



殊像寺干预史

History of Interventions

殊像寺干预表 (自1774年至今)
Table of Interventions (1774 to the present)

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殊像寺干预史

HISTORY OF INTERVENTIONS

前言

殊像寺自1744年建成至今（2004年），历经了多次修缮和改造，也经过了失修乃至废弃，而后又逐步修复的过程，其中人为干预从未中断。“干预”指对遗址本体和环境的原状及原貌所作的人为的改造，包括各种保护措施、发掘，建造现代化的建筑或添加物，人为的故意破坏以及各种规模的修缮工程。干预的概念和含义还包括自然灾害以及它们给遗址带来的损害。遗址的干预史是了解遗址的重要信息来源之一。通过这些资料我们可以掌握遗址现状，分析有关数据，并对遗址的多方面价值进行评估。根据上述有关“干预”的概念，本项目对殊像寺干预史的研究是多方面的，其中包括对承德的历史档案、历史文献和照片的研究，以及对多名在职和退休员工的采访记录。

下表按照时间的顺序将殊像寺干预史的摘要罗列出来。当然，今后还需要大量的研究工作才能进一步澄清许多已知的、但没有留下记录的干预活动。表后附有殊像寺现代干预图，该图将现代干预活动用红色标明出来。其后为殊像寺干预活动的老照片。

Introduction

The history of interventions at Shuxiang Temple began soon after the original construction of the complex in 1774 with repairs and alterations, and continued through abandonment and gradual rehabilitation, until the present day (2004). Interventions refer to human changes, including conservation measures, excavations, construction of modern buildings and features, vandalism, and any other works (large or small) that have altered the original construction and appearance of the site or its setting. Interventions may also include natural disasters or impacts. The history of interventions provides one of the most valuable sources of information for understanding the current condition of the complex and interpreting the analytical data, and for assessing the significance of the site. Information was gathered from the Chengde archives, historical documents and photographs, and interviews with present and former staff.

The table that follows places this information in summary form and in chronological order. There is considerable additional research that should be undertaken to clarify many of the repairs recorded in the table and to provide further information on other interventions known to have taken place but for which no record has been found. [The English table follows after the Chinese.] A site plan with modern interventions highlighted follows the table and precedes a selection of historical photographs depicting modern site intervention activities.

殊像寺干预表（自1774年至2004年）

清代		
日期	干预活动、事件	来源、备注
1774年4月 19日（乾隆三十九年）	开始兴建殊像寺主体建筑。	第一历史档案馆
1774年9月 29日（乾隆三十九年）	殊像寺后楼头亭（指清凉楼）改筑绿色琉璃瓦边。	费用见附件1
	添盖僧房共十五间。	费用见附件1
	山门前添青白石狮子一对，红砂石海墁二块，角门前冰纹甬路二道。	费用见附件1
	西大墙随墙门口改盖门楼一座 随墙外添盖看守房共12间。	费用见附件1
	其他添设物： ——会乘殿和宝相阁添设龙匾二面， ——各殿添设素线斗字匾共十面， ——会乘殿内添设供柜三张、藏经杉木夹板经板各二百十六块、经柜添锭黄铜什件二十二分。	费用见附件1 现在门楼无遗存， 院墙中的过木可能标志门楼原来位置
	——经堂（可能指演梵堂）添设经桌六十四张，经床六十四张 ——斋堂内添斋桌一百张。	费用见附件1
	——会乘殿添设写泥金字藏经。	费用见附件1
	——拆挪山门前民房九十间。	费用见附件1
1775年5月 1日（乾隆四十年）	宝相阁修筑铜镀金宝顶等。 紫坛木龕二座，修缮铜脊兽二份，砚盒上掐丝珐琅座二分。	费用见附件1
1775年	香林室和倚云楼渗透，檐望槽朽，东西配殿大脊歪闪。	
1804年（嘉庆九年）	拆修殊像寺庙外堆拨房二间。	第一历史档案馆工程档卷二

1805年11月29日（嘉庆十年）	<p>会乘殿：</p> <ul style="list-style-type: none"> ——挑换会乘殿椽飞望板 ——拆去旧礅墩、拦土 ——周围台帮包砌大料石二进 ——山檐墙上身改为青城砖 ——后檐拆去山石沟帮，改安大料石。 ——拆修山门三间 ——揭瓦天王殿五间、东西配殿（面月和指峰）六间 ——夹陇经堂十间，钟鼓楼二座 ——粘修第一院角门四座，拆砌膨胀裂闪墙四段 ——用石灰和红色灰拘抿抹饰墙六段，长三十四丈八尺八寸。 	<p>第一历史档案馆工程2卷二： 耗费工料银五万六千八百八十六两四钱七分，另取用围场木植银二千四百四十九两七钱二分四厘。</p>
1806年6月11日（嘉庆十一年）	<ul style="list-style-type: none"> ——揭瓦殊像寺堆拨房四间 ——补砌大墙一段，长四丈一尺。 	<p>第一历史档案馆工程档第2卷： 与其他寺庙修缮工程共耗银一万七千五百六十八两八钱五厘</p>
1819年4月28日（嘉庆二十四年）	<p>殊像寺僧房十一间头亭渗漏，椽望糟朽，山墙闪裂，有关部门把这些问题上报工程处。</p>	<p>第一历史档案馆工程档卷三</p>
1820年至1914年	<p>这时段没有修缮记录或资料。</p>	
1914年至2004年		
日期	干预活动、事件	资料来源、备注
1914年	<p>据说，姜桂题盗走了会乘殿中的许多珍贵物品，其中包括很多金、玉、翠质佛像以及皇帝幼年使用过的银碗、筷子、盆等。</p>	<p>《殊像寺殿堂内部陈设物和塑像调查报告》</p>
1926年	<p>据说，热河都统汤玉麟盗走了许多珍贵物品，其中包括99颗珍珠、小佛像730尊、五供一套、画卷等，拆毁了馥香堂和演梵堂。</p>	<p>《殊像寺殿堂内部陈设物和塑像调查报告》</p>
1933年	<p>日本军队占领承德，在此期间一部大藏经被拿走了。</p>	<p>《殊像寺殿堂内部陈设物和塑像调查报告》</p>
1934	<p>关野贞和竹岛卓一两名日本学者对殊像寺现状进行拍照和描述。</p>	<p>《热河》卷四中照片</p>

1942年10月 5日	日本人五十岚牧太对殊像寺现状进行了拍照和描述。	《热河古迹与西藏艺术》文字与照片
1947年	国民党十三军拆毁僧房几十间并砍伐古树，在此期间，殊像寺的陈设物可能有所丢失。	《殊像寺殿堂内部陈设物和塑像调查报告》
1950年	对殊像寺进行普查和现状勘测： ——山门一座，后檐坍塌 ——天王殿五间，坍塌四间，破烂不堪 ——钟鼓楼坍塌 ——会乘殿后坡坍塌，群墙破坏，门窗不全 ——东西配殿二座，坍塌无存 ——宝相阁坍塌情形严重， ——吉晖殿、慧喜殿、指峰殿、面月殿、清凉楼、倚云楼等建筑坍塌无存，群墙不齐。	外八庙资料室《殊像寺调查记录》
1954年	河北省文物局拨款52628.27元修缮殊像寺。	《殊像寺调查记录》
1954年	殊像寺演梵堂后面的三间偏房被殊像寺村委会占用，建成殊像寺小学，小学于1986年从寺庙迁出。	《殊像寺调查记录》
1956年	河北省文化局文化处处长戴书泽亲自主持了殊像寺会乘殿的修复工程，参与工程维修任务的还有原市政处302工地工长关怀卿。据关师傅介绍，工程于1956年秋季动工，1957年春季换瓦，更换会乘殿全部椽飞望板，更换檩子和上、下檐角梁。上檐子、老角梁均更换过，下檐东西两侧除一根子角梁外，其余角梁全部更换。殿顶部分琉璃瓦片已经破损，更换了部分新瓦。殿顶脊兽、兽吻仍为原样。	《会议纪要》 ——与古建筑专家谈殊像寺的修缮
1959年5月 18日	承德市文物局古建队对殊像寺山门、两侧围墙及钟鼓楼进行维修，对残破的建筑拍照存档。1959年7月份拍摄的照片主要题材为宝香阁维修工程情景，但是‘调查记录’没有提到此工程。	《殊像寺调查记录》 1959年7月照片 (承德市文物局)
1967年3月	承德市文物局古建队对宝相阁进行保护性落架拆除。把大木材存放在储材厂，之后又将濒坍的天王殿保护性落架拆除。	《殊像寺调查记录》
1968年至 1972年	据费雷，文革期间殊像寺遭到大炮破坏，只剩下会乘殿。	《测绘承德》费雷，1999年出版
1972年	在天王殿两侧新建两幢房屋作为殊像寺小学教室，1986年校舍搬迁。（尚未清楚这些建筑物是否1972年照片中所拍摄的建筑）。	《殊像寺调查记录》

1972年	<p>——7月将殊像寺现有建筑及已坍塌建筑物的基址进行拍照存档</p> <p>——10月把殊像寺每年阴历腊月初八用来煮“腊八粥”的铜锅从饌香堂移至普宁寺大雄宝殿院内，此锅直径2.41米，锅深1.33米，壁厚6厘米，由88块铜块铸接而成（现用来蓄水防火）。</p>	《殊像寺调查记录》
1975年8月	承德市文物局古建队对殊像寺山门进行维修。当时门殿因年久失修，瓦顶渗漏，椽飞望板遭朽，檐部塌落。进行了补换大木、斗拱，撤换并重新安设椽飞望板、连檐及瓦口。	殊像寺山门建筑登记表 卷内目录号：二三一第8-1号
1982年至1983年	承德市文物局古建队修复殊像寺钟、鼓二楼。撤换全部椽飞望板、连檐及瓦口等。	钟鼓楼建筑登记表，钟鼓楼修缮记录表，卷内目录：二三五六，第8-5/6号
1982年至1984年	<p>文物局古建队重建殊像寺庙围墙。采取原作法，用毛石垒砌，东、西、北墙墙顶砌抹灰馒头顶，西部山坡挖土处砌毛石护坡，东部挖窖处加筑混凝土、毛石基础及护坡。</p> <p>在清凉楼的北墙基址上所建造的北部围墙大概是在这一时段完成的（除了寺庙围墙的建筑施工图以外，没有其它现存纪录；见《殊像寺简述》：建筑施工图1），在（日）关野贞1933年的遗址平面图上有北部围墙的标志。</p> <p>宝相阁附近的云来殿基址上建了石灰熟化池（没有记录）。</p> <p>西部围墙中的消防门以及从天王殿通往宝相阁的消防道大概也是在这一时段建造的（没有记录）。</p>	庙墙重建工程——修缮记录表 卷内目录：二三一第8-1号
1982年7月23日	河北省人民政府公布殊像寺为省级重点保护单位。	《殊像寺调查记录》
1983—1984年	<p>承德市文物局古建队对殊像寺庙内及后部清凉楼等处进行基址清理。</p> <p>——会乘殿一些隔扇的菱条可能被换了（根据1981年照片观察，很多隔扇缺菱条或菱条遭到破坏）。</p>	基址清理修缮记录表 卷内目录：二三一第8-1号
1987年	承德市文物局购置消防器材并安装避雷针，同年成立了殊像寺文保所，王淑珍担任所长。	《殊像寺调查记录》
1988年1月13日	国务院公布殊像寺为第三批全国重点文物保护单位，并将汉白玉做的保护单位标志嵌在山门墙壁上。	《殊像寺调查记录》
1991年初	依据《中华人民共和国文物保护法》和《河北省文物保护管理条例》划定殊像寺保护范围（重点保护区和一般保护区）。	《殊像寺调查记录》

1992年	河北省所设立了文物保护范围与建设控制地带	
1994年初	承德避暑山庄及周围寺庙确定为世界遗产。 殊像寺向游人开放，罗旭担任所长。 遗址东北区的松树可能是在这一时段种的（没有记录）。	《殊像寺调查记录》
1996年	殊像寺停止向游客开放。	
1998年7月	对寺庙内部古松安装避雷针并做了安全加固支架。	《殊像寺调查记录》
2001年7月	宝相阁内三尊佛像的残余部件由承德双滦金纺创意工作室修复，于2002年10月22日完工，并安装完毕。至此，宝相阁修缮复原工作顺利竣工，历时两年零七个月。	
2002年5月	2002年5月承德市文物局与美国盖蒂保护所，按照《中国文物古迹保护准则》展开合作，将殊像寺列为落实《准则》的古建保护试点。	
2002年	采用水泥铺设冰纹石道路。	
2002年10月	盖蒂保护研究所采取会乘殿的彩画、木材及现代漆样品进行分析（见有关文件）。	
2003年7月	河北省第十届人大常委会委员批准《承德避暑山庄及周围寺庙保护管理条例》。	
2003年9月	盖蒂保护研究所采取会乘殿彩画的样品进行分析（见有关文件）。	
2003年10月	盖蒂保护所对会乘殿的彩画、木材及现代漆材取样。	
2003年11月	基址上大量的植物被清除（尤其在北部的3号区）以准备进行基址发掘。 对5号区内的清凉、六方亭、倚云楼、香林室、四方亭、灶房、上房、值房等地点进行发掘；在4号区和5号区挖掘探沟。 扩大了会乘殿东侧（清代值房内）的蓄水池（尚未竣工）。	

