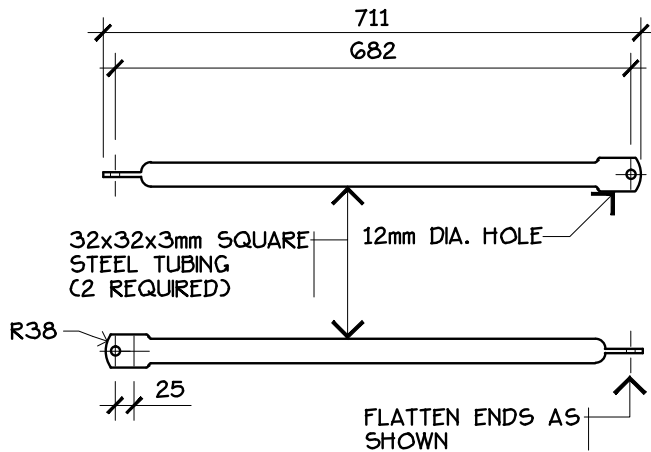
	REVISION NO:	DATE: 2009 08	DRAWING NO.  9A-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

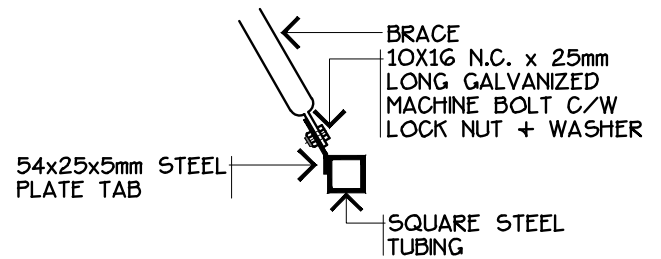
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



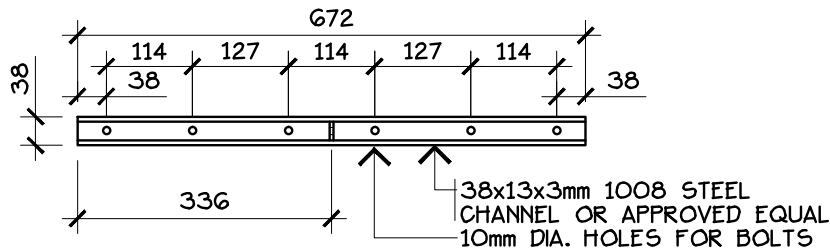
PLAN VIEW - FRAME ONLY



BRACE DETAIL




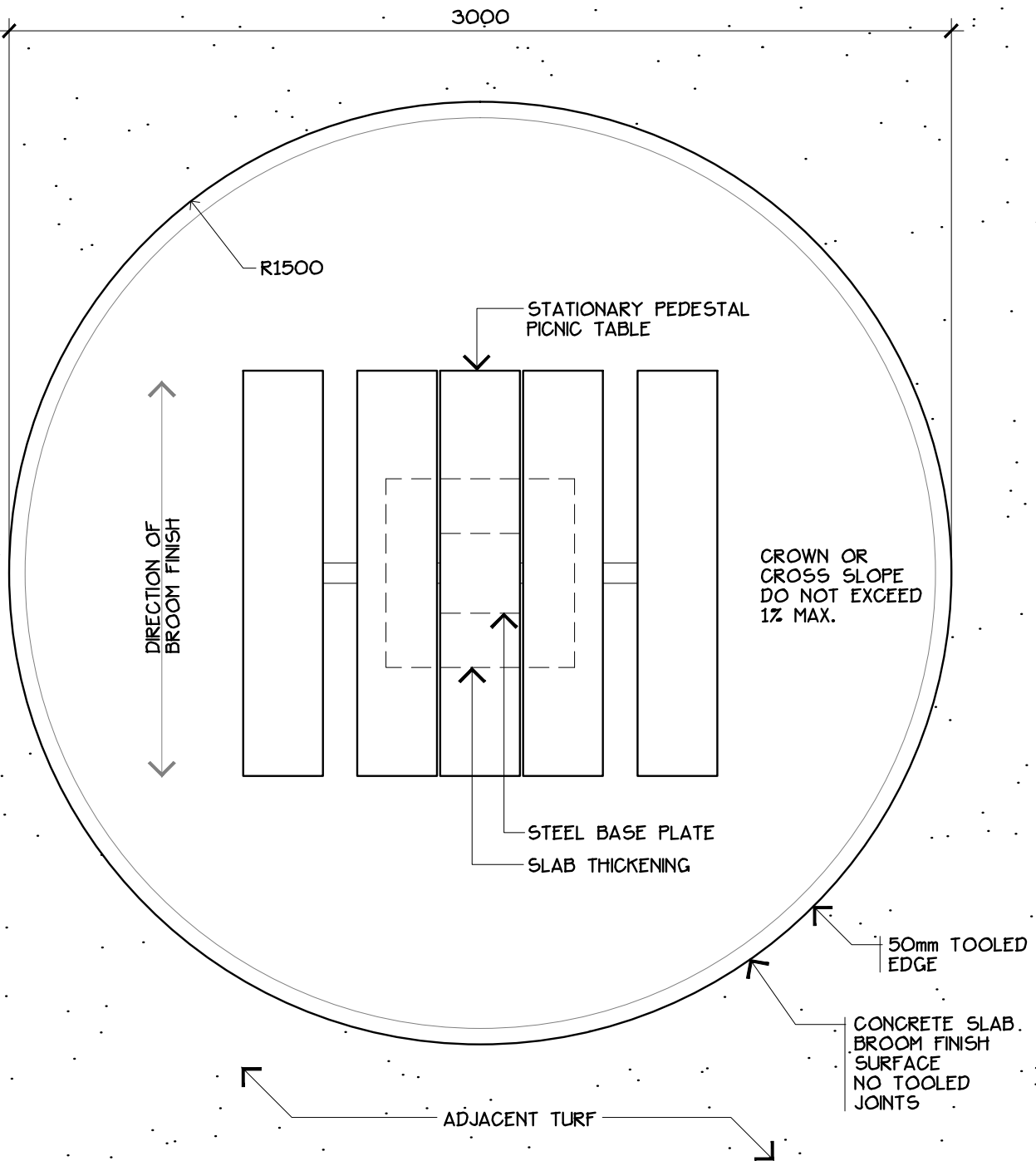
BRACE TAB DETAIL



CHANNEL DETAIL


DRAWING: PORTABLE PICNIC TABLE - DETAILS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>9A-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			

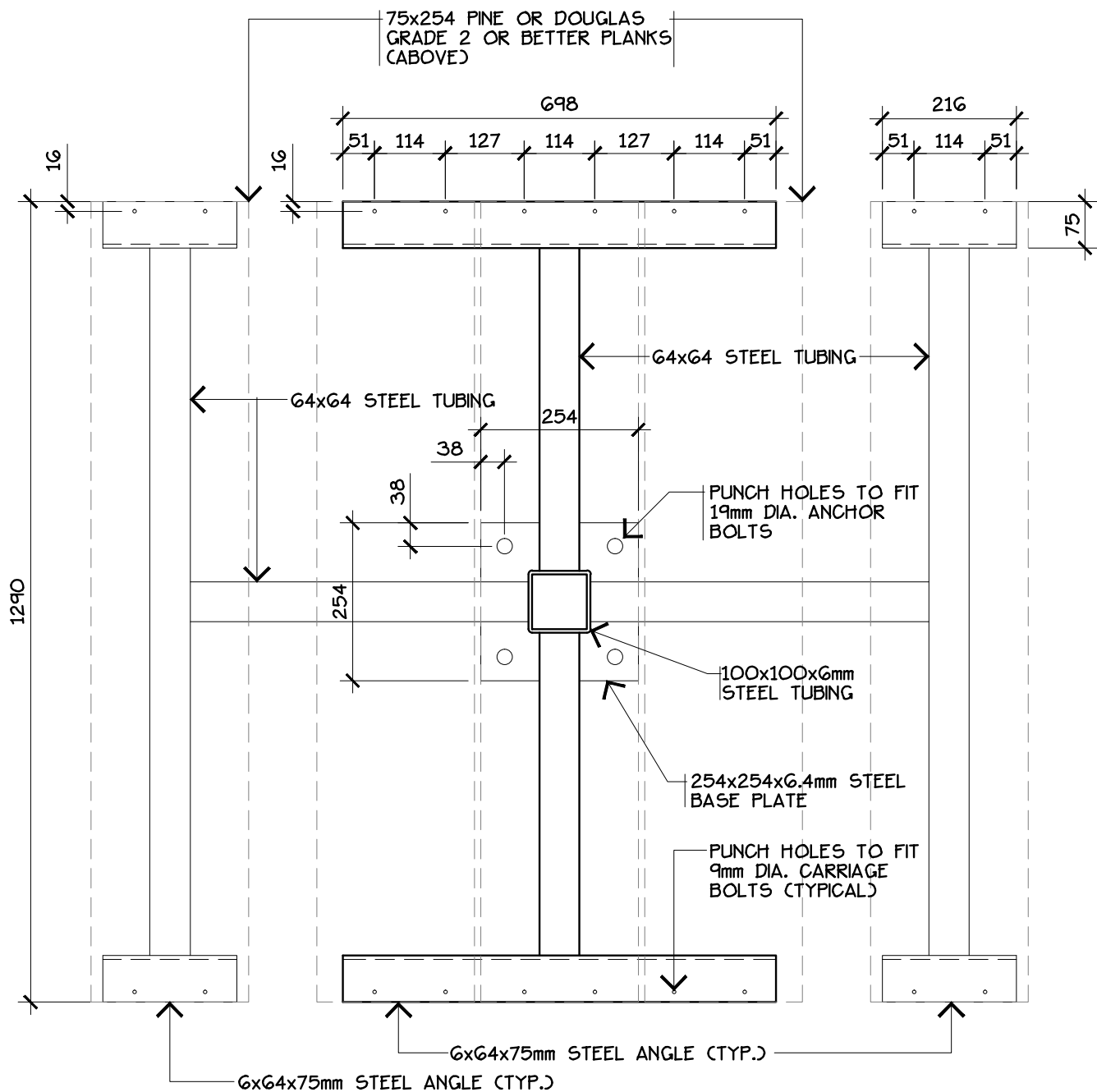


## PLAN VIEW - CONCRETE PAD

DRAWING: STATIONARY PEDESTAL PICNIC TABLE - CONCRETE PAD

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>9B-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	






#### NOTES:

- FRAME FINISH TO BE BLACK ALKYD SEMI-GLOSS PAINT OR POWDER COATED
- HORIZONTAL COMPONENTS TO BE ELECTRICALLY WELDED FIRST THEN WELDED TO THE VERTICAL COLUMNS
- ALL WELDS TO BE FILLET WELDS AND GROUND SMOOTH
- ALL BOLTS, NUTS + WASHERS TO BE GALVANIZED

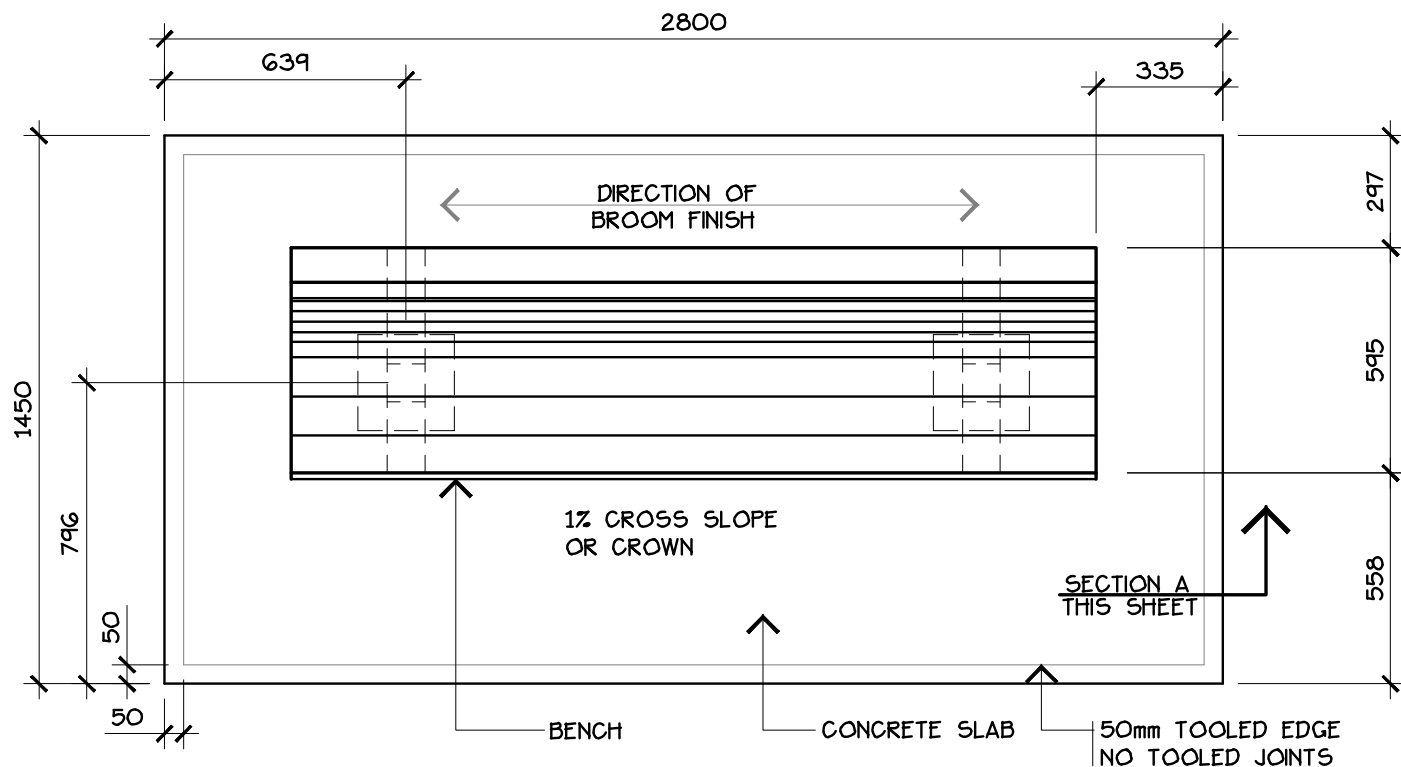
### PLAN VIEW - FRAME ONLY

DRAWING: STATIONARY PEDESTAL PICNIC TABLE

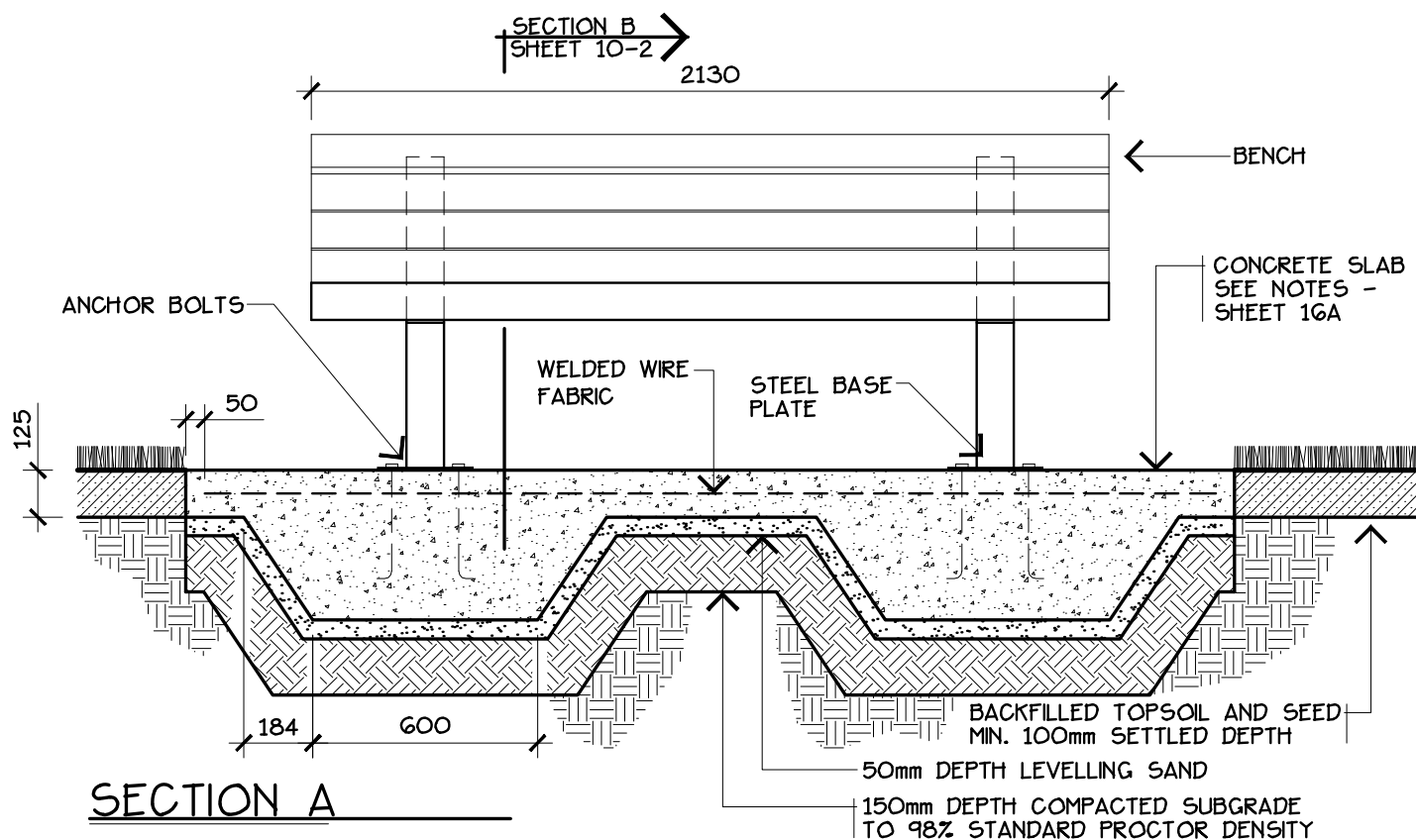
	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>9B-3</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




**PLAN VIEW**

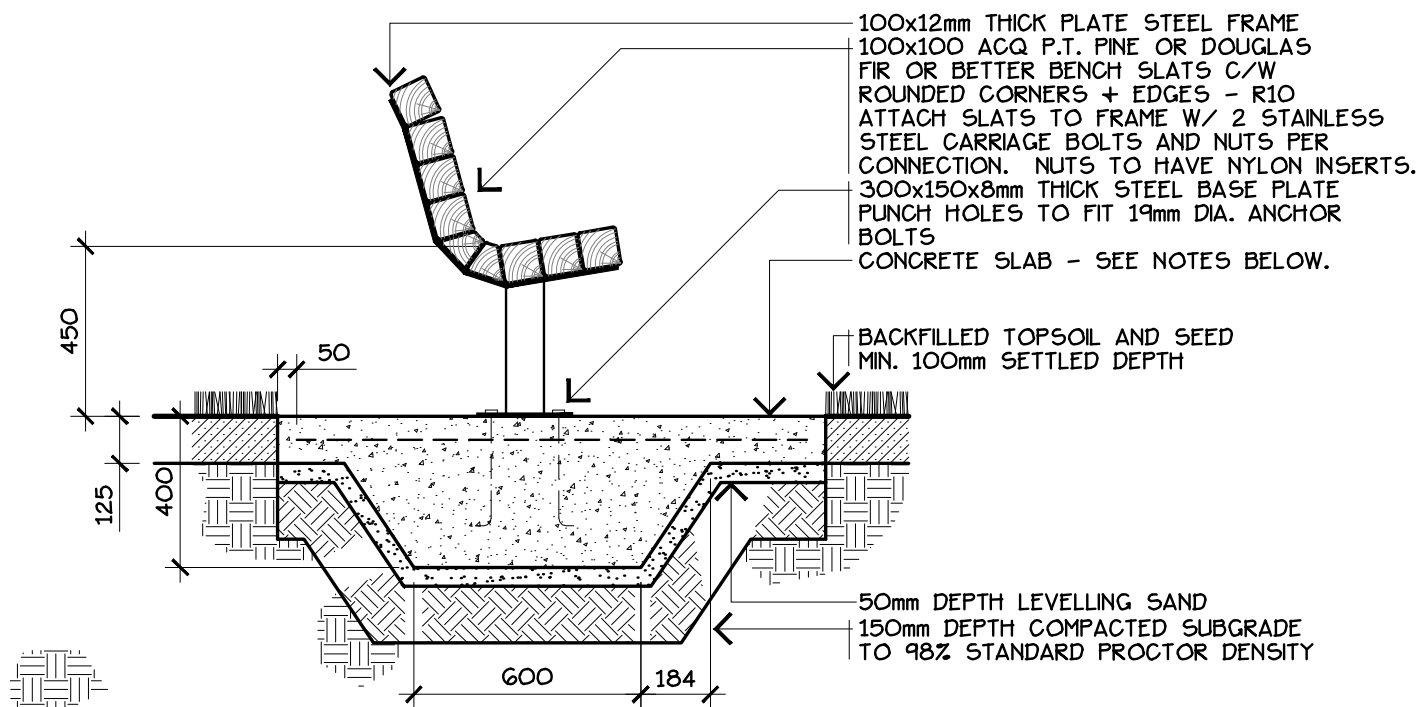


**SECTION A**

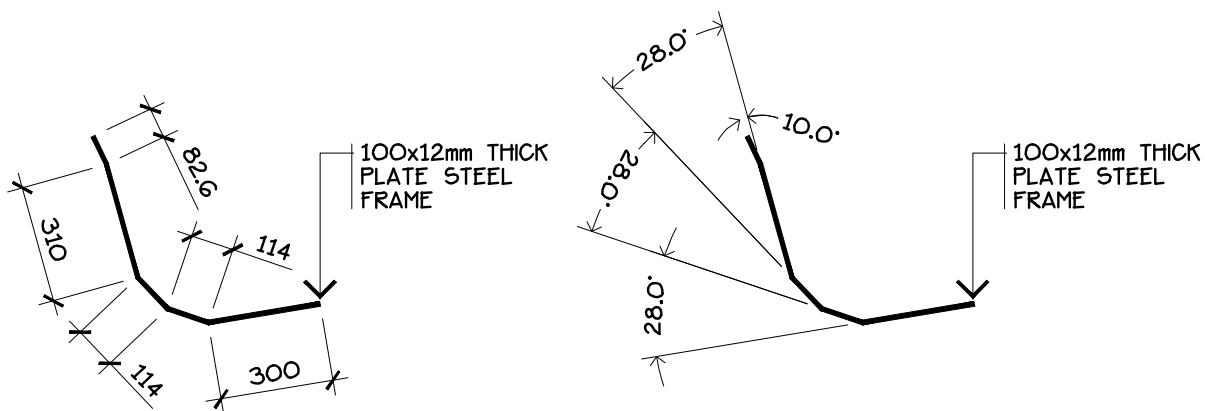
DRAWING: BACKED BENCH - PLAN & SECTION

	REVISION NO:	DATE: 2009 08	DRAWING NO.  10-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## SECTION B




## STEEL FRAME DETAIL

### NOTES:

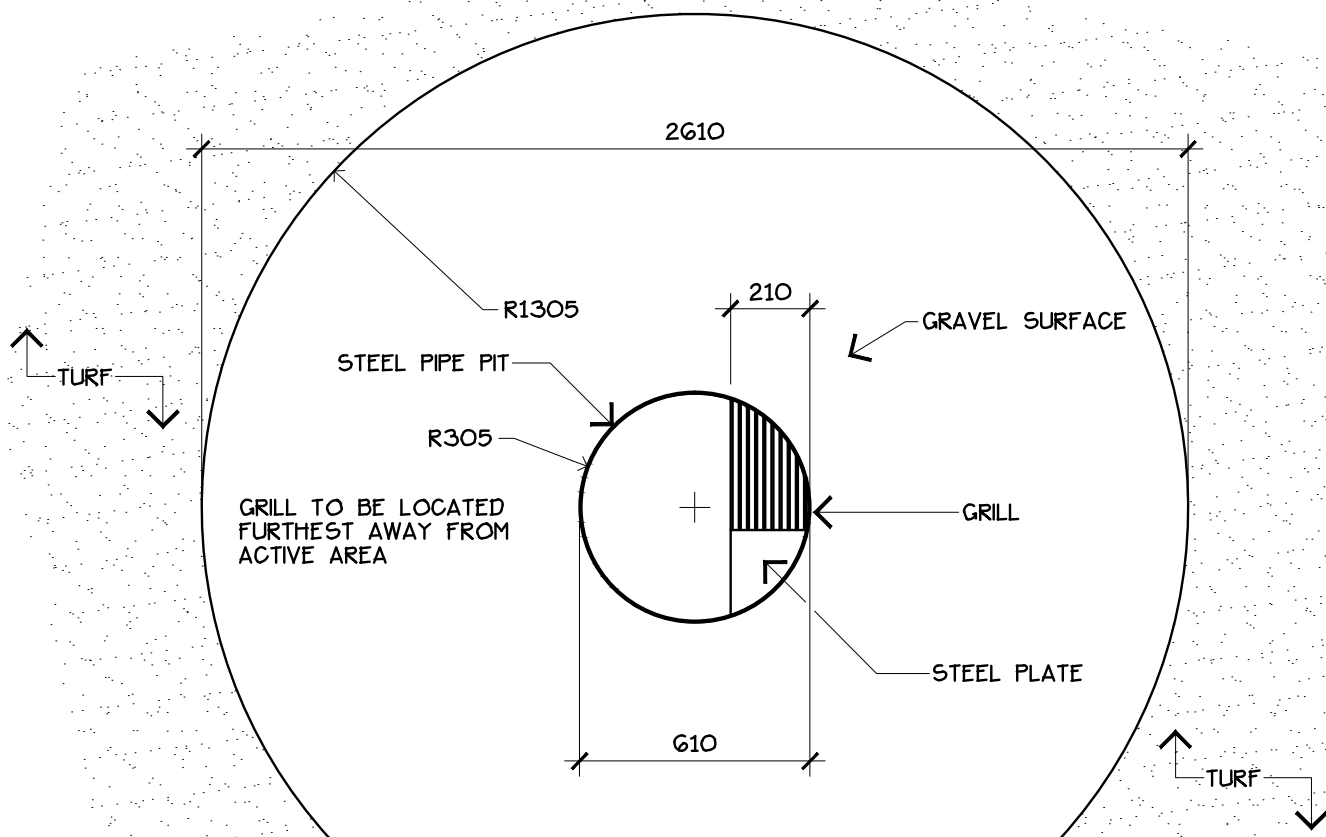
- CONCRETE SLAB:  
 CONCRETE - CLASS C. TYPE GU, 30MPa • 28 DAYS. SLUMP 50-70. AIR ENTRAINED >5.5%. MAXIMUM 20mm AGGREGATE. MAXIMUM WATER 0.45. CEMENT 335kg/m<sup>3</sup>  
 BROOM FINISH SURFACE. EDGES TOOLED. 50mm TOOLED JOINTS MAXIMUM 3000mm O.C.  
 REINFORCING WELDED STEEL WIRE FABRIC 150x150x6.  
 50mm DEEP LEVELLING SAND  
 150mm DEEP COMPACTED SUBGRADE TO 98% STANDARD PROCTOR DENSITY
- ALL WELDS TO BE FULL WELDS GROUND SMOOTH
- ALL METAL COMPONENTS TO BE BLACK ALKYD SEMI-GLOSS PAINT OR POWDER COATED
- ALL WOOD COMPONENTS TO BE FINISHED W/ 2 COATS SEMI-TRANSPARENT STAIN COUNTY OF LEDUC STANDARDS

DRAWING: BACKED BENCH - SECTION & DETAILS

	REVISION NO:	DATE: 2009 08	DRAWING NO.  10-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION			
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			

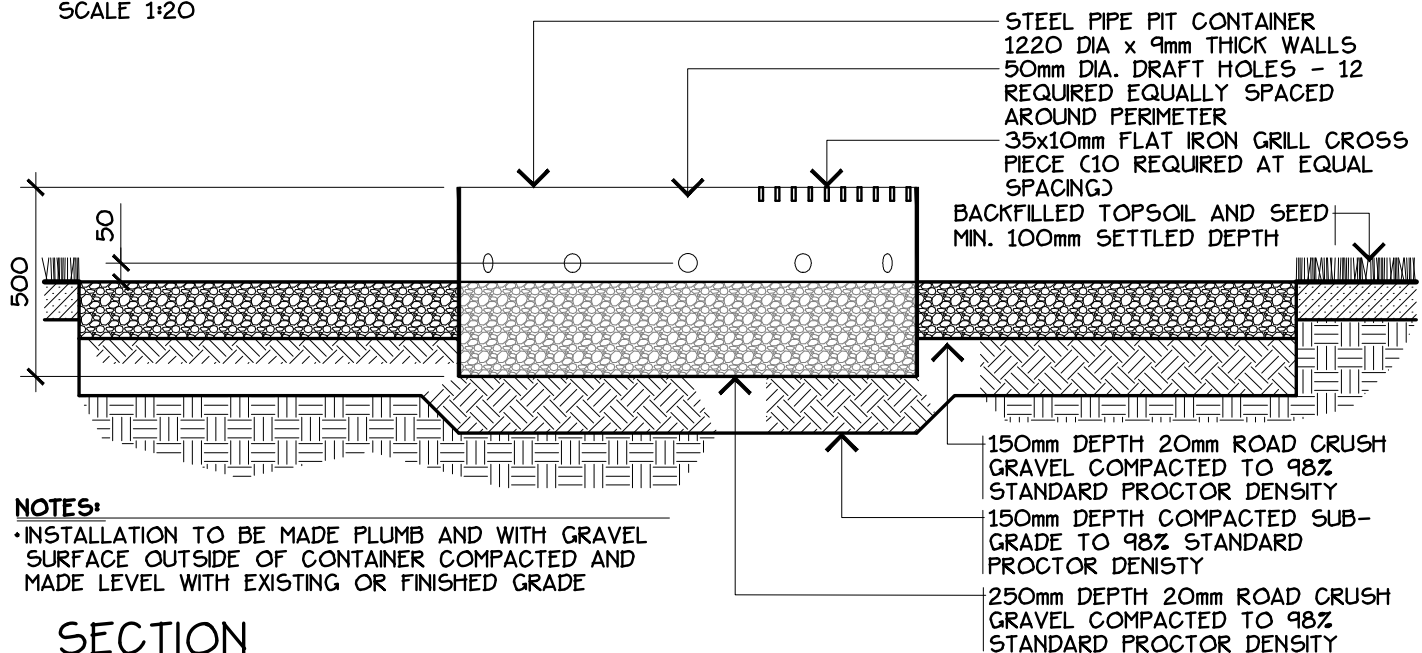
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3





## PLAN VIEW

SCALE 1:20



### NOTES:

- INSTALLATION TO BE MADE PLUMB AND WITH GRAVEL SURFACE OUTSIDE OF CONTAINER COMPACTED AND MADE LEVEL WITH EXISTING OR FINISHED GRADE

## SECTION

SCALE 1:10

DRAWING: FIRE PIT



REVISION NO:	DATE: 2009 08
DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: AS NOTED
CHECKED: N.M.	APPROVED: D.O.

DRAWING NO.

11

RUBBER BLACK HOSE 12mm OR APPROVED EQUAL. POSITIONED ABOVE FIRST STRONG BRANCH OF DECIDUOUS TREES AND APPROX. 3/5 HT. FOR CONIFEROUS TREES.

2 - METAL T-BAR (2100mm) PER TREE  
EXTENDING INTO UNDISTURBED SOIL.  
STAKES TO BE COLOUR CODED  
ACCORDING TO YEAR OF PLANTING  
WHITE - 2009/2013/2017  
YELLOW - 2010/2014/2018  
GREEN - 2011/2015/2019  
BLUE - 2012/2016/2020

METAL T-BAR FOR WARRANTY PERIOD  
REMOVE PRIOR TO FAC APPROVAL

SAUCER SHALL BE SOAKED WITH WATER IMMEDIATELY AFTER PLANTING

BURLAP SHALL BE ROLLED DOWN 1/3 PRIOR TO BACKFILLING

UNDISTURBED SOIL

GALVANIZED GUY WIRE NO. 12 MIN.

MIN. 100mm SHREDDED BARK MULCH (TO BE TAPERED AT BASE OF TRUNK) AS PER SPECIFICATION APPLIED OVER COLORED PRE-EMERGENT.

BACKFILLED TOPSOIL AND SEED. MIN. 100mm SETTLED DEPTH

TOP OF WIRE BASKET TRIMMED BELOW TOP OF ROOTBALL


PROVIDE MIN. 300mm COMPACTED SOIL MIX FOR ROOTBALL TO REST ON

SOIL MIX 2:1:1  
2 PART TOPSOIL  
1 PART SAND  
1 PART PEAT MOSS/COMPOST

#### NOTES:

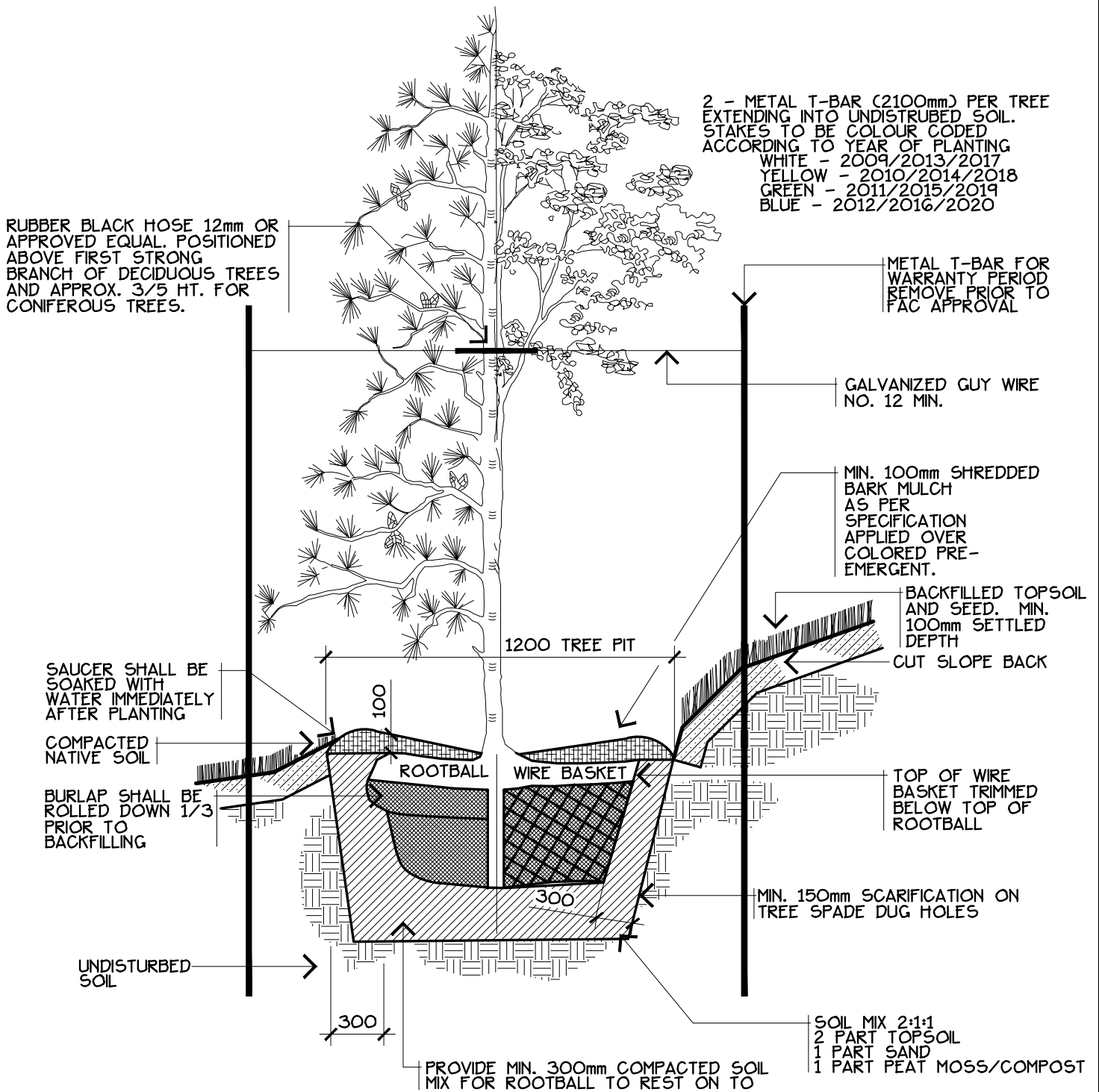
- PRUNE ONLY TO REMOVE DEAD, DAMAGED, DISEASED OR INTERFERING WOOD.
- CONTRACTOR TO ALLOW FOR SETTLEMENT WHEN PLACING THE TREE.

