APPENDIX A-2

FIRE PROTECTION PLAN

Janurary 9, 2004

Letter of understanding between Patrick J. Sweeney, President, MPE, Inc., the developer; Ron Ivie, Fire Marshall/Building Official Park City Municipal; Scott W. Adams, Assistant Chief/District Fire Marshall Summit County; and Peter J. Mulvihil, P.E., Vice President, Operations Manager, Fire Protection Management, Inc., consultant.

FPM®

FIRE PROTECTION MANAGEMENT, INC.
CONSTRUCTION MANAGEMENT CONSULTANTS

January 9, 2004

Ron Ivie
Fire Marshal/Building Official
Park City Municipal Corporation
455 Marsac Avenue
P.O. Box 1480
Park City, UT 84060

TREASURE HILL - PHASE 3
FIRE PROTECTION MASTER PLAN DEVELOPMENT

Dear Ron:

MPE, Inc., plans to develop several new facilities on proposed Lots 8 and 9 to the west of the center of town in a project known as Treasure Hill - Phase 3, also known as the Creole and Mid-station sites of the Sweeney Properties Master Plan. The attached site drawing, dated January 9, 2004, prepared by Eldredge & Nicholson Architects illustrates issues noted below and is hereby incorporated in this Fire Protection Master Plan.

The goal of this letter is to address project-wide fire apparatus access and the City's and fire district's associated life safety concerns.

PROJECT-WIDE GENERAL ISSUES

- Fire Flow. The fire flow provided to this development will utilize the Park City Building Department's calculation procedure to determine the volume of on-line water storage and will use Appendix B in the 2003 International Fire Code (IFC) as adopted by the State of Utah and Park City to determine the minimum flow rate available at a pressure exceeding the 20-pound minimum residual. The calculated fire flow will use a maximum reduction of 50-percent of the flow rate in IFC Table B105.1 instead of the maximum 75-percent reduction allowed in a fully sprinklered building by the exception to IFC Section B105.2. The maximum reduction in fire flow was not taken in order to provide an increase in overall fire protection for this project.

101 CONVENTION CENTER DRIVE, SUITE 650, LAS VEGAS, NV 89109-2001 USA, +1 702 699-5391, FAX +1 702 699-5534
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- Underground Fire Protection Water Mains. A consolidated fire protection water system will be provided to serve all of the buildings on this project. Initially, a separate system supplied solely by a high-pressure municipal system may serve the buildings south of the Town Lift, intended as the first construction phase. This would allow for phased construction with less disruption to protection provided when additional construction phases north of the Town Lift occur. As construction progresses, all buildings will be connected to the consolidated fire protection water system.

- Back-up Water Supply. A second water supply of a limited duration as referenced by International Building Code (IBC) Section 903.3.5.2 will be provided to serve the automatic sprinkler and standpipe systems when construction of buildings north of the Town Lift begins. This back-up water supply will be provided by either a fire pump installation drawing from a dedicated water storage tank or a gravity fed supply fed by a dedicated water supply storage tank with sufficient head to meet the flow requirements. Open ponds or other multiple-use bodies of water such as swimming pools or spas will not be used.

- Evacuation Shelters. The project developer will require the operator of the resort development to establish a program to designate shelter locations attended by trained staff within the resort complex in the event occupants of any multi-residential or public assembly building must be evacuated at any time of the year. The developer shares the City's concern that people are not evacuated from any building and left in the snow during an emergency. Office, restaurant, meeting rooms and other lodging facilities are among the types of facilities that may be used as shelters. A formal plan will be submitted to the Park City Building Inspection Department and the Park City Fire Service District for review, comment and approval prior to the issuance of a building permit for a multi-residential or public assembly building.

- Parking Garage Under Multiple Structures. This project may include developments where more than one residential structure is built over a Type IA underground parking structure. The deck separating the underground parking from the residential structures will comply with the separation requirements for consideration as separate buildings in 2003 IBC Section 508.2. For development purposes a real property line may exist between one or more of the residential structures but the underground parking structures may be interconnected for access purposes. Lighting requirements for parking garages will exceed the one-foot-candle at floor level requirement found in 2003 IBC Sections 1006.3 and 1006.4.