2004年5月	<p>会乘殿的南、东侧安装了脚手架以调查彩画现状；防鸟网被卸下来以进行彩画调查，调查结束之后重新安装防鸟网。盖蒂所对彩画、木材及地仗取样以进行分析（见有关文件）。</p> <p>在4号区靠近遗存的原僧房的位置建造犬窝。</p> <p>车辆使用的消防门改用了鲜艳的红漆，铺设水泥道路。</p> <p>4号区内西南部开始种菜。</p>	
2004年7月	<p>在会乘殿对木材取样，在第5院（1号区）对已死松树取样。</p>	
2004年秋季	<p>在山门前构筑水泥障碍物阻止车辆在清代的海墁上行驶</p> <p>在庙内设置厕所标志与防火标志</p>	
2004年5月	<p>盖蒂保护研究所采取彩画、木材及地仗样品进行分析（见有关文件）。</p>	
2004年11月	<p>召开3天的专家组会议，讨论《评估报告》所提出来的问题，并且讨论殊像寺项目今后的发展方向。</p>	
2004年12月	<p>完成倚云楼、清凉楼和御厨房基址的回填。</p>	
2005年9月-10月	<p>村子道路延伸到庙前</p> <p>在会乘殿东立面架设脚手架；对东立面彩画进行现场处理的定点试验</p> <p>对会乘殿内的陈设物与装饰物进行定点清洁试验</p> <p>区域5文保所的菜窖坍塌与进行了修理</p> <p>在区域5靠着围墙修建一个木棚作为野外试验室与储藏室</p> <p>在区域5设置木材涂料试验样品</p> <p>将庙内消防道路改到演梵堂北边，以避开天王殿基址</p>	

TABLE OF INTERVENTIONS (1774 TO THE PRESENT)

Qing Dynasty		
Date	Interventions and/or Activities	Source/Notes
1774, 19 Apr (Qianlong 39th year)	Construction begins on the main buildings of Shuxiang Temple.	No. 1 Historical Archives [no volume listed]
1774, 29 Sept (Qianlong 39th year)	Edging tiles on roof of “back building” replaced with green glazed tiles. [Actual building unclear; may refer to Qingliang]	For costs see Appendix 1.
	Added three lodgings for monks, totaling 15 rooms.	For costs see Appendix 1.
	In front of Shanmen, added a pair of stone (<i>qingbaishi</i>) lions, and two red sandstone carved pavers at center of ramp; in front of the side gates crazy-paving was laid.	For costs see Appendix 1.
	In the gate of the western enclosure wall a covered gatehouse building was constructed.	For costs see Appendix 1. No evidence of a gatehouse exists now; its probable location is marked by a timber member integrated in the masonry wall.
	Added 6 <i>kanshoufang</i> (guard houses) totaling 12 rooms outside the enclosure wall.	
	Other additions: -Two wooden tablets with carved dragons were added to the Baoxiang Pavilion; -In other halls 10 simple wooden tablets for names (<i>suxian douzi bian</i>) were added; -In Huicheng Hall 3 altar tables; 216 carved wooden book covers made from fir wood for the scriptures; and 22 sets of copper knobs were added to sutra cabinets.	For costs see Appendix 1.
	-In the chanting hall [perhaps Yanfan Hall] 64 scripture tables and 64 benches were added; -Zhai Hall was furnished with 100 meal tables.	For costs see Appendix 1.
	-100 scriptures written in gold ink were placed In Huicheng Hall.	For costs see Appendix 1.
-90 private dwellings in front of Shanmen facing the mountain were demolished and relocated elsewhere.	For costs see Appendix 1.	
1775, 1 May (Qianlong 40th year)	Added gold leafed bronze roof ornaments (<i>baoding</i>), etc. for Baoxiang Pavilion.	For costs see Appendix 1.
	Added two gilded Buddhist idol niches of red sandalwood (<i>zixiangmu</i>); two roof ridge animals in bronze repaired; two ink-stone boxes with filagree enamel added.	

1775	Xianglin Room and Yiyun Building had leakage problems and decayed roof beams. Main ridge beam (<i>daji</i>) in side halls to east and west were deformed.	
1804, (Jiaqing 9th year)	Disassembled and repaired two guardhouses outside the temple wall.	Second Volume of the Gongcheng archives at the No. 1 Historical Archives, Beijing
1805, 29 Nov (Jiaqing 10th year)	<p>Huicheng Hall:</p> <ul style="list-style-type: none"> -replaced the rafters, flying rafters and roof boarding -removed the old column bases, columns and brick foundations (<i>lantu</i>); -two stones (one vertical and one horizontal) of platform were replaced (<i>daliaoshi</i> -ashlars); -top of the gable wall was replaced with grey bricks; -the rear facade platform had the 'rockery stones' removed and replaced with ashlar (<i>daliaoshi</i>) [possibly to create a channel and remove large joints where water penetrated]. <ul style="list-style-type: none"> -Shanmen was dismantled and restored; -the tiles replaced on five bays of Tianwang Hall; -tiles replaced on six bays in the eastern and western side halls of Huicheng [Mianyue and Zhifeng]; -mortar for tiles replaced on roofs of side halls of Heavenly King [Yanfan Hall and Zhuanxiang Hall?] and Bell and Drum Towers; -four corner doors (<i>Jiaomen</i>) of the 1st courtyard were repaired (<i>nianxiu</i>) and four sections of damaged enclosure wall [of the courtyard] were repaired; -Six sections of the wall [courtyard or perimeter wall?] some 34 <i>zhang</i> 8 <i>chi</i> and 8 <i>cun</i> long were repaired using lime and red stucco and recoated. 	<p>Second Volume of the Gongcheng archives in the No. 1 Historical Archives, Beijing</p> <p>Total cost of labour and materials 56886.27 taels of silver. Wood taken from around the temple equals 2449.72 taels of silver in value</p>
1806, 11 Jun (Jiaqing 11th year)	<ul style="list-style-type: none"> -Replaced roof tiles in the four guardhouses outside Shuxiang Temple; -Repaired and replaced bricks in a section of the enclosure wall 4 <i>zhang</i> and one <i>chi</i> long. 	<p>Second volume of the Gongcheng archives in the No. 1 historical archives.</p> <p>Along with expenditures on other temples, it amounts to 17568.85 taels of silver</p>
1819, 28 Apr (Jiaqing 24th year)	The roof in eleven of the monks' rooms leaked when it rained and the rafter beams (<i>chuanwang</i>) were decaying. There were cracks in the wall. These were reported to the General Engineering Department.	Volume 3 of the Gongcheng archives in the No. 1 Historical Archives
1820-1914	No records or information available for Shuxiang Temple.	

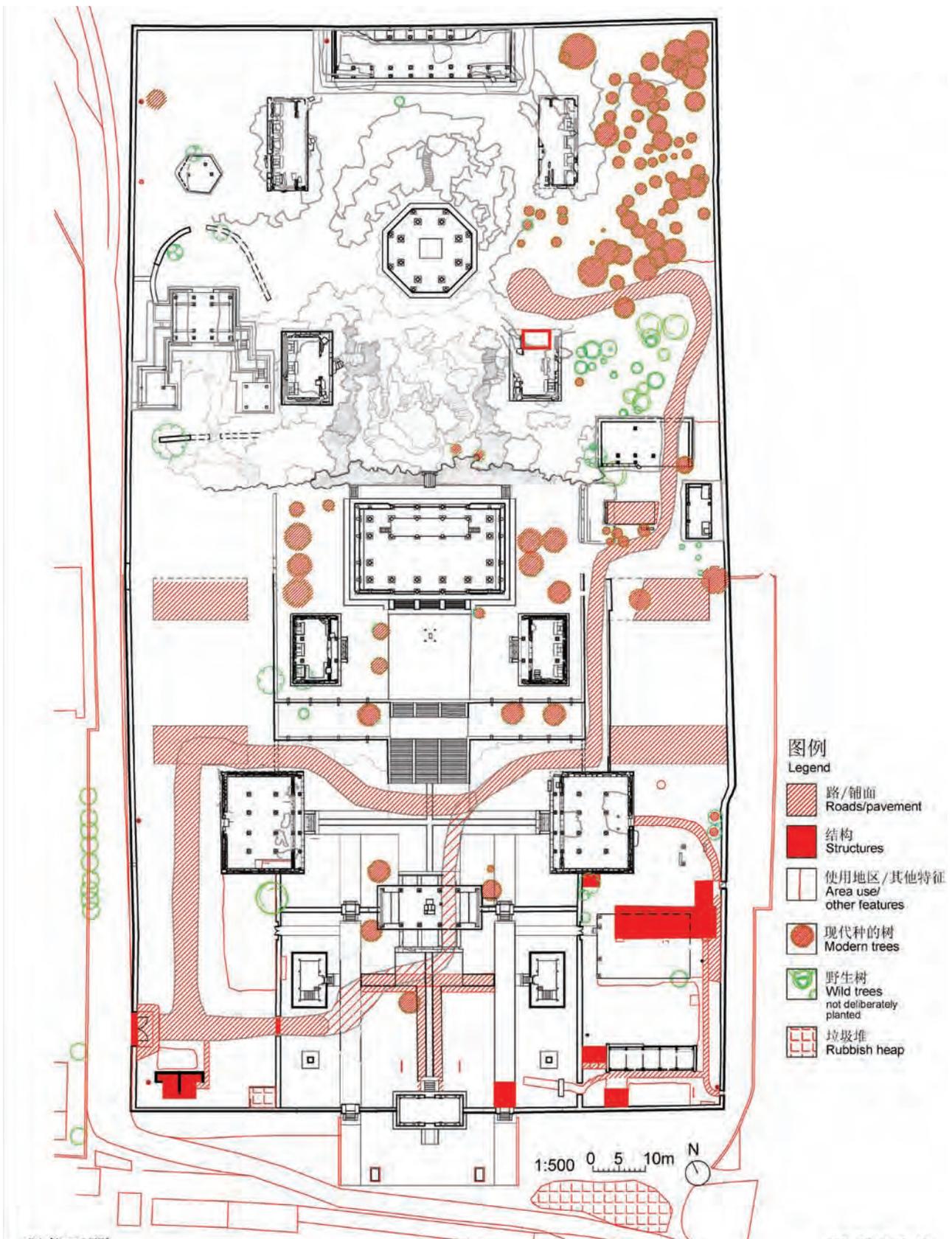
1914-present		
Date	Interventions and/or Activities	Source/Notes
1914	Jiang Guiti purportedly removed valuable contents from Huicheng Hall, including gold and jade Buddhist images, and the gold bowls, chopsticks, and plates used by the Emperor.	Report on Interior Statues and Furnishings
1926	Tang Yulin, Governor of Rehe, purportedly removed valuable items, including 99 pearls, 730 statuettes, one set of the Five Offerings, scroll paintings, and destroyed Zhuanxiang and Yanfan Halls.	Report on Interior Statues and Furnishings
1933	Japanese military occupied Chengde. One complete set of the <i>Tripitaka</i> removed during this period.	Report on Interior Statues and Furnishings
1933	Two Japanese researchers, Sekino Sada and Takeshima Souichi, conducted photographic survey and mapping, and described Shuxiang Temple.	Photos in Rehe, volume 4
1942, 5 Oct	Japanese Igarashi Makita photographed and described Shuxiang Temple.	Rehe Site and Tibetan Arts text and photos
1947	The 13th KMT Army tore down more than 20 monks' rooms and cut down many of the old trees. Loss of additional furnishings likely at this time.	Report on Interior Statues and Furnishings
1950	Conducted condition assessment and inventory (<i>pucha</i>) of all buildings: -Rear eave (<i>houyan</i>) of Shanmen collapsed. -Tianwang Hall had five bays, 4 collapsed and one severely deteriorated. -Drum and Bell Towers were collapsed. -Rear eaves of Huicheng Hall deteriorated and collapsed; some doors and windows lost. -Baoxiang Pavilion severely collapsed. -Jihui, Huixi, Zhifeng, and Mianyue Halls, and Qingliang and Yiyun Buildings: parts of their walls collapsed.	Shuxiang Temple Inventory Record, Outlying Temples Information Room
1954	Cultural Heritage Bureau of Hebei allocated RMB 52,628.27 for repairing Shuxiang Temple.	Shuxiang Temple Inventory Record
1954	Three buildings behind the Yanfan Hall were occupied by the Shuxiang Temple Village Committee and were converted into the Shuxiang Temple Elementary School. The school was removed from the temple in 1986.	Shuxiang Temple Inventory Record