DRAWING: TREE PLANTING

 <div>LEDUC COUNTY</div>	REVISION NO:	DATE: 2009 08	DRAWING NO.  12-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



**NOTES:**

- PRUNE ONLY TO REMOVE DEAD, DAMAGED, DISEASED OR INTERFERING WOOD.
- CONTRACTOR TO ALLOW FOR SETTLEMENT WHEN PLACING THE TREE.

DRAWING: TREE PLANTING ON SLOPES

	REVISION NO:	DATE: 2009 08	DRAWING NO.  12-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			

RUBBER BLACK HOSE 12mm OR APPROVED EQUAL. POSITIONED ABOVE FIRST STRONG BRANCH OF DECIDUOUS TREES AND APPROX. 3/5 HT. FOR CONIFEROUS TREES.

2 - METAL T-BAR (2100mm) PER TREE EXTENDING INTO UNDISTURBED SOIL. STAKES TO BE COLOUR CODED ACCORDING TO YEAR OF PLANTING  
 WHITE - 2009/2013/2017  
 YELLOW - 2010/2014/2018  
 GREEN - 2011/2015/2019  
 BLUE - 2012/2016/2020

METAL T-BAR FOR WARRANTY PERIOD REMOVE PRIOR TO FAC APPROVAL

GALVANIZED GUY WIRE NO. 12 MIN.

SAUCER SHALL BE SOAKED WITH WATER IMMEDIATELY AFTER PLANTING.

MIN. 100mm OF SHREDDED BARK AS PER SPECIFICATION. APPLIED OVER COLORED PRE-EMERGENT.

BACKFILLED TOPSOIL AND SEED. MIN. 100mm SETTLED DEPTH

BURLAP ROOT CONE

WIRE BASKET ROLLED BACK.

MACHINE DUG TREE WELL.


SOIL MIX MIN. 2:1:1  
 300mm ALL SIDES  
 2 PART TOPSOIL  
 1 PART SAND  
 1 PART PEAT MOSS/COMPOST

UNDISTURBED SOIL

#### NOTES:

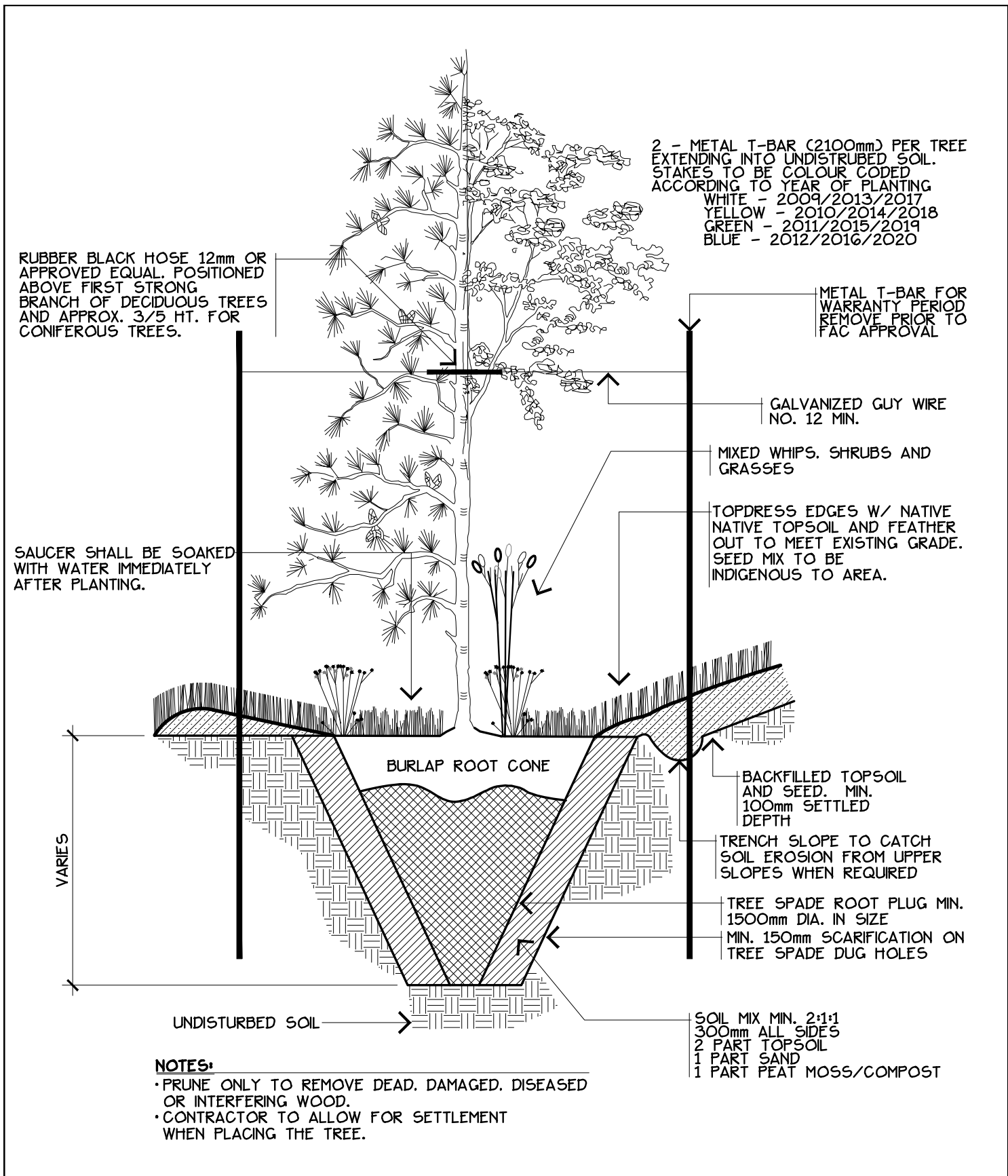
- PRUNE ONLY TO REMOVE DEAD, DAMAGED, DISEASED OR INTERFERING WOOD.
- CONTRACTOR TO ALLOW FOR SETTLEMENT WHEN PLACING THE TREE.

DRAWING: MACHINE DUG TREE

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>12-3</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
<b>LEDUC COUNTY PARKS AND RECREATION</b>			

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



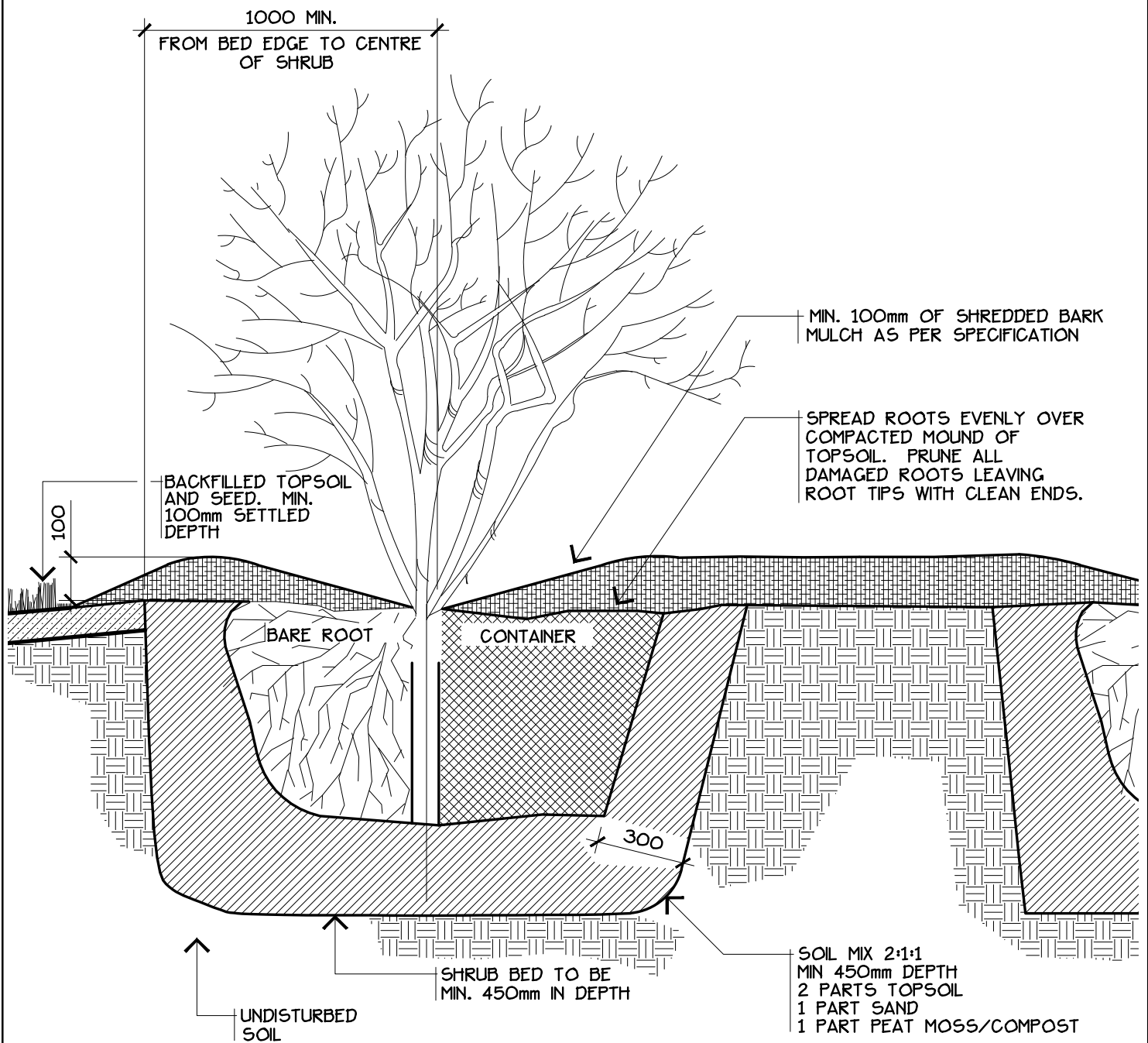
**NOTES:**

- PRUNE ONLY TO REMOVE DEAD, DAMAGED, DISEASED OR INTERFERING WOOD.
- CONTRACTOR TO ALLOW FOR SETTLEMENT WHEN PLACING THE TREE.

DRAWING: NATIVE TREE SPADE PLANTING

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>12-4</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



#### NOTES:

- MULCH TO BE 100mm DEEP AT DRIP LINE. TAPERING TO 0mm AT TRUNK FLARE.
- LOOSEN ROOT MASS PRIOR TO PLANTING.
- CONTAINER IS TO BE CUT CAREFULLY AWAY.
- SHRUB SHALL NOT BE PULLED FROM CONTAINER.
- THE USE OF POLY EDGING AND FILTER FABRIC IS NOT PERMITTED.

DRAWING: SHRUB PLANTING

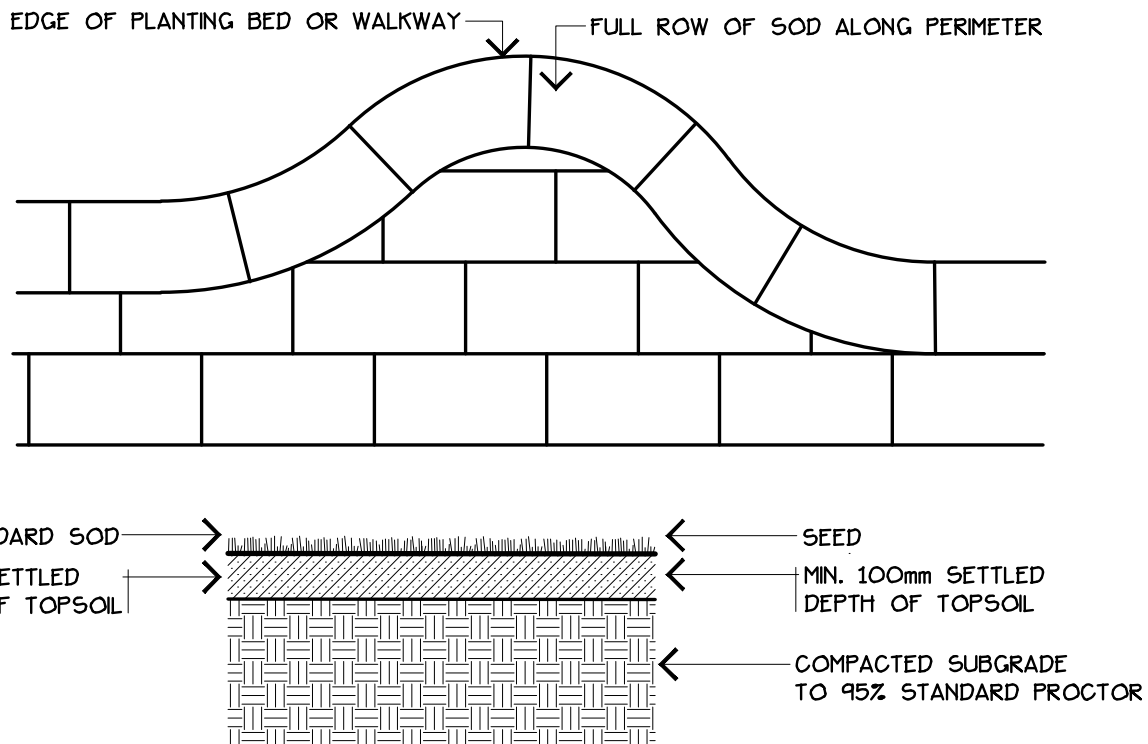
 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>13A</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

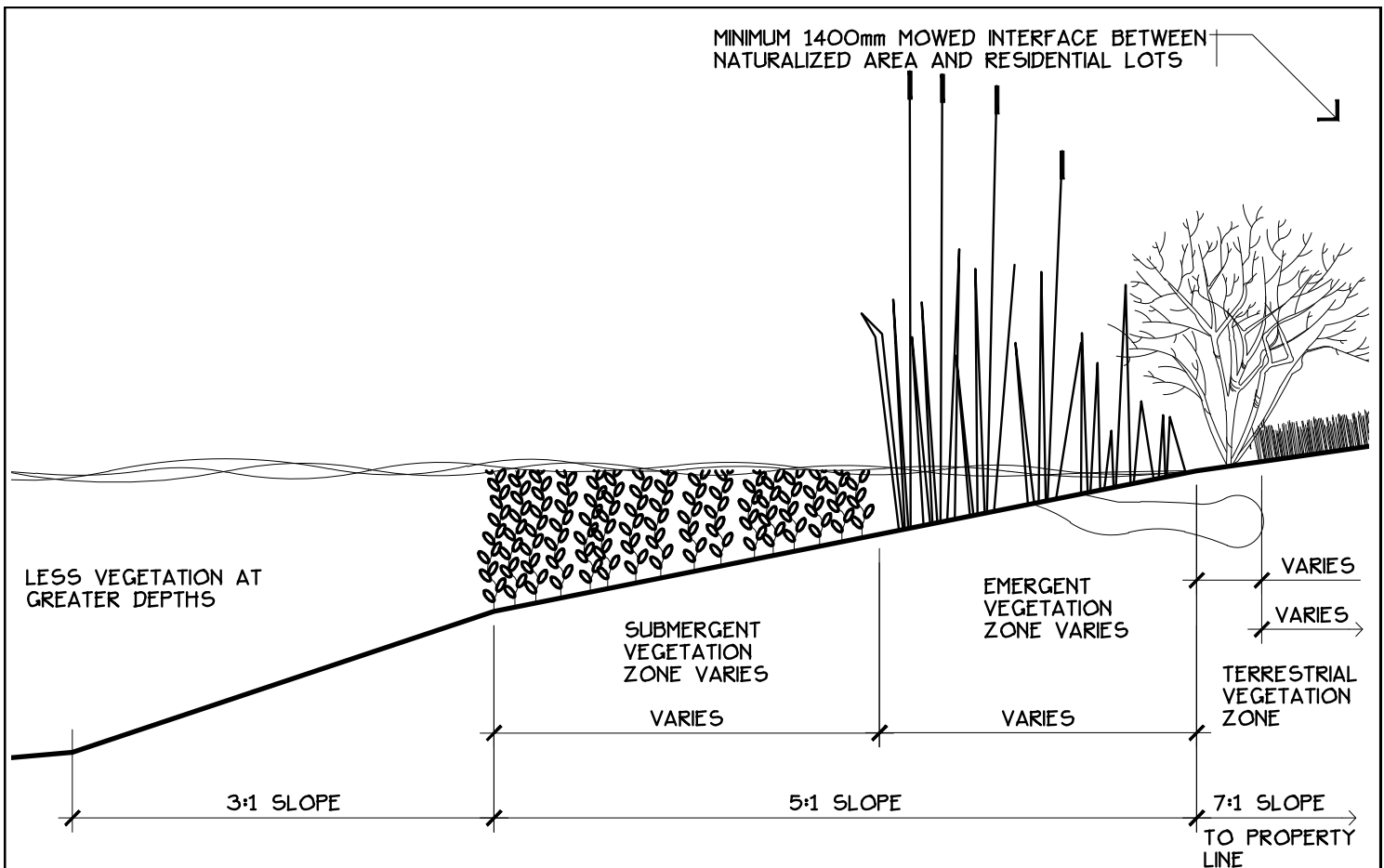
## NOTES:

- FINAL SUBGRADE MINIMUM SLOPE 1% SPORT FIELDS, 1.5% OTHER, MAXIMUM SLOPE 33%
- SUBGRADE COMPACTED TO 95% STANDARD PROCTOR DENSITY
- TILL SUBGRADE AREAS COMPACTED MORE THAN 95% TO A DEPTH OF 150 mm
- SCARIFY UPPER SURFACE OF ALL SUBGRADE
- SUPPLY + INSTALL 100mm (SOD) 100mm MIN. (SEED) SETTLED DEPTH OF APPROVED TOPSOIL
- SUPPLY + INSTALL 12-51-0 FERTILIZER AT 3.5 KG/100 m<sup>2</sup> ON TOP OF TOPSOIL
- SUPPLY + INSTALL STANDARD SOD IN LARGE ROLLS OR SMALLER PIECES
- DELIVER SOD TO SITE WITHIN 24 HOURS OF BEING LIFTED AND LAY SOD WITHIN 36 HOURS OF BEING LIFTED
- FULL ROW OF SOD FOR BED EDGES TO CREATE SMOOTH FREE FLOWING LINES
- TOPDRESS ANY JOINTS THAT DRY OUT AND OPEN UP
- MAINTAIN VIGOROUS + WEED FREE TO FINAL ACCEPTANCE CERTIFICATE APPROVAL
- SOD SEED MIX: 30% TOUCHDOWN BLUEGRASS, 40% KENTUCKY BLUEGRASS, 35% CREEPING RED FESCUE
- PARK SEED MIX: 30% TOUCHDOWN BLUEGRASS, 40% KENTUCKY BLUEGRASS, 35% CREEPING RED FESCUE
- NATIVE SEED MIX: 35% FAIRWAY CRESTED WHEATGRASS, 20% NAKISKA SHEEPS FESCUE, 20% DURAR HARD FESCUE, 10% NORLAC RED CLOVER, 10% BIRDSFOOT TREFOIL, 5% PERENNIAL RYEGRASS FOR NON-MOWED AREAS
- RIPARIAN SEED MIX: 25% FOWL BLUEGRASS, 20% ROCKY MOUNTAIN FESCUE, 20% HIGHLANDER SLENDER WHEATGRASS, 15% ALKALIGRASS, 10% HARD FESCUE, 10% SLOUGHGRASS, 5% HAIRY VETCH FOR 1000mm ELEVATION ABOVE + BELOW NORMAL WATER LEVEL
- SPREAD ALL SEED AT 240 KG/HECTARE OR AS SPECIFIED FOR THE SEED TYPE.
- SEED TO BE SPREAD IN TWO PASSES AT OPPOSITE DIRECTIONS
- HYDROSEEDING FOR SLOPES 3:1 OR STEEPER TO FOLLOW STANDARD HYDROSEEDING PRACTICES



DRAWING: SEED AND SOD DETAIL

	REVISION NO:	DATE: 2009 08	DRAWING NO.  13B
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: NTS	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	




#### NOTES:

- DENSE SHORELINE DISCOURAGES GOOSE ACCESS TO RIPARIAN AND ORNAMENTAL VEGETATION
- SETBACK BETWEEN SHORE OF NWL AND PROPERTY LINE CONTAINS UNDERMINING OF SHORE BY MUSKRATS ON PUBLIC PROPERTY
- VEGETATED, NATURALIZED SHORELINE RESULTS IN IMPROVED WATER QUALITY AND STABILIZES BANKS AND SHORE. DECREASES EROSION AND IMPROVES AESTHETIC QUALITY
- THERE ARE THREE ZONES THAT NEED TO BE IDENTIFIED - WIDTHS VARY ON A SITE BY SITE BASIS
- SWMF DESIGN TO BE CONSISTENT WITH LEDUC COUNTY'S DESIGN GUIDELINES AND CONSTRUCTION STANDARDS FOR DEVELOPMENTS, CHAPTER 6
- PLANT MATERIAL SHALL BE SELECTED TO RESPECT SOIL CHARACTERISTICS, SLOPES, VEGETATION AND DESIGN OF THE FACILITY AND ITS INTENDED USE
- MINIMUM 75 TREES PER HECTARE REQUIRED BASED ON AREA ABOVE THE NORMAL WATER LEVEL (NWL). SHRUBS MAY BE SUBSTITUTED AT A RATE OF 5 SHRUBS TO ONE TREE.
- PLANT MATERIAL MUST BE APPROPRIATE TO WITHSTAND FLOODING CONDITIONS AND SHOULD DETER DIRECT PUBLIC ACCESS TO THE WETLAND
- MINIMUM BUFFER WIDTH OF 10m OF VEGETATION AROUND THE PERIMETER OF THE POND IS REQUIRED FOR EROSION CONTROL AND SEDIMENT/NUTRIENT REMOVAL. AFTER TOPSOIL HAS BEEN PLACED, THE ENTIRE VEGETATION AREA SHALL SEEDED WITH A RIPARIAN SEED MIX TO STABILIZE THE SOIL
- IN THE SPRING OF THE YEAR FOLLOWING CONSTRUCTION THE ENTIRE VEGETATION ZONE SHALL BE OVERSEEDDED WITH LEGUMES AND OTHER NATIVE WETLAND MATERIAL. AT APPROXIMATELY THE SAME TIME THE AREA ABOVE THE NWL SHALL BE PLANTED WITH WOODY SPECIES
- PRIOR TO FAC AND TWO YEARS AFTER CCC A DIVERSE POPULATION OF WETLAND VEGETATION AND TOLERANT WOODY PLANTS SHOULD BE ESTABLISHED
- TO ACCOMMODATE RECREATIONAL USES FOR THE PUBLIC, A WALKWAY MAY BE REQUIRED IN THE BUFFER STRIP BETWEEN THE NWL AND HIGH WATER LEVEL AT THE DISCRETION OF LEDUC COUNTY

## SECTION

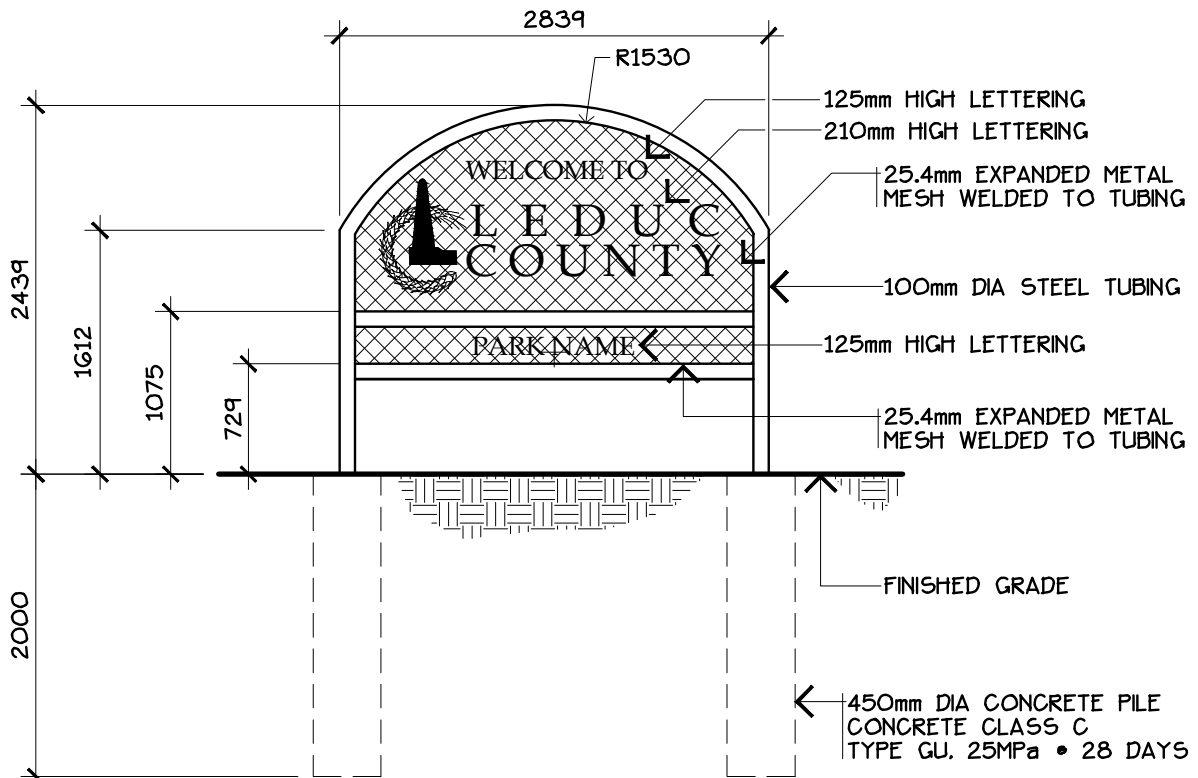
DRAWING: STORM WATER MANAGEMENT FACILITY (SWMF) PLANTING

	REVISION NO:	DATE: 2009 08	DRAWING NO.  14
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:75	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

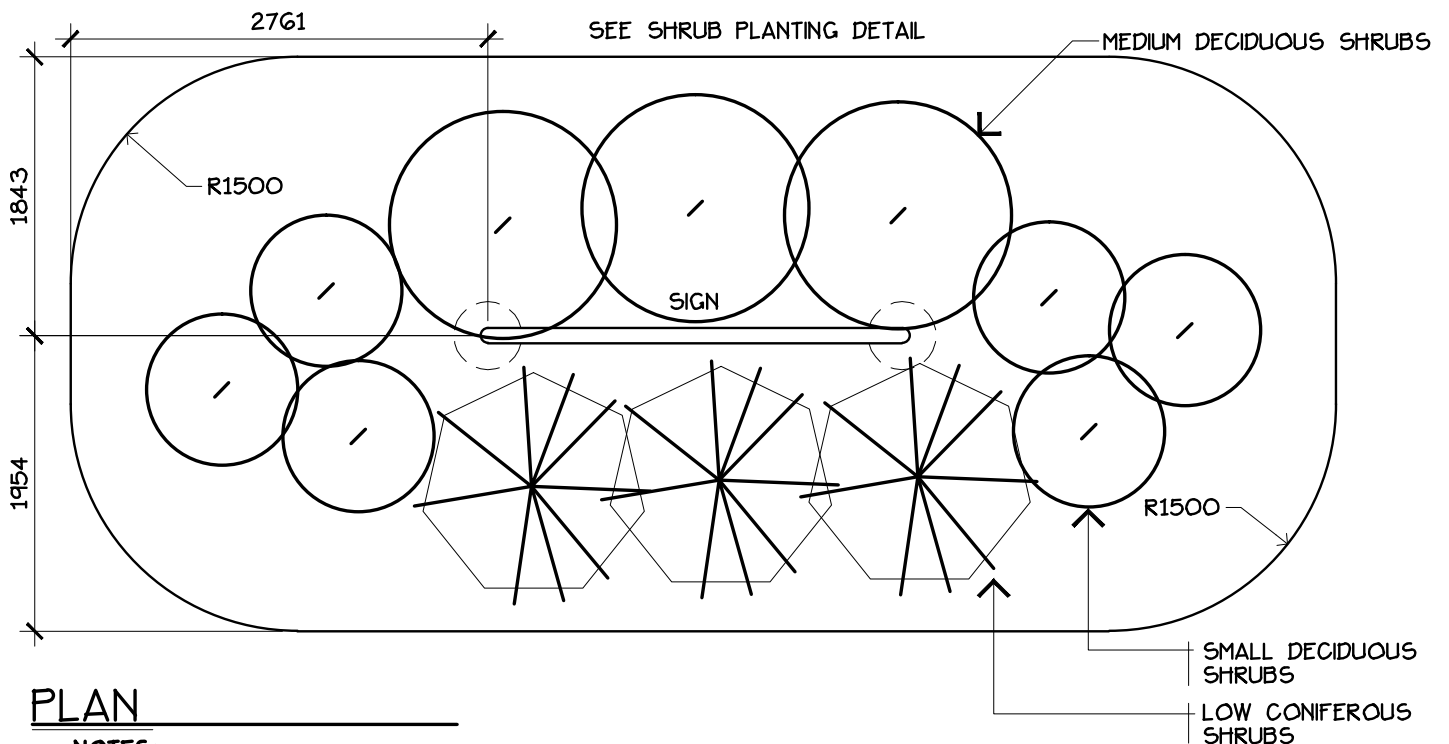
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3





## ELEVATION




## PLAN

### NOTES:

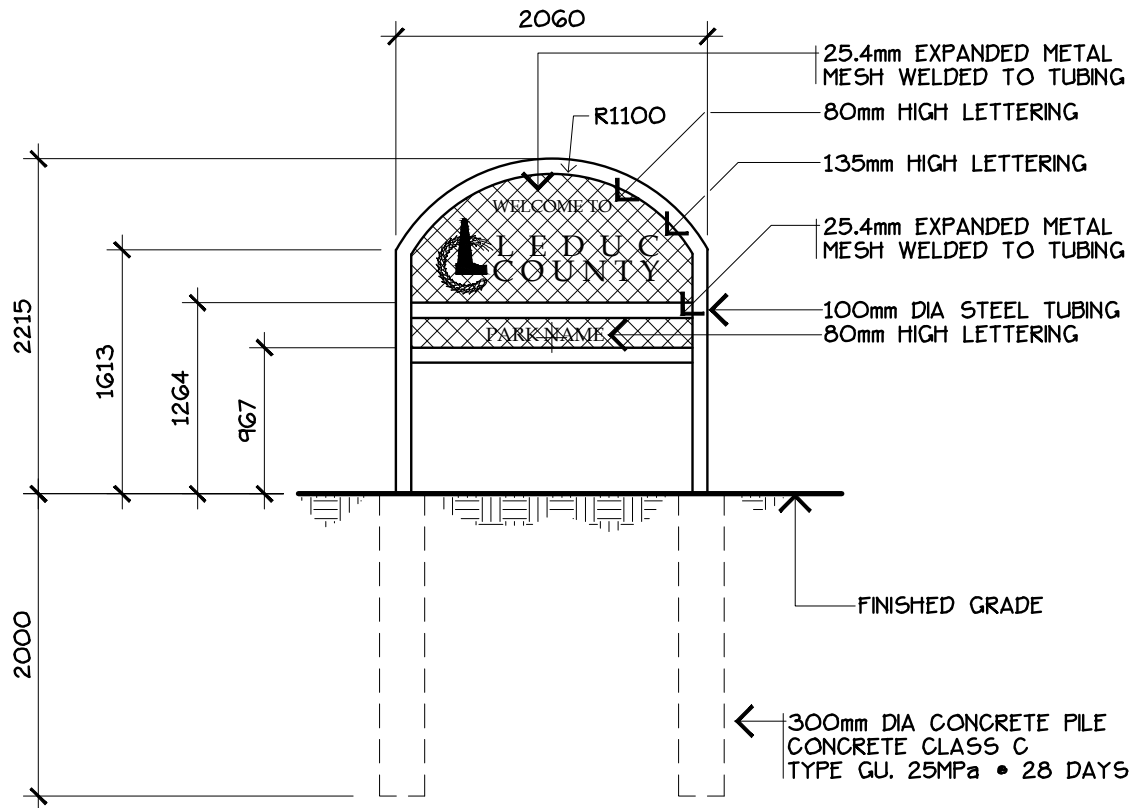
- METAL COMPONENTS TO BE POWDER COATED TO COUNTY COLOUR PANTONE BLUE-301C
- ALL WELDS TO BE GROUND SMOOTH.
- LETTERING FONT TO BE COPPERPLATE GOTHIC SIZED AS PER DETAIL