- Garage Ventilation. All enclosed parking garages will be provided with mechanical ventilation meeting the requirements of the 2003 IBC Section 1203.5 as adopted by the State of Utah and Park City. Parking garage exhaust fan status and manual override control will be provided on the Firefighter's Smoke Control and/or Fire Alarm Annunciator graphic panel in the Fire Command Center. These fans will not qualify for nor will they be provided with all of the provisions of 2003 IBC Section 909, but will be able to be manually started or shutoff by responding Fire District personnel.

- Fireplaces. The project will be provided with only gas-fired fireplaces. No wood-burning fireplaces will be provided. Creosote build-up in flues will not be a problem.

- Egress Protection. Exits from buildings will be protected from snow sliding from roofs. Exits will open onto maintained pathways leading to public ways.

- Heavy Timber. Structures within this project may utilize heavy timber elements in otherwise noncombustible Type I and II construction for appearance and structural support purposes. Other combustible construction materials would be limited by the existing 2003 IBC restrictions or prohibitions on combustible materials in Type I or II buildings.

- Centralized Fire Command Center. A centralized Fire Command Center (FCC) meeting the requirements of 2003 IBC Section 911 will be provided at the ground level, east entrance to the Creole parking garage as shown on drawing FD-1. All fire alarm system annunciation, paging (where provided) and access control for the development will be provided in one room of sufficient size to accommodate all equipment and provide at least 96-square feet of clear working space for responding Fire District personnel. Should the Building 1 group of structures be erected first, a temporary FCC will be located in this first phase and later relocated to the central FCC in the Creole garage. Central station service monitoring of the alarm, supervisory and trouble signals from the project will be provided.

FIRE DEPARTMENT ACCESS ISSUES

Several multi-family residential, lodging and commercial/skier services buildings are proposed for this development. The nature of the resort development is to provide for ski-in and ski-out connections with the structures. Existing ski trails for the Park City Mountain Resort that also serve the "Old Town" area cross the project and are an integral component in the project's development. Combined with the natural terrain of the development site, this presents a challenge to provide the fire apparatus access required by 2003 IFC Section 503.1.

A dedicated fire apparatus access roadway is provided from the south end of Lowell Avenue with acceptable pedestrian travel distances to the exterior perimeters of Buildings 2, 3b and 3c. Buildings 3a, 4a, 4b and 4c have access provided to one side with travel distances over 150-feet, but not exceeding 340-feet, to any point on the exterior of the respective buildings.

Buildings 1a, 1b, 1c, 5a, 5b, 5c and 5d are served by access through underground access tunnels or high-bay parking garages or surface routes with travel distances not exceeding 368-feet from the point where fire apparatus may stage exterior to the underground structures to any exterior point on the buildings. Buildings 5b and 5d are accessed as noted above with the provision of plaza access through Buildings 5a and/or 5c. Access for medical emergencies is provided to each building either on one immediate side or through underground high-bay parking structures or access tunnels.

All fire apparatus access roadways and building egress pathways, with the exception of the driveway serving Buildings 1a, 1b and 1c, will be provided with a snowmelt system. A contracted snow removal service with an area designated for snow disposal will be provided for the driveway serving Building 1a, 1b and 1c. A deposit account with the City will be required from the homeowners' association to allow the City to plow the driveway if the homeowners' association fails to do so in a timely manner.

During construction, temporary at-grade access across existing ski trails during the winter months will be available as the trails may be closed for a season in an agreement with the resort. Summer access across ski trails during construction periods will also be available.

Several building sites will be provided with access on only one side, in some cases access will be on the up-hill side and in some cases access will be on the downhill side of the structures.

For those buildings other than townhouses and detached dwellings that cannot meet the requirements of a 150-foot travel path from a fire apparatus access roadway to any portion of the grade level exterior wall of a building, the following will be provided:

- Fire Equipment Caches. Emergency rescue and fire equipment caches will be provided by the building's developer in strategically placed locations in the building. Equipment inventories will be developed with the Park City Fire Service District. Equipment caches such as these will enable fire district personnel to respond quicker without the need to shuttle equipment long distances through the building. Equipment placed in these cache locations would be under the exclusive control and maintenance of the Fire District and would meet the specifications and requirements of the Park City Fire Service District.