1956	<p>Director of Culture Division of Culture Bureau, Mr. Dai Shuzhe was in charge of the restoration project for Huicheng Hall. Mr. Guan Huiqing, Director of the 302 Work Site project of the Municipal Affairs Division, was also involved in the restoration project. According to Mr. Guan, the project was started in fall of 1956. In spring of 1957, the roof was re-tiled; all rafters, flying rafters and roof boards were replaced; purlins, and corner beams of upper and lower eaves were replaced. The upper eave corner beams have all been replaced. The lower eave corner beams (of east and west sides) were all replaced, except one corner beam. Part of the glazed tiles were replaced. The animal figures at roof ridges and the ridge-end ornaments were not replaced.</p>	<p>Meeting record---interviewed with ancient architecture experts about the restoration of Shuxiang Temple</p>
1959, Spring	<p>The ancient architecture construction team of Cultural Heritage Bureau repaired Shanmen, enclosure walls on either side, and the Drum and Bell Towers, and took photos of the deteriorated buildings.</p> <p>July 1959 photos show repair of Baoxiang Pavilion, but there was no reference in inventory record.</p>	<p>Shuxiang Temple inventory record July 1959 photos in Chengde Cultural Heritage Bureau archives.</p>
1967	<p>The ancient architecture construction team of the Cultural Heritage Bureau disassembled Baoxiang Pavilion to conserve its remains. The wooden materials were numbered and stored. In May, the team also disassembled the nearly collapsed Tianwang Hall for the same purpose.</p>	<p>Shuxiang Temple inventory record</p>
1968-1972	<p>According to P. Forêt, 'During the Cultural revolution, artillery exercises so badly damaged the Manjusri temple that only Huichen [<i>sic</i>] hall has remained.'</p>	<p>P. Forêt, Mapping Chengde, p. 99</p>
1972	<p>Two buildings were built on either side of Tianwang Hall to serve as classroom of Shuxiang Temple Elementary School. School was relocated in 1986. [Not clear where these buildings are, possibly those in 1972 (?) photos].</p>	<p>Shuxiang Temple inventory record</p>
1972 July October	<p>-In July, photos taken of existing buildings and foundations of collapsed buildings and the photos were archived.</p> <p>-In October, a copper cauldron, which was used for cooking congee every December 8 in the lunar calendar, was moved from Zhuanxiang Hall to the courtyard of the Main Hall (Daxiongbao) in Puningsi, assembled from 88 copper pieces (now used for storing water for fire prevention).</p>	<p>Shuxiang Temple inventory record</p>
1975 August	<p>The ancient architecture construction team repaired Shanmen. Due to lack of maintenance, the roof was leaking, the flying rafters and roof boarding were rotten, and eaves were collapsing. The big beam, corbel bracket system, flying rafters, eave edging, and tile edging were replaced.</p>	<p>Shuxiang Temple Entrance Gate Construction Record, table of content: 231, No. 8-1</p>

1982-1983	The ancient architecture construction team restored the Drum and Bell Towers and replaced all flying rafters, roof boarding, eave edging, and tile edging.	Drum and Bell Towers Construction Record and Repair Records, table of content: 2356, No. 8-5/6
1982-1984	<p>The ancient architecture construction team reconstructed the temple perimeter wall using traditional materials and techniques. The east, west, and north walls were constructed with rubble masonry ['tiger skin'] and the top of the wall was coated with mortar. The west wall was built on a slope and supported with a wide foundation with a retaining slope on one side. On the eastern side a trench was dug and reinforced with cement, stone rubble foundations and a retaining slope.</p> <p>A lime-slaking pit constructed close to Baoxiang in the ruins of Yunlai Hall may date to this period (no record exists). The construction of the north perimeter wall on the remains of the north wall of Qingliang Building may have been done at this time (no record exists, except for construction drawings; see Specifications Drawing 1 in "Description of Shuxiang Temple"). The 1933 Sekino plan of the site shows the north perimeter wall far to the north of Qingliang.</p> <p>The modern gate in the west wall may have been built at this time, as well as an access road traversing the site across Tianwang and leading up to Baoxiang (no record exists).</p>	Temple wall reconstruction project--repair record, table of content: 231, no. 8-1
1982 July 23	Shuxiang Temple was announced as a Provincial-level protected site.	Shuxiang Temple inventory record
1983-1984	<p>The ancient architecture construction team cleared up the interior of the temple and the foundation of Qingliang Building.</p> <p>In Huicheng Hall, the lattice may have been replaced on some doors [based on 1981 photos, which show lattice missing or largely destroyed in many doors; no record exists].</p>	Foundation check up and repair record, table of content: 231, no. 8-1
1987	Cultural Heritage Bureau purchased fire prevention equipment and installed lightning rods. The Shuxiang custodial committee was established and the director was Ms. Wang Shuzhen.	Shuxiang Temple inventory record
1988 13 Jan	Shuxiang was announced in the third group of nationally protected sites by the State Council. White marble plaque placed on Shanmen wall announcing classification.	Shuxiang Temple inventory record
Early 1991	According to the Conservation Law of the People's Republic of China and Hebei Provincial Conservation Management Technical Schedules, the protected areas (key and general protected areas) of Shuxiang were legislated.	Shuxiang Temple inventory record
1992	Hebei Province established site boundaries and buffer zone.	

Early 1994	A sign made of white marble designating the protection zone of Shuxiang Temple was attached to the south facade of Shanmen.	Shuxiang Temple inventory record
1994	Chengde Imperial Summer Resort and Outlying Temples Designated World Heritage Site. Shuxiang was open to visitors. Director was Mr. Luo Xi. The pine trees planted in the NE part of the site may date from this period (no record exists).	Shuxiang Temple inventory record
1996	Shuxiang closed to the public.	
1998 July	Installed lightning rods and safety bracing on the ancient pine trees inside the temple precinct.	Shuxiang Temple inventory record
2001 July	The remaining fragments of the statues from Baoxiang Pavilion were sent to Chengde Shuangluan Jinfang Creation Work Studio for restoration and they were installed in Baoxiang Pavilion on October 22, 2002. This represented the completion of all restoration work to Baoxiang Pavilion, which lasted for two years and seven months.	
2002 May	The Chengde Cultural Heritage Bureau began a cooperative program with the Getty Conservation Institute on using Shuxiang Temple as a pilot project for the conservation of heritage architecture in accordance with the China Principles.	
2002	Crazy paving path re-laid by site manager with cement mortar in Courtyard 1.	
2002 October	Samples of <i>caihua</i> and wood from Huicheng Hall, and modern paint samples taken by GCI for analysis (see related documents).	
2003 July	The Standing Committee of Hebei Province's 10th Provincial People's Congress ratified "Conservation Management Regulations for the Chengde Imperial Summer Resort and Outlying Temples".	
2003 September	Samples of <i>caihua</i> from Huicheng Hall taken by GCI for analysis (see related documents).	
2003 November	Extensive vegetation on site (especially in the northern third) cut in preparation for excavations. Excavation of Qingliang, Hexagonal Pavilion, Yiyun, Xianglin, Fangting, Kitchen, Dining Hall, and Entry Hall in Area 5; trenches in Areas 4 and 5. Enlargement of water reservoir east of Huicheng Hall, within the Entry Hall (not completed).	

2004 May	<p>Scaffolding erected on south and east sides of Huicheng for condition recording of <i>caihua</i>; bird netting removed, [on the east facade, lower level], for the purpose of inspection and replaced after work completed; scaffolding later removed</p> <p>Samples of <i>caihua</i>, wood, and plaster taken by GCI for analysis (see related documents).</p> <p>Cement kennels built for the guard dogs in Area 4, adjacent to the remaining original monks' quarters.</p> <p>Western gate for vehicle use painted bright red and cement pathway laid.</p> <p>New areas in SW courtyard (Area 4) set aside for cultivation.</p>	
2004 July	<p>Samples of wood taken from Huicheng Hall and dead pine tree in S courtyard in Area 1 (see related documents).</p>	
Fall 2004	<p>Construction of cement barriers in front of Shanmen to prevent traffic on historic stone.</p> <p>Installation of bathroom and fire signs in temple.</p> <p>West perimeter wall gate repainted.</p>	
2004 November	<p>Experts' Committee held for three days to review findings of Assessment Report and discuss future directions for project at Shuxiang Temple.</p>	
2004 December	<p>Final reburial of Xianglin Complex, Qingliang Building, and kitchen building complex.</p>	
2005 September- October	<p>Concrete village road extended in front of temple.</p> <p>Scaffolding erected on east facade of Huicheng Hall; in situ treatment spot tests of east facade <i>caihua</i>.</p> <p>Spot cleaning tests on Huicheng Hall interior furnishings and decorations.</p> <p>Area 5 cellar collapse and repair.</p> <p>Construction of shed in Area 5 against perimeter wall to serve as field lab and for storage.</p> <p>Installation of wood coatings testing samples in Area 5.</p> <p>Re-routing of access road to the north of Yanfan Hall to avoid Tianwang Hall.</p>	



- 图例
Legend
-  路/铺面
Roads/pavement
 -  结构
Structures
 -  使用地区/其他特征
Area use/
other features
 -  现代种的树
Modern trees
 -  野生树
Wild trees
not deliberately
planted
 -  垃圾堆
Rubbish heap

现代干预
Modern Interventions

2006年1月
January 2006



香林室园林景观，圆形月洞门状况良好，背景是会乘殿，1934年。
Xianglin Room Complex Garden view, with round moon gate intact, 1934. Huicheng Hall is in the background.



天王殿东侧尚存塑像，1934年。建筑物不复存在，塑像部分存在。
Extant statuary on east side of Tianwang Hall, 1934. Note the building no longer exists and the statues are only partially extant.

宝相阁 图 版 寺 展



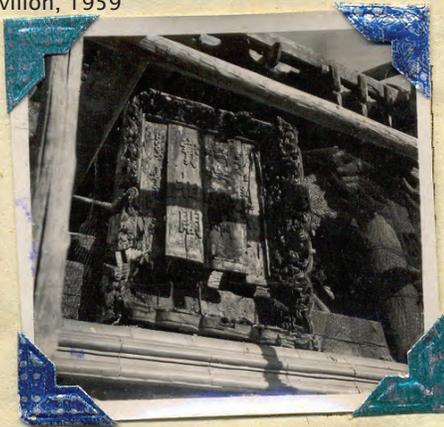
内容 全景 (破损情况)
部位 正前面
底版号 版号 1
时间 1959年
来源 古建队

1. Front view, state of deterioration of Baoxiang Pavilion, 1959



内容 坍塌情况
部位 顶部
底版号 版号 2
时间 1959年
来源 古建队

2. State of collapse of roof of Baoxiang, 1959



内容 匾
部位 前正面
底版号 版号 3
时间 1959年
来源 古建队

3. Front view of wooden tablet, Baoxiang, 1959



内容 像
部位 西侧正面
底版号 版号 4
时间 1959年
来源 古建队

4. Statue in Baoxiang from the west, 1959

All photos taken by Heritage Architecture Team

殊像寺宝像阁



宝相阁扁额 全景

宝相阁扁额 全景

版号 3 1959.7.

版号 1959.7.

1-2. Wooden tablet at front of Baoxiang, July 1959



"靠背"残破情况 西侧面
版号 5. 1959.7.

像"靠背"残破情况 西侧面
版号 5. 1959.7.



"靠背"全景 正面上部
版号 6. 1959.7.

"靠背"全景 正面上部
版号 6. 1959.7.

3-6. Deterioration of back screen of statues, west side and front, July 1959

宝相阁 图 版 寺 展



内容 靠背
部位 西侧面
底版号 版号 5
时间 1959年
来源 古建队

1. Back of statue screen, from west side, 1959



内容 靠背
部位 背面上部全景
底版号 版号 6
时间 1959年
来源 古建队

2. Back of upper section of statues screen, 1959



内容 维护情况
部位 前面全景
底版号 版号 7
时间 1959年
来源 古建队

3. View of the restoration of Baoxiang, west side, 1959



内容 维护情况
部位 内下梯木枋支架情况
底版号 版号 8
时间 1959年
来源 古建队

4. Looking up at fir wood supports inside Baoxiang showing restoration methodology, 1959

殊像寺宝相阁



1. 维修情况 前正面
版号 7. 1959. 7.



2. 维修情况 前正面
版号 7. 1959. 7.



3. 内部用杉木帮友的架木 仰视
版号 8. 1959.



