PART 1 - GENERAL

1.1 Related Sections

.1 Section 01 33 00 – Submittal Procedures.

.2 Section 32 31 13 – Cast in Place Concrete.

.3 Section 32 31 13 – Chain Link Fence and Gates.

1.2 References

.1 American Society for Testing and Materials International, (ASTM)
- .1 ASTM D 698-00a, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).

.2 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB-1.5-M91(March 1999), Low Flash Petroleum Spirits Thinner (Reaffirmation of December 1991).
- .2 CAN/CGSB-1.74-2001, Alkyd Traffic Paint.

.3 Ontario Provincial Standard Specifications (OPSS)
- .1 OPSS 302-April 1999, Construction Specification for Primary Granular Base.
- .2 OPSS 310-March 1993, Construction Specification for Hot Mixed, Hot Laid Asphaltic Concrete Paving and Hot Mix Patching.
- .3 OPSS 314-December 1993, Construction Specification for Untreated Granular, Subbase, Base, Surface Shoulder and Stockpiling.
- .4 OPSS 1010-March 1993, Material Specification for Aggregates, Granular A, B, M and Select Subgrade Material.
- .5 OPSS 1103-February 1996, Material Specification for Emulsified Asphalt.
- .6 OPSS 1150-May 1994, Material Specification for Hot Mixed, Hot Laid Asphalt Concrete.

1.3 Samples / Data Sheets

.1 Submit data sheets in accordance with Section 01 33 00 – Submittal Procedures.

.2 Submit to Consultant, report of sieve analysis at least 2 weeks before beginning Work.

1.4 Tests and Inspections

.1 Independent Inspection/Testing Agencies approved by the Owner's

Representative, will be engaged by the Contractor for the purpose of inspecting and/or testing portions of Work.

.1 Inspections/Testing to be sufficient for complete coverage of Work.

.2 Cost of such services will be borne by the Contractor.

.2 Employment of inspection/testing agencies does not relax the responsibility to perform Work in accordance with the Contract Documents.

.3 If defects are revealed during inspection and/or testing, the appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Consultant and/or Owner's Representative at no cost to the Owner. Pay costs for retesting and reinspection.

.4 Notify the appropriate agency and Consultant 48 hours in advance of the requirement for tests, in order that attendance arrangements can be made.

1.5 Waste Management and Disposal

.1 Separate and recycle waste materials.

.2 Remove from site and dispose of all packaging materials at appropriate recycling facilities.

.3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling.

.4 Place materials defined as hazardous or toxic in designated containers.

.5 Divert unused aggregate materials from landfill to quarry or facility for reuse as approved by Consultant.

.6 Dispose of unused paint and paint thinner materials at official hazardous material collections site as approved by Consultant and/or Owner's Representative.

.7 Fold up metal banding, flatten and place in designated area for recycling.

.8 Do not dispose of unused paint and paint thinner material into sewer system, into streams, lakes, onto ground or in other location where it will pose health environmental hazard.

.9 Divert unused asphalt from landfill to facility capable of recycling materials.

PART 2 - PRODUCTS

2.1 Materials

.1 Aggregates to: OPS MUNI 1003, OPSS MUNI 1010.
- .1 Granular A.
- .2 Granular B Type II.
- .3 Select subgrade.

.2 Prime coat: MTO Primer RC-30 or SS-1 to OPSS 1103.

.3 Tack coat: SS-1 to OPSS MUNI 1103.

.4 Asphalt concrete: to OPSS MUNI 1150.

.5 Patching materials: to OPSS MUNI 1153.

.6 Line paint (White): to CGSB 1-GP-74M, alkyd traffic paint.

.5 Geotextile: Woven geotextile: 'Linq GTF200S' distributed by Geosynthetics (613)733-9585, or approved equivalent.

2.2 Plexi-Pave Surfacing

.1 Plexi-pave surfacing: 'Plexicourt LA' standard texture court surface. Phone 1-508-829-0035, e-mail: p.spongberg@plexipave.com
- .1 Underlayment: Acrylotex MA.
- .2 Textured Finish: Acrylotex LA.
- .3 Plexipave colorizer - Basketball
  - .1 Light Green – interior
  - .2 Australian Open True Blue – Court Accents
  - .3 California Red – surround
- .4 Plexipave colorizer - Tennis
  - .1 Australian Open True – interior
  - .2 Light Green – surround
- .5 Approved equivalent.

.2 Linework:
- .1 Basketball: white
- .2 Tennis Court: white
- .3 Pickleball: light yellow
- .4 Colours to be approved

PART 3 - EXECUTION

3.1 Testing / Inspection

.1 Subbase to be inspected by Consultant and/or Owner's Representative prior to proceeding.

.2 Testing to be performed on bases as per 1.4 Testing and Inspections.