DRAWING: PARK ENTRANCE SIGNS

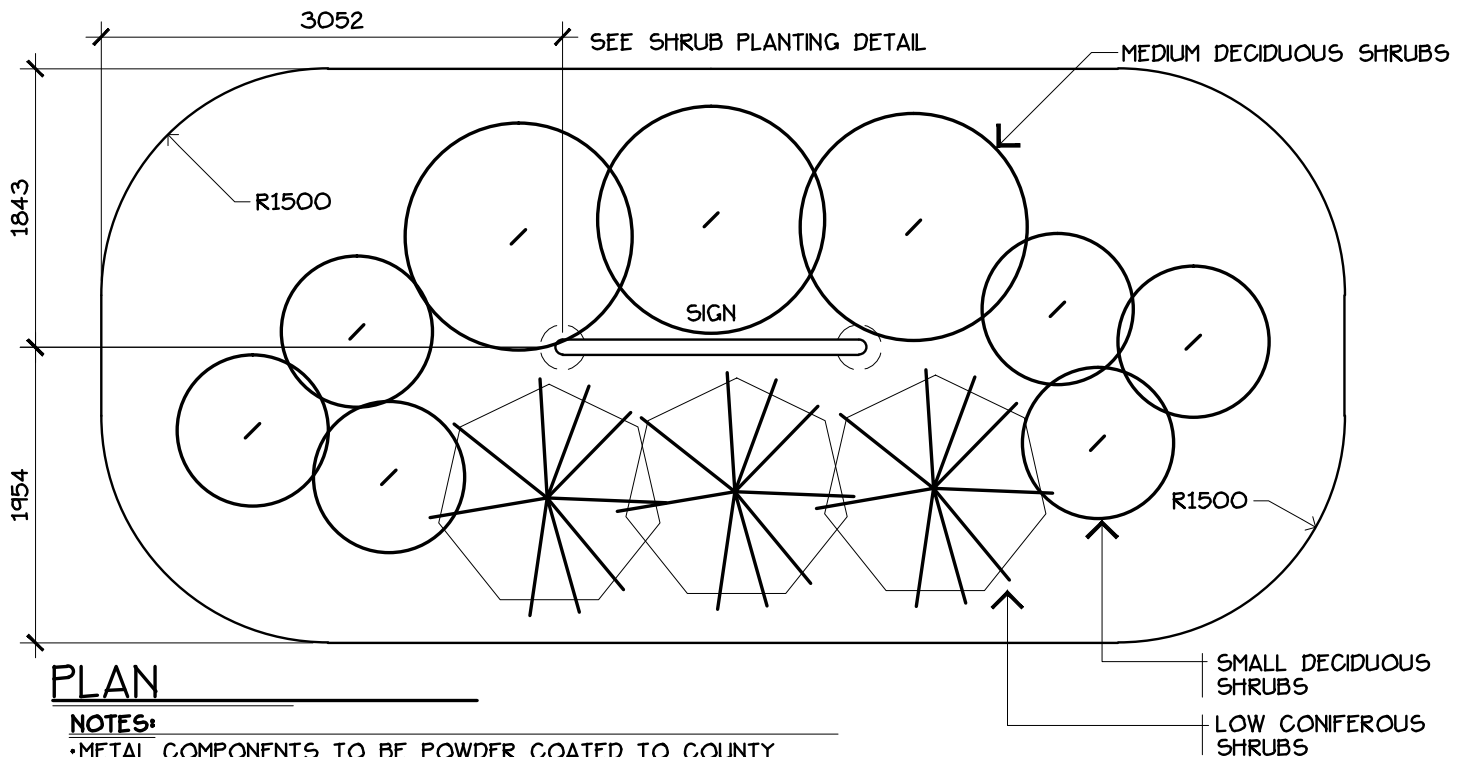
	REVISION NO:	DATE: 2009 08	DRAWING NO.  15-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## ELEVATION




## PLAN

### NOTES:

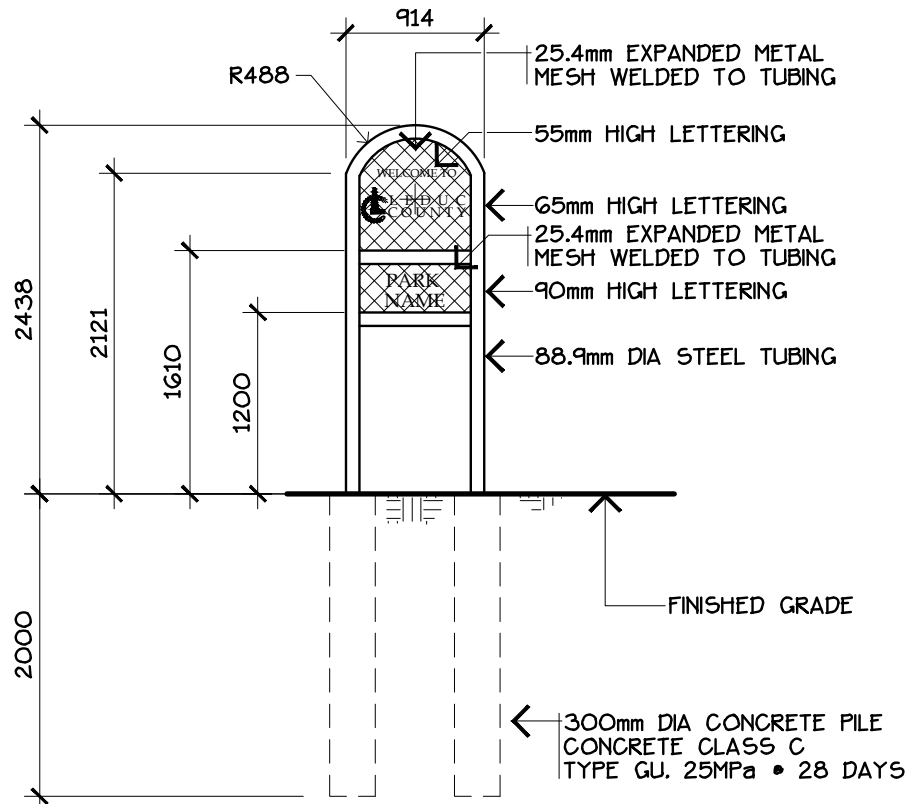
- METAL COMPONENTS TO BE POWDER COATED TO COUNTY COLOUR PANTONE BLUE-301C
- ALL WELDS TO BE GROUND SMOOTH.

DRAWING: PARK ENTRANCE SIGNS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>15-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

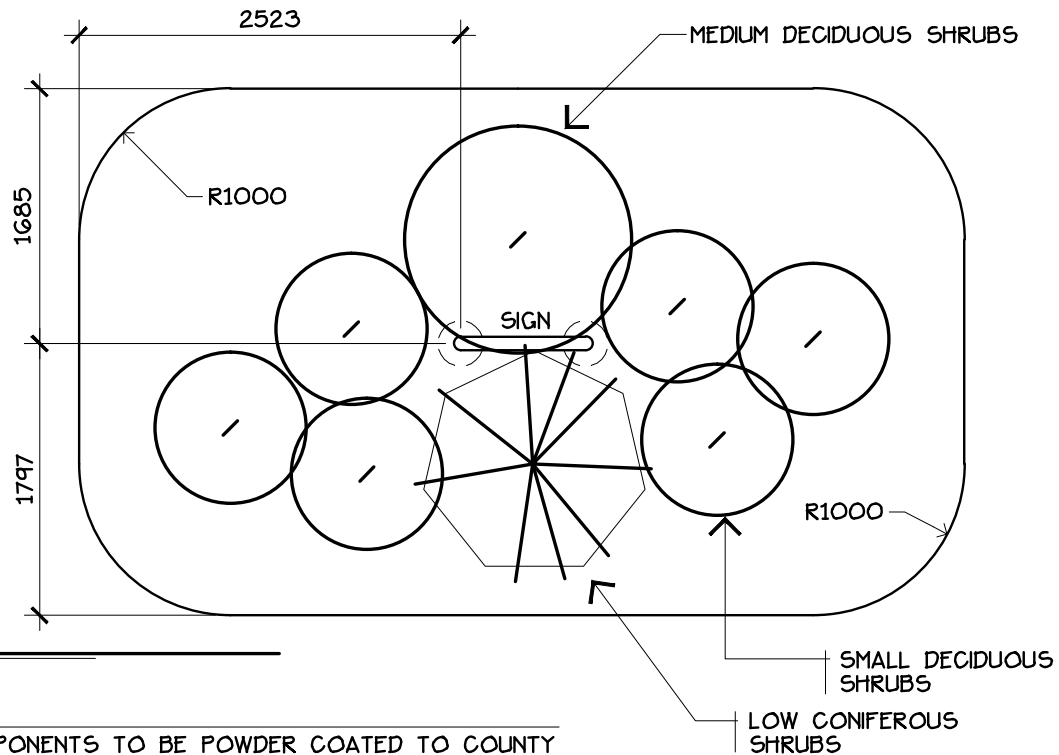
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## ELEVATION

SEE SHRUB PLANTING DETAIL




## PLAN

### NOTES:

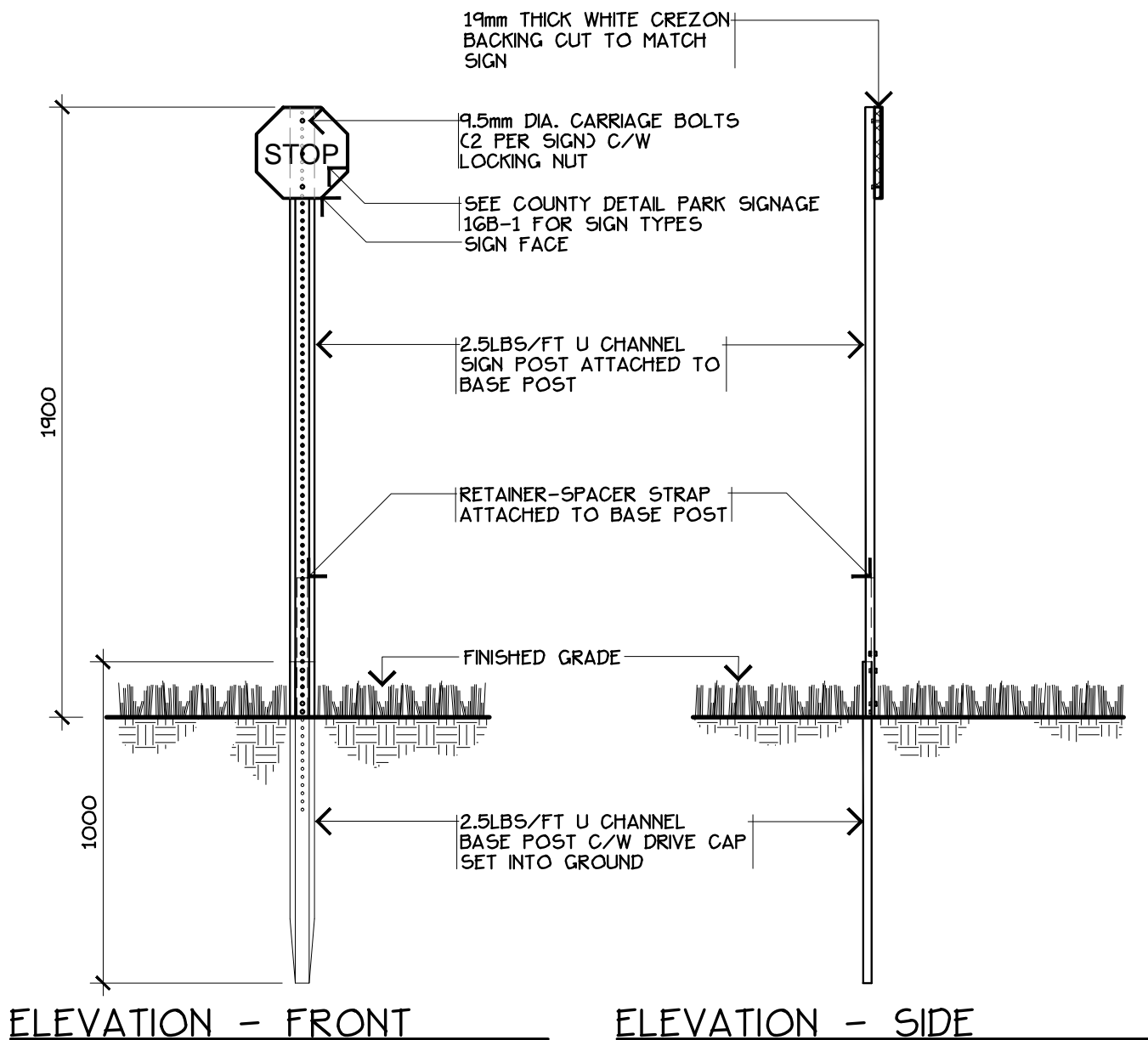
- METAL COMPONENTS TO BE POWDER COATED TO COUNTY COLOUR PANTONE BLUE-301C
- ALL WELDS TO BE GROUND SMOOTH.

DRAWING: PARK ENTRANCE SIGNS

	REVISION NO:	DATE: 2009 08	DRAWING NO.  15-3
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



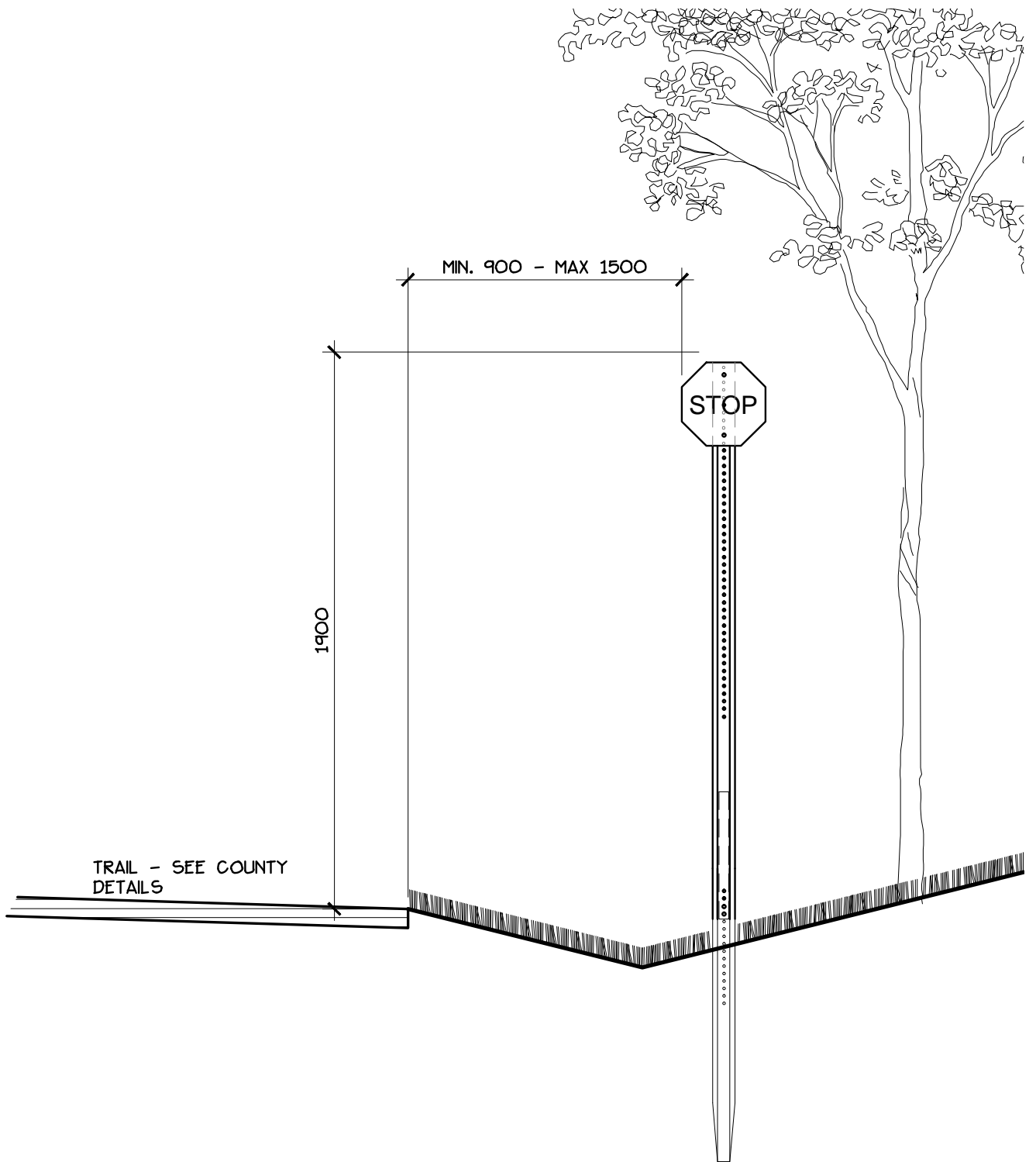
#### NOTES:

- SIGN POSTS TO BE 'EZE-ERECT' SIGN POSTS C/W BASE POST SIGN POST. RETAINER-SPACER STRAP AND ALL HARDWARE AS PER MANUFACTURER'S SPECIFICATIONS.
- 'EZE-ERECT' SIGN POSTS AVAILABLE FROM ALBERTA TRAFFIC SUPPLY LTD.
- ALL METAL COMPONENTS TO GALVANIZED.
- INSTALL 'EZE-ERECT' SIGN POSTS ACCORDING TO MANUFACTURER'S SPECIFICATIONS

DRAWING: PARK SIGNAGE


	REVISION NO:	DATE: 2009 08	DRAWING NO.  16A-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION			
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## SITE ELEVATION

DRAWING: PARK SIGNAGE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>16A-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			



HP-1

300mm x 300mm  
W/R - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
9.5mm HOLES. LARGE  
CROPPED CORNERS



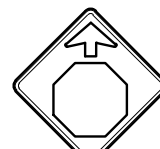
HP-2

300mm x 300mm  
B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
9.5mm HOLES. CENTERED  
CROPPED CORNERS



HP-3

375mm x 375mm x 375mm  
W/R - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
TRIANGLE 9.5mm HOLES  
CENTERED - LARGE  
CROPPED CORNERS



HP-4

300mm x 300mm  
R/B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
DIA. 9.5mm HOLES  
CENTERED - CROPPED



HP-5

300mm x 300mm  
R/B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS



HP-6

200mm x 300mm  
G/B/W - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS



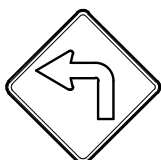
HP-7

200mm x 300mm  
W/BR - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS



HP-11

300mm x 200mm  
W/BR - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
SQUARE - 9.5mm CENTERED  
LARGE CROP



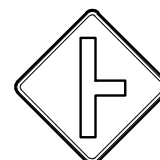
HP-8L

300mm x 300mm  
B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
DIA. 9.5mm HOLES ON CENTRE  
LARGE CROP



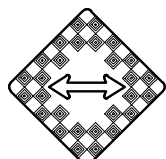
HP-8R

300mm x 300mm  
B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
DIA. 9.5mm HOLES ON CENTRE  
LARGE CROP



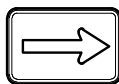
HP-9

300mm x 300mm  
B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
DIA. 9.5mm HOLES ON CENTRE  
LARGE CROP



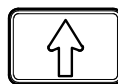
HP-8L

300mm x 300mm  
B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
DIA. 9.5mm HOLES ON CENTRE  
LARGE CROP



HP-12

300mm x 200mm  
W/BR - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
RECT - 9.5mm CENTERED  
LARGE CROP



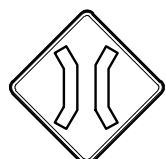
HP-13

300mm x 200mm  
W/BR - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
RECT - 9.5mm CENTERED  
LARGE CROP



HP-14

300mm x 300mm



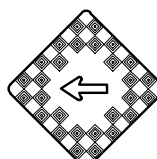
HP-15

300mm x 300mm



HP-16

300mm x 200mm



HP-17

300mm x 300mm



HP-18


300mm x 450mm  
R/B/Y - HI SIGN GRADE  
ALUMINIUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS

#### NOTES:

• SEE DETAIL 16A-1 AND 16A-2 FOR SIGN ATTACHMENT AND INSTALLATION SPECIFICATIONS.

## SIGN ELEVATIONS

DRAWING: PARK SIGNAGE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  16B-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



450mm x 600mm  
HIGH INTENSITY



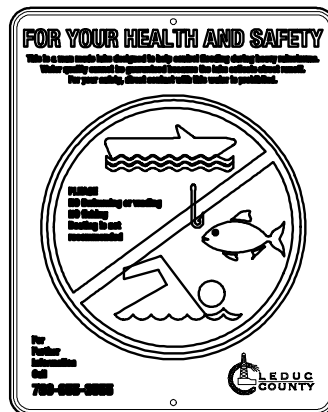
450mm x 600mm  
HIGH INTENSITY



450mm x 600mm  
HIGH INTENSITY



610mm x 610mm  
HIGH INTENSITY




610mm x 762mm  
HIGH INTENSITY

#### NOTES:

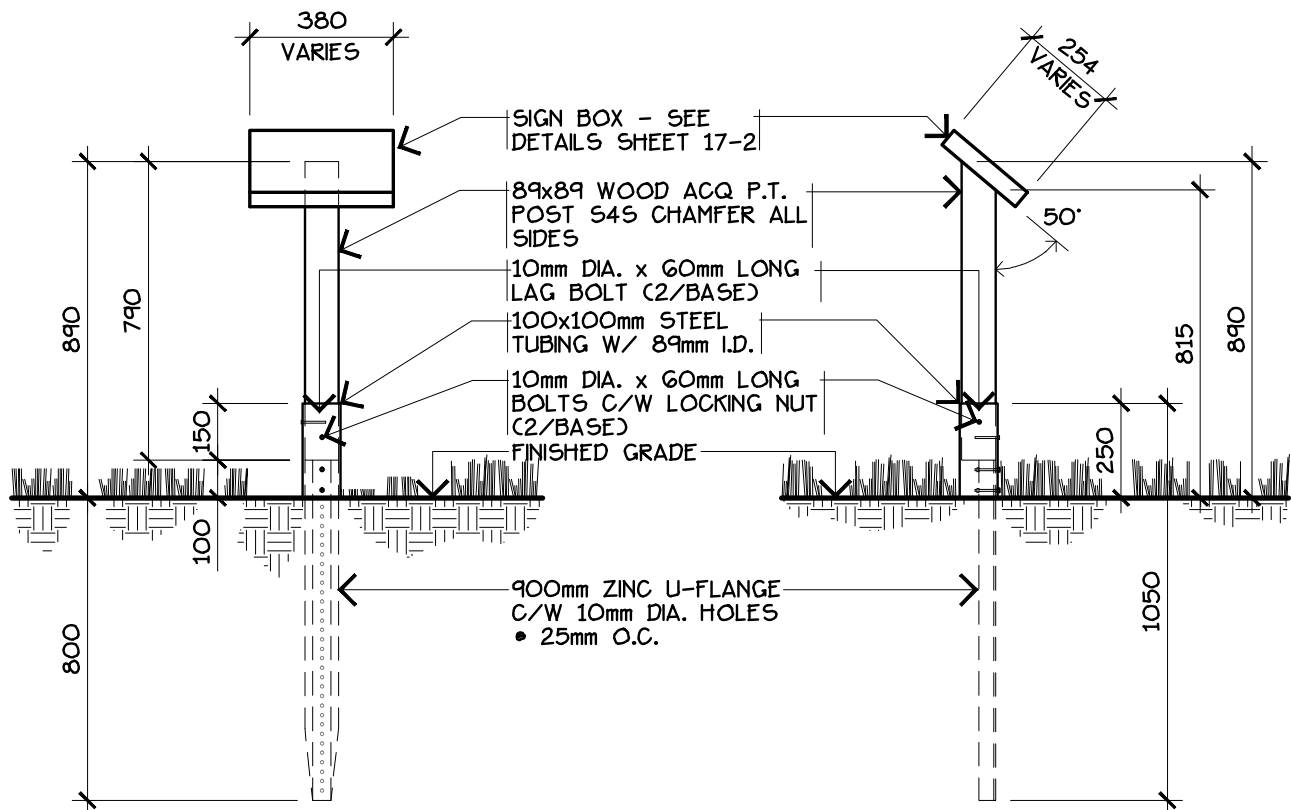
- SEE DETAIL 16A-1 AND 16A-2 FOR SIGN ATTACHMENT AND INSTALLATION SPECIFICATIONS.

## SIGN ELEVATIONS

DRAWING: PARK SIGNAGE

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>16B-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



ELEVATION - FRONT

ELEVATION - SIDE

**NOTES:**

- ALL WOOD TO BE ALLOWED TO WEATHER
- TOUCH UP STAIN AFTER CONSTRUCTION.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES  
W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.

DRAWING: **PARK INTERPRETIVE SIGNS**



REVISION NO:

DRAWN BY: **EARTHSCAPE CONSULTANTS**

CHECKED: **N.M.**

DATE: **2009 08**

SCALE: **1:20**

APPROVED: **D.O.**

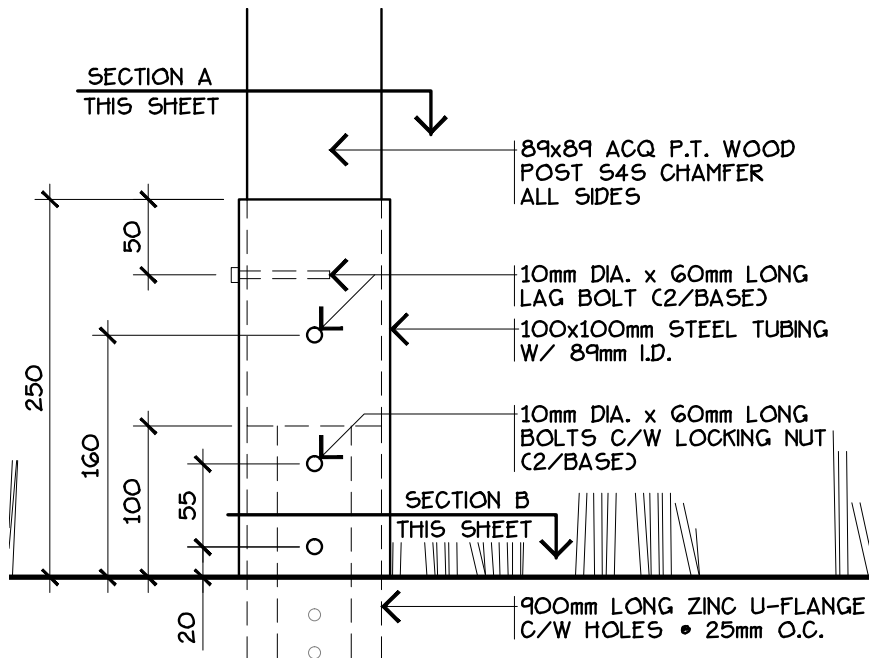
DRAWING NO.

**17-1**

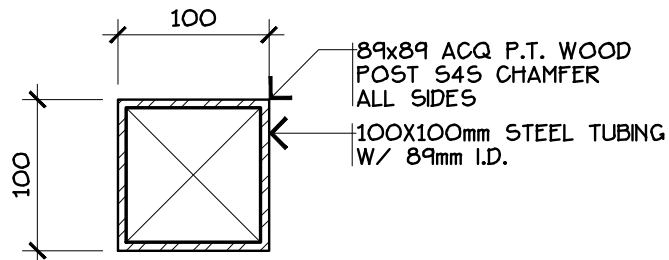
**LEDUC COUNTY PARKS AND RECREATION**

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

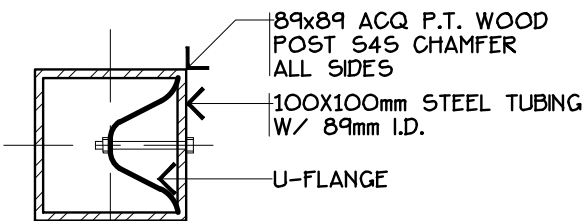




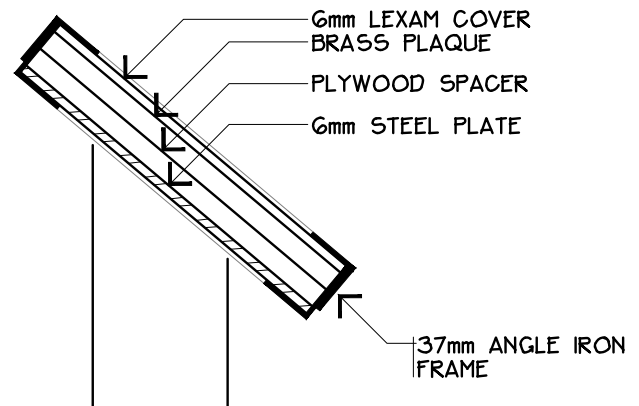
SIGN BASE FRONT VIEW



SECTION A



SECTION B



SIGN BOX DETAIL

DRAWING: PARK INTERPRETIVE SIGNS



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

DATE: 2009 08

SCALE: 1:5

APPROVED: D.O.

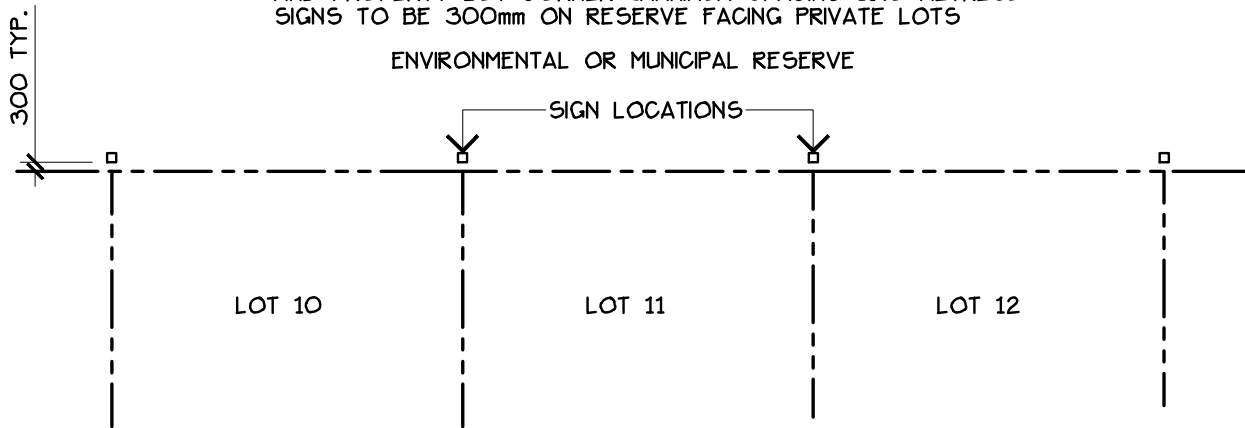
DRAWING NO.