4. 内部用杉木帮友的架木 仰视
版号 8. 仰视 1959年



5. 内部用杉木帮友的架木
版号 8. 仰视 1959年

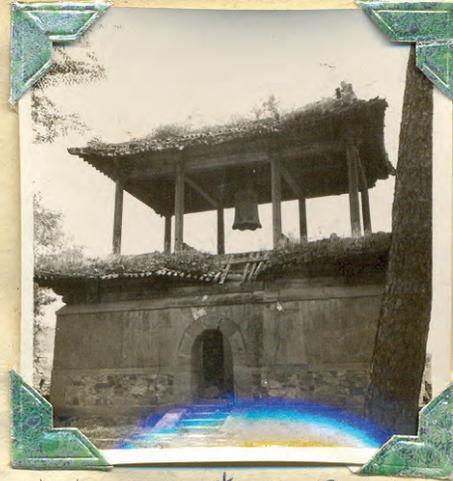
1-2. Restoration of Baoxiang, viewed from front, July 1959

3-5. Internal view looking up at the dry fir wood frame of Baoxiang, 1959

宝相阁 版 寺 展



1. 内容 宝相阁的顶内仰视
部位 顶内仰视
底版号 版号 7



2. 内容 钟楼全景
部位 前侧面
底版号 版号
时间 1959年
来源 古建队

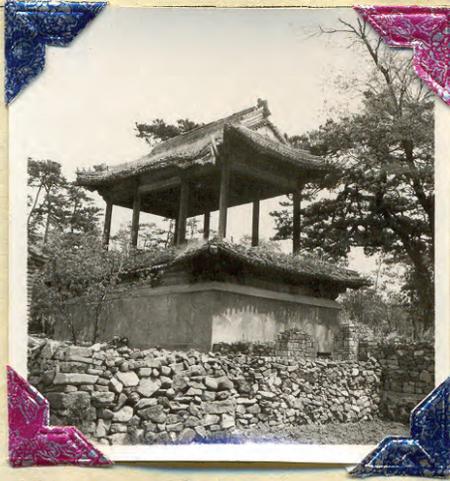


3. 内容 从私人手里拍到的全景像
部位
底版号 版号
时间
来源

1. Baoxiang Pavilion, roof restoration, looking up.
2. Bell Tower, 1959
3. Photo of Manjusri from a private photographer [similar to a Sekino 1933 photo]

内容
部位
底版号 版号
时间
来源

鼓 楼 图 版 寺 厦



内容 全景
部位 西侧面
底版号 版号 1
时间 1959年
来源 古建筑队

1. West side of Drum Tower, 1959



内容 全景背残破状况
部位 背面侧面
底版号 版号 2
时间 1959年
来源 古建筑队

2. State of deterioration of Drum Tower, from the back, 1959



内容 背残破状况
部位 背面侧面
底版号 版号 2
时间 1959年7月
来源 古建筑队

3. State of deterioration of Drum Tower, from the back, 1959



内容 背残破状况
部位 背面侧面
底版号 版号 2
时间 1959. 7月
来源 古建筑队

4. State of deterioration of Drum Tower, from the back, 1959



1. Present condition of Shuxiang, panoramic view, July 7, 1972

殊像寺现状
全景状况
1972.7.7.



殊像寺全景

2. Panoramic view of Shuxiang



天王殿残破状况

3. State of deterioration of Tianwang Hall



宝相阁文殊菩萨

4. Statue of Manjusri in Baoxiang Pavilion

[Similar to a 1933 Sekino photograph]

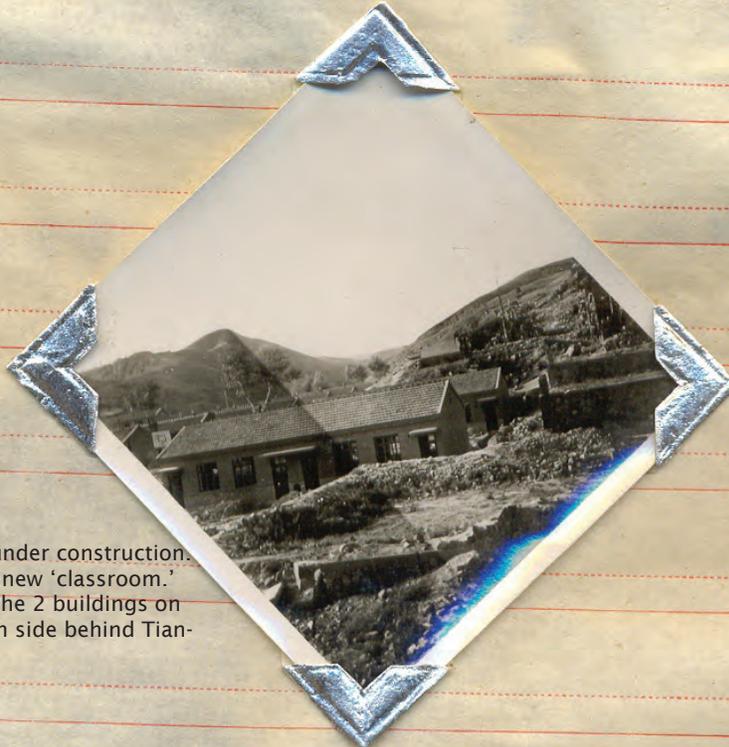
72



1. Provincial Political
Department approves
use of the temple;
building of a school off
the central axis of the
temple

省政府已批准利用此庙

中轴线外兴建学校



2. School under construction.
This is the new 'classroom.'
Picture of the 2 buildings on
the western side behind Tian-
wang Hall

这下正在兴建学校，这是新建的‘教室’。

(皆为天王殿后西侧西两幢房)

[No date; possibly 1972]



‘鼓楼’北后侧面

看残破情况

1. North side of Drum Tower; state of deterioration



[Bell Tower]

[No date. Possibly 1972]



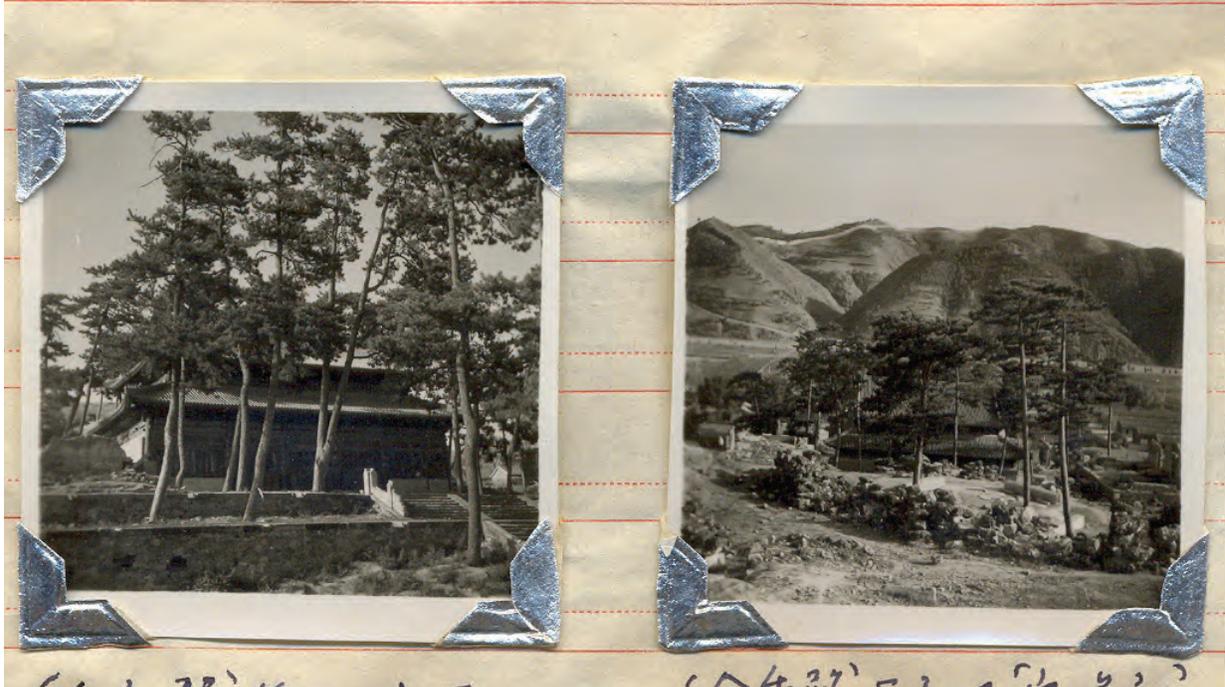
‘山门’前即现状

1. Present condition of Shanmen

从‘会集殿’往山门处看

现状情况

2. Present condition, looking down from Huicheng Hall to Shanmen



[No date. Possibly 1972]



1. General Panoramic view [no date]

[数像寺西面，营区内部；可能是1972年]
[West of Shuxiang Temple, in the military area; may date to 1972]



殊像寺会聚层全景

73. 7.
1. Panoramic view of Huicheng Hall, July 1973



殊像寺假山松树

73. 7.

2. Pine trees in front of rockery, July 1973



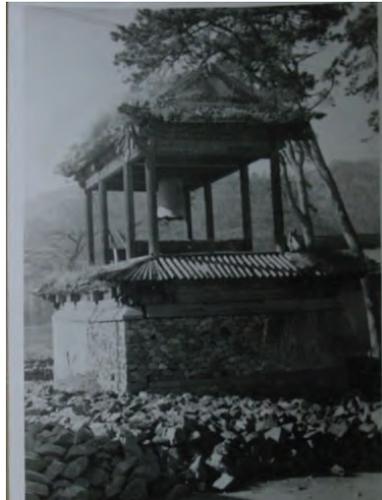
殊像寺假山松树

73. 7.
3. Pine trees in front of rockery, July 1973



鼓楼

81.4.4



钟楼

<60> 81.4.4

Drum and Bell Towers, April 4, 1981



鼓楼上层梁头

<80> 81.4.4

Drum Tower, upper eave, April 4, 1981



鼓楼下层角梁

<82> 81.4.4

Drum Tower, lower eave, corner, April 4, 1981



鼓楼上檐正脊

<190> 1982.3.

Drum Tower, upper eave, roof ridge, April 4, 1981



殊像寺 鼓楼上檐正脊北端

<186> 1982.3.

Drum Tower, upper eave, north corner ridge, April 4, 1981



鼓楼上檐正脊北端

<189> 1982.3.

Drum Tower, upper eave, north ridge, April 4, 1981



鼓楼承椽枋

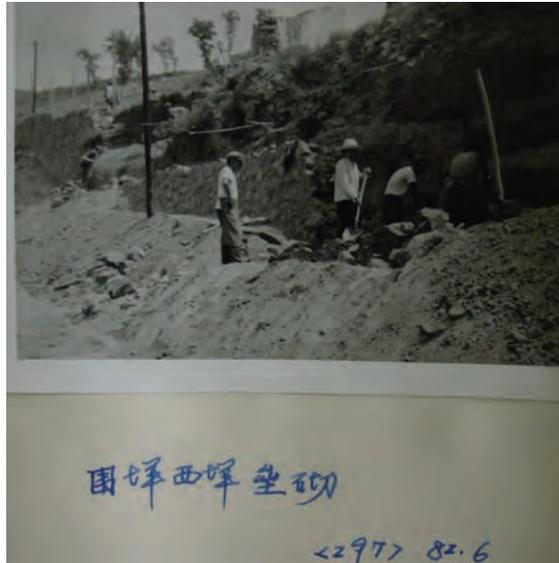
Drum Tower, detail, April 4, 1981



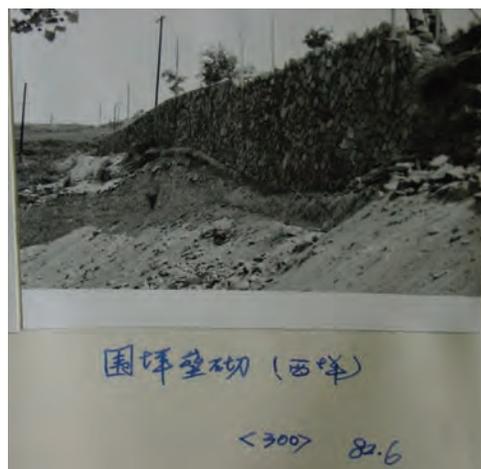
Baoxiang Pavilion, statue base, April 4, 1981



Side gate [east of Shanmen], May, 1982



Reconstruction of temple wall, west side, June, 1982



附件1：殊像寺兴建和修缮费用的档案资料

APPENDIX 1: ARCHIVAL RECORD OF THE CONSTRUCTION AND REPAIR COSTS OF SHUXIANG TEMPLE

1、宫中 硃批 奏销档 文档号：329号

乾隆三十九年四月十九日

殊像寺

热河园外布达拉庙之西戒台之东添建

1. Palace memoirs, approved by the Emperor, financial files, archive No: 329

19 day 4th lunar month on the 39th year of the reign of Emperor Qianlong

Shuxiang Temple

A new temple was added between the Putuozongcheng Temple and Guang'an Temple outside the Rehe Palace Grounds

殊像寺并东西二所殿宇楼亭游廊房座等工除行取围场砍伐木植值银二万六千九百五十九两三钱五分外净估需物料工价并拉运围场木植车脚共银十五万七千二百五十三两八钱八厘等因具奏 奉旨知道了欽此欽遵在案今查自本年九月二十九日起节次遵

On the 29th day of the 9th lunar month the following was made known to the Emperor:

Shuxiang temple itself and other structures including two halls on the east and west side [of the main hall], pavilions, and covered walkways were built from wood harvested at the Mulan Hunting Grounds to the value of 26959.35 taels of silver; the estimated cost of other materials, labor and transportation from the Hunting Grounds was 157253.88 taels of silver; this is the report of costs to the Emperor. This has been approved by the Emperor, entered in the official archives, and is known by the Emperor.