- Type of Construction. The type of construction for each building will vary at the discretion of the Architect. In all cases, the minimum type of construction for a given occupancy, size and height specified in the 2003 IBC will be provided. Furthermore, buildings with more than three stories above or below the fire department's access level will use only noncombustible construction, heavy timber construction or a combination involving noncombustible and heavy timber construction.

- Automatic Sprinklers. Automatic sprinkler systems will be installed throughout the building as required by 2003 IBC Sections 403.2 and 903. In addition, the design of the sprinkler systems will comply with the current edition of NFPA 13 as opposed to standard NFPA 13R. The hydraulic design criteria in the current edition of NFPA 13 at the time of construction of each structure will be applied to that structure. Only quick response-type sprinklers will be used in these systems. All decks and balconies with overhangs, eaves or other fixed obstructions above will be provided with automatic sprinkler protection even if NFPA 13 would allow for their omission.

- Exterior Standpipe Connections. For Buildings 5a, 5b, 5c and 5d, exterior standpipe connections will be provided outside the entry doors to each building with a fire department connection(s) located on the nearest fire apparatus access roadway with a fire hydrant suitable for pumper operations located within 50-feet of the connection. Exterior standpipe connections will be fed by an automatic wet design with a manual shutoff valve located in a heated area.

- Standpipe Systems. Standpipe systems meeting the requirements of 2003 IBC Section 905 will be provided in all stairways serving three or more floor levels regardless of building height and will be supplied by both municipal water supplies and the backup water supply criteria found in 2003 IBC Section 903.3.5.2. Exterior standpipe systems located to the satisfaction of the Park City Fire Marshal and the Park City Fire Service District will be provided to serve Buildings 1b, 1c, 5b and 5d.

- Smoke Control. High-rise buildings no longer are mandated by the 2003 IBC to be provided with a smoke control system. However, in order to provide an alternate design to alleviate the obstructed access, a smoke management system in conformance with 2003 IBC Section 909 will be developed for each building with access limitations. The design of each building's system will be based on a case-by-case study of each building. For multiple level buildings up to and including four stories in height with access limitations, pressurized stairways in conformance with 2003 IBC Section 909.20.4 or 909.20.5 will be provided.

Each specific project will be analyzed for the most appropriate design approach, which may include substantially upgrading construction type, provision of a smoke management system, or a combination of the two. The actual design criteria for each building will be established in cooperation with the Building Department and the Fire District in a Fire Protection Outline and Code Analysis Report prepared prior to issuance of a building permit. Testing and acceptance of these systems will involve both agencies.

- Medical Access. Primary exit stairways will be sized to accommodate the movement of emergency medical personnel, equipment and gurneys. At least one elevator serving all floor levels in each building regardless of the number of stories involved will also meet or exceed the stretcher size requirements of 2003 IBC Section 3002.4. Access driveways used for medical access to this elevator will be provided with a minimum 10-foot clear height. An alternate vehicle access way will be provided if travel distance from the vehicle drive to this elevator will exceed 100-feet.

- Garage Access. Directional and clearance signage will be provided throughout the garage structures on this project. Building name, address and other features will be included. A wayfinding sign package detailing the signage design and placement will be included in the architectural submittals for each project for review and acceptance by the PCFSD and PCBD.

- Designated Parking Area. Parking spaces and access routes for PCFSD will be designated throughout the project. Details will be included in the architectural submittals for each project for review and acceptance by the PCFSD and PCBD. A tow service will be arranged with formal, recorded agreements referenced in the homeowners' association CC&R's.

- Pass-Through Access. Where an at-grade or below-grade parking garage is provided, a pass-through access route will be available to reach the far side of the building. The route may include access to stairways or travel through an intervening room. The firefighter access route will be marked as required by the Fire District. The parking garage will be separated from the remainder of the building by a fire-resistive deck providing added protection to Fire District personnel in the event of a fire on an upper floor level.