17-2

LEDUC COUNTY PARKS AND RECREATION

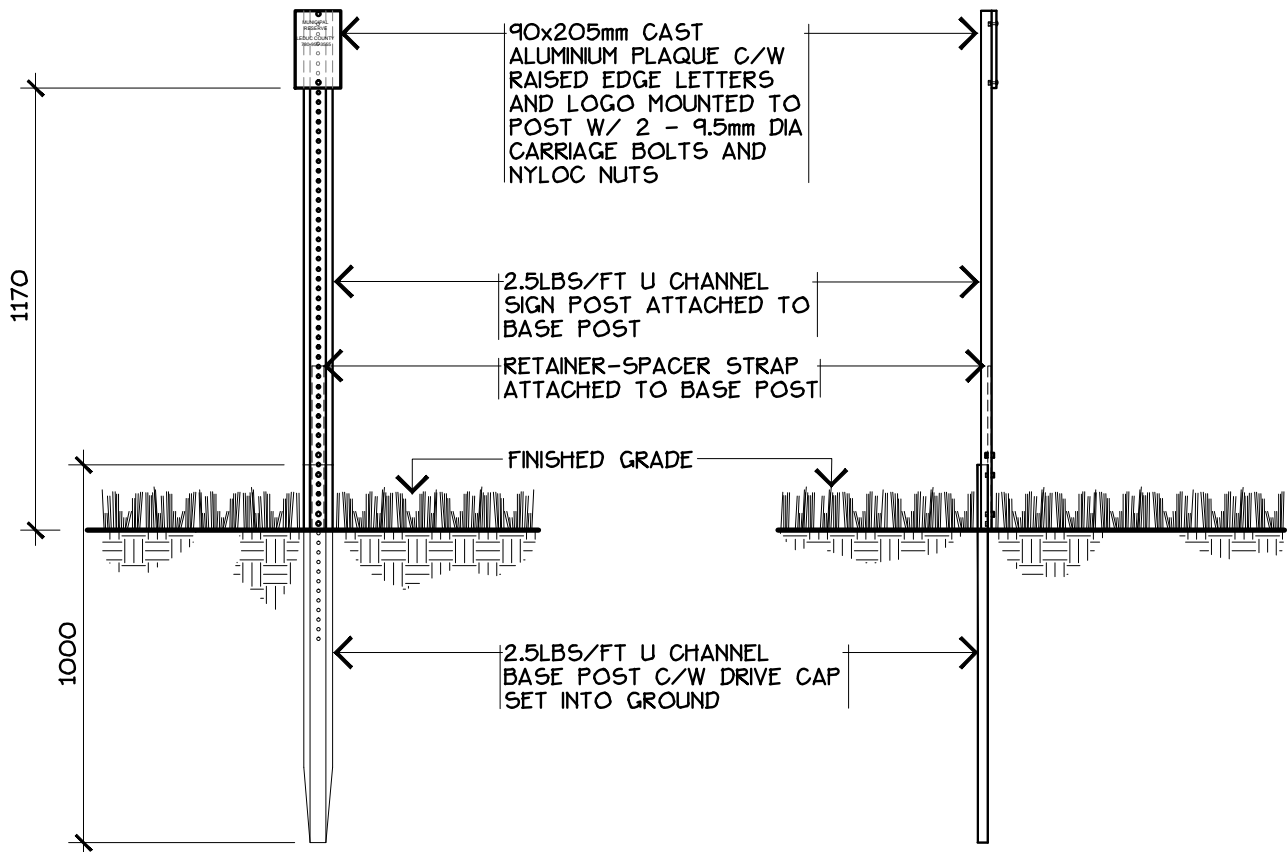
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SIGNS TO BE LOCATED AT EACH COMMON ENVIRONMENTAL RESERVE  
AND PROPERTY LOT CORNER (MAXIMUM SPACING 15.0 METRES)  
SIGNS TO BE 300mm ON RESERVE FACING PRIVATE LOTS



## PLAN VIEW

SCALE 1:250



## ELEVATION - FRONT

SCALE 1:20

## ELEVATION - SIDE


SCALE 1:20

### NOTES:

- SIGN POSTS TO BE 'EZE-ERECT' SIGN POSTS C/W BASE POST SIGN POST, RETAINER-SPACER STRAP AND ALL HARDWARE AS PER MANUFACTURER'S SPECIFICATIONS.
- 'EZE-ERECT' SIGN POSTS AVAILABLE FROM ALBERTA TRAFFIC SUPPLY LTD.
- ALL METAL COMPONENTS TO GALVANIZED.
- INSTALL 'EZE-ERECT' SIGN POSTS ACCORDING TO MANUFACTURER'S SPECIFICATIONS

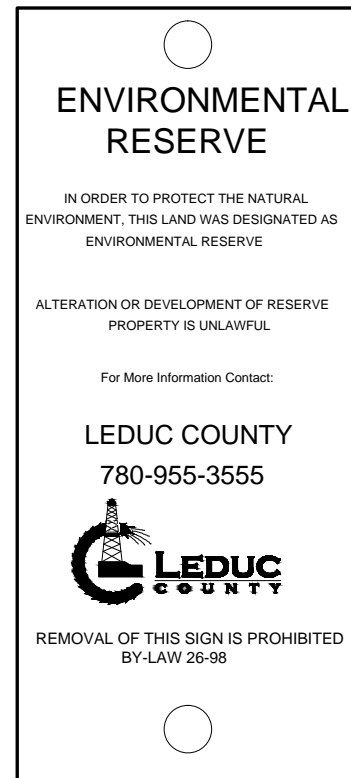
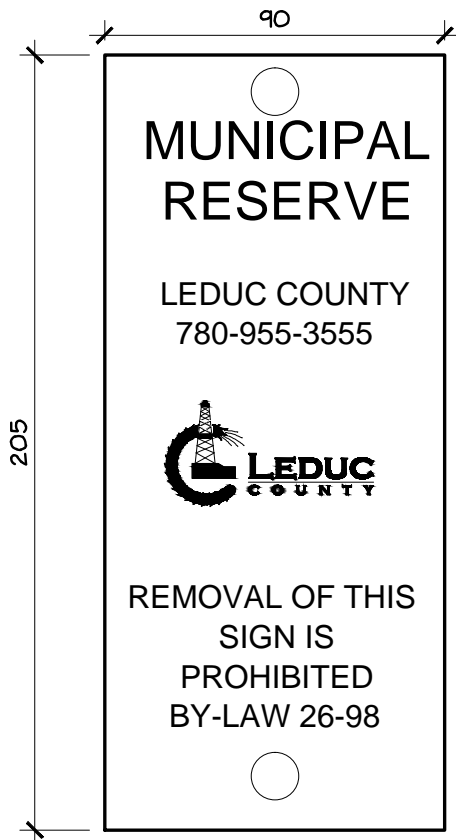
- SEE COUNTY CAMPSITE LAYOUT + SURFACING DETAILS FOR CAMPSITE DESIGNATION SIGN LOCATIONS

DRAWING: ER/MR AND CAMPSITE DESIGNATION SIGNS

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>18-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: AS NOTED	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



ELEVATIONS


DRAWING: ER/MR AND CAMPSITE DESIGNATION SIGNS

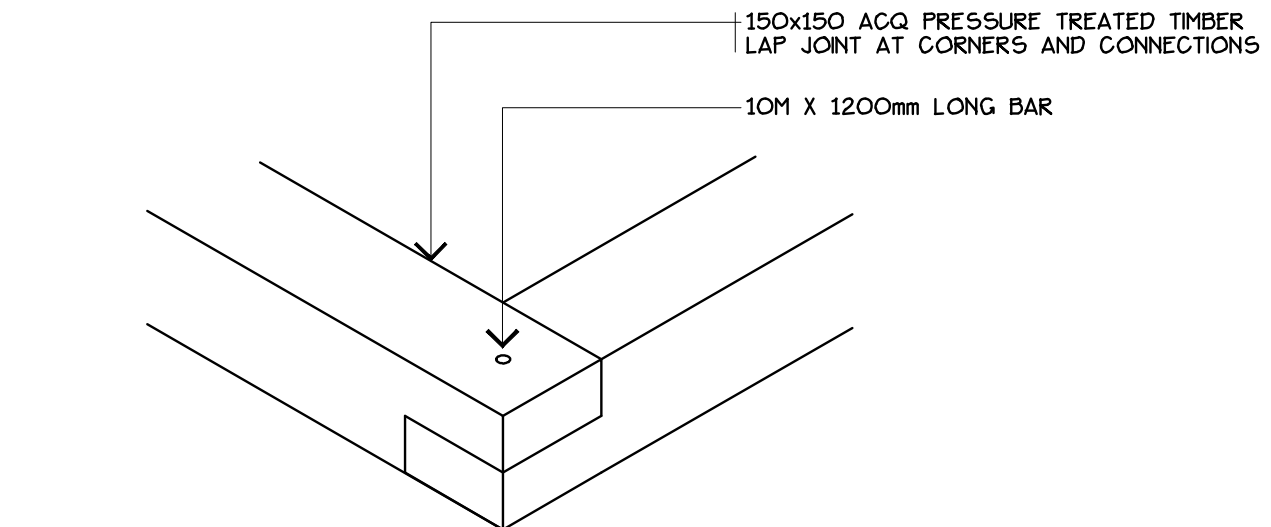
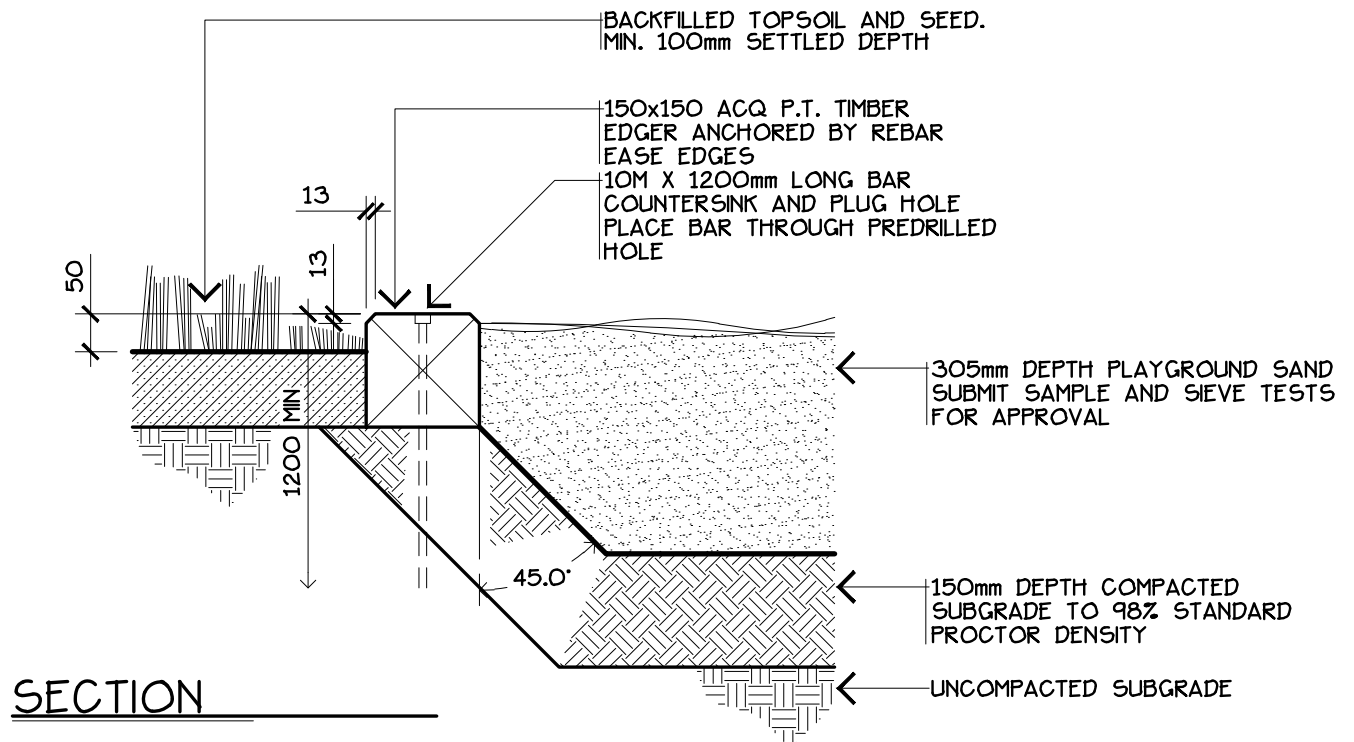
	REVISION NO:	DATE: 2009 08	DRAWING NO.  18-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:2	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	



## SIGN ELEVATION

DRAWING: PARK AREA ACTIVITY SIGNS


 <div>LEDUC COUNTY</div>	REVISION NO:	DATE: 2009 08	DRAWING NO.  19
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:5	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	



**NOTES:**

- FIELD TREAT ALL CUT ENDS, DRILLED HOLES AND EASED EDGES  
W/ 2 COATS CLEAR ACQ.

DRAWING: **PLAYGROUND EDGER**

	REVISION NO:	DATE: 2009 08	DRAWING NO.  19A
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

# Play Safe

This playground is designed  
for ages 18 months to 5 years  
Adult Supervision is Always Recommended

Pets are not permitted on the equipment  
or in the sand area.

This Playspace is checked  
regularly by Parks Staff.  
Should you see damage or  
vandalism please call  
780-955-3555

300mm x 350mm  
BLACK ON WHITE - HI SIGN GRADE  
ALUMINUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS

# Play Safe

This playground is designed  
for ages 5 years to 12 years  
Adult Supervision is Always Recommended

Pets are not permitted on the equipment  
or in the sand area.

This Playspace is checked  
regularly by Parks Staff.  
Should you see damage or  
vandalism please call  
780-955-3555

300mm x 350mm  
BLACK ON WHITE - HI SIGN GRADE  
ALUMINUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS

# Play Safe

This playground is designed  
for ages 18 months to 12 years  
Adult Supervision is Always Recommended

Pets are not permitted on the equipment  
or in the sand area.

This Playspace is checked  
regularly by Parks Staff.  
Should you see damage or  
vandalism please call  
780-955-3555


300mm x 350mm  
BLACK ON WHITE - HI SIGN GRADE  
ALUMINUM - 2mm/.081  
RECT - 9.5mm CENTERED  
CROPPED CORNERS

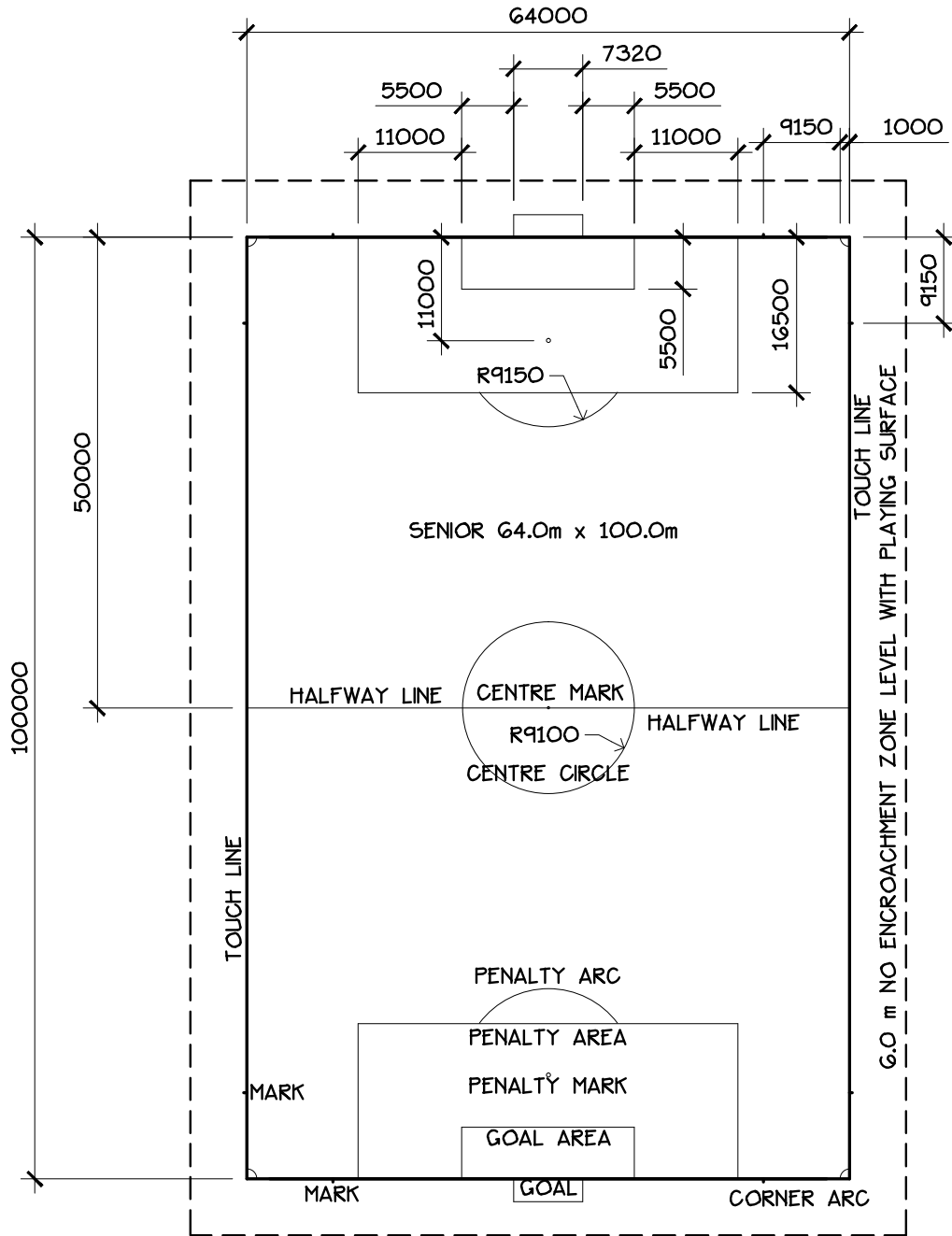
## NOTES:

- PLAYGROUND SIGNS TO BE LOCATED AT ALL MAJOR ENTRANCES TO THE PLAYGROUND. LOCATIONS TO BE APPROVED BY LEDUC COUNTY.
- SEE PARK SIGNAGE DETAILS 16A-1 AND 16A-2 FOR SIGN MOUNTING DETAILS
- WHERE POSSIBLE THE SIGNS ARE TO BE MOUNTED TO THE PLAY STRUCTURE IN SAFE AND VISIBLE LOCATIONS. LOCATIONS TO BE APPROVED BY LEDUC COUNTY.

- WHERE POSSIBLE THE SIGNS CAN BE ENGRAVED INTO A PANEL ON THE PLAY STRUCTURE IN SAFE AND VISIBLE LOCATIONS. LOCATIONS TO BE APPROVED BY LEDUC COUNTY

DRAWING: PLAYGROUND SIGNAGE

	REVISION NO:	DATE: 2009 08	DRAWING NO.  19B
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:5	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	




#### NOTES:

- GRADE AT 1% FROM HALFWAY LINES TO GOALS OR FROM CENTRELINE OF GOALS TO TOUCHLINE
- ALL SOILMIX IN NO ENCROACHMENT ZONE TO BE 3 PARTS TOPSOIL, 1 PART PEAT/COMPOST AND 1 PART MEDIUM SAND
- INSTALL SPORT FIELD REFERENCE LAYOUT PINS AT TIME OF CONSTRUCTION USING 500mm LENGTHS OF 15M REBAR AT MINIMUM DEPTH OF 50mm BELOW GRADE.
- PREFERRED ORIENTATION OF FIELDS IS A NORTH TO SOUTH DIRECTION. SITE CONDITIONS MAY DICTATE AN ALTERNATIVE.
- SEED IN ACCORDANCE WITH SEED AND SOD DETAIL 13B WITH A PARK SEED MIX.
- SOILMIX DEPTH - 100mm SETTLED DEPTH.

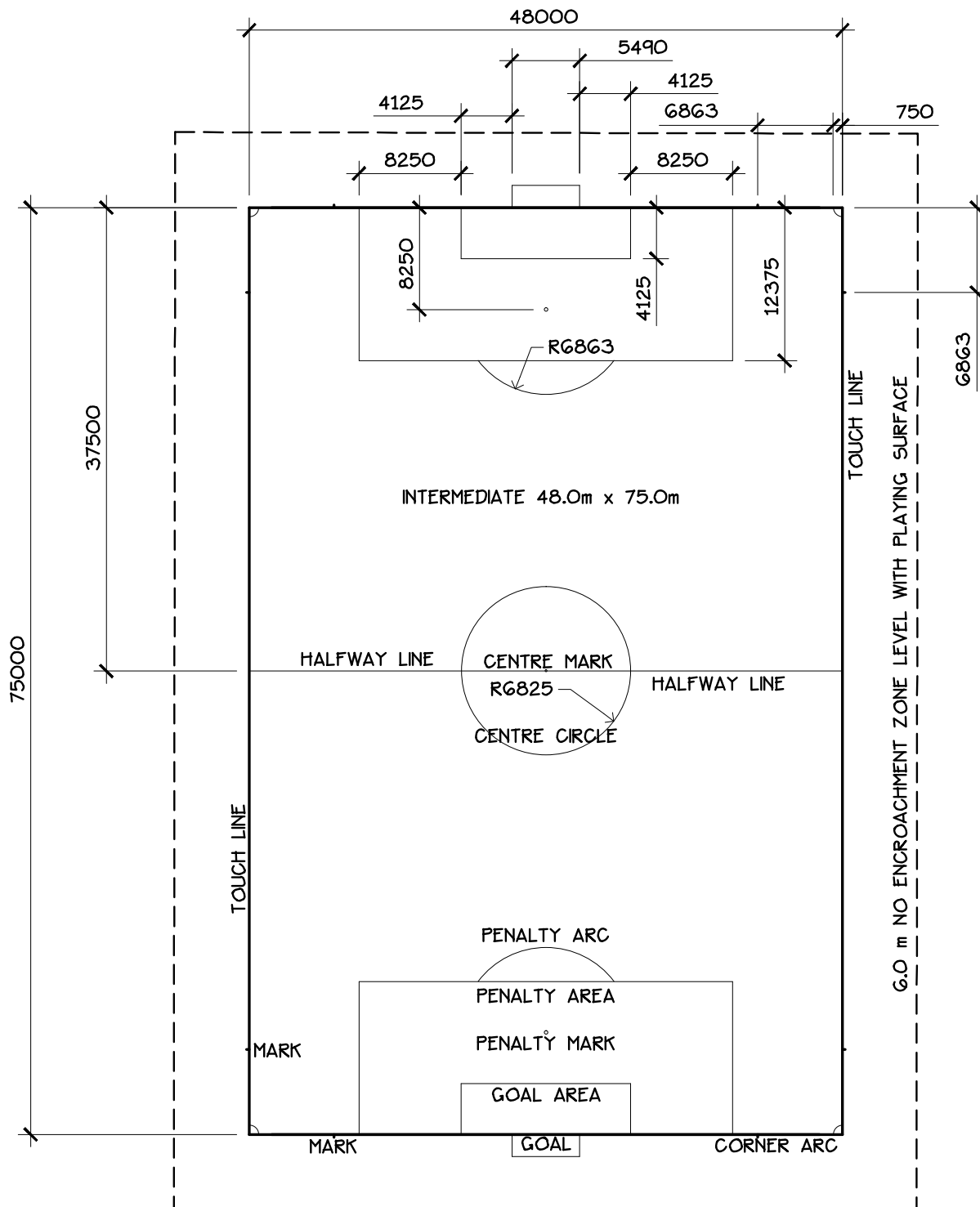
## PLAN VIEW

DRAWING: SENIOR SOCCER FIELD

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>20A</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:750	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- GRADE AT 1% FROM HALFWAY LINES TO GOALS OR FROM CENTRELINE OF GOALS TO TOUCHLINE
- ALL SOILMIX IN NO ENCROACHMENT ZONE TO BE 3 PARTS TOPSOIL, 1 PART PEAT/COMPOST AND 1 PART MEDIUM SAND
- INSTALL SPORT FIELD REFERENCE LAYOUT PINS AT TIME OF CONSTRUCTION USING 500mm LENGTHS OF 15M REBAR AT MINIMUM DEPTH OF 50mm BELOW GRADE.
- PREFERRED ORIENTATION OF FIELDS IS A NORTH TO SOUTH DIRECTION. SITE CONDITIONS MAY DICTATE AN ALTERNATIVE.
- SEED IN ACCORDANCE WITH SEED AND SOD DETAIL 13B WITH A PARK SEED MIX.
- SOILMIX DEPTH - 100mm SETTLED DEPTH.

## PLAN VIEW

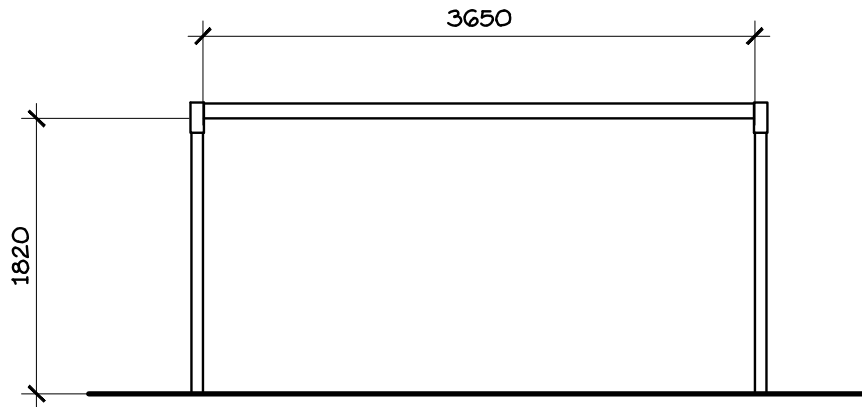
DRAWING: INTERMEDIATE SOCCER FIELD

	REVISION NO:	DATE: 2009 08	DRAWING NO.  20B
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:500	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

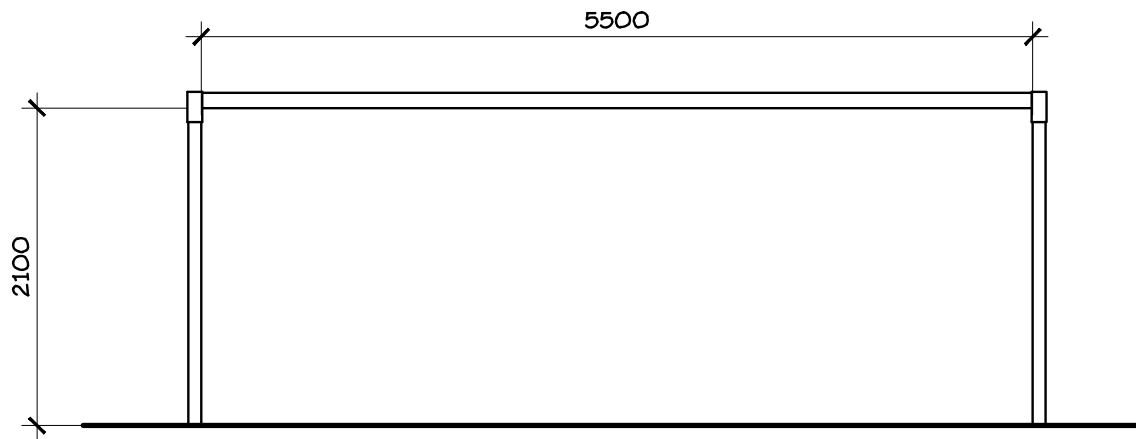
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



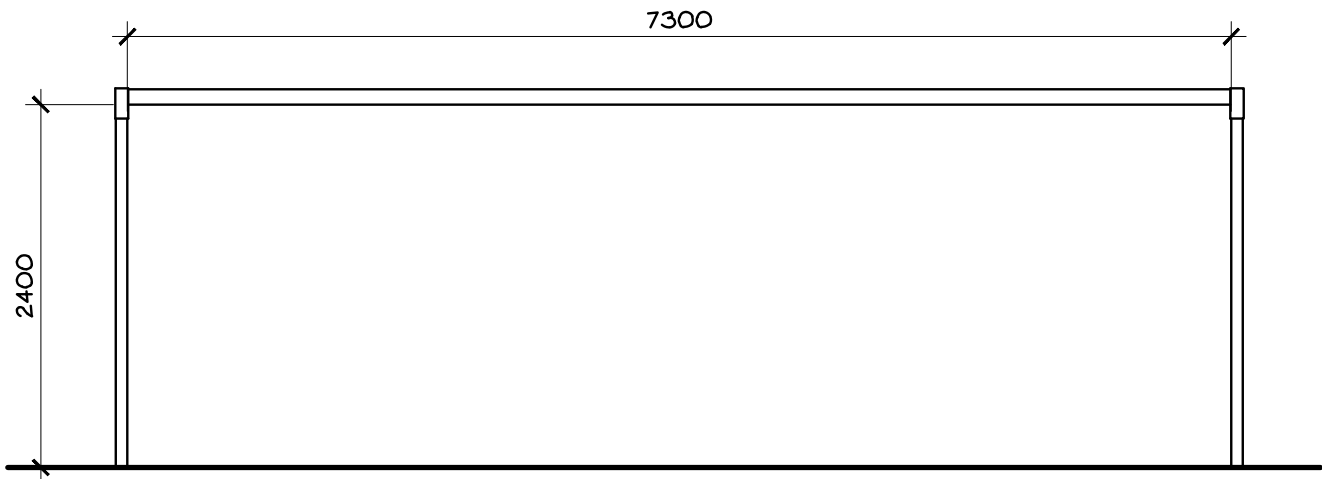




JUNIOR GOAL POST



INTERMEDIATE GOAL POST



**NOTES:**

•SEE SECTIONS SHEET 20E AND 20F

SENIOR GOAL POST

DRAWING: GOAL POSTS



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

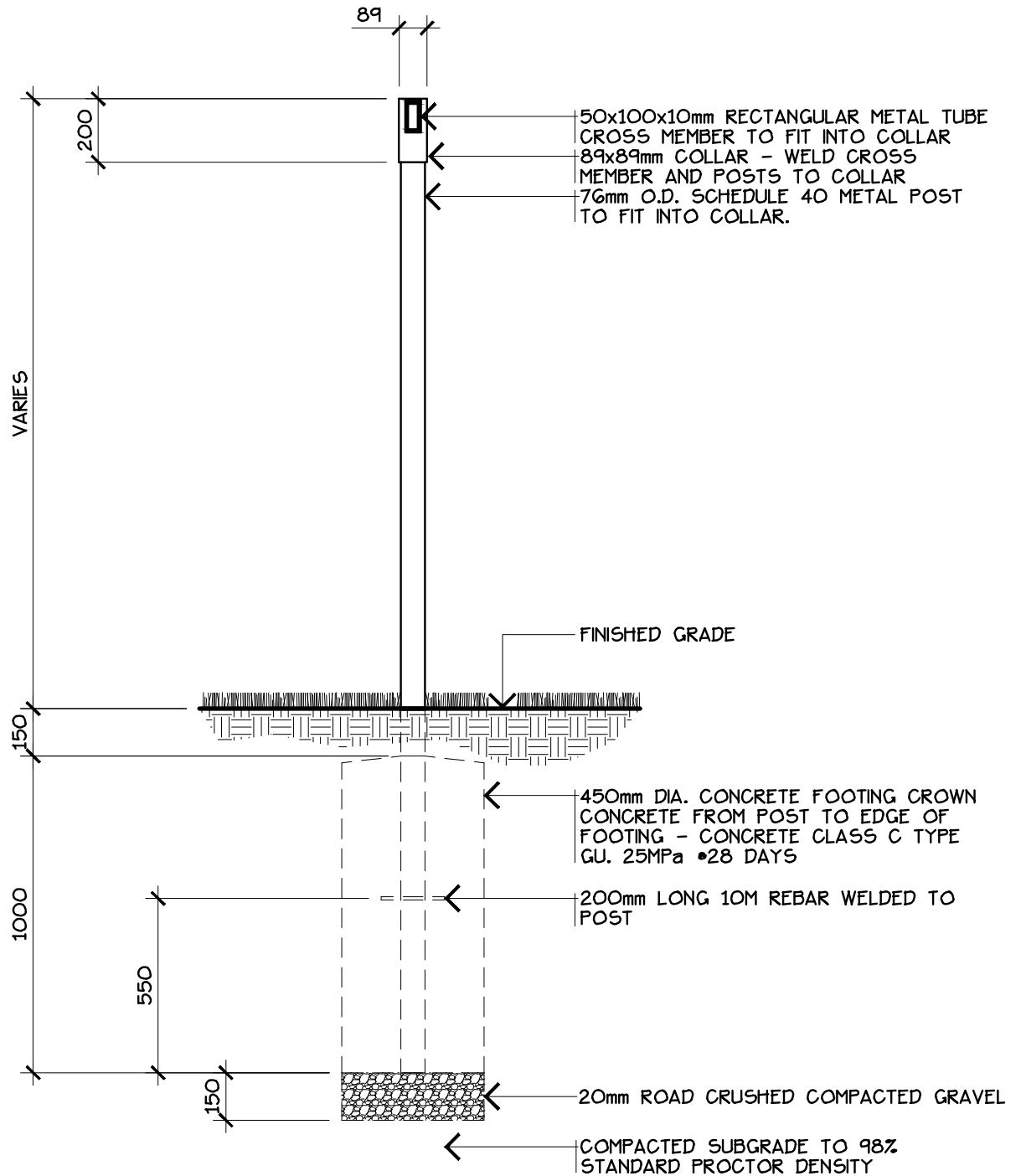
DATE: 2009 08

SCALE: 1:50

APPROVED: D.O.

DRAWING NO.

**20D**




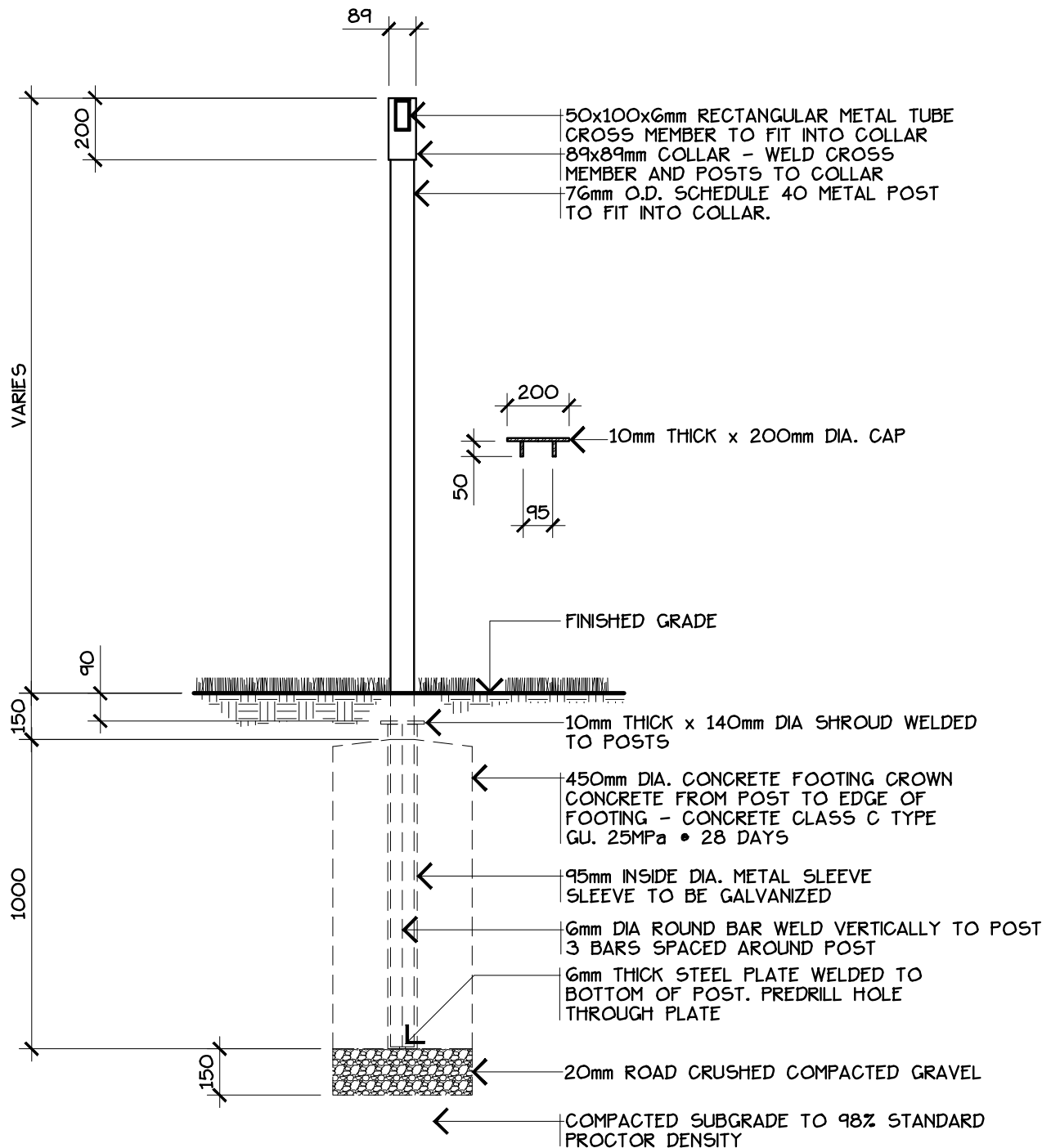
#### NOTES:

- POST AND CROSS MEMBER TO BE POWDER COATED WHITE
- ALL CONNECTIONS TO BE WELDED AND GROUND SMOOTH

## SECTION

DRAWING: GOAL POST - PERMANENT

	REVISION NO:	DATE: 2009 08	DRAWING NO.  20E
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	