- 旨殊像寺内后楼头停改筑绿色琉璃瓦边
- 添盖僧房三座计十五间
- 大墙外看守房六座计十二间
- 山门前添安青白石狮子一对
- 红沙石海墁二块
- 角门前冰纹石甬路二道
- 西大墙随墙门口改盖门楼一座
- 大殿、八方亭添安龙匾二面
- 各殿素线斗字匾十面
- 会乘殿内添安供柜三张、藏经杉木夹板经板各二百十六块、经柜添锭黄铜什件二十二份
- 经堂内经桌六十四张，经床六十四张
- 斋堂内斋桌一百张
- 画藏经看面写泥金字
- 铜炉瓶配做灵芝龙蜡
- 拆挪山门前粘碍民房九十间挪盖龙王庙正殿三间山门一座院墙凑长十六丈一尺并甬路散水油画神像供桌供器等项除行取围场砍伐木植值银一千五十三两六钱五分三厘外统计续添九项工作共需银八千七百二十六两八分五厘

- edging tiles on roof of “back building” replaced with green glazed tiles. [Actual building unclear; may refer to Qingliang];
- added three lodgings for monks totaling 15 rooms;
- added 6 *kanshoufang* (guard houses) totaling 12 rooms outside the enclosure wall;
- in front of Shanmen, added a pair of *qingbaishi* (bluish-white tuff) stone lions;
- a pair of red sandstone carved middle pavers were laid at the center of the ramp (carved in the shape of waves and mountains);
- in front of the side gates beside the main gate, crazy-paving was laid;
- in the gate of the western enclosure wall a covered Shanmen building was constructed;
- two wooden tablets with carved dragons were added to the Baoxiang Pavilion;
- in other halls 10 simple wooden tablets for names (*suxian douzi bian*) were added;
- in Huicheng Hall 3 altar tables, 216 carved wooden covers made from fir wood for the scriptures, and 22 sets of copper knobs for sutra cabinets were added
- in the chanting hall [perhaps Yanfan Hall] 64 scripture tables and 64 benches were added;
- Zhai Hall was furnished with 100 meal tables;
- 100 Tibetan scriptures with paintings and explanatory texts written in matted gold were added;
- hand warmers with dragon carved wax candles (used as fuel);
- 90 homes of local farmers were removed; and a Dragon King Temple with its main hall of 3 bays, a Shanmen, a courtyard wall of 16 zhang 1 chi long, a front paved path, and stone driplines and drainage were all removed and rebuilt. The painted statues, altar tables, and altar implements [inside the temple] were moved too. The cost of the wood from Mulan Hunting Grounds is 1513.653 taels of silver, in addition are nine more works and the total cost is 8726.85 taels of silver.

殊像寺后楼头停改筑绿色琉璃瓦边估需工料银一千九十三两一钱四分八厘

The estimated cost of labor and materials for changing the glazed green tiles on the pavilion at the back of Shuxiang Temple [possibly Qingliang] is 1093.148 taels of silver.

添盖僧房十五间看守房十二间估需工料银一千八百七十八两七钱四厘

The estimated cost of labor and materials for building 15 monk cells and 12 guard houses is 1878.74 taels of silver.

山门前添安青白石狮子一对红砂石海墁二块角门前冰纹石甬路二道估需工料银二千六百二十二两六钱二分六厘

The estimated cost of labor and materials for adding a pair of white stone lions in front of Shanmen, a pair of red sandstone central carved middle stones in steps, and two strips of crazy pavement in front of the corner gates is 2622.626 taels of silver.

西大墙随墙门口改盖门楼一座估需工料银二百十两九钱二分二厘

The estimated cost of labor and materials for rebuilding side gate in the western wall is 212.922 taels of silver.

龙匾二面 素线斗字匾十面 供柜三张 经桌六十四张 经床六十四张 斋桌一百张 铜炉瓶配作灵芝龙蜡估需工料银八百五十一两六钱五分五厘

The estimated cost of labor and materials for two dragon wooden tablets, ten plain carved wooden tablets, 3 altar tables, 64 desks for studying scriptures, 64 large low seats for studying scriptures, one hundred dining tables, bronze hand warmers and the candles for fuel is 851.655 taels of silver.

蓝经杉木夹板、经板各二百十六块 经柜添錠黄铜什件二十二分估需工料银五百六十二两三钱六分八厘

Total cost of labor and materials for blue scriptures with fir wood covers and the 256 block wood scriptures along with 22 sutra holders with bronze knobs, 562.368 taels of silver

正殿画藏经看面写泥金字领用工料银二百八十两八钱三分

Cost of labor and materials for the painted scriptures with gilded words in the center of the main hall is 280.83 taels of silver

拆挪山门前粘碍民房九十间给价银二百八十两五钱

Compensation to farmers for the removal of 90 houses close to the temple: 280.25 taels of silver

挪盖龙王庙正殿三间山门一座院墙凑长十六丈一尺并甬路散水油画神像供桌供器估需工料银九百四十一两三钱三分二厘

The estimated cost of labor and materials to move and build the Dragon King Temple with its main hall of three bays, a shanmen, and 16 *zhang* 1 *chi* of walls, paved paths, painted statues, altar tables, implements for the altar tables is 941.332 taels of silver.

统计九项共需用银八千七百二十六两八分五厘

Total cost of these nine accounts is 8726.85 taels of silver.

2、宫中 硃批 奏销档

文档号：334号

乾隆四十年五月初一

殊像寺

热河文殊菩萨庙铜镀金顶等项活计按例共约用头等镀金叶一百二十二两三钱六分三厘

2. Palace memoirs, approved by the Emperor, financial files, archive No: 334

First day of the fifth month of the 40th year of the reign of Emperor Qianlong

Shuxiang Temple

122.363 taels of Grade 1 gold leaf for the roofs' bronze coated ornaments and other work for the Manjusri Bodhisattva (Wenshu Pusa) Temple.

奏明向广储司领取应用再为镀金紫坛木龕二座上铜脊兽二分砚盒上掐丝珐琅座二分并玉壶春周敦等项活计约用镀金叶七两一钱

[We] declare that [we] obtained 7.1 taels of gold leaf from the Storage Office to gild two red sandalwood stands with niches for Buddhist idols, two bronze animals on the roof ridge, two ink stone boxes and enamel stands as well as a jade pot.

附件2：宝相阁重建报告摘要

APPENDIX 2: SUMMARY REPORT ON THE RECONSTRUCTION OF BAOXIANG PAVILION

基本情况

Background Information

宝相阁为殊像寺主要建筑之一，位于寺庙中轴线后部假山之巅，初建于清乾隆三十九年（1774年）。该阁的建筑形式为正八角形重檐绿琉璃瓦黄剪边攒尖顶佛教殿宇，上檐七踩斗拱，下檐五踩斗拱，菱花装修，井口天花，殿内供奉骑狮文殊菩萨一尊，左右护法神二尊。

Baoxiang Pavilion is one of the major structures in Shuxiang Temple and is located at the rear part of the central axis of the temple complex perched above a large ornamental rockery, at the top of an artificial hill. The pavilion was built in Qianlong's 39th year (1774). It is octagonal in shape, with two levels of high eaves and a pyramidal roof covered in green glazed tiles and yellow glazed border tiles. The upper eave has seven tiers of brackets (*cai*) and the lower eave has five tiers of upturned brackets decorated with a criss-cross pattern (water chestnut shaped pattern). The ceiling panel is decorated with a “井” square-shaped pattern. Inside is a large central statue of Manjusri riding on a lion and two smaller guardian attendants on either side.

此阁经二百年风雨侵蚀，由于年久失修，局部坍塌渗漏，大木严重糟朽。因无力维修，上世纪60年代初，不得已采取落架保护，构件入库保存。主要的构件有檐柱6件、金柱7件、下檐大额枋6件、下檐额枋7件、下檐老角梁1件，所有构件榫卯缺失严重；另有座斗35件、正心瓜拱60件、正心万拱70件、单材瓜拱70件、单材万拱70件、厢拱120件、翘65件、昂50件、蚂蚱头50件、麻叶头35件、桁碗40件。

Two hundred years of being exposed to the elements brought about considerable deterioration to the pavilion. This, together with a long period of neglect, resulted in partial collapse and leakage with the main components of the framework in a state of severe decay. The pavilion was disassembled for conservation purposes in the 1960's, since restoration could not be carried out, and kept in storage. The stored elements included mainly 6 peripheral eave (peristyle) columns, 7 inner (hypostyle) columns, 6 greater architraves of the lower eave, 7 lesser architraves of the lower eave, 1 big corner beam of lower eave, with the tenon and mortise work of all the above mentioned pieces either seriously damaged or missing. In addition, there were 35 bearing blocks; 60 oval axial bracket arms; 70 long axial bracket arms; 70 oval, outer bracket arms; 70 long, outer bracket arms; 120 regular bracket arms; 65 outstretched bracket arms (cantilevers); 50 inclined bracket arms *ang*; 50 *mazhatou* (top bracket arm); 35 *mayetou* carvings on small tie-beams and 40 *hengwan*.

修复原则

Principles for Restoration

修复中坚持尽可能使用原构件，能修补的不做更换。

During restoration, original fabric was used as much as possible; repairs to original fabric were preferred to new additions.

修复过程简介

Outline of Restoration Process

2000年对宝相阁进行修复，历时三年。

Restoration started in year of 2000 and it took three years to complete the project.

一、大木维修

i. Restoration of the Wooden Framework

a、将柱根严重糟朽的部分裁掉，测定剩余柱高，计算相差尺寸，采用钢筋混凝土柱找平，并用钢筋做管脚榫，与柱子联结严紧，对柱头卯口进行加固，对保存较好的木柱，在根部刷防腐油漆并作通风处理。

a. Cut off the sections on the bottom of columns that had severe basal decay/erosion. Measured the length of the remaining column and determined the difference with respect to the original length and then used reinforced concrete to restore the column to its original length and to make a base tenon which would hold the column firmly. The *maokou* at the top of the column was fixed into place. If the column was in good condition and did not require splicing with reinforced concrete, the base of the column was treated with preservative and given ventilation.

b、大小额枋，补配榫头，裹棱、镶补裂缝。

b. Replaced or provided tenons for lintels and tie lintels (architrave), cut edges, and filled cracks.

c、斗拱，进行修补，旧斗拱基本用于正面及侧面。

c. Repaired brackets. Installed extant brackets on front and two side facades.

二、补做大木、椽望、装修

ii. Repairs to the Framework and Rafters

根据旧件尺寸及老照片，对不存构件进行补配，大木均采用落叶松制作，装修均采用一等红松制作。

Based on the size of original fabric and old photos, lost components were re-created. Structural elements were produced from larch and non-structural elements created from first-grade red pine [apparently due to costs of pine].

三、匾额补配

iii. Re-creation of horizontal plaque

按照设计尺寸，见普乐寺旭光阁匾额纹饰高浮雕龙纹，用2毫米紫铜板补配满藏汉蒙四种文字的“宝相阁”匾。

Name plaque of Baoxiang Pavilion was manufactured with a decorative pattern in the shape of a dragon based on the horizontal plaque of Xiguang Pavilion at Pule Temple. The name plaque was made of 2mm thick red copper sheet and the name of Baoxiang Pavilion was written in Manchu, Mongol, Chinese, and Tibetan.

四、瓦作

iv. Roof tiles

根据现场出土的旧瓦件尺寸，确定瓦件样数，确定琉璃瓦面，一勾、二筒、黄琉璃剪边，围、垂脊件均按原样。下檐兽前三联砖上用仙人、龙、凤、狮三路小兽，上檐用仙人、龙、凤、狮、天马、海马五路小兽；宝顶顶座琉璃纹饰按旧件重新烧制，宝顶用紫铜板镀钛制作。

According to the sizes of roof tiles unearthed at Shuxiang Temple, the quantity of tiles, their style, and the area of the glazed tiles was determined. Sets consisted of one eave tile, two cover tiles (semi cylindrical), yellow glazed roof ridge tiles, etc.; these were manufactured according to the original size. The lower eave

ridge end tiles were decorated with one figure each of a deity, dragon, phoenix, and lion. The upper ridge ends were decorated with a deity, dragon, phoenix, lion, heavenly horse, and sea horse. The base of roof top decorative piece was made of glaze and its pattern based on the original design. The top piece was made of titanium-plated red copper.

五、油饰彩画

v. Painted Architectural Decoration (*caihua*)

上架各构件和匾额构件做两布六灰地仗，椽头、连檐、瓦口、斗拱三道灰地仗，上架露明大木构件做烟琢墨金线大点金旋子彩画，椽飞头分别做龙眼万字。

The plaster layer (*dizhang*) of the upper frame elements and plaque is composed of two layers of fibers and six types of *hui*. The plaster (*dizhang*) of the rafters, beams, flying rafters, end tile connectors, and brackets have three layers. The exposed areas of the upper portion of the structural wood frame were decorated with “*yanduomou jingxian dadian*” *caihua* pattern. The end of the rafters was decorated with a “dragon eye” pattern.