- Roof Access. The roofs of each multi-story building, with the exception of townhouse structures, will be provided with access doorways as necessary to reach all roof levels. Furthermore, if any point on a roof of a building required to have a roof access stairway is more than 150-feet from the access stairway door, then a second roof access stairway will be provided. The architect will work with the Building Department and the Fire District to best determine the locations for these access points during the detailed design of each building structure.

- Roof Coverings. Only Class A roof coverings will be used on any structure on this project.

- Defensible Wildland Space. Defensible space and wildland interface considerations will be incorporated in each building's design and landscape plan.

- Maintenance of Protection Systems. Qualified individuals acceptable to the Utah State Fire Marshal, Park City Fire Service District and Park City Municipal Corporation will regularly test all active fire protection and life safety systems and devices in accordance with applicable codes and standards. Since the maintenance and testing requirements for each building will vary depending on the protection systems installed in each structure, a maintenance and testing program will be outlined in detail by the responsible designer at the time of building permit application for the respective structure. Records of all maintenance and testing will be forwarded to the City and Fire District as well as retained on site and presented to local and state authorities upon request.

Due to the extent of the built-in fire and life safety protection features, the increased automatic sprinkler system design standard, the provision of smoke management systems, the Fire District's access through a parking level, the placement of fire and emergency equipment caches, use of Class A roof coverings, additional roof access provisions, installation of snowmelt systems in driveways and egress pathways, wildland defensible space and given the existing topography of the site, approval of your department to modify the 150-foot travel distance as allowed under Exception No. 2 to IFC Section 503.1.1 is requested.

RECORDATION

The parties agree to record this Fire Protection Plan or a reference to this Fire Protection Plan at the time of plat recordation.

CONCLUSION

These combinations of features should provide an acceptable level of protection from fire and other hazards for building occupants, resort staff, visitors and responding Fire District personnel.

We look forward to working with the Park City Building Department and the Park City Fire Service District in the development of this project. Review of detailed building plans will be conducted with the City's and the Fire District's Fire Marshal prior to submittal for building permits to ensure compliance with the wording and intent of this Plan. If you concur with the design approach as detailed for this project, please return on copy with your approval noted below. Thank you for your assistance in developing the fire and life safety criteria for this project.

Prepared by:

FIRE PROTECTION MANAGEMENT, INC.

Peter J. Mulvihill, P.E.
Vice President, Operations Manager

9 January 2004
Date

Prepared for:

MPE, INC.

Patrick J. Sweeney, President

14 January 2004
Date

Accepted by:

PARK CITY MUNICIPAL CORPORATION

Ron Ivie, Building Official/City Fire Marshal

1-20-04
Date

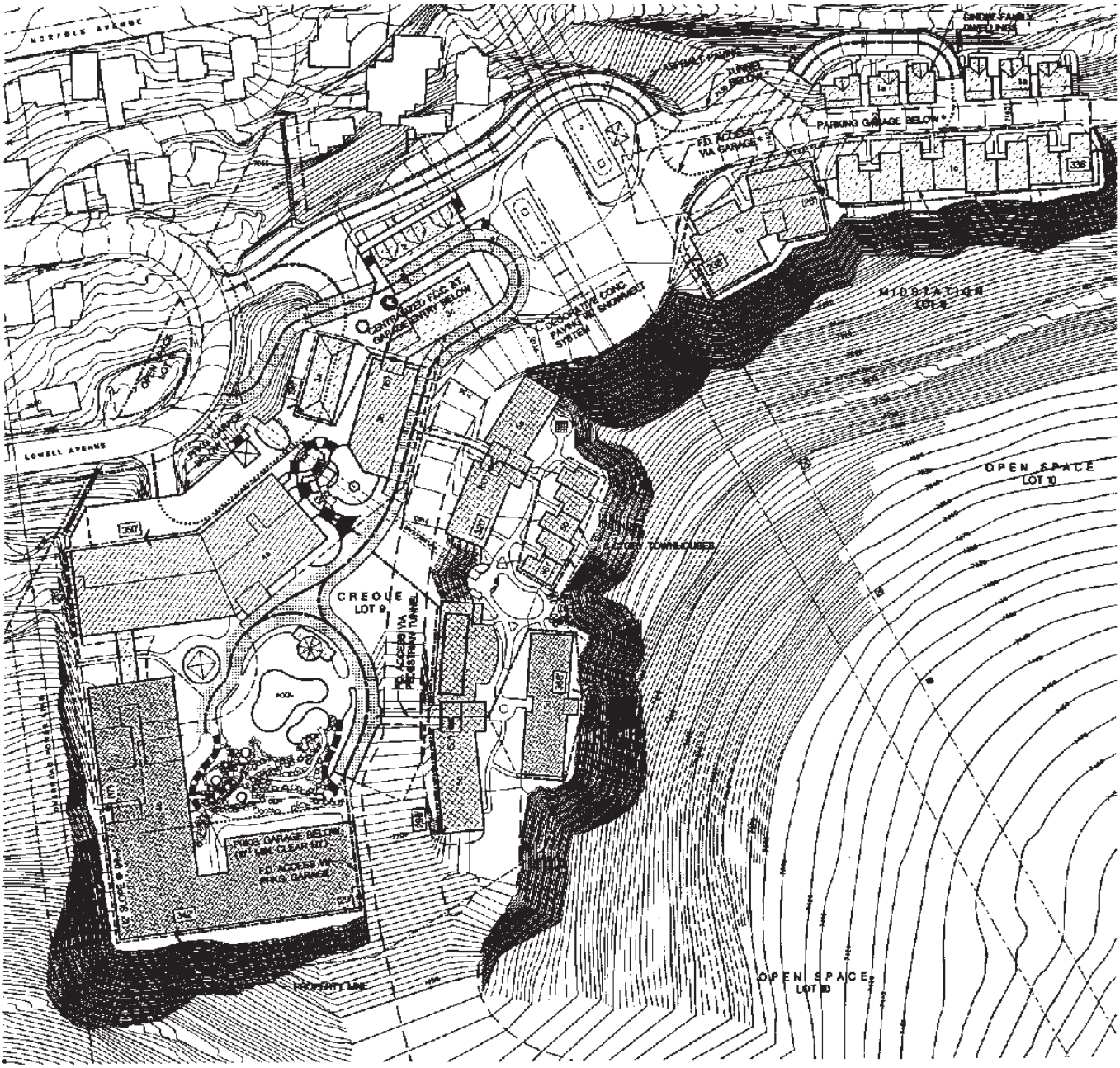
PARK CITY FIRE SERVICE DISTRICT

Scott W. Adams, Asst. Chief/District Fire Marshal

1-20-04
Date

PJM/AJV:pm
Z22345/Fire master plan 010904

Fire Department Access Plan/Phase 3



NORTH
SCALE: NONE
DATE: 1/9/04

ELDREDGE & NICHOLSON
ARCHITECTS
175 WEST 200 SOUTH
SUITE 3004
SALT LAKE CITY, UTAH 84101
(801) 363-4667 FAX: (801) 355-9996

LEGEND

- EXTERIOR VEHICULAR ACCESS
- INTERIOR VEHICULAR ACCESS
- 255 (H) — Total Distance (including Vertical Circ.) / Stair & Height Difference — FIREFIGHTERS ACCESS ROUTE
- EQUIDISTANT ALTERNATIVE ROUTE

NOTE: CLEAR HEIGHT IN TUNNELS AND GARAGES DESIGNATED WITH ASTERISK (*) 14'-0" MINIMUM.

- LOW-RISE BUILDING (1-3 Stories)
- MID-RISE BUILDING (More Than 3 Stories But Not Qualifying As High-Rise)
- LOW/MID-RISE CONSTRUCTED TO COMPLY W/ HIGH-RISE REQTS (Limited Accessibility)
- HIGH-RISE BUILDING (Highest Occupied Floor More Than 75' Above Vehicle Access Elev.)