#### NOTES:

- POST AND CROSS MEMBER TO BE POWDER COATED WHITE
- ALL CONNECTIONS TO BE WELDED AND GROUND SMOOTH

## SECTION

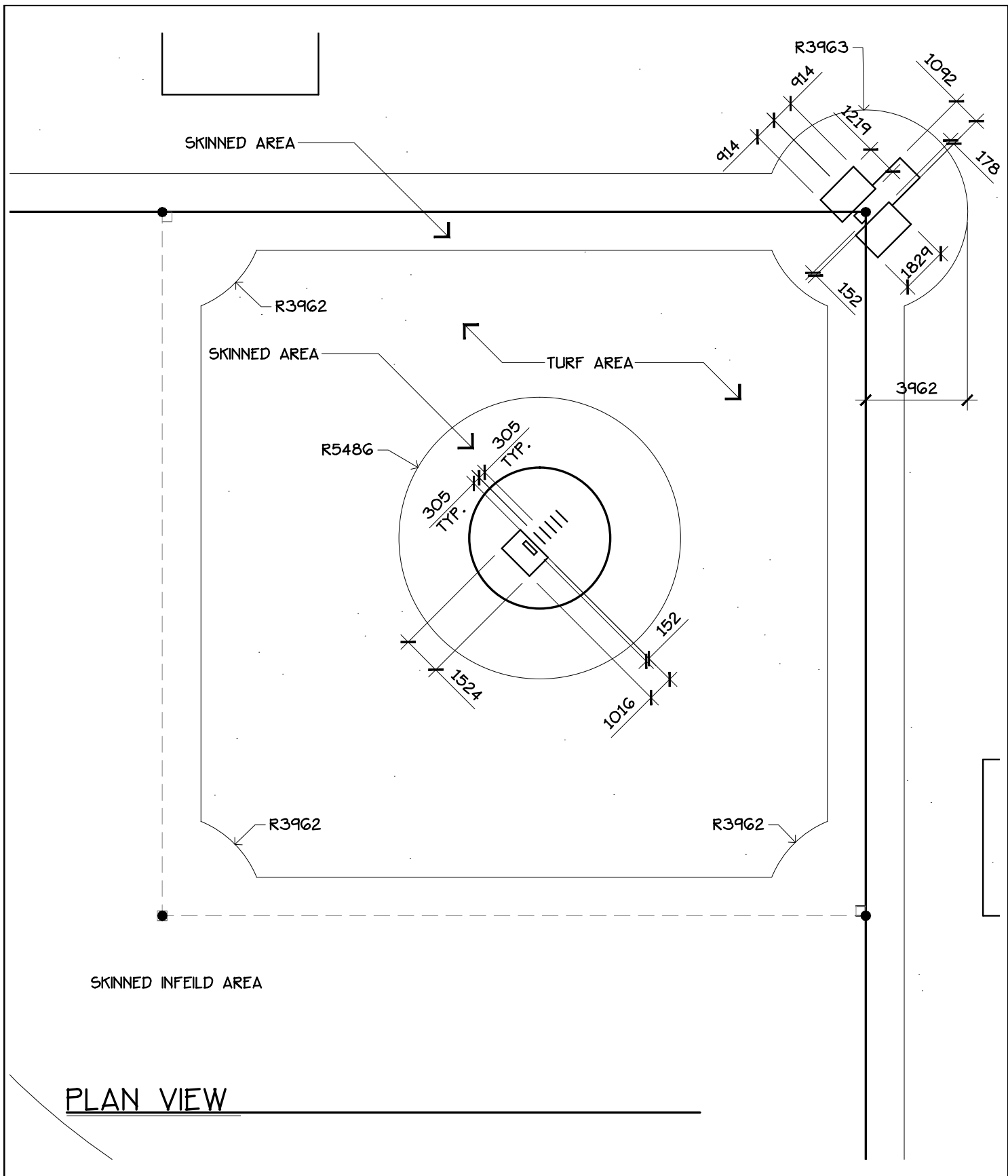
DRAWING: GOAL POST W/ SLEEVE


 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>20F</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

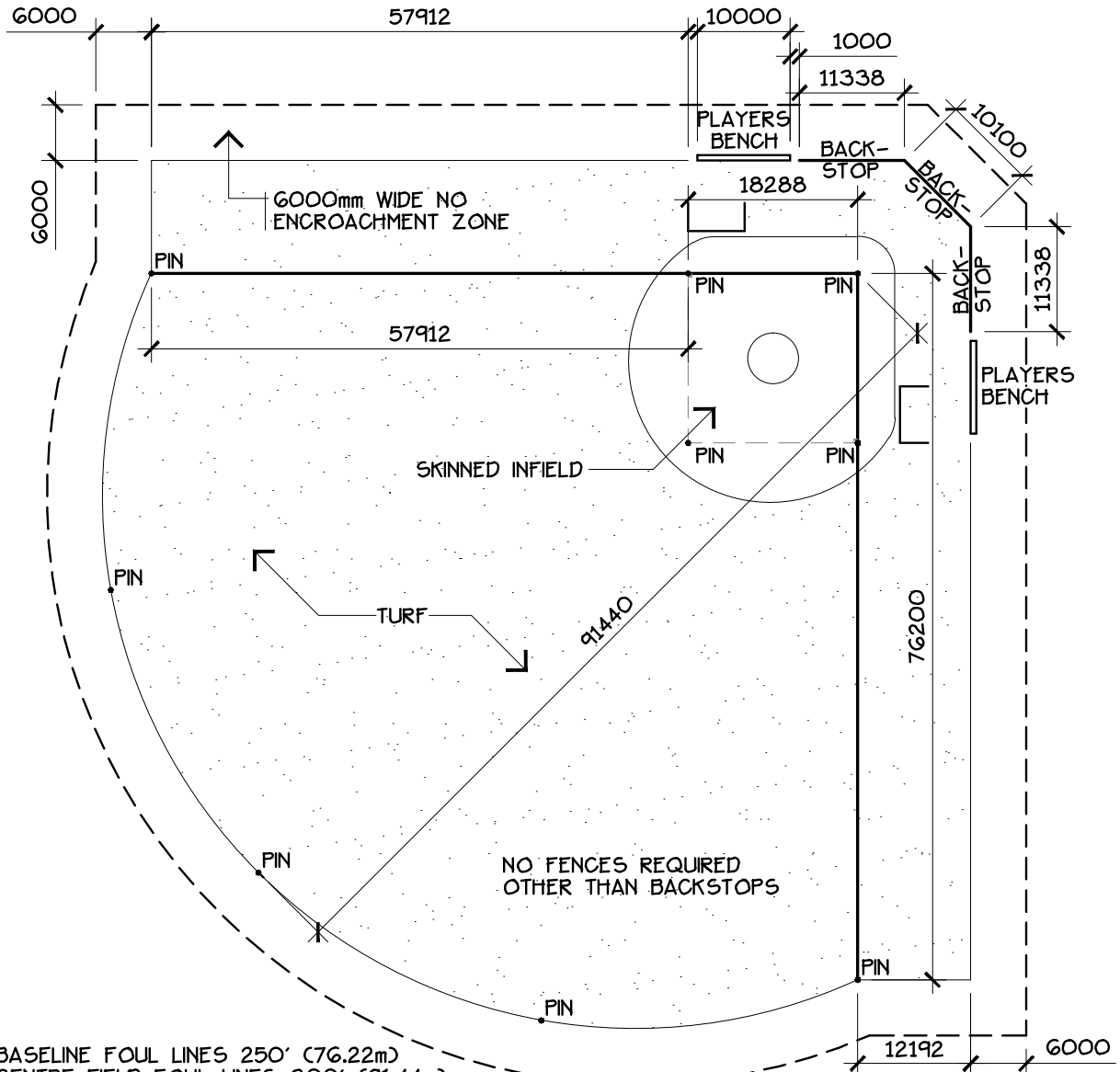
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3






DRAWING: SENIOR BASEBALL DIAMOND				
 LEDUC COUNTY	REVISION NO:		DATE: 2009 08	DRAWING NO.  21A-2
	DRAWN BY: EARTHSCAPE CONSULTANTS		SCALE: 1:200	
	CHECKED: N.M.		APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION			SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	



- JUNIOR BASELINE FOUL LINES 250' (76.22m)
- JUNIOR CENTRE FIELD FOUL LINES 300' (91.44m)
- JUNIOR BASELINE LINES 60' (18.288m)
- JUNIOR PITCHERS PLATE FRONT 44' (13.4112m)
- JUNIOR PITCHERS PLATE CIRCLE CENTRE POINT IN FRONT OF PLATE 1.5' (0.457m)
- JUNIOR PITCHERS PLATE CIRCLE RADIUS 9' (2.743m)
- JUNIOR SKINNED INFELD RADIUS FROM FRONT OF PITCHERS PLATE 50' (15.24m)
- JUNIOR BACKSTOP SETBACK 40' (12.192m)
- JUNIOR PLAYERS BENCH 32.8 (10.0m)
- LOCATION PINS TO BE BURIED 75mm BELOW FINISHED SURFACE.
- GRADE AT 1% FROM PITCHERS MOUND
- 150mm COMPACTED DEPTH OF 5mm MINUS CRUSHED SHALE OR LIMESTONE
- SUBMIT SAMPLE AND SIEVE TEST RESULTS FOR APPROVAL
- ALL SOILMIX FOR TURF AREAS TO BE 3 PARTS TOPSOIL, 1 PART PEAT/COMPOST AND 1 PART MEDIUM SAND
- SOILMIX DEPTH - 100mm SETTLED DEPTH.

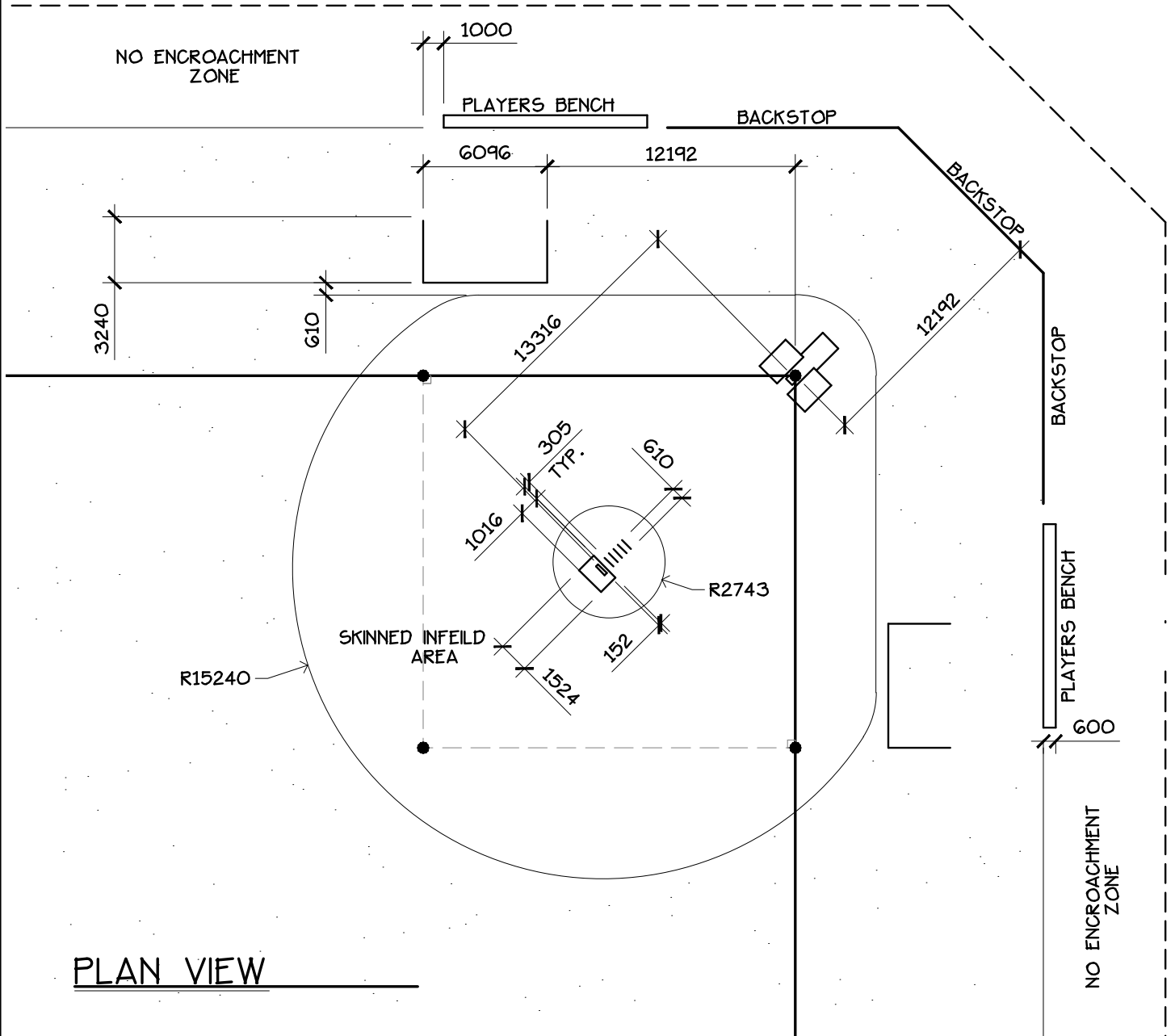
## PLAN VIEW

DRAWING: LITTLE LEAGUE BASEBALL DIAMOND


	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>21B-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:750	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

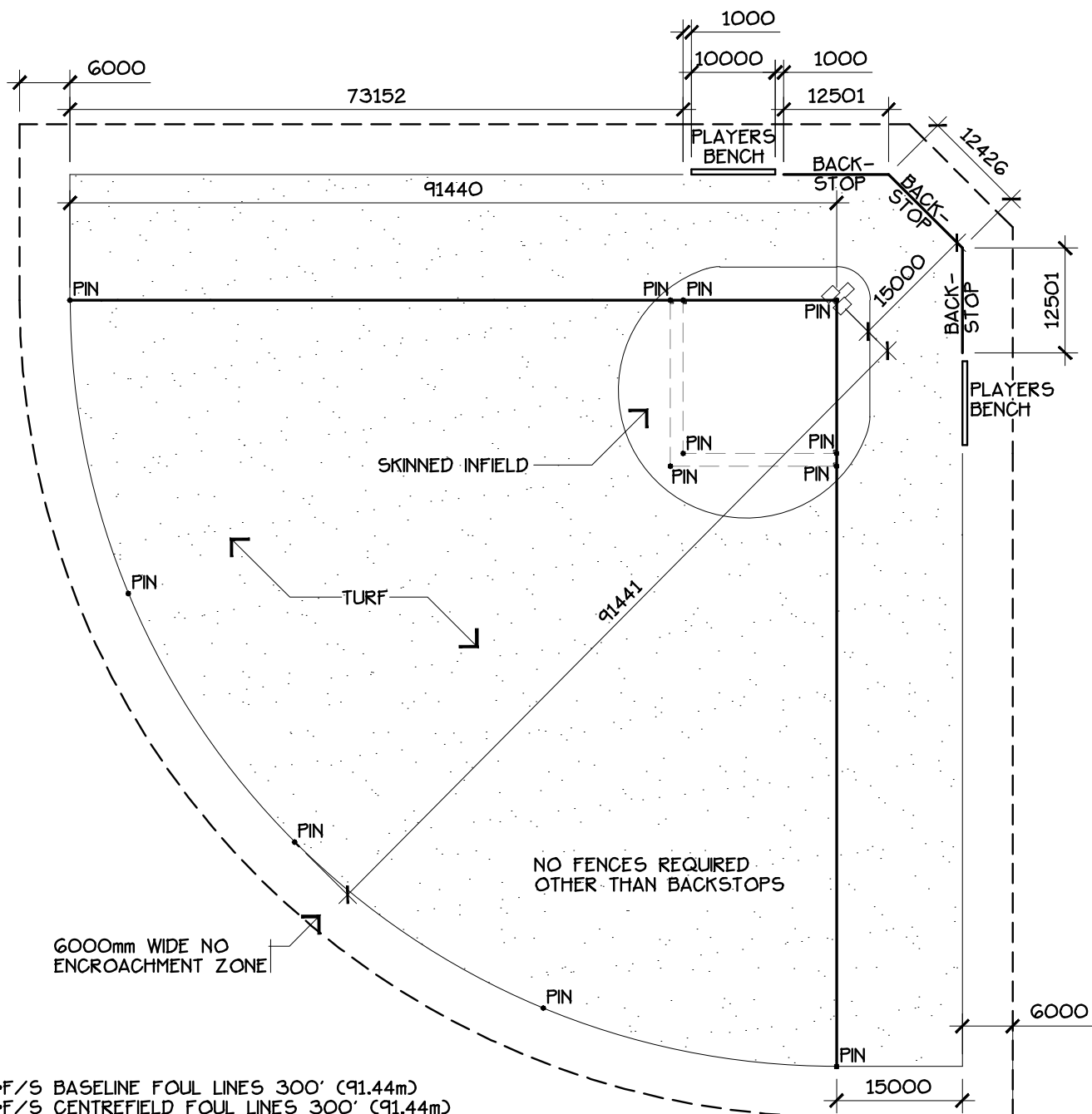
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



DRAWING: LITTLE LEAGUE BASEBALL DIAMOND

	REVISION NO:	DATE: 2009 08	DRAWING NO.  21B-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:300	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			






- F/S BASELINE FOUL LINES 300' (91.44m)
- F/S CENTREFIELD FOUL LINES 300' (91.44m)
- F/S BASELINES 65' (19.812m) + 60' (18.288m)
- F/S PITCHERS PLATE FRONT 50' (15.24m) + 46' (14.021m) + 40' (12.192m) + 35' (10.668m)
- F/S SKINNED INFELD RADIUS FROM 50' PITCHERS PLATE 50' (15.24m)
- F/S BACKSTOP SETBACK 49.21' (15.0m)
- F/S PLAYERS BENCH 32.8' (10.0m)
- LOCATION PINS TO BE BURIED 75mm BELOW FINISHED SURFACE.
- GRADE AT 1% FROM PITCHERS MOUND
- 150mm COMPACTED DEPTH OF 5mm MINUS CRUSHED SHALE OR LIMESTONE
- SUBMIT SAMPLE AND SIEVE TEST RESULTS FOR APPROVAL
- ALL SOILMIX FOR TURF AREAS TO BE 3 PARTS TOPSOIL, 1 PART PEAT/COMPOST AND 1 PART MEDIUM SAND
- SOILMIX DEPTH - 100mm SETTLED DEPTH.

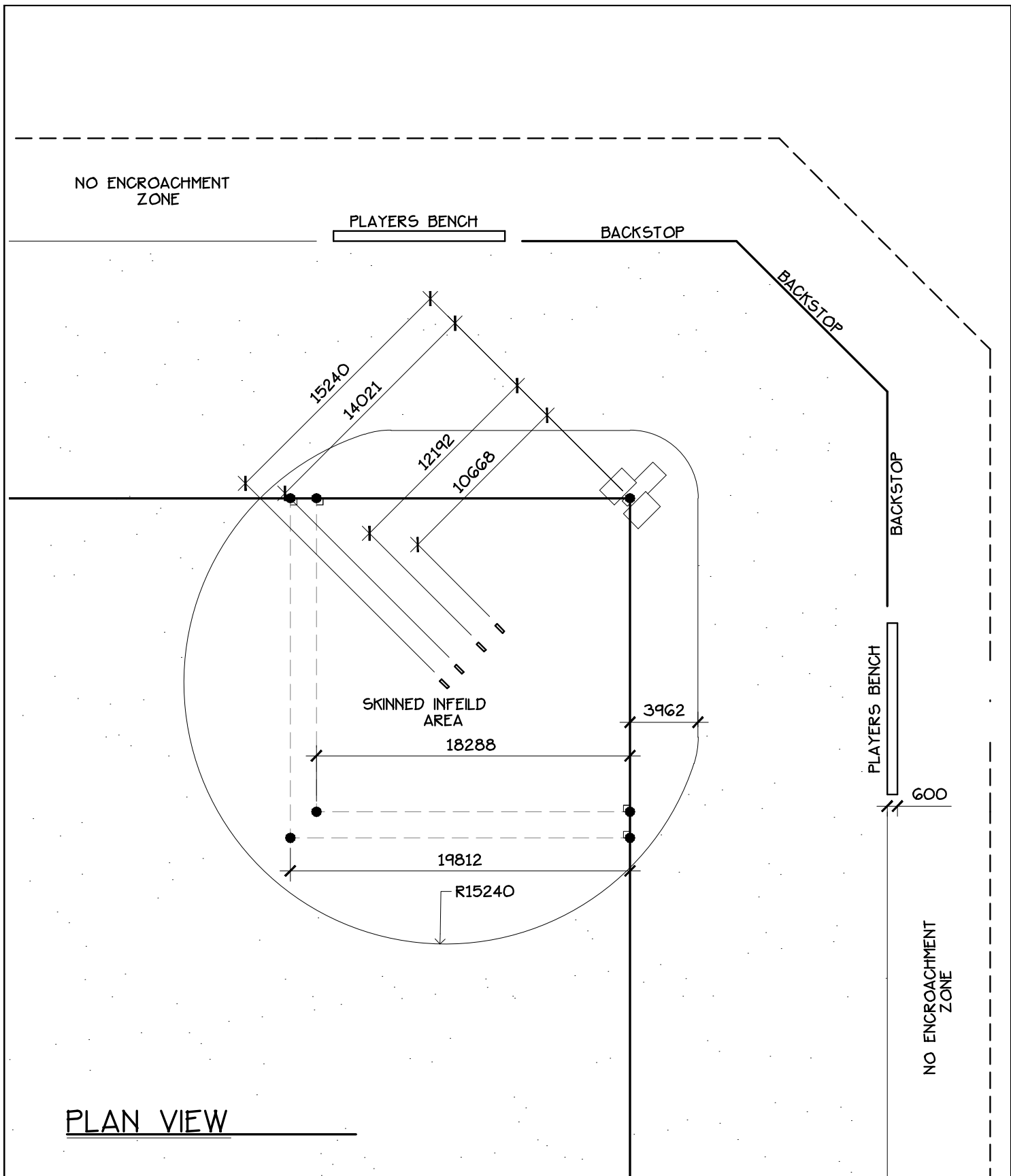
## PLAN VIEW

DRAWING: FASTBALL/SLOPITCH BALL DIAMOND


	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>21C-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:750	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

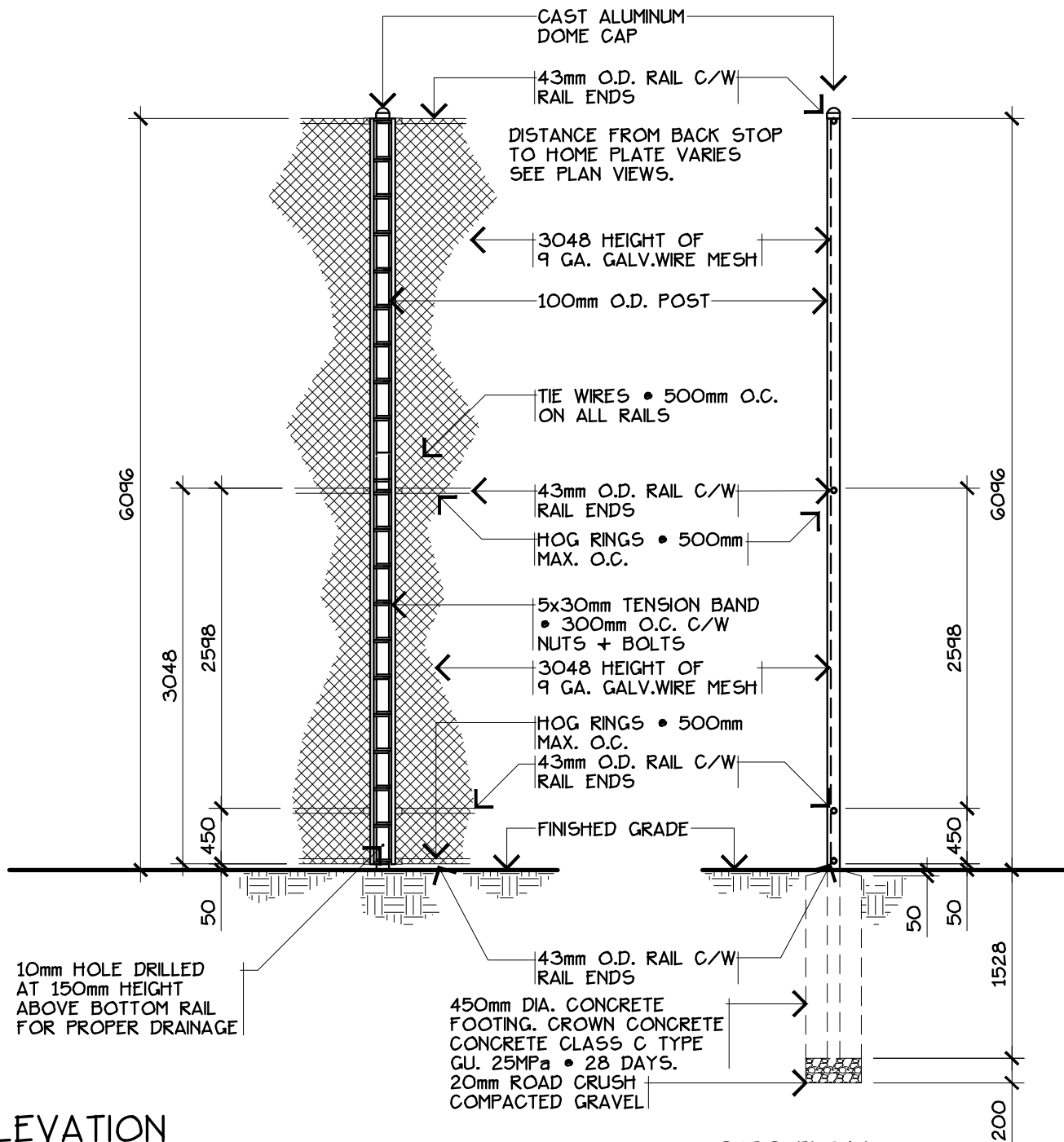
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



DRAWING: FASTBALL/SLOPITCH BALL DIAMOND

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>21C-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:300	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			




**ELEVATION**

**SECTION**

**NOTES:**

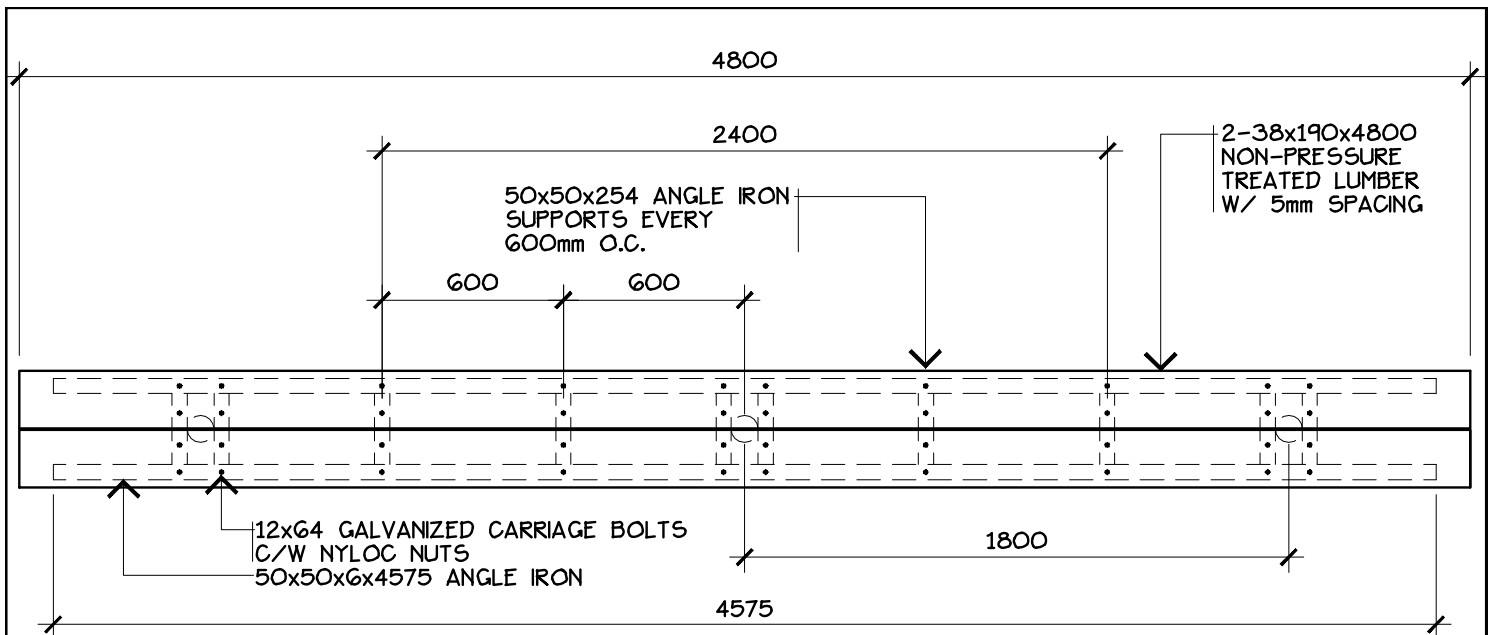
- POSTS: 100mm O.D. SCHEDULE 40 ZINC COATED GRADE 1 MIN. 550g/m<sup>2</sup>
- RAILS: 43mm O.D. SCHEDULE 40 ZINC COATED GRADE 1 MIN. 550g/m<sup>2</sup>
- FABRIC: TYPE 1 MEDIUM STYLE 50mm 9 GAUGE CLASS A ZINC-COATED GRADE 1 MIN. 490g/m<sup>2</sup>. TWISTED TOP, KNUCKLE BOTTOM

DRAWING: BACKSTOP DETAILS

	REVISION NO:	DATE: 2009 08	DRAWING NO.  21D
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

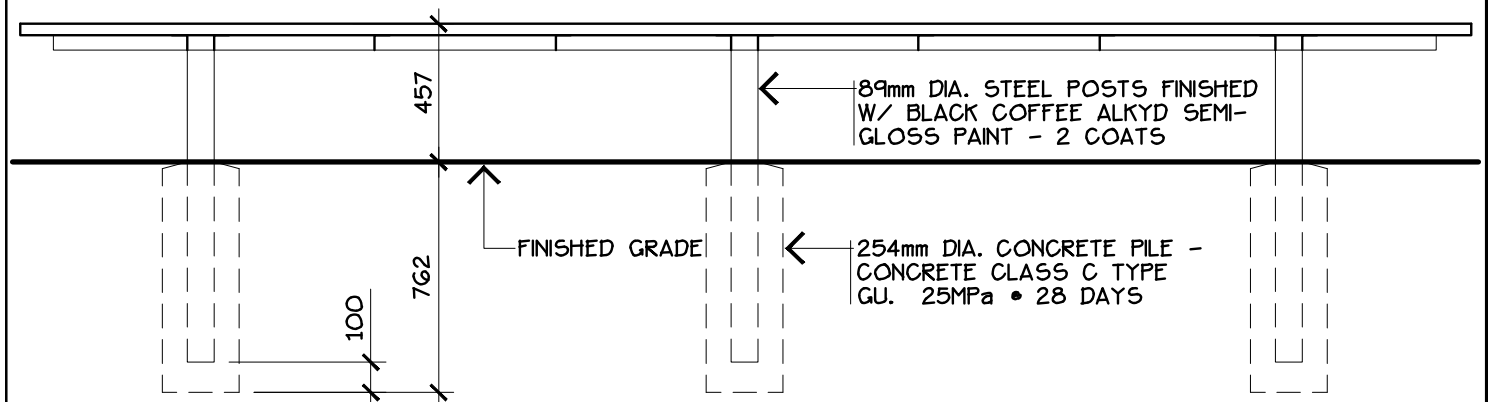
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



ANGLE IRON AND ANGLE IRON SUPPORTS TO BE FINISHED W/ BLACK ALKYD SEMI-GLOSS PAINT

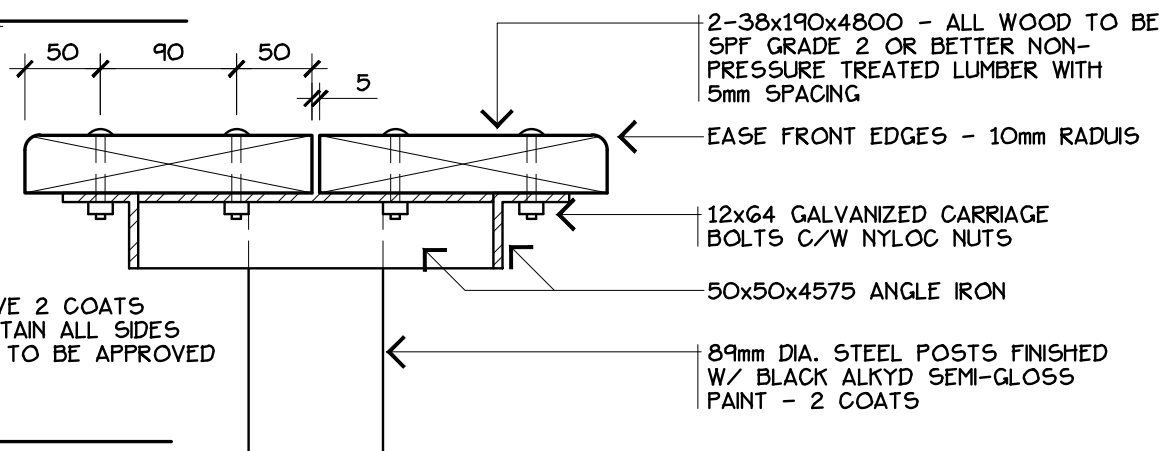
## PLAN VIEW

SCALE 1:25



## ELEVATION

SCALE 1:25




ALL WOOD TO RECEIVE 2 COATS  
SEMI-TRANSPARENT STAIN ALL SIDES  
OF WOOD. COLOUR TO BE APPROVED  
BY LEDUC COUNTY

## SECTION

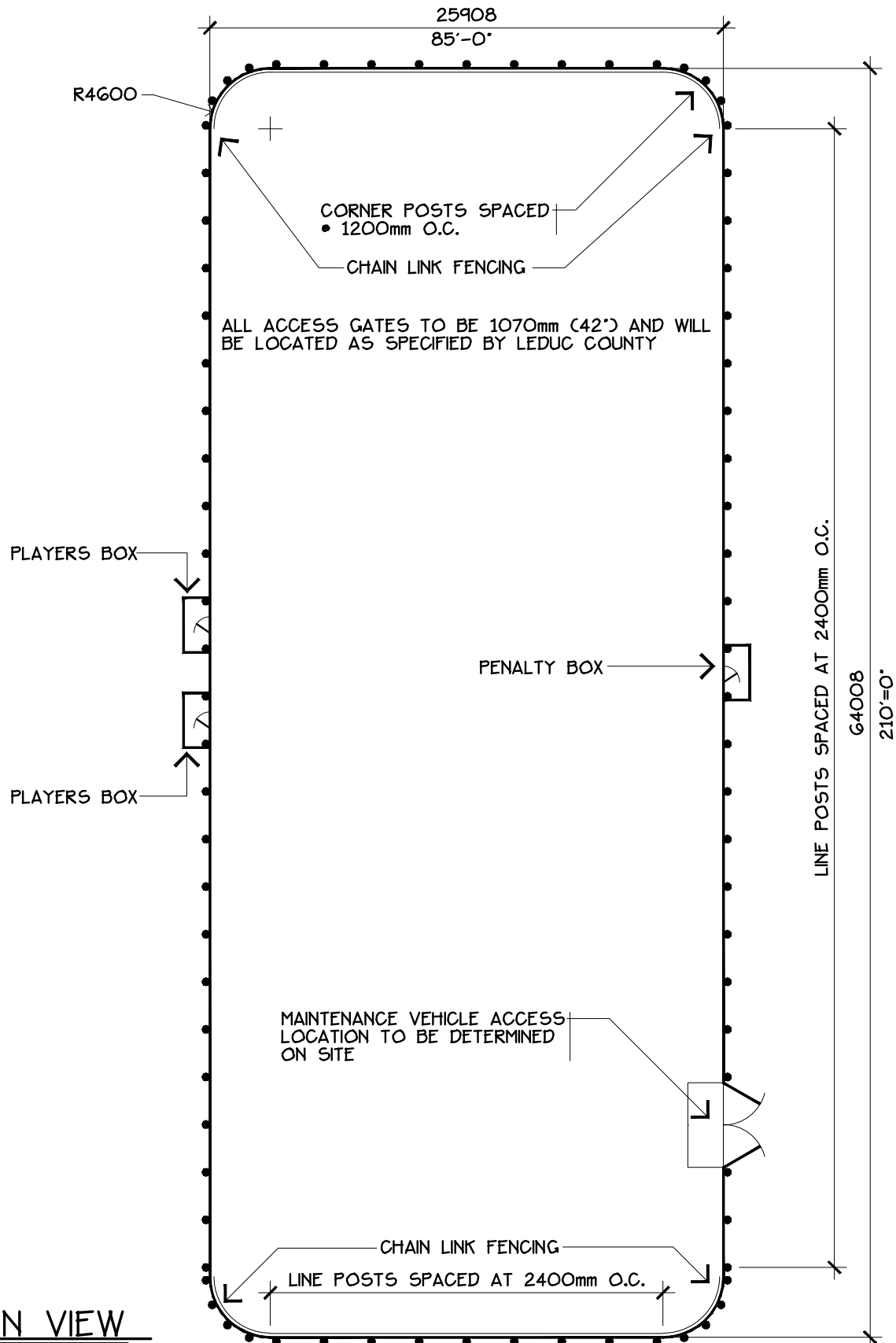
SCALE 1:5

DRAWING: PLAYER'S BENCH

	REVISION NO:	DATE: 2009 08	DRAWING NO.  21E
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: AS NOTED	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