六、台基

vi. Platform

对原酥碎的地面石、柱顶石及原埧地灰泥进行拆除，台明石、槛垫石不动。由于采用钢筋混凝土柱墩的形式，再做柱顶石时，在钢筋混凝土墩处改为套卡柱顶，柱础墩与地基础板结为一体浇筑，保证了柱墩的稳固，地面石改用1:3水泥砂浆座埧厚25毫米~30毫米，600毫米x600毫米的未抛光灰白色花岗岩板材，槛垫石未动，墙缝内清理干净，用细石砾灌注，榻板石用原材料补配整齐。

Removed the paving stones, the bottom of columns and original paving grouting that was crumbling. The platform stones and the long lengths of base stone were left untouched. Measured the length of the remaining columns and determined the difference with respect to the original length. Formed reinforced concrete columns for the missing length on each column and a reinforced control-foot tenon. Connected and secured the reinforced concrete column and wood column. If the column was in good condition and did not require splicing with reinforced concrete, the base of the column was treated with preservative. Removed all fragile stone at the ground surface, column bases, and lime-earth mortar. Platform stones and long sill stone were untouched. The column foundations and column bases were made with reinforced concrete. The reinforced concrete of the foundation and base were connected together by injecting cement to make sure that the column bases were secure. The ground surface stones were replaced with concrete (1:3 ratio) then overlaid with 25 to 30mm thick unpolished gray granite tiles (60 x 60cm). The long blocks of stone under the doorway were not touched. The cracks in the walls were filled and the sill stones were replaced with exact copies.

七、避雷针

vii. Lightning Rods

按设计图布线，均以焊接方式由殿内引下，各部弯曲半径不得小于15厘米，地极引下线埋深不少于80厘米。

Welded lightning rods were placed down the sides of the building and the diameter of the rods where they curved with the shape of the building was no thinner than 15cm in accordance with the design plan. The grounding wire was buried underground at a depth of more than 80cm.

八、塑像

viii. Sculpture

2004年承德市的金枋印家完成了对文殊像的重新塑造；重塑的文殊像使用了一些原塑像的碎片。
A major restoration of the sculpture ensemble incorporating original fragments was completed in 2004 by GODOFS company, in Chengde Municipality.

附件3：2003年考古发掘摘要

APPENDIX 3: SUMMARY REPORT ON THE ARCHAEOLOGICAL EXCAVATIONS (2003)

殊像寺香林室组基址清理发掘简报

Excavation Report on Xianglin Complex, Qingliang Building, and the Eastern Complex of Buildings in Area 5

2003年10月至11月中旬，根据承德市文物局与美国盖蒂保护研究所合作工作项目的需要，承德市文物局组织了对位于五号区的香林室及其附属建筑的考古清理工作。本次发掘的目的是为了确认废弃建筑的基址，以便把它们绘入新制的详细平面图中。

According to the work plan of the collaborative project between the Chengde Cultural Heritage Bureau and the Getty Conservation Institute, the foundations of Xianglin Complex, Qingliang Building, and the eastern complex of buildings in Area 5 were excavated and cleaned up by the Chengde Cultural Heritage Bureau between October and mid-November in 2003. The purpose was to confirm footings of former buildings and include these in a new, comprehensive site plan.

香林室组

Xianglin Complex

一、自然情况

1. Natural condition

香林室及其附属建筑位于殊像寺寺院的西北部；一道高约3.5米的石砌虎皮墙将其与寺院内的其他建筑分割开来，形成了一个相对独立的院落。整组建筑由香林室、倚云楼、方亭、蹬道、游廊、六角亭及假山组成（基址分布见平面图）。上述建筑基址依次分布在高差13.4米的山坡之上；院内轴线上的建筑从前到后依次为假山（部分已坍塌）、香林室、假山、蹬道及围墙（围墙中段已坍塌）；六角亭位于院外轴线最高处，四方亭和倚云楼分别位于香林室前部的东西两侧，相互间有游廊及蹬道相连，形成一个基本对称的格局。该组建筑毁于上世纪三四十年代，发掘前大部分基址被山体滑落的土石及近现代垃圾所覆盖。覆盖物深度由0.30米到1.20米不等，院内长满杂草及野生乔、灌木。部分基址暴露，暴露的基址石料严重风化、酥裂。地表散落柱础、砖瓦、琉璃及其他一些建筑构件。

Xianglin Complex is located to the northwest of Huicheng Hall. It was surrounded by a 3.5m tall rubble masonry ("tiger skin") wall, which served to isolate the complex from its surroundings. This group of buildings consisted of Xianglin Room, Yiyun Building, a square pavilion [Fang ting], stairways, covered walkways, an hexagonal pavilion, and a small area of rockery (see plan for the distribution of buildings). The foundations of the above-mentioned buildings are located on a 13.4m high hillside. A large area of rockery (most of which has collapsed) is located in front of the group of buildings, followed by Xianglin Room, another rockery, stairway, a stone wall (the mid-section of the wall has collapsed), hexagonal pavilion (located outside the courtyard at the highest position on axis with the complex). The square pavilion and Yiyun Building were symmetrically located at the southeast and southwest sides of Xianglin Room and they were connected with a stairway and covered walkway. This group of buildings was damaged in the 1930s and 1940s and prior to excavation the area was covered with dirt, rocks, and debris. The thickness of the covering layer varied from 0.30m to 1m and the area was also covered with weeds, bushes, and trees. A portion of the building foundation was exposed and this exposed area was severely weathered, exhibiting widespread cracking and fissuring. Dispersed column bases, bricks, tiles, glazed materials, and other architectural elements are scattered around the area.

二、发掘及地层情况

2. Excavation and the description of stratification

此次发掘从2003年10月19日开始，至11月16日结束，发掘面积约1000平方米。地层堆积较为简单，可分二层：第一层：现代叠压层，厚0.15~1.5米。土黄褐色，内杂大量的砖瓦及砾石碎块；该层下即为清代建筑基址。第二层：清代建筑基址，厚约0.2~1.0米，该层打破山体原生土。The excavated area was about 1000 square meters and the excavation began on October 19, 2003 and ended on November 16, 2003. The strata were relatively simple and could be divided into two layers. The first layer was about 0.15m to 1.5m thick of modern deposit. The soil was yellowish-brown in color and was mixed with a large amount of original fragments of brick, roof tiles, pebbles, and stone blocks. The layer beneath the modern deposit was the foundation of the Qing dynasty architecture. The second layer was about 0.2m to 1m thick of the Qing dynasty architectural footing, which was dug into autochthonous soil.

清理出的基址包括：香林室、倚云楼、方亭、蹬道、游廊、六角亭及部分假山。

The foundations discovered were those of Xianglin Room, Yiyun Building, the square pavilion, pathway, a covered walkway, the hexagonal pavilion, and a small area of rockery.

(i)、基址现状

香林室为该组主建筑。发掘前的基址北部为土石所覆盖，南侧台基及部分柱础暴露，台基上的压面石及柱础严重风化、酥裂。根据所存柱础分析，该建筑面阔三间，进深三间，方向略偏东南，四周均用鸚鵡岩质石条压面，石条宽0.58米~0.60米，长1.8米~2.1米不等，厚0.23米，石条下为石砌基础。基址东西长11.55米，南北宽9.5米，柱础东西向每排四个，共四排，柱础上部为圆形，直径46厘米，下部基座为方形，60厘米×60厘米，柱间距3.25米；南北向同样每排四个，房屋进深8.3米，前后廊进深1.3米，后墙及东、西山墙北侧均保留部分墙体，西山墙残高0.3米~0.5米，墙角为砖砌，墙体为石砌，宽0.45米，东侧山墙北侧保留部分原墙，内部为磨砖砌成，主墙体为石砌，屋内地面为青砖铺成，青砖分两种尺寸：方砖47厘米×45厘米；条砖40厘米×27厘米。后墙中部开门，出门后即为用自然石块砌成的蹬道，与假山及院外高岗上的六角亭相连。前门踏步同样为大块自然石铺砌，不规则，出门外约三米处呈人字形分为两条线路，一条通过天井，穿假山出院门与院外假山的蹬道相通，另一条向西侧斜出，与倚云楼东侧游廊相连。

(i). Condition of the remains

Xianglin Room was the main building of this group of structures. Prior to the excavation, the north part of the area was covered with dirt and stone, while the south side of the building platform and column bases were partially exposed. The facing stones of the platform and column bases show cracking and crumbling. Based on the column bases, Xianglin Room was three bays in width and depth and faced slightly southeast. The facing stone blocks are *yingwuyan* (tuff) (0.58 to 0.6m wide, 1.8 to 2.1m long, and 0.23m thick). Underneath the facing blocks is a stone platform (11.55m long E-W, and 9.5m long N-S). There are four rows of column bases on an E-W axis and each row has four column bases. The upper part of the column base is rounded and its diameter is 46cm and the lower part is square in shape (60 by 60cm). The spacing between columns is 3.25m. There were also 4 column bases along the N-S direction. The building is 8m deep, from N to S. The width of both front and rear corridors is 1.3m. A portion of the rear wall and the north side of the east and west gable walls is extant. The height of the extant west gable wall is 0.3m to 0.5m. The corners of the walls are built with bricks and the core of the wall is constructed of stone. The wall is about 0.45m thick. A part of the original north side of the east gable wall remains. The inner side of the wall was built with polished bricks and the core of wall was built with stone. The building floor was paved with grey bricks of two sizes: a square brick (47cm × 45cm) and a rectangular brick (40cm × 27cm).

There was a door in the middle of the rear wall and outside the door was a stairway paved with natural stone blocks connecting a rockery with the hexagonal pavilion located on the top of the hill outside the courtyard.

Outside the front [south] door, a walkway was irregularly paved with natural stone blocks. About 3m away from the door, the walkway divides into two, in a “Y” shape. One part went across the courtyard and rockery and connected to the stairway outside the courtyard; the other one turned towards the west connecting to the covered walkway at the east side of Yiyun Building.

前廊东西两侧均与游廊相通，西侧游廊呈曲尺形，进游廊后北侧为一间3.35平方米的小室，向西约九米进入倚云楼。东侧游廊为“之”字形，沿游廊曲行可达方亭。游廊与倚云楼相连处南侧又一出口，与游廊通往方亭的出口并列，踏步用自然石块砌成，沿此踏步可出游廊，沿石砌甬道进入天井，而后通向假山与倚云楼前通假山的甬道相合。

Both east and west ends of the south portico connected to the covered walkway. The west walkway was L-shaped. There is a 3.35m² room at the north side of the walkway. Yiyun Building is located about 9m west of the square room. The east walkway was zigzag in shape and connected to a square pavilion [Fang ting]. Exits to the covered corridors from Yiyun exist at the SW and SE corners. The walkway was paved with natural stone blocks, along this walkway one could access the courtyard, rockery, and Yiyun Building.

方亭位于香林室东南部，有游廊相通，游廊两个拐角处各有五阶踏步。方亭边长5.47米，周围条石压面，条石宽53厘米。柱础方形，座宽55厘米x55厘米，柱础部分35厘米x35厘米，柱间距4.06米。亭内东北部留有部分漫地砖、条形，其尺寸27厘米x14厘米，砖下为三合土基础。

The square pavilion [Fang ting] is located southeast of Xianglin Room and the two structures were connected by the covered walkway. At each end of the covered walkway are five steps. The pavilion is 5.47m long on each side and its surrounding platform covered with 53cm-wide rectangular stone blocks. The column pedestals are square (55 by 55cm) with the column base (plinth stone) measuring 35 by 35cm; the columns are 4.06m apart. In the interior northeast corner of the pavilion, rectangular paving bricks (14 by 27cm) survive. Under the bricks is a layer of *sanhe tu*, a mixture of sand, lime, and clay used as a building material.

倚云楼，位于香林室西南部，北部有游廊与倚云楼相连，南部已被破坏，台基压面石缺失。根据发掘基址测量，南北长8米，东西宽7.8米，东北部凹进3.1米x2.15米，故整个建筑布局为曲尺形。西、北面残存部分原墙体砖石混砌，残高0.3米~0.8米，柱础座为方形，0.7米x0.7米，上部为圆形，直径0.43米。

Yiyun Building is located southwest of Xianglin Room, reached via the covered walkway. The south part of the hall was damaged and the stone facing of the platform has been lost. Based on the excavation, the foundation was 8m long N-S and 7.8m long E-W, but the north west section of the building had a recess of 3.1m by 2.15m. The floor plan of the room is L-shaped. A portion of the original wall, composed of stone and brick and about 0.3 to 0.8 m high, is extant along the north and west. The housing for column bases is 0.7 by 0.7m and the columns were rounded with a diameter of 0.43m.

六角亭位于倚云楼北部院外的小山顶部，边长4.9米，仅存基址。

The Hexagonal Pavilion is located at the top of the hill north of Yiyun Building, outside the courtyard. The length of each side was 4.9m and only its platform remains.