3.2 Subbase

.1 Geotextile to be used in areas where subbase is frost susceptible only. Use to be confirmed and approved by Consultant and/or Owner's Representative. Place woven geotextile over approved excavated subgrade with minimal wrinkling. Fabric to be turned up along sides of excavated areas, covering the sides of the base layer. Overlap rolls 600mm. No vehicular traffic to occur over exposed geotextile.

3.3 Site Preparation

.1 Remove obstructions, ice and snow, from surfaces to be excavated within limits indicated.

.2 Cut existing asphalt pavement neatly along limits of proposed excavation in order that surface may break evenly and cleanly.

.3 Remove existing asphalt to limits shown on the drawings and dispose off site to appropriate disposal facility.

3.4 Excavating

.1 Do not disturb soil within branch spread of trees or shrubs that are to remain. If excavating through roots, excavate by hand and cut roots with sharp axe or saw once approval is obtained from the Consultant.

.2 Do not obstruct flow of surface drainage.

.3 Earth bottoms of excavations to be undisturbed soil, level, free from loose, soft peat or organic matter. Hand trim, make firm and remove loose material and debris from excavations. Where material at bottom of excavation is disturbed, compact foundation soil to density at least equal to undisturbed soil to approval of Consultant and Geotechnical Engineer.

.4 Dispose of surplus and unsuitable excavated material to a landfill facility for contaminated soils considered non-hazardous solid waste as approved by the Consultant.

3.4 Pathways, Asphalt Pavement and Sport Surfaces Base

.1 Foundations for pathways comprise:
  .1 150 mm compacted thickness of OPSS 1010 Granular 'A' base.

.2 200 mm OPSS 1010 Granular B Type II .
.3 compacted subbase / approved fill.

.2 Foundations for sports surfaces (basketball and tennis courts) comprise:
.1 300 mm compacted thickness of OPSS 1010 granular 'A' base.
.2 compacted subbase / approved fill.
Or
.1 150 mm compacted thickness of OPSS 1010 Granular 'A' base.
.2 200 mm OPSS 1010 Granular B Type II .
.3 compacted subbase / approved fill.

.3 Construction of granular foundations: OPSS 314.

.4 Compaction: compact each lift of granular material to 100% maximum density to ASTM D 698. Maximum lift thickness: 150 mm.

3.5 Playground Edge

.1 Excavate area as required to install asphalt walkway with 1% slope positive drainage away from the structure.

.2 Asphalt retaining edge to be true and level with constant measurement of 650mm to allow for 600mm of resilient surfacing plus base.

.3 Asphalt rolled edge to extend into the structure area on a 45 degree slope to the bottom of the granular base layer.

.4 Asphalt ramp to extent into the play area with a maximum slope of 5%. Asphalt ramp as per details.

.5 Paint 50mm wide white strip at top of ramp with approved asphalt paint.

3.6 Pavement Thickness

.1 Pavements for pathways:
.1 Base course: 50 mm HL3 of SP 12.5 Asphaltic concrete.

.2 Pavements for sports surfaces (basketball court):
.1 Base course: 50 mm HL3 of SP 12.5 Asphaltic concrete.
.2 Plexi-pave surfacing.

.3 Pavements for playground edge:
.1 Base course: 125 mm HL3 fine.

3.7 Pavement Construction

.1 Application of prime coat: OPSS 302.

.2 Construction of asphalt concrete: OPSS 310.

3.8 Backfilling

.1 Do not commence backfilling until areas of work to be backfilled have been inspected and approved by the City Project Manager.

.2 Areas to be backfilled and backfill material must be free from debris, snow, ice, water or frozen ground.

.3 Prior to installation of granular materials, compact existing subgrade to obtain required bearing capacity. Remove "soft", unstable or weak subgrade materials and fill with approved material.

.4 Place and compact fill materials in continuous horizontal layers not exceeding 150 mm. compacted depth. Use methods to prevent disturbing or damaging buried services. Make good any damage.

3.9 Asphalt Paint

.1 Pavement surface to be dry, free from ponded water, frost, ice, dust, oil, grease and other foreign materials.

3.10 Application: Asphalt Paint

.1 Lay out pavement markings for approval.
- .1 Unless otherwise approved by Consultant, apply paint only when air temperature is above 10°C, wind speed is less than 60km/h and no rain is forecast within next 4h.
- .2 Asphalt traffic paint:
  - .1 Apply traffic paint evenly at rate of 3m² /L.
  - .2 Do not thin paint unless approved by Consultant.
  - .3 Symbols and letters to conform to dimensions indicated.
  - .4 Paint lines to be of uniform colour and density with sharp edges.
  - .5 Thoroughly clean distributor tank before refilling with paint of different colour.

3.11 Application: Plexi-Pave Surfacing

.1 Install as per manufacturer’s specificatons.

.2 Weather limitations
- .1 Do not install when rainfall in imminent or extremely high humidity prevents drying.
- .2 Do not apply unless surface and air temperature are 50°F and rising.
- .3 Do not apply if surface temperature is in excess of 140°F.