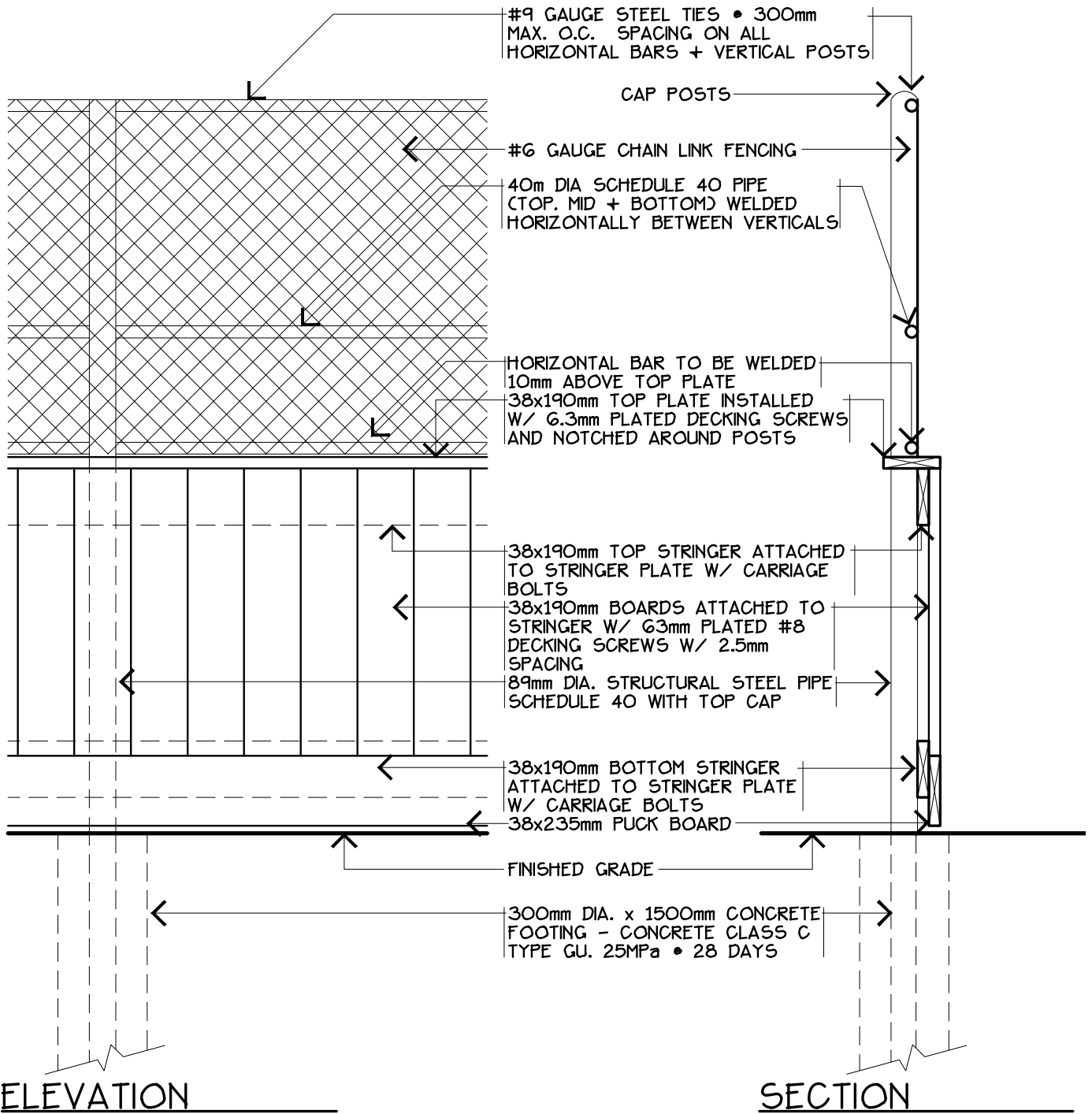
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## PLAN VIEW

DRAWING: OUTDOOR RINK


 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>22-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:300	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			



#### NOTES:

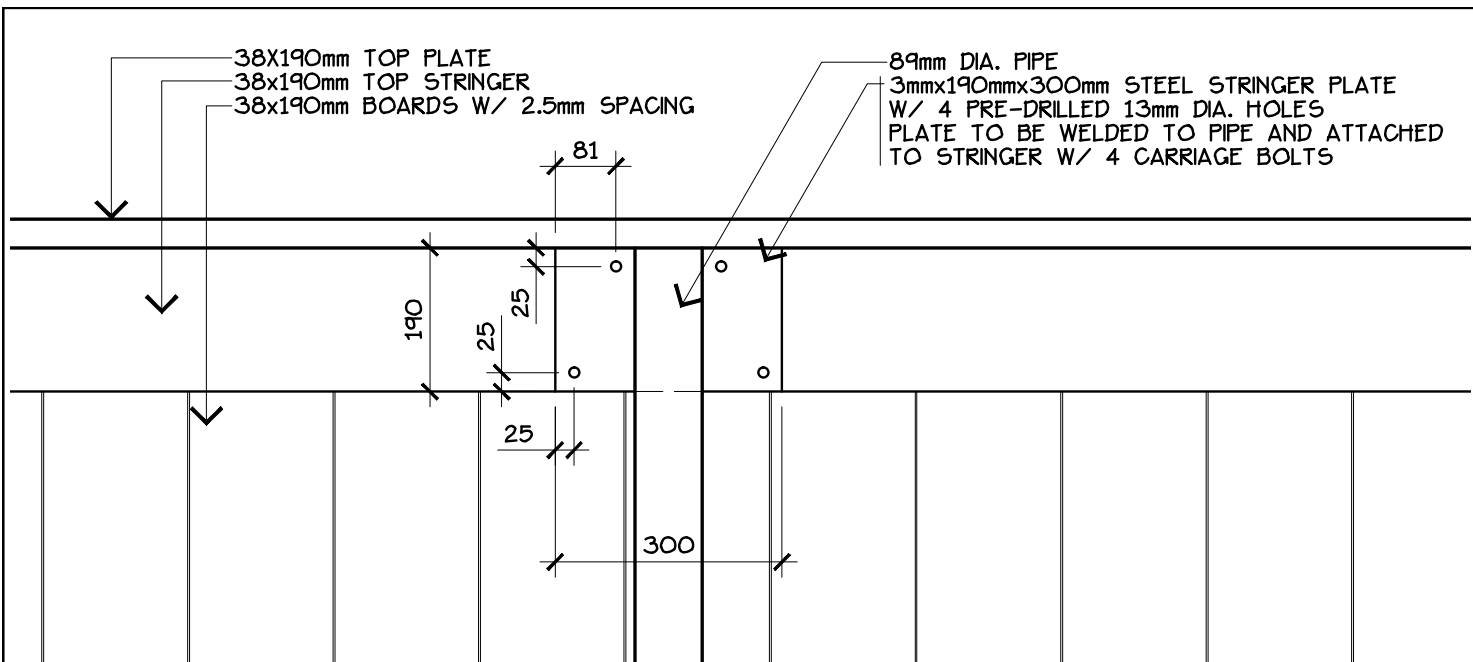
- ALL BOARDS TO BE PAINTED W/ BEHR PINTO WHITE OR APPROVED EQUAL
- ALL WELDS TO BE PAINTED W/ ZINC OXIDE. ALL METAL SURFACES TO BE PAINTED W/ TWO COATS OF TREMCLAD FLAT WHITE FOR METAL
- TENSION BANDS TO BE INSTALLED ON END POSTS AT 500mm O.C. SPACING
- STEEL WIRE TIES ARE TO BE USED, NOT ALUMINUM
- ALL CHAIN LINK COMPONENTS TO BE GALVANIZED UNLESS STATED OTHERWISE

DRAWING: **OUTDOOR RINK**

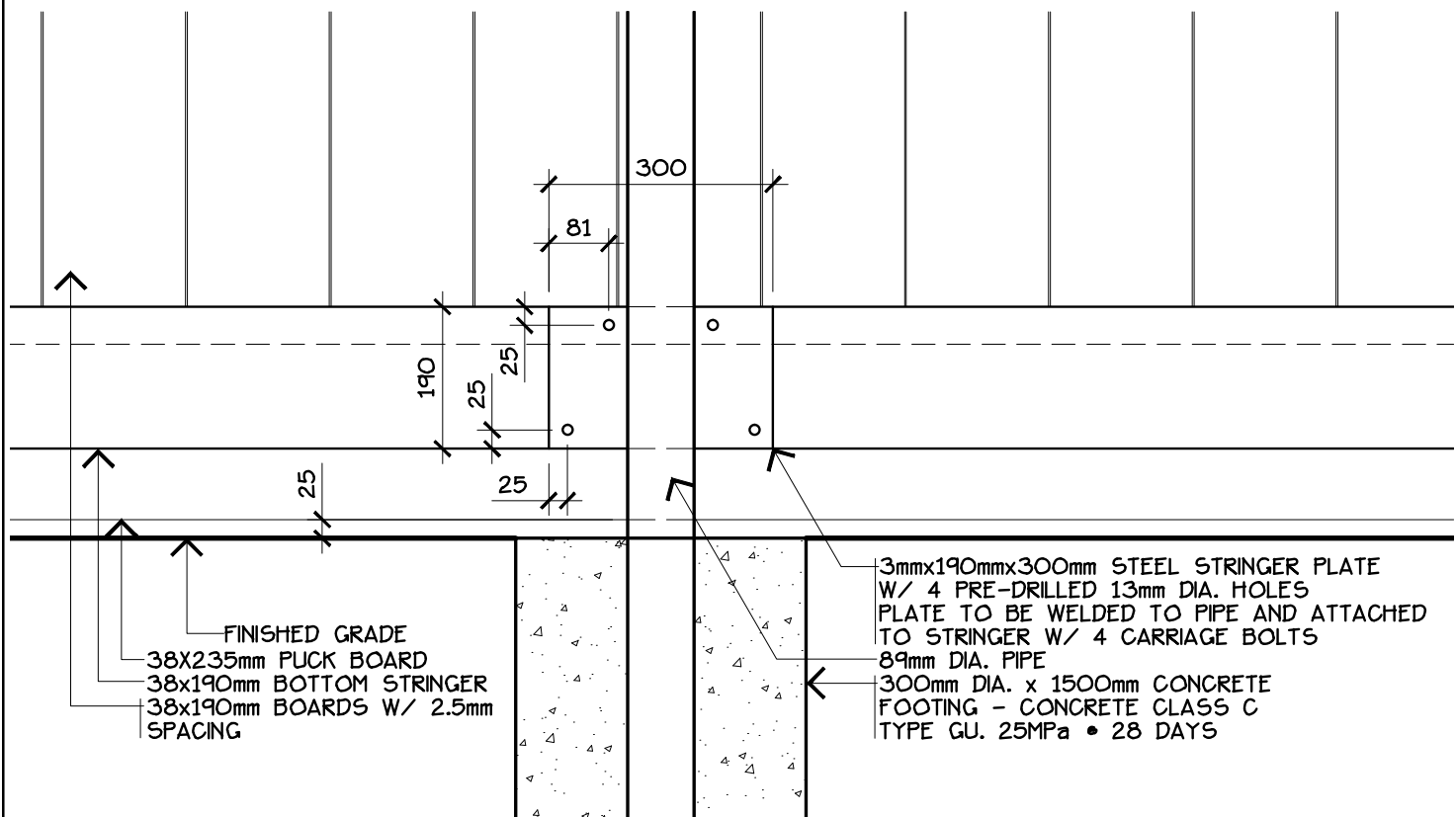
	REVISION NO:	DATE: 2009 08	DRAWING NO.  22-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




## TOP STRINGER PLATE

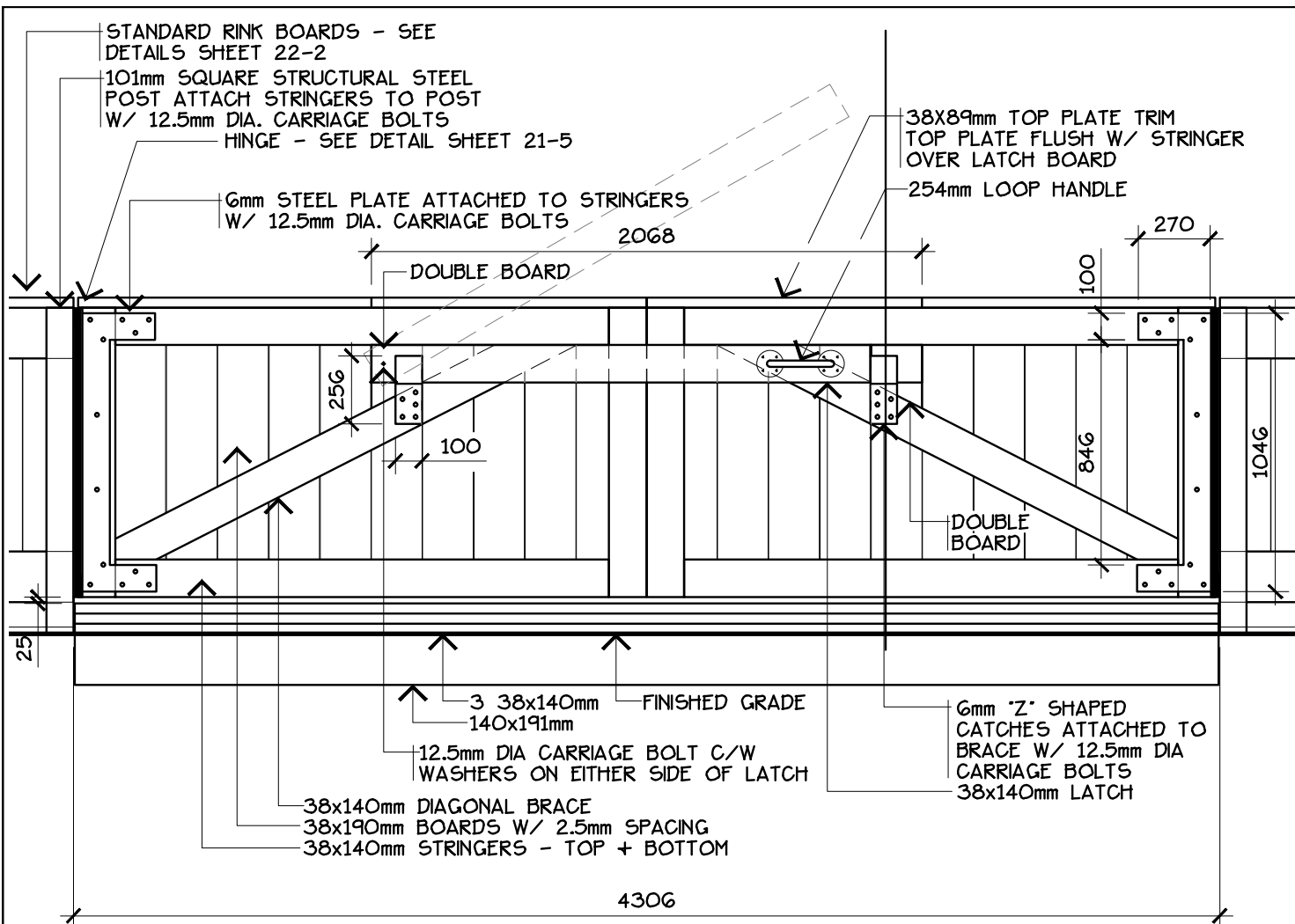


## BOTTOM STRINGER PLATE

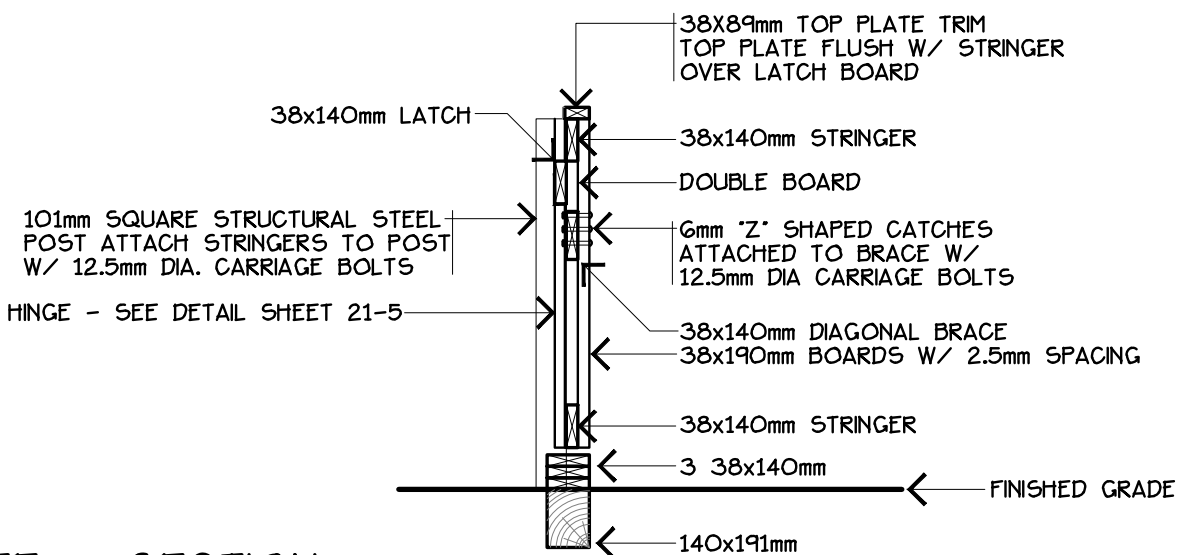
DRAWING: OUTDOOR RINK

	REVISION NO:	DATE: 2009 08	DRAWING NO.  22-3
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



## GATE - ELEVATION



## GATE - SECTION

DRAWING: OUTDOOR RINK



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

DATE: 2009 08

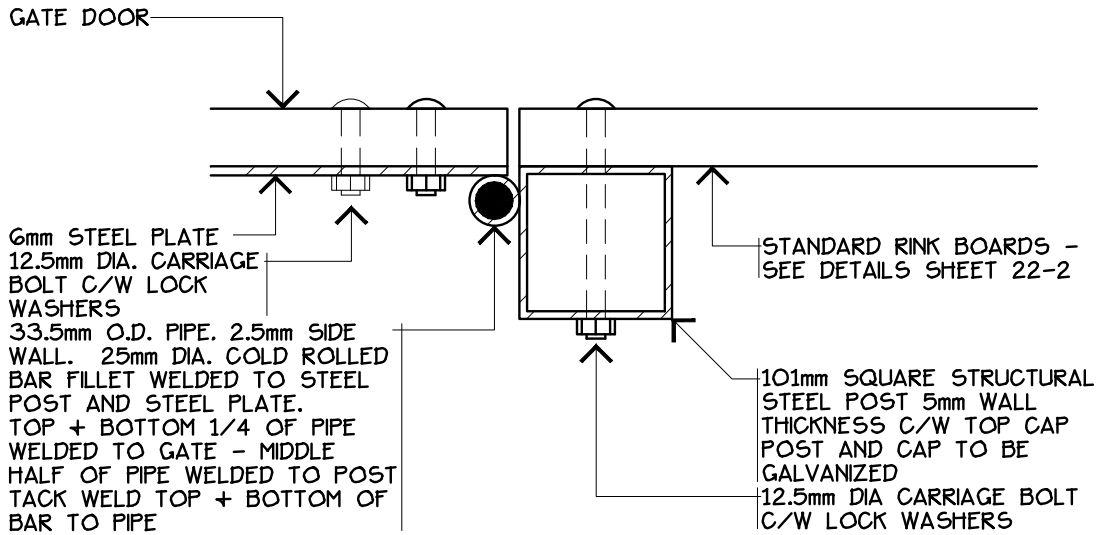
SCALE: 1:25

APPROVED: D.O.

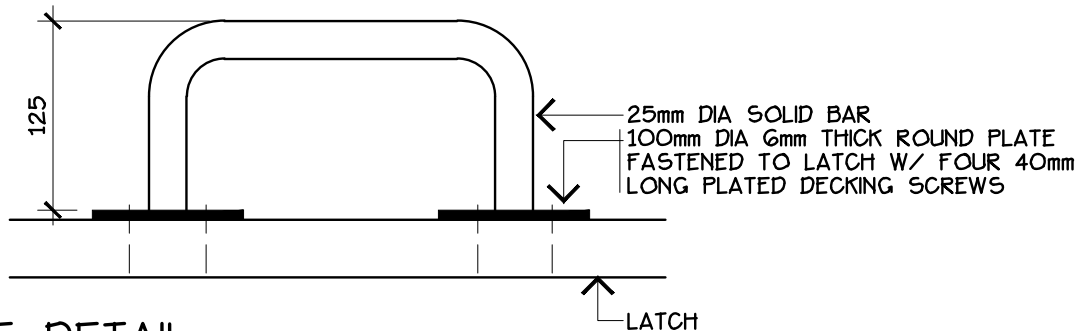
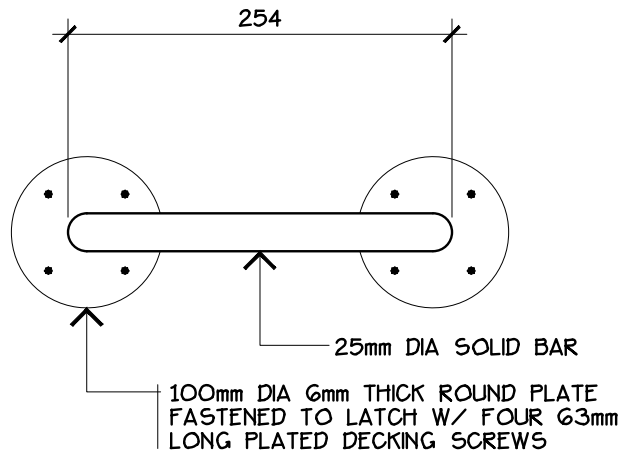
DRAWING NO.

22-4





## HINGE DETAIL



## LOOP HANDLE DETAIL

DRAWING: OUTDOOR RINK



REVISION NO:

DRAWN BY: EARTHSCAPE CONSULTANTS

CHECKED: N.M.

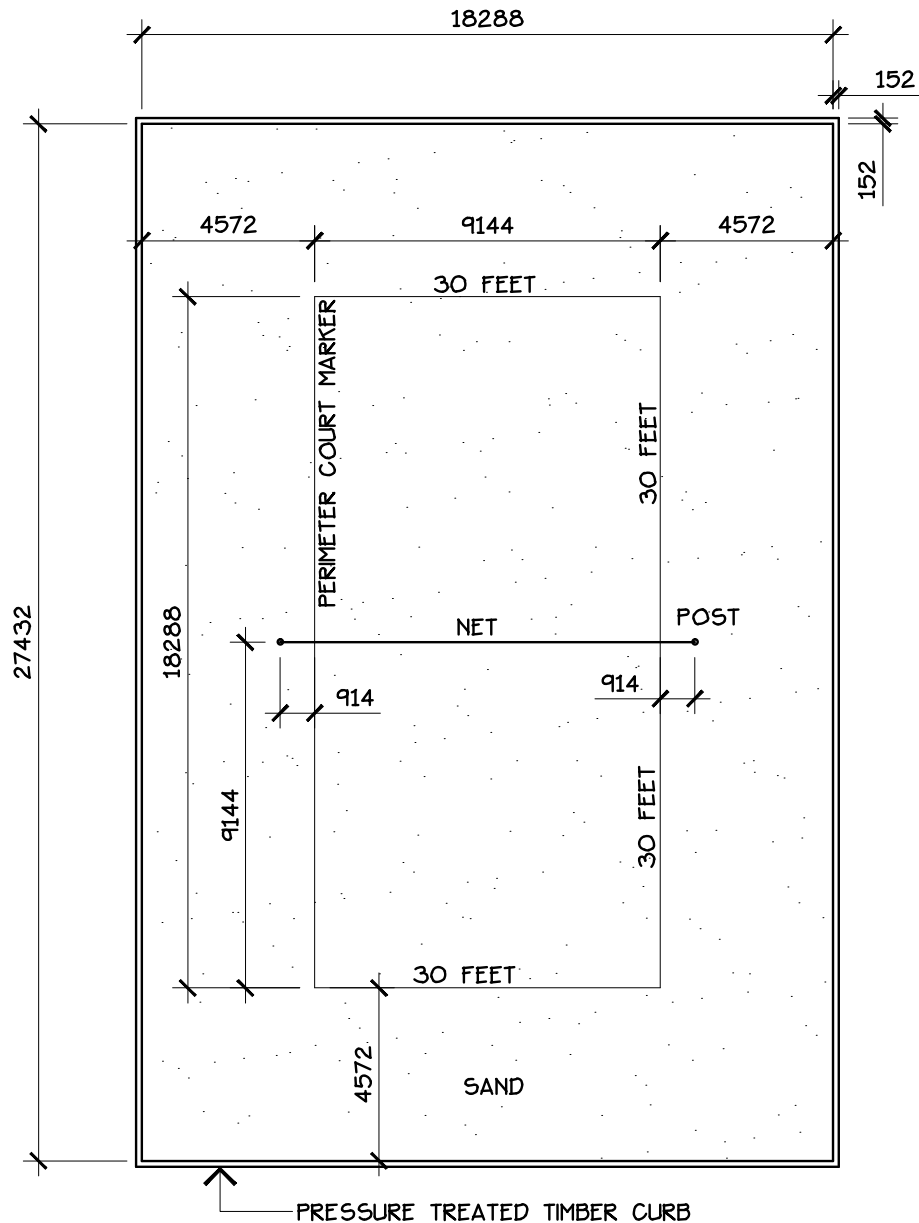
DATE: 2009 08

SCALE: 1:5

APPROVED: D.O.

DRAWING NO.

22-5




#### NOTES:

- MEN'S NET HEIGHT 2.43m
- WOMEN'S NET HEIGHT 2.24m
- GRADE AT 1% FROM NET CENTRELINE TO ENDS
- VOLLEYBALL POSTS, NETS AND PERIMETER COURT MARKER AVAILABLE FROM HABITAT SYSTEMS INCORPORATED
- POSTS TO BE PW ATHLETIC MFG. CO. MODEL #2216-21 POWDER COATED COUNTY BLUE-301C.
- VOLLEYBALL NET TO BE PW ATHLETIC MFG. CO. MODEL #8361-10
- PERIMETER COURT MARKER PORTER 09855-000

## PLAN VIEW

DRAWING: SAND VOLLEYBALL COURT

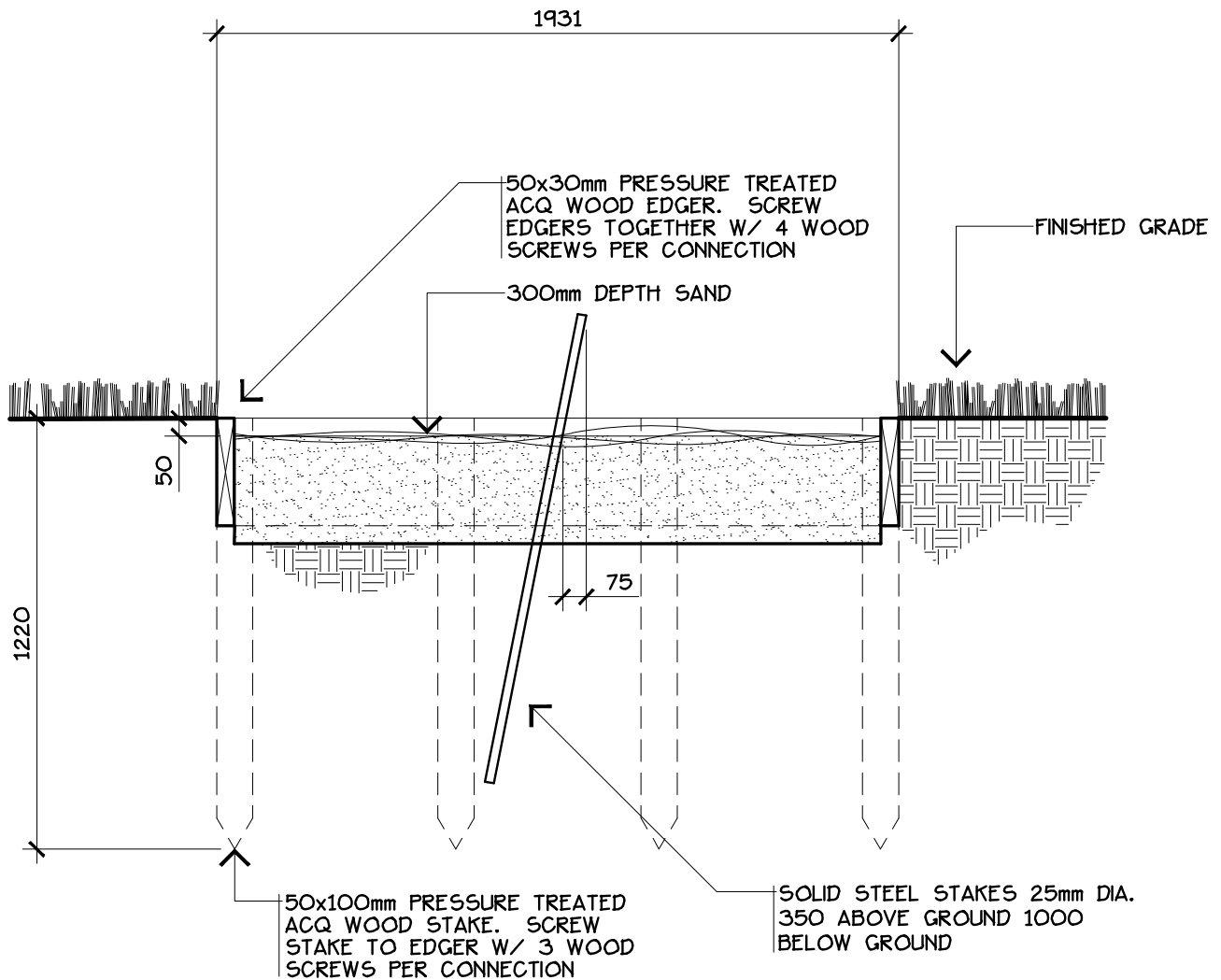
	REVISION NO:	DATE: 2009 08	DRAWING NO.  23-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:200	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3








#### NOTES:

- MEN'S DISTANCE BETWEEN STAKES 40' (12.192m)
- WOMEN'S DISTANCE BETWEEN STAKES 30' (9.144m)
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ (PRESSURE TREATED WOOD ONLY).
- ALL METAL HARDWARE TO BE GALVANIZED.