(ii)、出土遗物

出土遗物均为建筑构件，主要有：

- (1) 筒瓦，可分为两种，一种通长20厘米，另一种通长13厘米。
- (2) 瓦当，种类多样，根据材质，分三种类型，第一种为普通莲文，另两种分别为绿琉璃龙纹瓦当和黄琉璃龙纹瓦当，直径14厘米。
- (3) 瓦，分大小两种；大号15厘米x13厘米，小号11厘米x10厘米。
- (4) 琉璃筒瓦，分黄、绿两色，通长29厘米。

- (5) 绿琉璃正吻残块，龙纹。
- (6) 墙面砖，外做绿色龟背锦彩绘。
- (7) 铁构件9枚，分别为钉、扒锯。
- (8) 石栏杆两个，均残，其中一个稍完整，通长75厘米，鼓形，上下直径分别为9厘米、8厘米，中部有两个直径4厘米的孔，距端点2.5厘米处饰一周乳丁纹。
- (9) 内装修构件，团花、卧蚕等。

(ii). Excavated Objects

The excavated objects consist primarily of architectural elements:

- (1) Semi-circular roof tiles of two kinds: one 20cm long and the other 13cm long.
- (2) Roof tile ends. There were many types that can be divided into three categories: unglazed lotus pattern, green glazed dragon pattern, and yellow glazed dragon pattern. The diameter of the glazed tile-ends is 14cm.
- (3) Flat roof tile. There were two types: one 15cm by 13cm, the other 11cm by 10cm.
- (4) Glazed semi-circular tiles are of two colors, green and yellow, and 29cm long.
- (5) Fragments of green glazed ridge-end ornament, dragon pattern.
- (6) Brick wall facing with green turtleshell pattern.
- (7) 9 pieces of metal elements, including nails and handsaws.
- (8) There were two elements of stone balustrade exhibiting differing degrees of deterioration, 75cm long and drum shaped (upper diameter is 9cm and the lower diameter 8cm). They have two 4cm-diameter holes in the middle of the element and a raised decorative pattern located about 2.5cm from the ends.
- (9) Internal decorative elements included flower patterns and U-shaped elements.

三、存在问题及认识

3. Existing problems and legibility

通过对该组基址的发掘，首先对遗址的全貌有了全面地了解和认识。该组建筑级别较高，建筑形式多样，具有较高的建筑艺术价值。但该遗址所暴露的建筑基址所用石料，均为就地所采鸚鵡岩质，该种石材吸水性强，脱水后易酥裂，特别是长期暴露，自然损害更加严重。今后应加强对该种石材的研究，采取可行的技术手段对这类石质文物加以科学的保护。

Based on the excavation we now understand the site better. This group of buildings had a high standard, variety of styles, and high architectural value. However, the stone foundation uses local tuff (*yingwuyan*), which has a high water absorption capacity. After extended exposure to cyclical wetting and drying, this kind of rock cracks and crumbles easily. Therefore, it is necessary to conduct further study and adopt feasible techniques and procedures to conserve these stone relics.

4号区殊像寺西跨院探沟发掘说明

Excavation of the west area (Area 4)

为了解殊像寺西跨院建筑的分布情况，在对香林室组古建筑基址进行清理的同时，还在殊像寺西跨院原僧房所在处开探沟一条。探沟方向北偏西15度，宽0.5米，长46.5米，深0.7米。其中发现古建筑基址三处，单独石条三处，石质柱础一处。可基本确定僧房的位置（见殊像寺西跨院探沟发掘平面及剖面图）。

In order to understand the distribution of structures in the west area of Shuxiang Temple, an exploratory trench was excavated in the monks' residential, contemporaneously with the excavation of the Xianglin Complex. The direction of the trench is north, 15° toward the west and the trench is 0.5m wide, 46.5m

long, and 0.67m deep. Three building foundations, 3 long blocks of stone, not in situ, and 1 stone footing for a column were discovered. The location of the monks' residential area can be determined from these excavations (see west yard excavation plan-view and cross-section maps).

该处地层可分二层，具体情况如下：

第一层：现代叠压层，厚0.15米~0.5米。内杂大量的砖瓦及砾石碎块。该层下即为清代建筑基址。第二层：清代建筑基址厚约0.2米~0.5米。该层打破原生土。

There are two strata. The first layer, a modern deposit layer, is about 0.15 to 0.5m thick and contains mainly fragments of bricks, roof tiles, pebbles, and stone blocks. The layer beneath the modern deposit constitutes the footings of the Qing architecture. The second layer, the Qing architectural footings, is about 0.2 to 0.5m and was dug into autochthonous soil.

清凉楼和5号区的东部建筑群

Qingliang Building and the eastern complex of buildings in Area 5

一、自然情况

1. Natural condition

清凉楼毁于上世纪三四十年代，发掘前大部分基址被山体滑落的土石及原古建筑落房土所覆盖，覆盖物深度由0.10米到1.50米不等，长满杂草及野生灌木。部分基址、柱础暴露，暴露的部分石料严重风化酥裂。地表可见散落柱础、砖瓦、琉璃及其它一些建筑构件残块。

Qingliang Building was destroyed in the 1930s and 1940s and the area, prior to excavation, was covered with dirt and rocks from landslides and debris from the collapsed buildings. The thickness of the dirt and debris layer varied from 0.1m to 1.5m and had dense weed growth and bush cover. Portions of the building foundation and column bases were exposed and these exposed stone elements were severely weathered and cracked. Some column bases, bricks, roof tiles, glazed elements, and other architectural elements were scattered on the surface in this area.

二、发掘及地层情况

2. Excavation and the description of stratification

此次发掘从2003年10月19日开始，至11月16日结束，发掘面积约800平方米，地层较为简单，可分二层：

第一层：为现代叠压层，厚0.15~1.5米。土黄褐色，内杂大量的砖瓦及砾石碎块。该层下即为清代建筑基址。

第二层：清代建筑基址，厚约0.2~1.0米。该层打破山体原生土。

Excavation began on October 19, 2003 and ended on November 16, 2003. The area excavated was approximately 800m² and the deposit had two strata:

The first stratum was composed of modern debris and ranged from 0.15m to 1.5m in depth. The dirt was yellow-brown in color and mixed with a large amount of brick and tile fragments, as well as conglomerate.

The second layer was the foundation of the Qing dynasty architecture, which was about 0.2m to 1.0m thick. This layer was cut into the autochthonous soil of the hillside.

(i)、基址现状

清凉楼发掘前大部为土石所覆盖，南侧台基及部分柱础暴露，台基上的压面石及柱础严重风化酥裂。根据所存柱础分析，该建筑面阔九间，进深三间，方向正南，四周均用鸚鵡岩质石条压

面，石条宽0.58米~0.60米，长1.8~2.1米不等，厚0.23米，石条下为石砌基础。基址东西长34.47米，南北宽10.85米，柱础共四排，东西向每排十个，部分缺失或残损。柱础为上部为圆形，直径46厘米，下部基座为方形，60×60厘米，柱间距3.52米；南北向同样每排四个，房屋进深5.82米，前后廊进深1.62米，现殊像寺后院墙应为原清凉楼后檐墙，后山墙下保存石质须弥座五座，东、西山墙北侧均保留部分石质墙体，屋内地面为青色方砖铺成，青砖尺寸：47×45厘米；前门踏步为大块自然石铺砌，不规则，出门后即为用自然石块砌成的蹬道，通过假山与南侧坡下的宝相阁相连。

(i). Condition of the remains

The majority of the area prior to excavation was covered with dirt and fragments, but the south side of the platform and some column bases were exposed. The ashlar and column bases were severely weathered and cracked. Based on the extant column bases, the south-facing building was 9 bays long and 3 bays deep. The ashlars on the edge of the platform are tuff (*yingwuyan*) and measure 0.58m to 0.60m in width, 1.8m to 2.1m in length, and 0.23m in thickness. The foundation is 34.47m long (east to west) and 10.85m wide (south to north) and constructed of coursed ashlar blocks. There were originally ten column bases in each of four rows across (east to west), but some column bases have been lost or damaged. The upper part of each column base is rounded with a diameter of 46cm and the lower part measures 60cm square. The spacing between columns [from east to west] is 3.52m. The building was 5.82m deep and both the front and rear corridors were 1.62m wide. At the base of the rear [north] wall were five *sumeru* pedestals. A partial stone wall survives at the north end of both east and west gable walls. The interior floor was paved with gray stone tiles, the size of each being 47cm x 45cm. The steps at the front of the building were made of irregularly shaped stone blocks. There was a trail paved with unhewn rocks passing a rockery to the south and connecting to Baoxiang Pavilion.

(ii)、出土遗物

出土遗物均为建筑构件，主要有：

- (1) 筒瓦，发现较多，按尺寸可分为两种，一种通长20厘米，另一种通长13厘米。
- (2) 瓦当，种类多样，根据材质，分三种类型，第一种为普通莲文（图七）；另两种分别为绿琉璃龙纹瓦当和黄琉璃龙纹瓦当，直径14厘米（图九）。
- (3) 板瓦，分大小两种大号15×13厘米，小号11×10厘米。
- (4) 琉璃筒瓦，分黄、绿两色，通长29厘米。
- (5) 绿琉璃龙纹正吻残块。
- (6) 墙面砖，饰绿色龟背锦彩绘。

(ii). All excavated artifacts were architectural elements. These were primarily:

- (a) Tubular roof tiles of two lengths: 20cm and 13cm.
- (b) Tile end pieces of three types: unglazed lotus pattern, green glazed dragon pattern, and yellow glazed dragon pattern. Both types of glazed end pieces are 14cm in diameter.
- (c) Flat tile of two sizes: 15cm x 13 cm and 11cm x 10 cm.
- (d) Glazed tubular roof tiles 29cm long of two colors: yellow and green.
- (e) A fragment of the green glazed dragon pattern ornament from the end of the main roof ridge
- (f) Bricks from the facade decorated with green turtle shell pattern

发掘遗址的保护

Protection of the Excavated Structures

发掘遗址的保护方案是由河北省文物局和盖蒂保护所磋商之后决定的。具体方案和要求由河北省文物局编制，方案已于2004年12月实施落实（见附件4）。

Recommendations were made for the protection of the excavated ruins in consultation with the Hebei Provincial Bureau and the Getty Conservation Institute. The specifications were drafted by Hebei Provincial Bureau and implemented in December 2004 (see Appendix 4 for details).



1. 从东北方向看殊像寺西侧的基址发掘，包括香林室区域
Excavations on W side of Temple, seen from NE, including Xianglin Complex



2. 香林室区域，基址发掘出来的鸚鵡岩台阶
Xianglin Complex, excavated tuff stair



3. 香林室区域，台明石与散水
Xianglin Complex, edge of covered walkway, with drip-line pavement



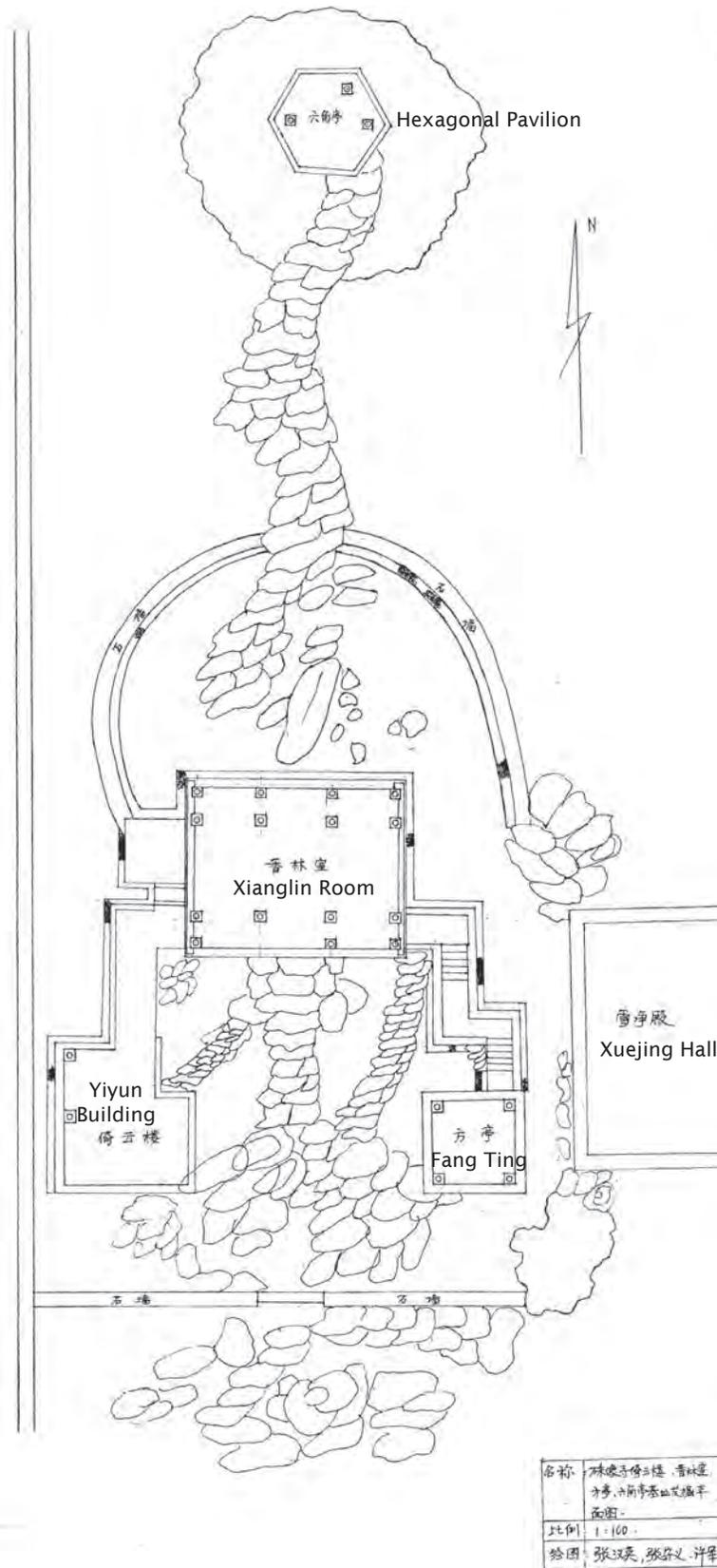
4. 香林室组的基址发掘
Excavation of Xianglin Complex