.3 Preparation for acrylic color playing system
- .1 Clean surfaces of loose dirt, oil, grease, leaves, and other debris in

strict accordance with manufacturer's directions. Pressure washing will be necessary to adequately clean areas to be coated. Any areas previously showing algae growth shall be treated with Clorox or approved product to kill the organisms and then be properly rinsed.

.2 Holes and cracks: Cracks and holes shall be cleaned and a suitable soil sterilant, as approved by the owner, shall be applied to kill all vegetation 14 days prior to use of Court Patch Binder according to manufacturer's specifications.

.3 Depression: Depressions holding enough water to cover a five cent piece shall be filled with Court Patch Binder Patching Mix. 3 gallons of Court Patch Binder, 100 lbs. 60-80 silica sand, 1 gallon Dry Portland Cement (Type I). This step shall be accomplished prior to the squeegee application of Acrylic Resurfacer. The contractor shall flood all the courts and then allow draining. Define and mark all areas holding enough water to cover a nickel. After defined areas are dry, prime with tack coat mixture of 2 parts water/l part Court Patch Binder. Allow tack coat to dry completely. Spread Court Patch Binder mix true to grade using a straight edge (never a squeegee) for strike off. Steel trowel or wood float the patch so that the texture matches the surrounding area. Never add water to mix. Light misting on surface and edges to feather in is allowed as needed to maintain work ability. Allow to dry thoroughly and cure.

NO WORK FROM THIS STAGE ON SHALL COMMENCE UNTIL AN INSPECTOR HAS ACCEPTED THE SURFACE.

.4 Filler Course. (Acrylic Resurfacer): Filler course shall be applied to the clean underlying surface in one application to obtain a total quantity of not less than .06 gallon per square yard based on the material prior to any dilution. Acrylic Resurfacer may be used to pre-coat depression and crack/hole repairs to achieve better planarity prior to filler course application.

.4 Over a properly repaired surface of asphalt on existing courts, apply one coat of Acrylic Resurfacer according to the following mix:

Acrylic Resurfacer	55 gallons
Water	20 - 40 gallons
Sand	600-800 pounds / 60-80 mesh
Liquid Yield	112-138 gallons

.5 On new asphalt, two coats of Acrylic Resurfacer shall be used to properly fill all voids in the asphalt surface. Use clean, dry 50-60 mesh sand and clean, potable water to make mixes. The quantity of sand and water in the above mix may be adjusted within above limits to complement the roughness and temperature of the surface.

.6 Mix the ingredients thoroughly using accepted mixing devices and use a 70

Durometer rubber bladed squeegee to apply each coat of Acrylic Resurfacer as required.

.7 Allow the application of Acrylic Resurfacer to dry thoroughly. Scrape off all ridges and rough spots prior to any subsequent application of Acrylic Resurfacer or subsequent cushion or color surface system.

.8 Application of acrylic color playing surface

.1 All areas to be color coated shall be clean, free from sand, clay, grease, dust, salt or other foreign matters. The Contractor shall obtain the Engineer's approval, prior to applying any surface treatment.

.2 Blend color base and Plexichrome with a mechanical mixer to achieve a uniform Fortified Plexipave mixture. The mix shall be:

Color Base 30 gallons
Plexichrome 20 gallons
Water 20 gallons

.3 Application shall be made by 50 durometer rubber faced squeegees. The Fortified Plexipave mixture should be poured on to the court surface and spread to a uniform thickness in a regular pattern.

.4 A total of 3 applications of Fortified Plexipave shall be made to achieve a total application rate of not less than .15 gal./sy. No application should be made until the previous application is thoroughly dry.

.9 Line painting

.1 Line shall be 2” wide unless otherwise noted on the drawings. Lines hall be carefully laid out in accordance with ASBA and USTA guidelines. The area to be marked shall be taped to insure a crisp line. The California Line Paint shall have a texture similar to the surrounding play surface. Application shall be made by brush or roller at the rate of 150-200 sg./gal. (3/4 gal. per tennis court).

3.12 Paint Tolerance

.1 Paint markings to be within plus or minus 12mm of dimensions indicated.

.2 Provide templates of turtle markings for approval.

3.13 Protection of Completed Work

.1 Protect pavement markings until dry.

3.14 Restoration

.1 Upon completion of Work, remove waste materials and debris, trim slopes, and correct defects as directed by Consultant.

.2 Reinstate adjacent pavements and sidewalks disturbed by excavation to thickness, structure and elevation which existed before excavation.

.3 Clean and reinstate areas affected by Work as directed by Consultant.

3.15 Surplus Material

.1 Dispose of surplus material not required for backfill, grading or landscaping, off site.

.2 Dispose of material unsuitable for fill, grading or landscaping off site.

END OF SECTION