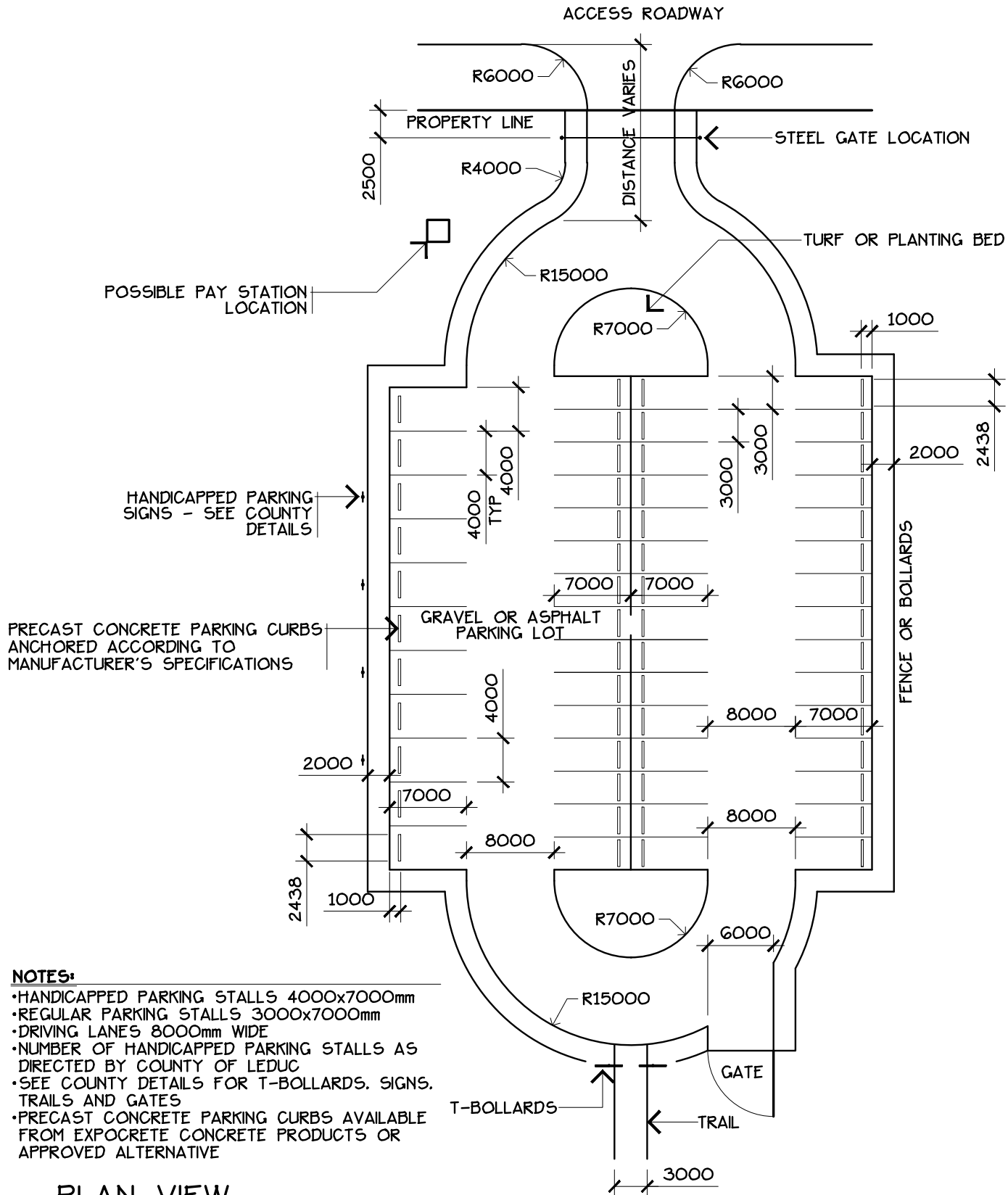
## PLAN VIEW

DRAWING: HORSESHOE PITCH


 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	DRAWING NO.  <b>24-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

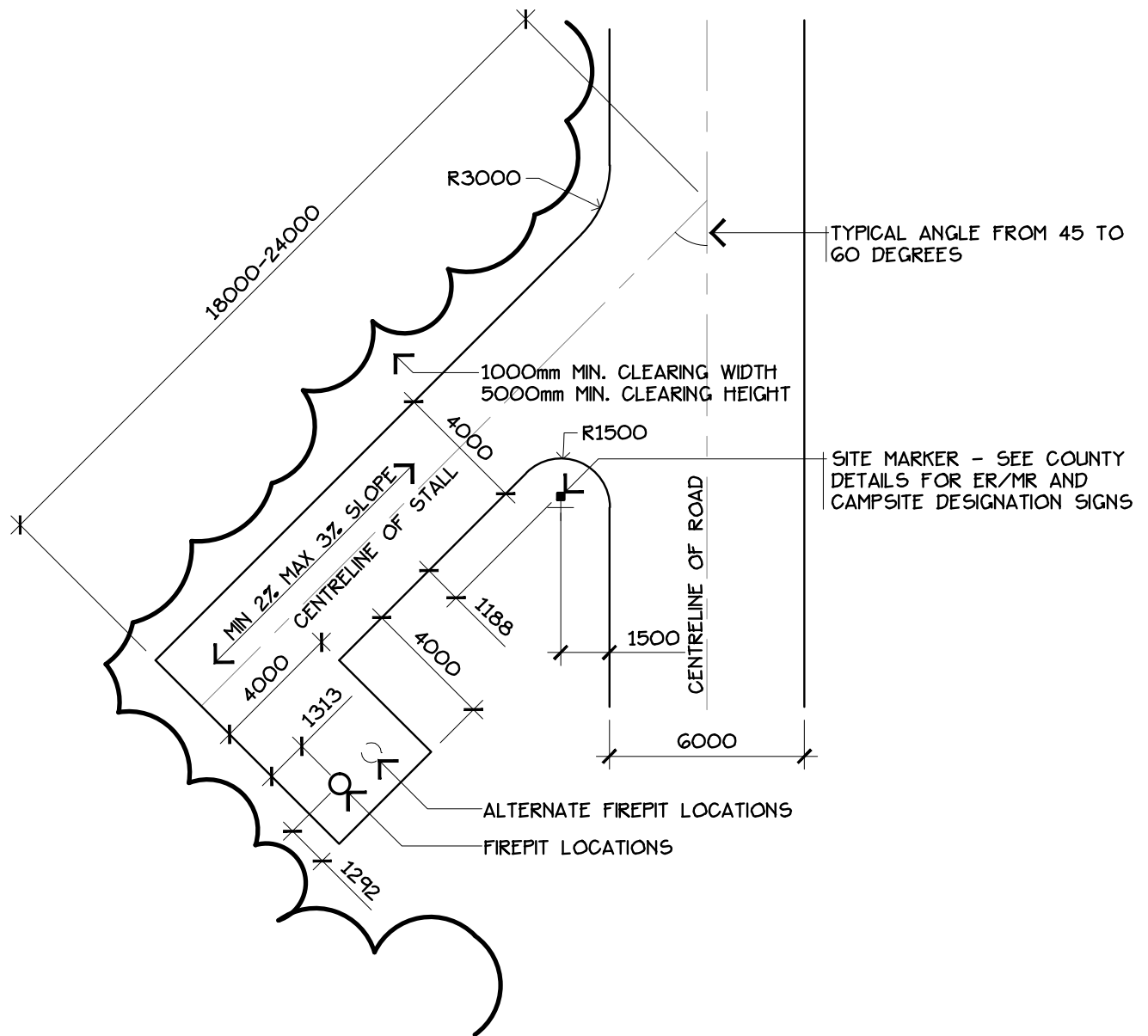


DRAWING: PARKING LOT LAYOUT

	REVISION NO:	DATE: 2009 08	DRAWING NO.  25
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:500	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

- CAMPSITE STALL TO BE GRAVEL SURFACE. 150mm DEPTH 20mm ROAD CRUSH GRAVEL COMPACTED TO 98% STANDARD PROCTOR DENSITY. GRAVEL TO BE PLACED ON 150mm DEPTH COMPACTED SUBGRADE TO 98% STANDARD PROCTOR DENSITY

## PLAN VIEW - BACK IN STALL

DRAWING: CAMPSITE LAYOUT AND SURFACING

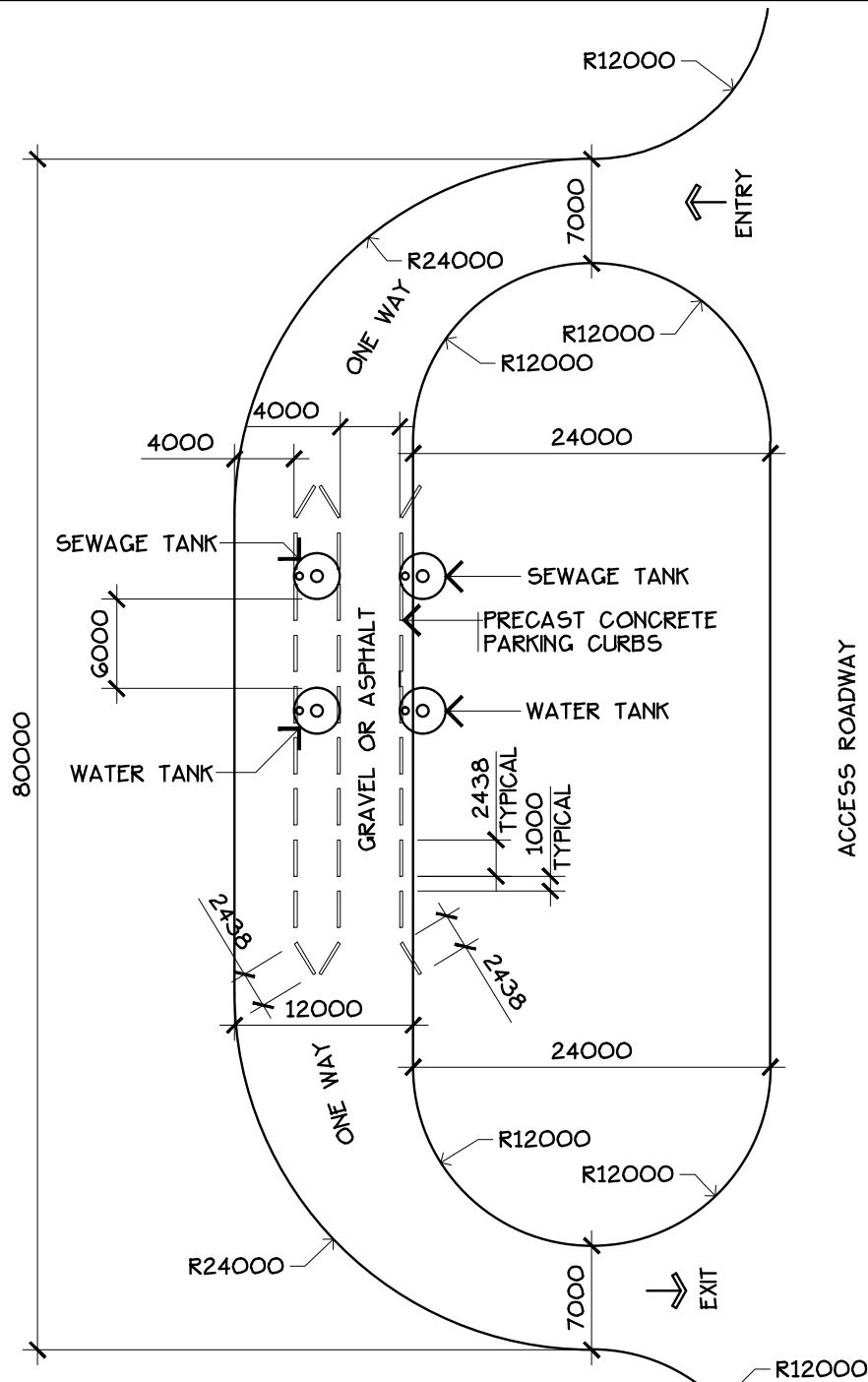
	REVISION NO:	DATE: 2009 08	DRAWING NO.  26A
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:200	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3








PRECAST CONCRETE PARKING CURBS TO BE ANCHORED ACCORDING TO MANUFACTURER'S SPECIFICATIONS

#### NOTES:

- DRIVING LANES 4000 WIDE
- TWO 1000 GALLON SEWAGE HOLDING TANKS
- TWO 1000 GALLON WATER CISTERN TANKS WITH PUMPS
- WHERE ROCKY OR HIGH WATER TABLE CONDITIONS EXIST A CONCRETE TANK OR EQUIVELANT WILL BE REQUIRED
- PRECAST CONCRETE PARKING CURBS AVAILABLE FROM EXPOCRETE CONCRETE PRODUCTS OR APPROVED ALTERNATIVE

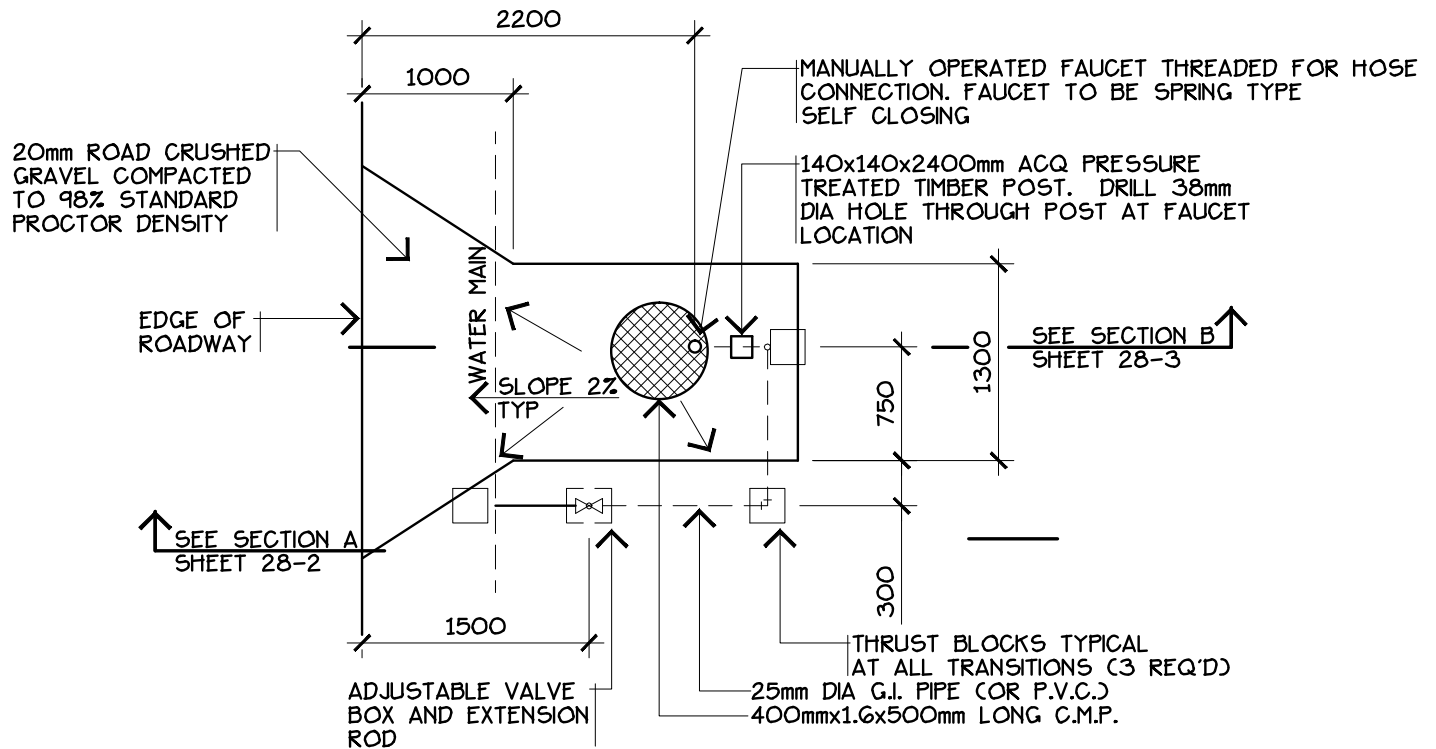
## PLAN VIEW

DRAWING: SEWAGE DUMP STATION

	REVISION NO:	DATE: 2009 08	DRAWING NO.  27
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:500	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		


SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

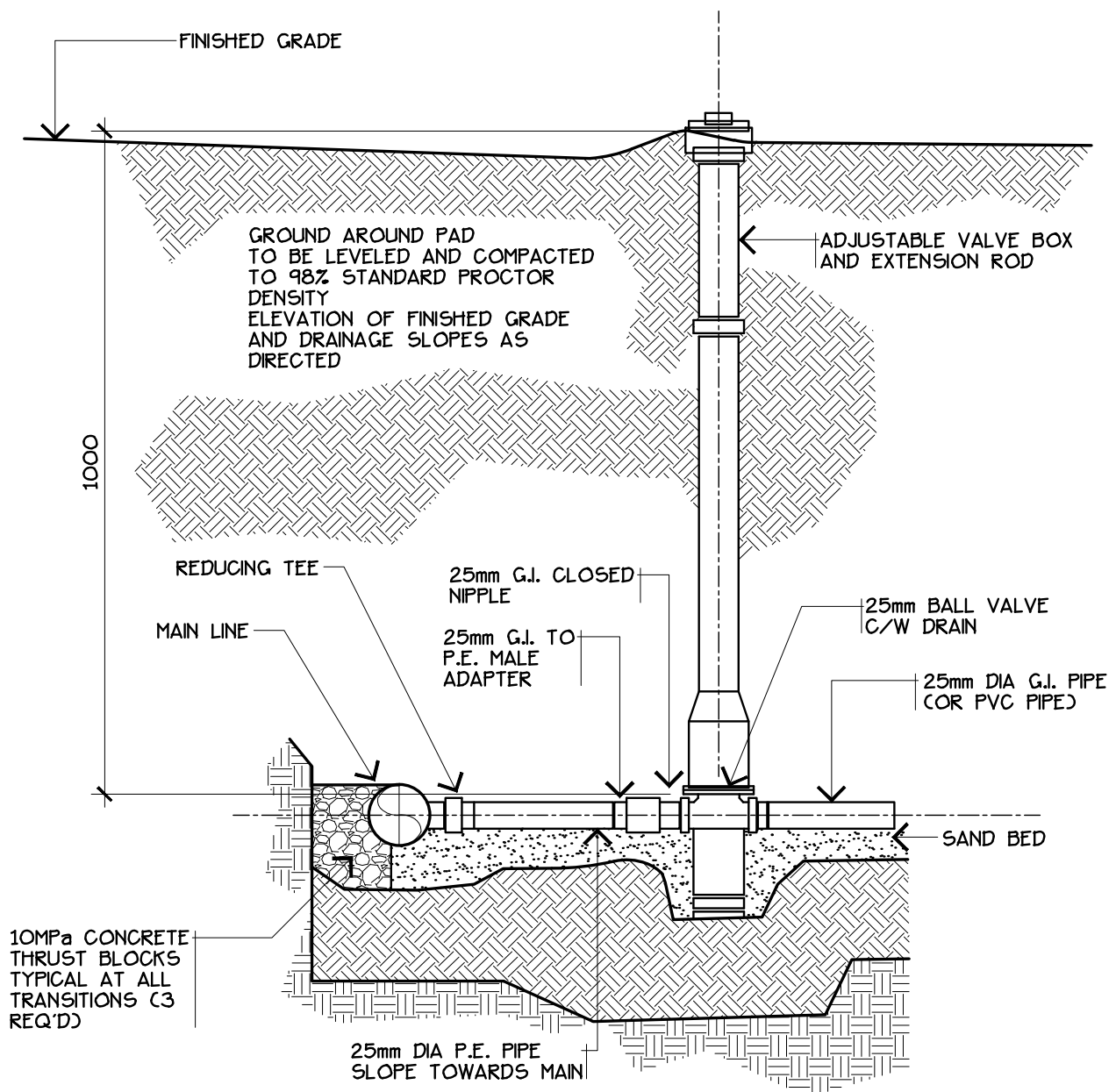
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



PLAN VIEW


DRAWING: SEASONAL WATER TAP & SUMP

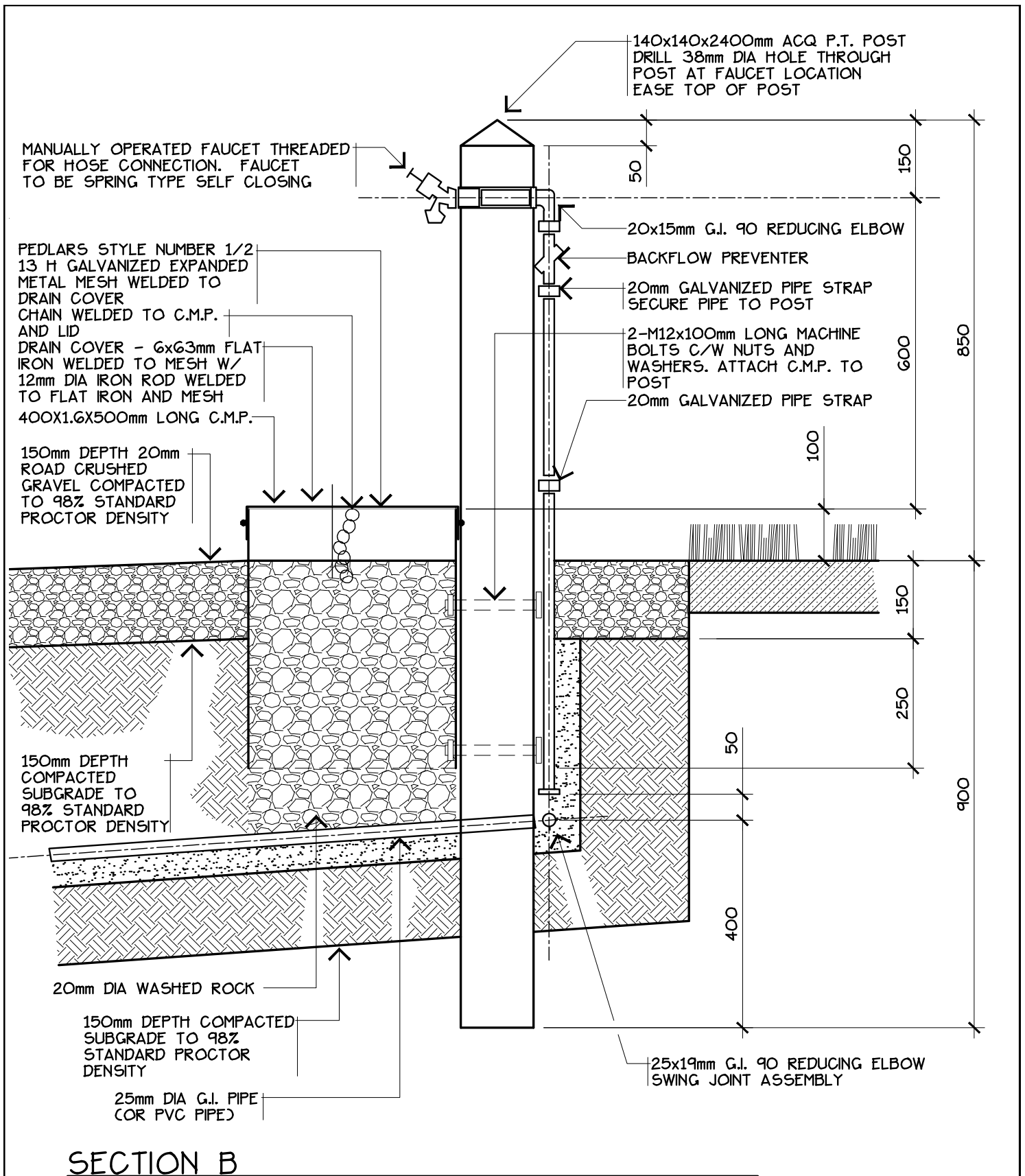
	REVISION NO:	DATE: 2009 08	DRAWING NO.  28-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			




## SECTION A

DRAWING: SEASONAL WATER TAP & SUMP

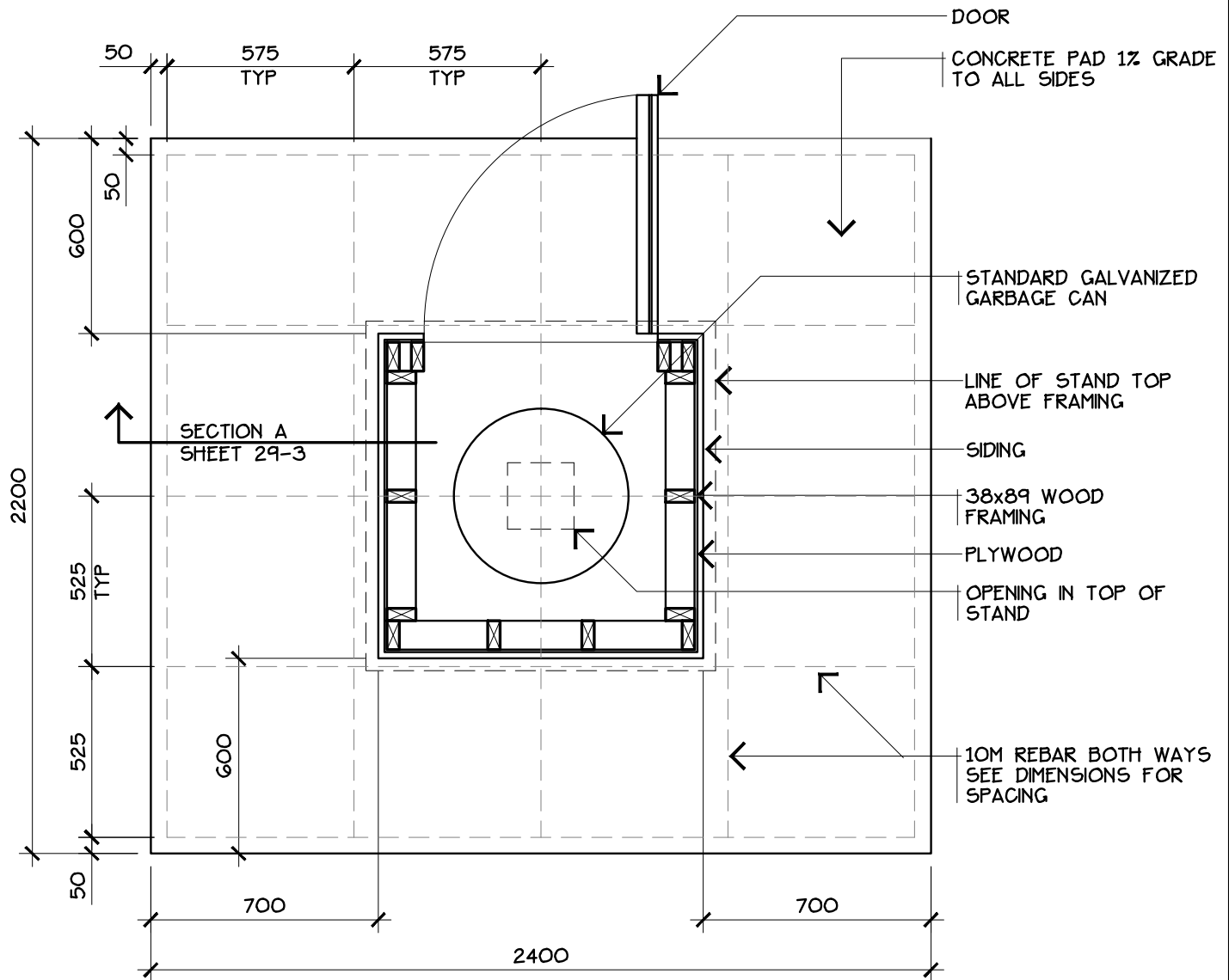
 LEDUC COUNTY	REVISION NO:	DATE: 2009 08	DRAWING NO.  28-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			



DRAWING: SEASONAL WATER TAP & SUMP

	REVISION NO:	DATE: 2009 08	DRAWING NO.  28-3
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




#### NOTES:

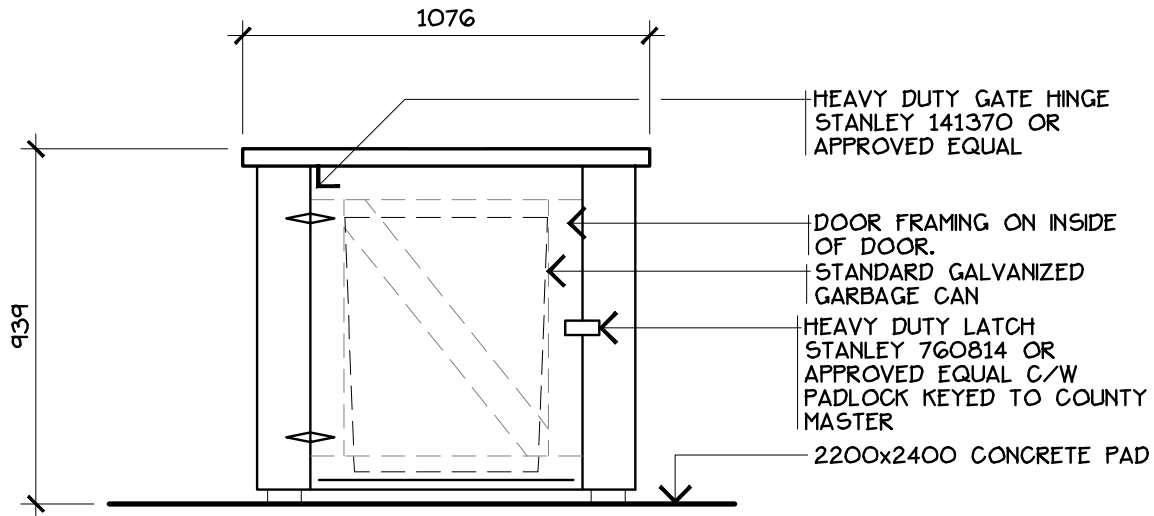
- FRAMING MATERIALS - CONSTRUCTION GRADE SPF. MAX. MOISTURE CONTENT 27%. ACQ PRESSURE TREATED AS NOTED
- NAILS, SCREWS TO BE GALVANIZED
- CEDAR SIDING - SELECT TIGHT KNOT ROUGH SAWN CHANNEL. SIDING TO BE FINISHED W/ 2 COATS OF OLYMPIC SEMI-TRANSPARENT STAIN #716
- ACQ P.T. WOOD - ALL CUT ENDS AND DRILLED HOLES TO BE FIELD TREATED W/ 2 COATS OF CLEAR ACQ WOOD PRESERVATIVE
- 2 COATS OF WHITE ENAMEL ALL INTERIOR SURFACES
- CONCRETE PAD:
  - CONCRETE - CLASS C, TYPE GU, 30MPa • 28 DAYS, SLUMP 50-70, AIR ENTRAINED >5.5%, MAXIMUM 20mm AGGREGATE, MAXIMUM WATER 0.45, CEMENT 335kg/m<sup>3</sup>
  - BROOM FINISH SURFACE, EDGES TOOLED, 50mm TOOLED JOINTS MAXIMUM 3000mm O.C.
  - 10M REBAR BOTH WAYS - SEE DIMENSIONS FOR SPACING
  - 50mm DEEP LEVELLING SAND
  - 150mm DEEP COMPACTED SUBGRADE TO 98% STANDARD PROCTOR DENSITY
- PROVIDE KEY LOCK FOR UNLOADING DOOR - ALL LOCKS KEYED TO COUNTY MASTER

## PLAN

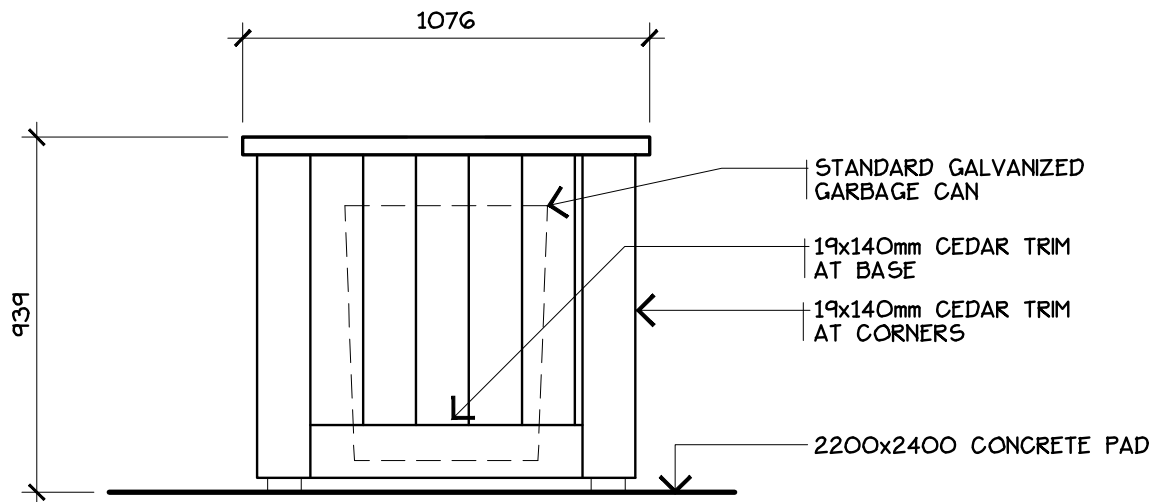
DRAWING: FISH CLEANING STAND

	REVISION NO:	DATE: 2009 08	DRAWING NO.  29-1
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




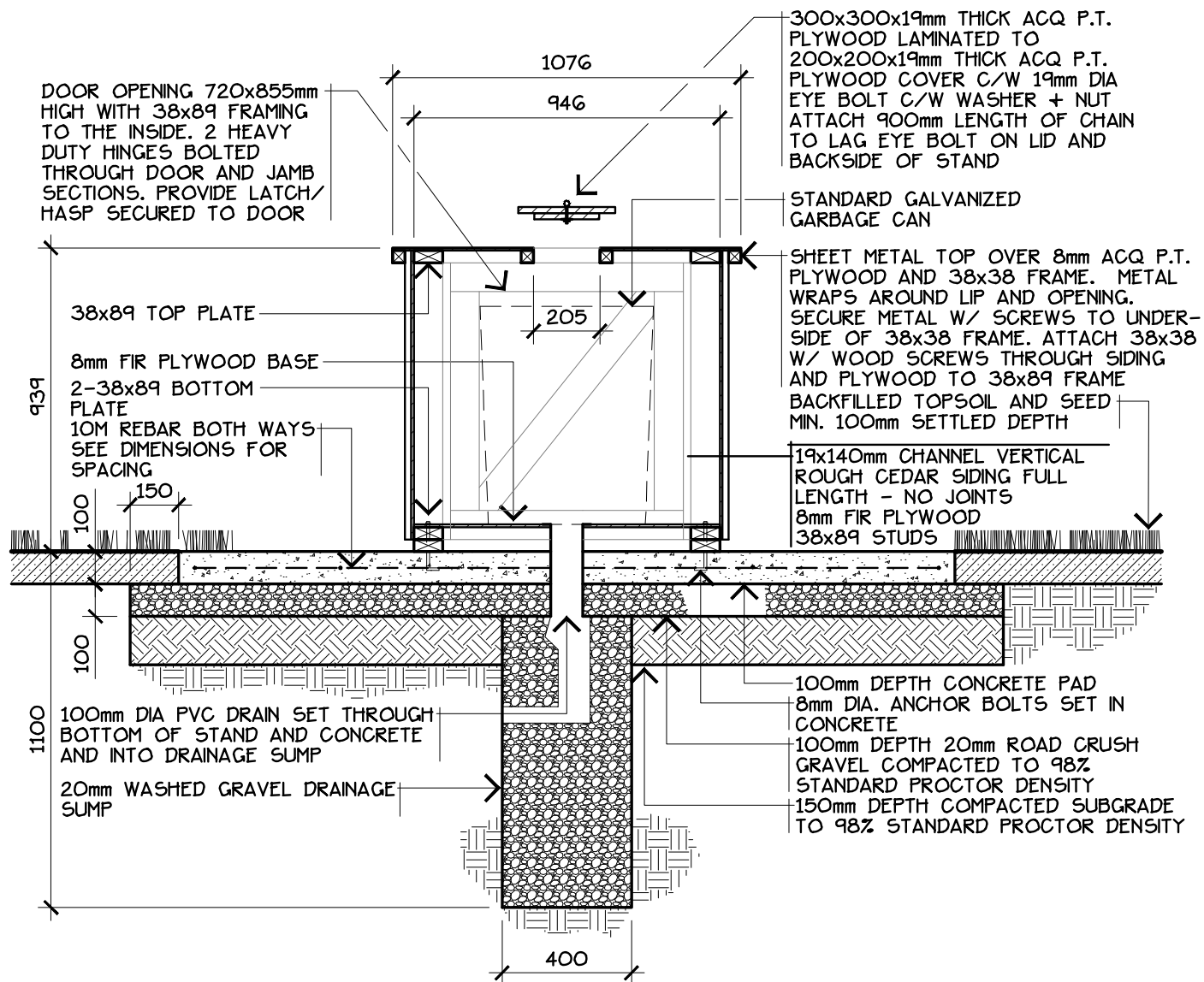
## FRONT ELEVATION



## SIDE ELEVATION

DRAWING: FISH CLEANING STAND

	REVISION NO:	DATE: 2009 08	DRAWING NO.  29-2
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			




#### NOTES:

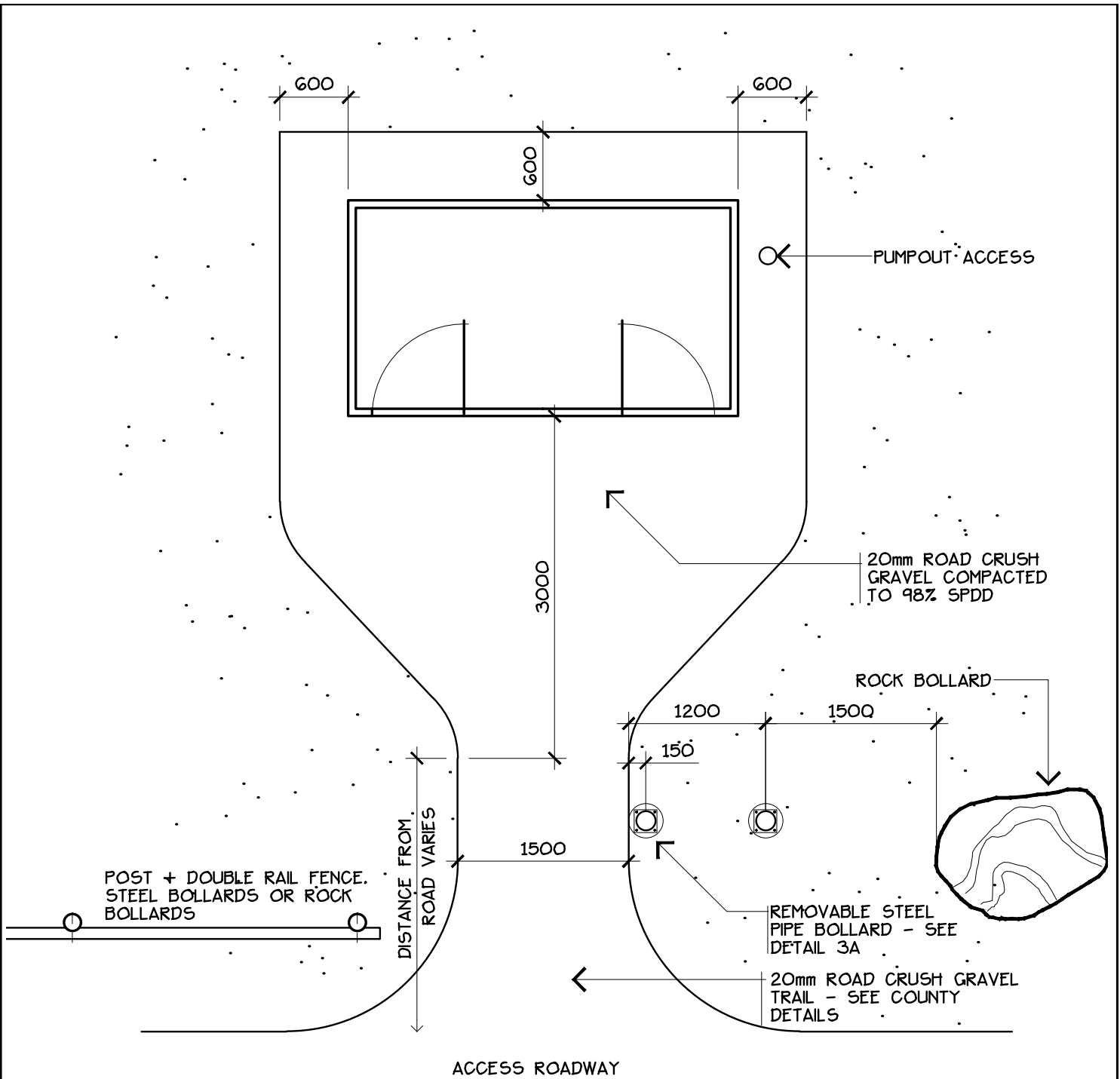
- FRAMING MATERIALS - CONSTRUCTION GRADE SPF, MAX. MOISTURE CONTENT 27%. ACQ PRESSURE TREATED AS NOTED
- NAILS, SCREWS TO BE GALVANIZED
- CEDAR SIDING - SELECT TIGHT KNOT ROUGH SAWN CHANNEL. SIDING TO BE FINISHED W/ 2 COATS OF OLYMPIC SEMI-TRANSPARENT STAIN #716
- ACQ P.T. WOOD - ALL CUT ENDS AND DRILLED HOLES TO BE FIELD TREATED W/ 2 COATS OF CLEAR ACQ WOOD PRESERVATIVE
- 2 COATS OF WHITE ENAMEL ALL INTERIOR SURFACES
- CONCRETE SLAB:
  - CONCRETE - CLASS C, TYPE GU, 30MPa • 28 DAYS, SLUMP 50-70, AIR ENTRAINED >5.5%, MAXIMUM 20mm AGGREGATE, MAXIMUM WATER 0.45, CEMENT 335kg/m<sup>3</sup>
  - BROOM FINISH SURFACE, EDGES TOOLED, 50mm TOOLED JOINTS MAXIMUM 3000mm O.C.
  - 10M REBAR BOTH WAYS - SEE DIMENSIONS FOR SPACING
  - 50mm DEPTH LEVELLING SAND
  - 150mm DEPTH COMPACTED SUBGRADE TO 98% STANDARD PROCTOR DENSITY

## SECTION

DRAWING: FISH CLEANING STAND


	REVISION NO:	DATE: 2009 08	DRAWING NO.  29-3
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



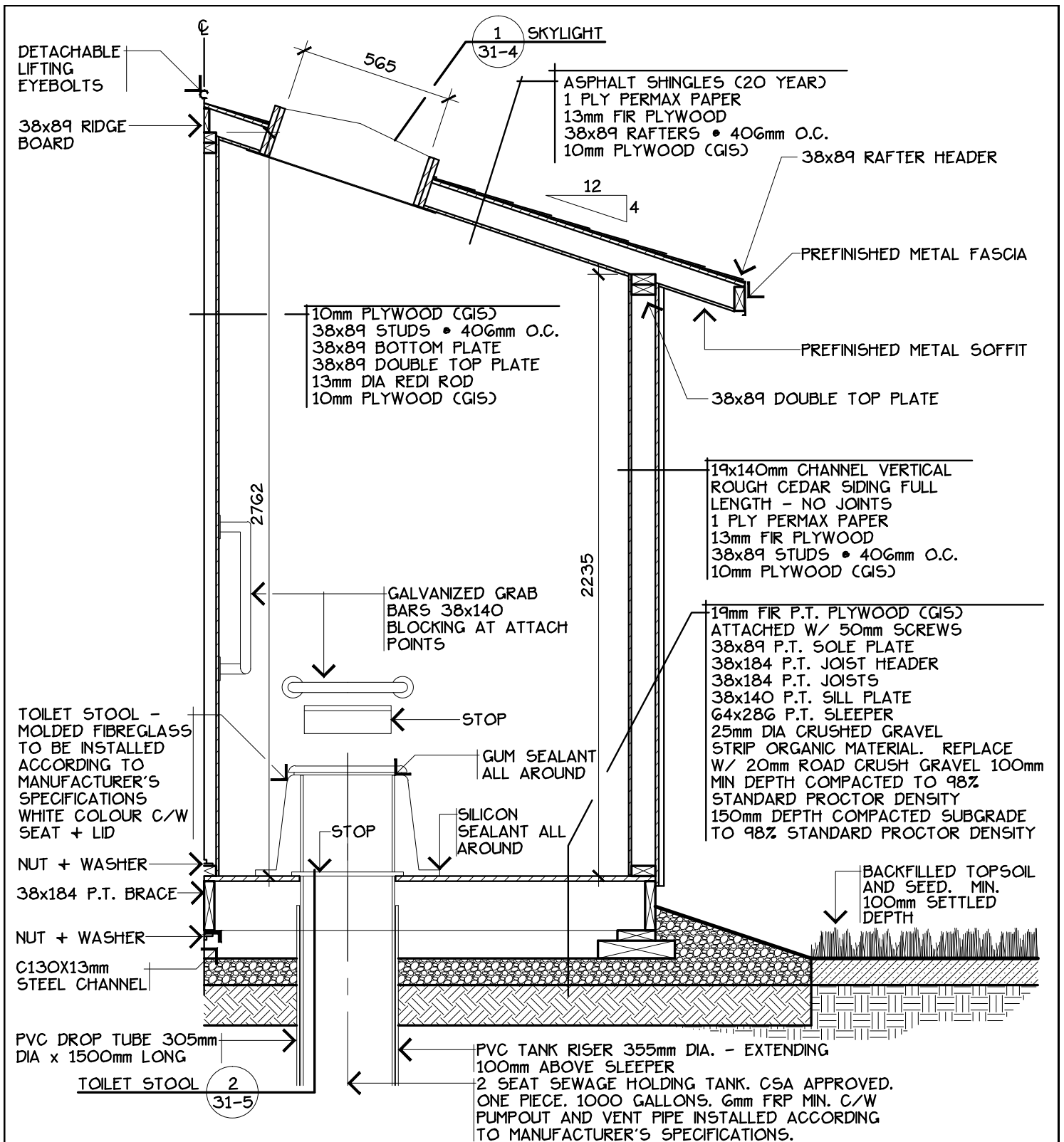
## PLAN VIEW

DRAWING: DOUBLE VAULT TOILET BUILDING

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>30-1</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3			






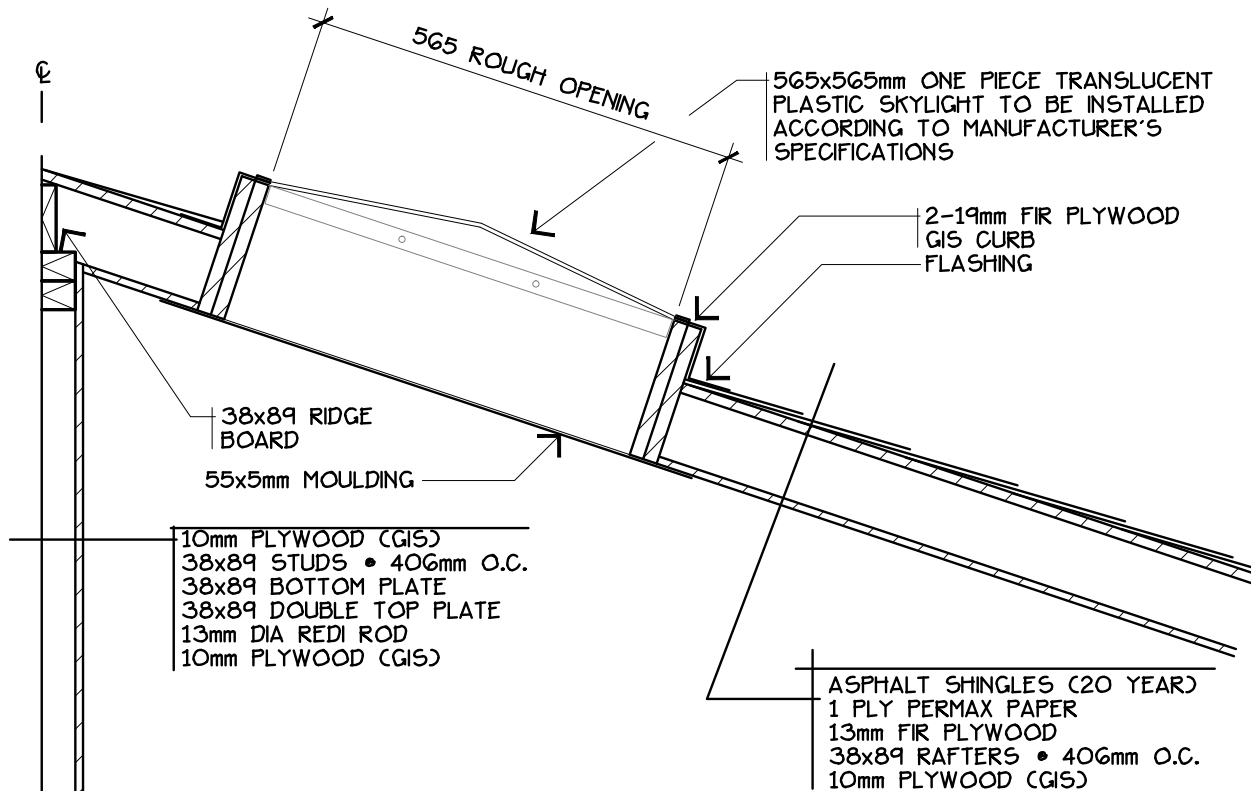


## BUILDING SECTION

DRAWING: DOUBLE VAULT TOILET BUILDING - BUILDING SECTION

	REVISION NO:	DATE: 2009 08	DRAWING NO.  30-3
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:20	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

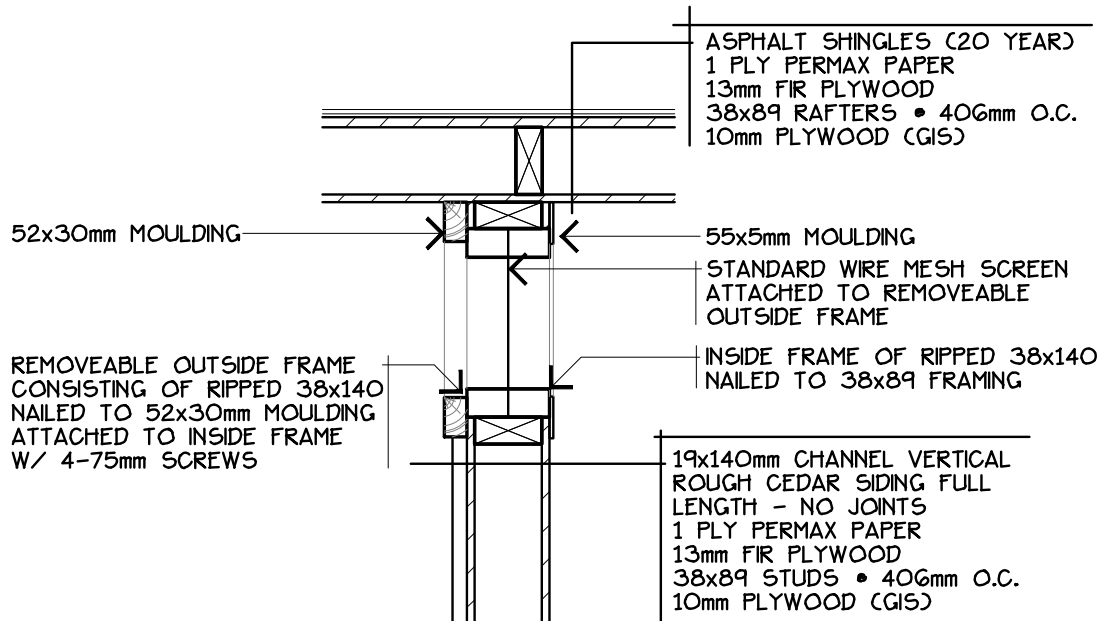
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3



1

## SKYLIGHT

31-4




A

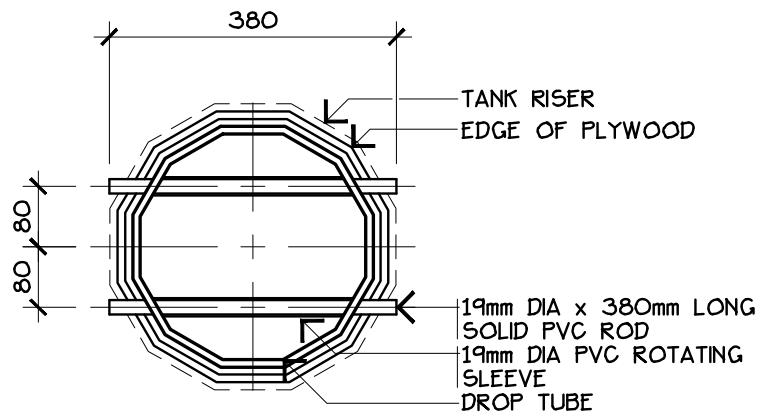
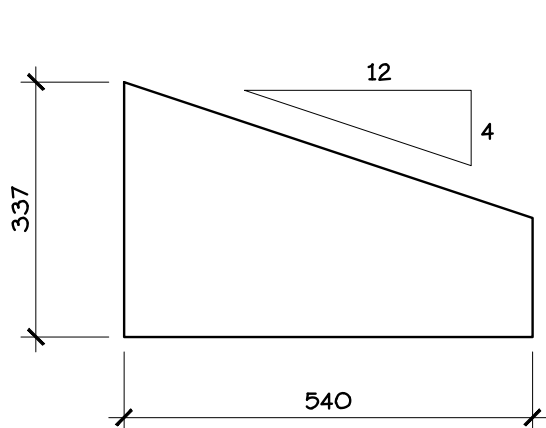
## SECTION A

31-4

DRAWING: DOUBLE VAULT TOILET BUILDING - DETAILS

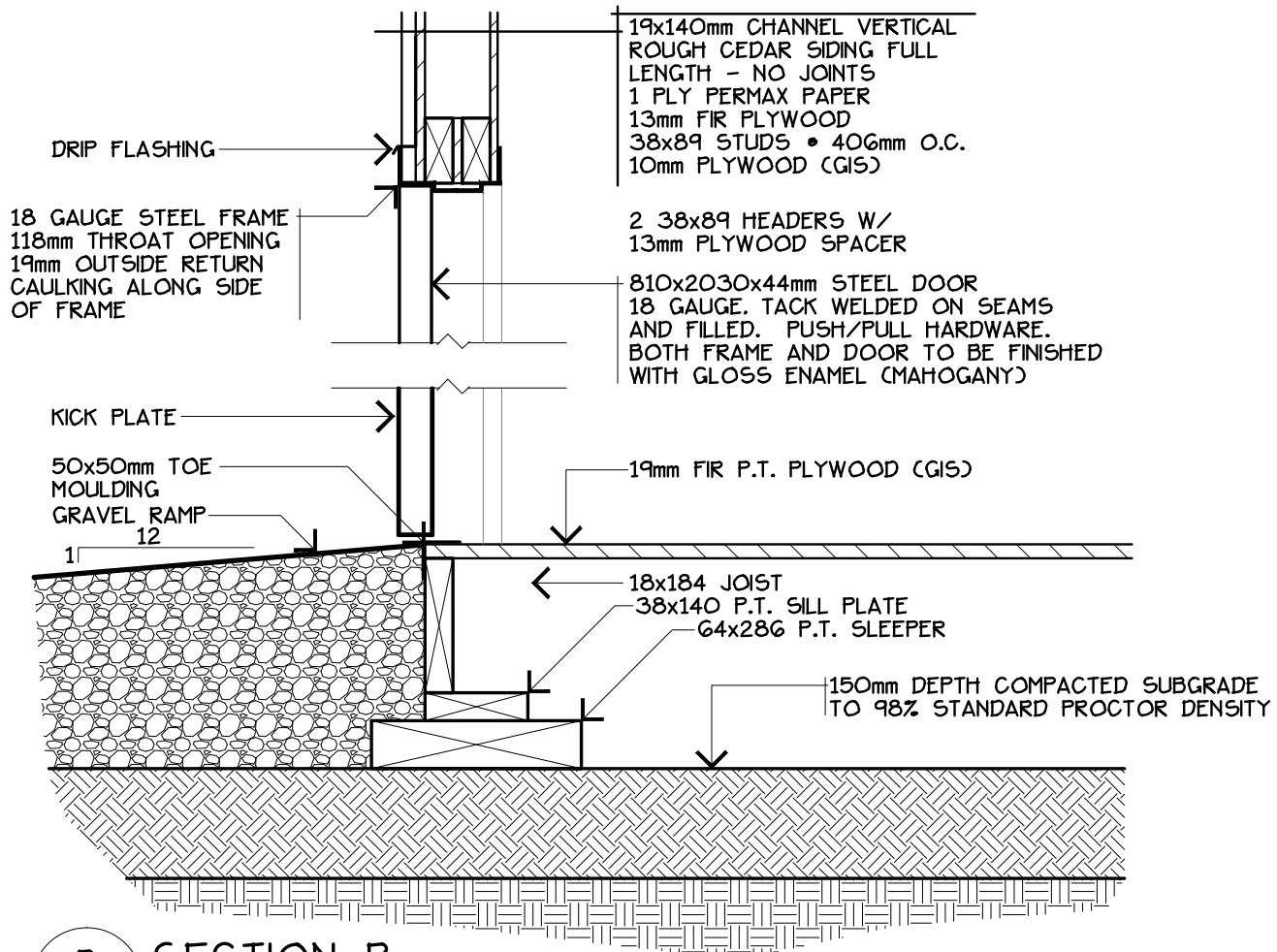
	REVISION NO:	DATE: 2009 08	DRAWING NO.  30-4
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
LEDUC COUNTY PARKS AND RECREATION		SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3	

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3




1 CLEAR VENT OPENING  
31-5

2 TOILET STOOL  
31-5



B SECTION B  
31-5

DRAWING: DOUBLE VAULT TOILET BUILDING - DETAILS

	REVISION NO:	DATE: 2009 08	DRAWING NO.  30-5
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	LEDUC COUNTY PARKS AND RECREATION		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

	ROOM	FLOOR		CEILING		WALLS		REMARKS
		MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	
INTERIOR	WASHROOM	19mm FIR PLYWOOD (GIS)	C	10mm FIR PLYWOOD (GIS)	B	10mm FIR PLYWOOD (GIS)	B	GRAB BARS TO BE INSTALLED IN BOTH COMPARTMENTS
EXTERIOR						VERTICAL ROUGH CEDAR	A	DOOR SHALL BE EQUIPPED W/ PUSH PLATE + PULL BAR + CORBIN #0-30BL REVERSE BACKCHECK DOOR CLOSERS

DOORS						WINDOWS					
TYPE		FRAME		TRIM		TYPE		FRAME		TRIM	
MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.
STEEL HONEY COMBE	G	STEEL	G	STEEL	G	INSECT SCREEN		CEDAR	F	CEDAR	F

FITTINGS		ROOF		FLASHINGS		MECH. TRIM		SOFFIT		FASCIA	
TYPE	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.	MATERIAL	FIN.
TOILET STOOL	D										
SKYLIGHT	E	ASPHALT SHINGLES (20 YEAR)	H	PRE-FINISHED	I			PREFINISHED METAL	F	PREFINISHED METAL	F

#### NOTES:

• ALL FINISHES TO HAVE TWO COATS C/W PRIMER IN ACCORDANCE W/ MANUFACTURER'S SPECIFICATIONS

A OLYMPIC SEMI-TRANSPARENT STAIN #71G

B MOOR-O-MATIC SEMI GLOSS ALKYD ENAMEL #2-50

C MOORES PORCH + FLOOR ENAMEL 112-57 BAMBOO BEIGE

D AS PER MANUFACTURER'S SPECIFICATIONS

E ACRYLIC PLASTIC - TRANSLUCENT

F OLYMPIC SOLID COLOUR STAIN - MAHOGANY

F GENERAL PAINT ALKYD HOUSE + TRIM. GLOSS ENAMEL - MAHOGANY

NOTE: EXPOSED FLASHING TO BE ETCHED TO TAKE APPLIED FINISH

H CEDAR TONE

I BROWN

#### MATERIALS

• FRAMING MATERIALS - CONSTRUCTION GRADE SPF. MAX. MOISTURE CONTENT 27%. ACQ PRESSURE TREATED AS NOTED

• NAILS, SCREWS AND STAPLES - GALVANIZED IN EXTERIOR LOCATIONS

• CEDAR SIDING - SELECT TIGHT KNOT ROUGH SAWN CHANNEL

#### INSTALLATION

• CONFIRM BUILDING LOCATION AND CLEARING LIMITS WITH COUNTY PRIOR TO EXCAVATION

• ESTABLISH THE LOCATION AND EXTENT OF UNDERGROUND UTILITIES PRIOR TO EXCAVATION

• CLEARING, GRUBBING AND EXCESS COMMON EXCAVATION TO BE DISPOSED OF OFF-SITE

• NOTIFY COUNTY PRIOR TO BACKFILLING


• INSTALL HOLDING TANK AS PER MANUFACTURER'S INSTRUCTIONS. W/ VERTICAL RISERS 100mm ABOVE TOP OF SLEEPERS

• BACKFILL MATERIALS TO THE BOTTOM OF SLEEPERS TO BE CRUSHED GRAVEL AS APPROVED BY THE COUNTY

• REMOVE ALL DEBRIS FROM THE SITE

• THE TOILET STALL SHALL HAVE 2 GRAB BARS. ONE ON THE SIDE WALL AND ONE ON THE BACK WALL AT LEAST 600mm IN LENGTH. 25 TO 32mm DIA. TUBULAR BARS. WITH AT LEAST 45mm BETWEEN BARS AND WALLS. THE BAR ON SIDE WALL SHALL BE MOUNTED AT A 60 DEGREE ANGLE TO THE FLOOR. AND 750mm ABOVE THE FLOOR. THE BAR ON REAR WALL SHALL BE CENTERED ON THE TOILET STOOL AND FIXED AT A LEVEL APPROX. 280mm ABOVE THE SEAT.

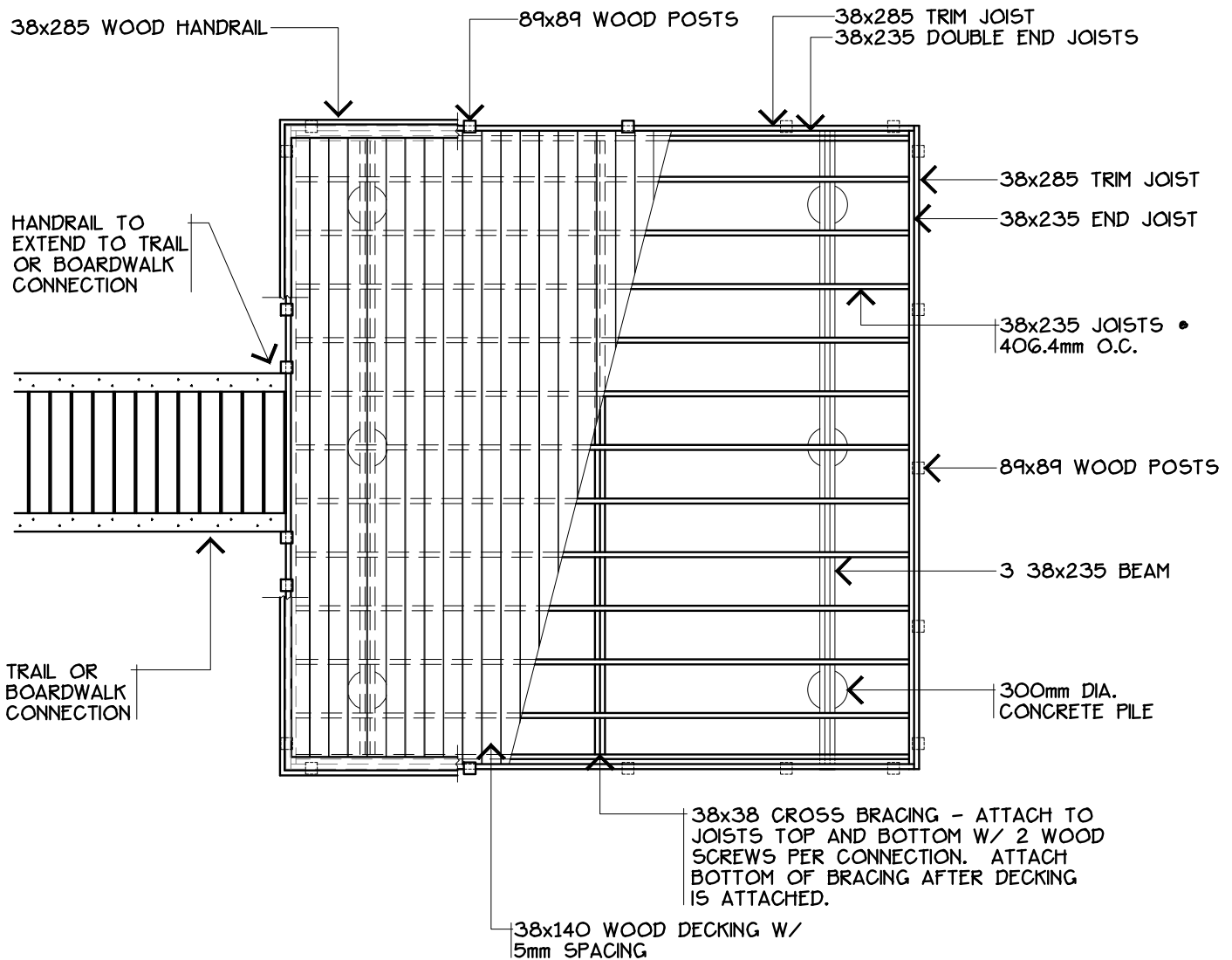
DRAWING: DOUBLE VAULT TOILET BUILDING - FINISH SCHEDULE

	REVISION NO:		DATE: 2009 08		DRAWING NO.  30-6
	DRAWN BY: EARTHSCAPE CONSULTANTS		SCALE: NTS		
	CHECKED: N.M.		APPROVED: D.O.		
	LEDUC COUNTY PARKS AND RECREATION				

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3






#### NOTES:

- ALL WOOD TO BE ACQ PRESSURE TREATED SPF
- ALL WOOD TO BE ALLOWED TO WEATHER.
- FIELD TREAT ALL CUT ENDS AND DRILLED HOLES W/ 2 COATS CLEAR ACQ
- ALL METAL HARDWARE TO BE GALVANIZED.
- CONCRETE TO BE CLASS C TYPE GU 25MPa • 28 DAYS

## PLAN VIEW

DRAWING: WILDLIFE VIEWING PLATFORM

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>31-2</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:50	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

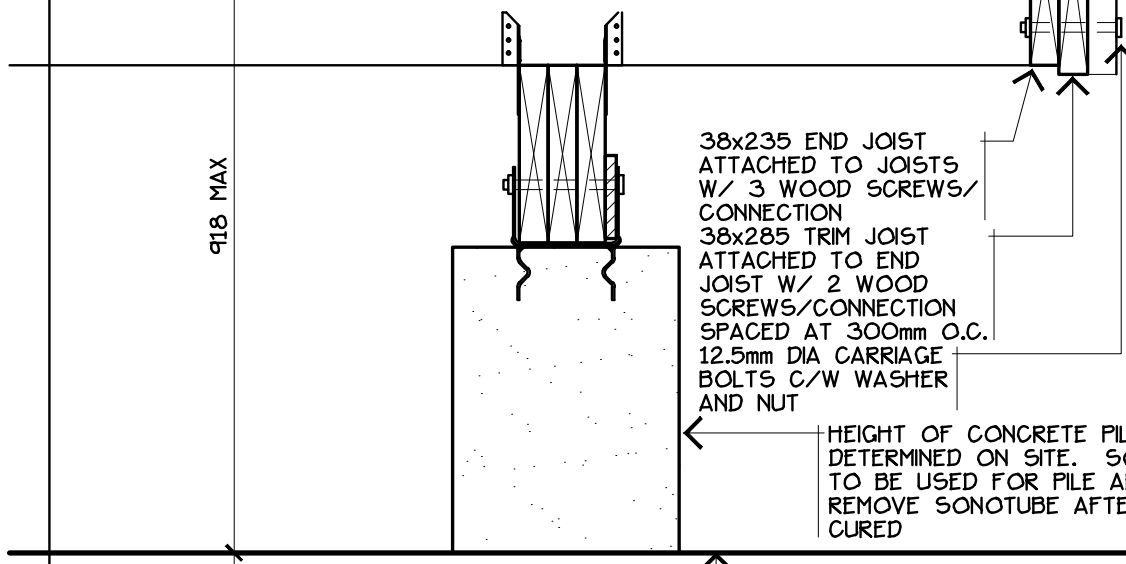
SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

38x285 WOOD HANDRAIL ATTACHED TO POST W/ 12.5mm DIA CARRIAGE BOLTS C/W WASHER AND NUT.  
12.5mm DIA CARRIAGE BOLTS C/W WASHER AND NUT. COUNTERSINK WASHER AND NUT

12.5mm DIA CARRIAGE BOLTS C/W WASHER AND NUT. COUNTERSINK WASHER AND NUT  
38x89 WOOD STRINGER ATTACHED TO POST W/ 12.5mm DIA. CARRIAGE BOLTS C/W WASHER AND NUT. COUNTERSINK WASHER AND NUT  
89x89 WOOD POST ATTACHED TO DECK STRUCTURE W/ 12.5mm DIA CARRIAGE BOLTS C/W WASHER AND NUT. POSTS TO BE SPACED AT 1200mm O.C AND AT CORNERS  
38x38 WOOD BALLISTERS ATTACHED TO POST W/ 2 WOOD SCREWS/CONNECTION TOP AND BOTTOM

38x140 WOOD DECKING W/ 5mm SPACING ATTACHED TO JOISTS W/ WOOD SCREWS 2 PER CONNECTION  
38x235 WOOD JOISTS • 406.4mm O.C. ATTACHED TO BEAM W/ SIMPSON STRONG TIES H1 HURRICANE TIES - 2 PER CONNECTION  
PRESSURE TREATED PYWOOD SPACER  
3 38x235 BEAM ATTACHED TO BEAM BASE W/ 2 12.5 DIA BOLTS C/W WASHERS AND NUT  
BEAM BASE - SIMPSON STRONG TIE PB66 SET INTO TOP OF PILE  
300mm DIA CONCRETE PILE TO EXTEND MIN. 2400mm BELOW FINISHED GRADE. CONCRETE CLASS C TYPE GU. 25MPa • 28 DAYS




38x235 END JOIST ATTACHED TO JOISTS W/ 3 WOOD SCREWS/ CONNECTION  
38x285 TRIM JOIST ATTACHED TO END JOIST W/ 2 WOOD SCREWS/CONNECTION SPACED AT 300mm O.C.  
12.5mm DIA CARRIAGE BOLTS C/W WASHER AND NUT

HEIGHT OF CONCRETE PILE TO BE DETERMINED ON SITE. SONOTUBE TO BE USED FOR PILE ABOVE GRADE REMOVE SONOTUBE AFTER CONCRETE HAS CURED

## SECTION A

FINISHED OR EXISTING GRADE

DRAWING: WILDLIFE VIEWING PLATFORM

 <b>LEDUC COUNTY</b>	REVISION NO:	DATE: 2009 08	<b>DRAWING NO.</b>  <b>31-3</b>
	DRAWN BY: EARTHSCAPE CONSULTANTS	SCALE: 1:10	
	CHECKED: N.M.	APPROVED: D.O.	
	<b>LEDUC COUNTY PARKS AND RECREATION</b>		

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3

SUITE 101, 1101 - 5th STREET, NISKU, ALBERTA, T9E 2X3