5. 清凉楼，从东边看此区域
Qingliang Building, view from E

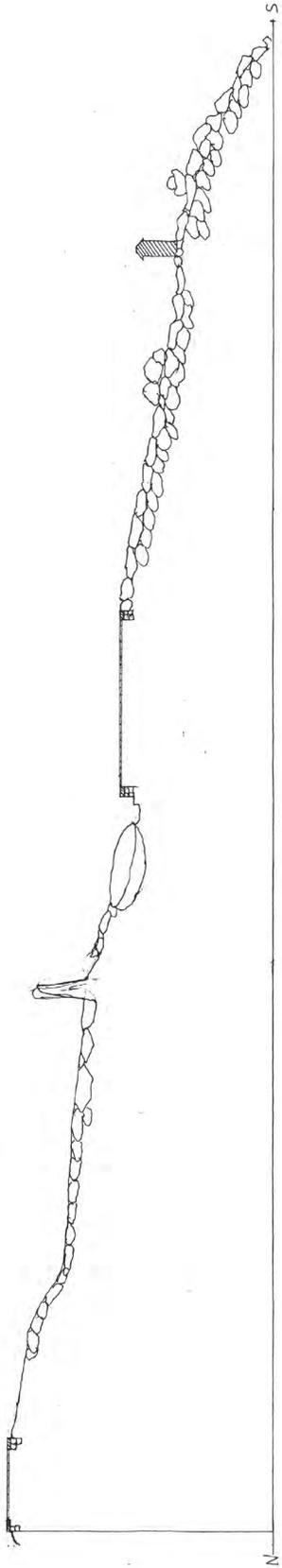


6. 西跨院的探沟
West area, excavation trench

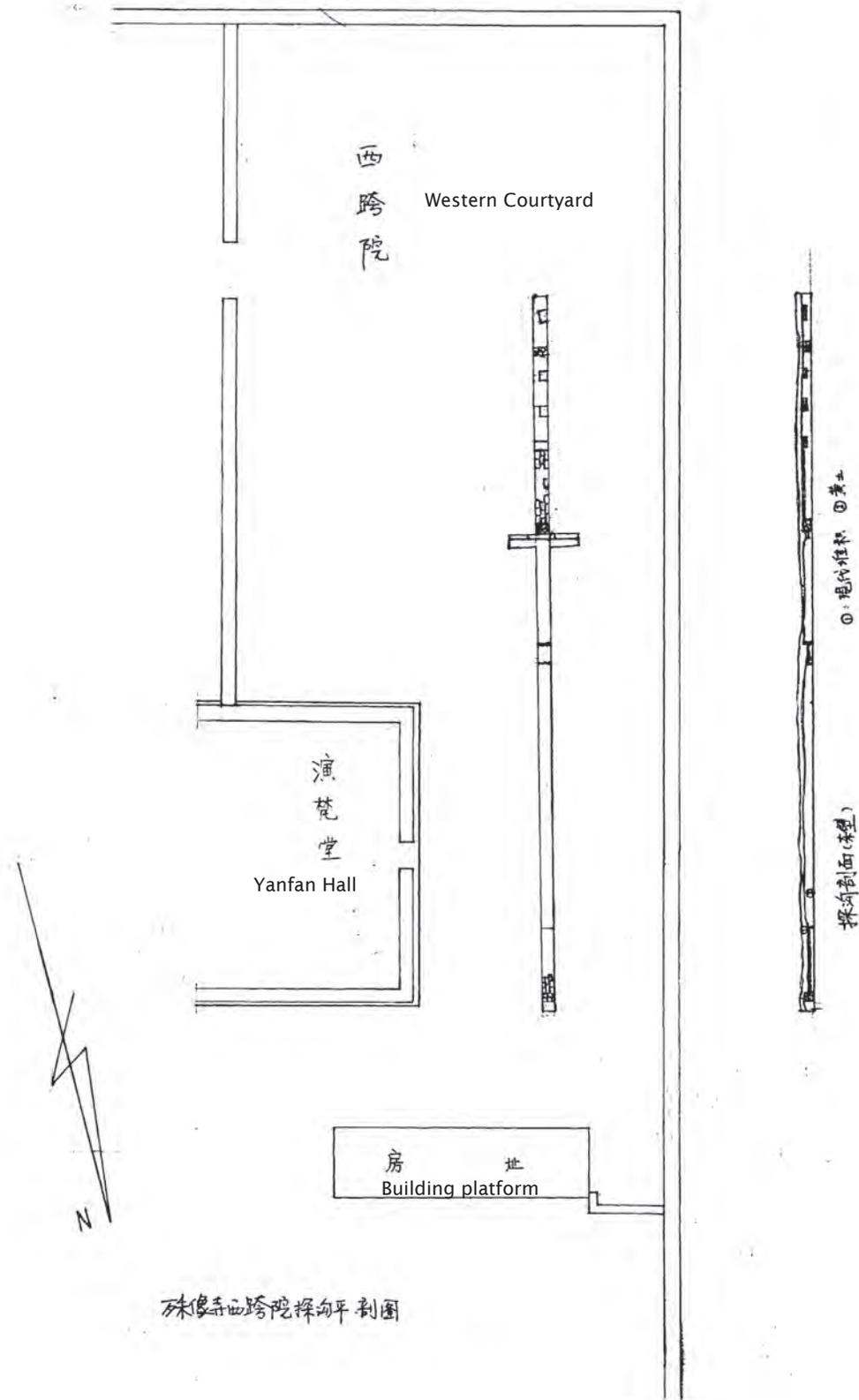


香林室及其附属建筑已毁建筑（基址）平面图，2003年考古发掘
Plan of Xianglin Complex ruins, as revealed by excavation (2003)

图名	殊像寺香林室及其附属建筑基址剖面图
比例	1:100
绘图	张进 黄强



香林室及其附属建筑基址剖面图，南北剖面
 Xianglin Complex site section, N-S section



西院考古发掘遗址图
Plan of Western Courtyard excavation

附件4：殊像寺基址回填保护工作报告

APPENDIX 4: REPORT ON THE CONSERVATION OF RUINS THROUGH REBURIAL

承德市文物局
2005年2月15日

殊像寺基址回填保护方案

Proposal for site conservation

由于年久失修及人为破坏，殊像寺的山门直至最北的清凉楼，会乘殿西侧香林室、倚云楼、方亭、六角亭等建筑现已无存。2002年根据与盖蒂保护所合作的需要，局设计室组织人员对部分基址进行了发掘，暴露后的基址如不进行妥善保护，将受到极大损害。

Shuxiang temple was neglected for a long period of time and many structures were deliberately damaged or destroyed, from Shanmen to the northernmost part of the temple. The structures to the west of Huicheng Hall, namely Xianglin Room, Yiyun Building, the Square Pavilion (Fang ting), and the Hexagonal Pavilion (Liujiiao ting) are no longer extant. In 2002, due to needs arising out of cooperation with the Getty Conservation Institute, the Design Department of the Chengde Bureau organised the excavation of some of the site's footings. Footings that were exposed to the elements, if not appropriately conserved, will suffer considerable damage.

为做好基址的保护工作，河北省古建研究所经多次现场勘查，对基址进行了现状分析：

To ensure that the conservation of the footings is properly undertaken, the Hebei Provincial Heritage Architectural Conservation Institute inspected the site on several occasions and provided the following condition assessment of the footings:

一、基址保存现状 Condition Assessment of the Ruins

由于基址考古发掘过程中，缺乏必要的保护措施，未能及时制定回填保护方案，基址裸露的压面石、阶条石、柱顶石等各类石质构件出现了严重的劈裂、崩裂现象。

During the process of excavating this archaeological site, no conservation measures were carried out and a reburial conservation plan was not drawn up in a timely manner. The stringers, platform copestones, column bases, and other stone components have been seriously split and suffer from fissuring.

遗址槛墙、山墙、台基等砌体表层脱落严重；部分地面砖劈裂；表层风化严重。

The sill walls, gable walls, platforms and surface masonry elements suffered serious loss. Some of the paving stones are split and seriously weathered.

二、破坏因素分析 Analysis of Causes of Deterioration

1、冻融 Freeze-thaw

承德地区纬度偏北，冰冻期较长，昼夜温差较大。夜晚结冰，白天在阳光曝晒下，温度迅速回升。渗入基址内的水份，在冻融作用下，使基址出现酥裂、崩裂现象。

Chengde district is located at a high latitude and has a long period of freezing with great temperature

variations between day and night. Freezing normally occurs overnight; during the daytime, the temperature often rises rapidly due to the large amount of sunshine. Moisture that soaks into the ruins undergoes cyclical freezing and thawing, which results in flaking and fissuring of the stone.

2、雨水浸泡 Rain Soaking

基址裸露后，由于缺乏必要的排水措施，基址凹凸不平，低洼地段多处存水，雨水直接浸泡基址；近年来，北方地区空气污染严重，空气中二氧化硫与水结合，形成酸雨，对基址具有严重的腐蚀作用。

Given the lack of necessary drainage and the uneven ground of the ruins location, comprising a topography of many peaks and troughs, there are many low-lying areas where water accumulates upon exposure to the elements. The rainwater soaked directly into the ruins. Furthermore, pollution in the north of China has become severe over the past few years and there is a high content of SO₂ in the air which, when mixed with water, forms acid rain that has an extremely corrosive effect on the stone of the ruins.

三、回填保护原则 Principles Employed for Conservation through Reburial

1、以国家有关法律、法规和标准、行业规则为依据，在进行文物基址回填保护时，坚持“不改变文物原状”的原则；

i. When carrying out the reburial of the ruins, national laws, regulations, standards and trade codes are to be observed; the principle of ‘not changing the historic appearance of a site’ is also to be observed;

2、保护基址的完整性和真实性原则；

ii. Observe the principle of conserving the site’s integrity and authenticity;

3、回填方案遵循可逆性原则。

iii. All measures in the Reburial Plan should be reversible.

在此基础上制定了完善的回填保护方案，经省文物局、市文物局同意后，由承德市文物局古建处承担整个工程的实施。

Taking the above into consideration, a thorough reburial conservation plan was drawn up. After gaining the approval of the Provincial Cultural Heritage Bureau and the Municipal Cultural Heritage Bureau the Heritage Building Department of the Chengde Cultural Heritage Bureau was in charge of implementing the entire plan.

施工队根据现有的经济和技术条件，遵照省古建所制定的《殊像寺基址保护维修方案》，根据实际情况，确定了本次维修的目的主要是达到不塌、不倒、更好保护的目标。在组织施工中，基址保护备料和施工均严格遵守《文物保护法》的相关规定和省古建所的设计方案，而且精益求精。如使用的材料采用石家庄产的精制蛭石和上等白灰、黄土，铺垫材料采用小目防晒网。施工中，为确保文物安全，根据不同基址的不同情况，因地制宜，对基址进行原位整体加固，制订了较详细的维修施工方案，主要为：

Although the project team had financial and technological constraints, when undertaking the reburial they bore in mind the main purpose of the work was to make sure no further elements cave in or fall down and that the elements are well conserved. In doing this, they followed the ‘Shuxiang Temple Footings Conservation Maintenance/Restoration Plan’ drawn up by the Provincial Heritage Architecture Conservation Institute along with the actual on site conditions. During the implementation of the project, the materials used and the work

undertaken at the site strictly observed the relevant regulations of the Cultural Heritage Law and the design plan proposed by the Provincial Heritage Architectural Conservation Institute. The project team continually strove to improve their standards. Materials used included fine vermiculite, high quality lime produced at Shijiazhuang, and loess soil. Small-mesh shading net was used for the marker layer. During the project, footings were stabilized in their original position so as to better protect them. A detailed restoration work plan has been drawn up, the main elements of which follow:

一、对基址上多年生的灌木连根清理，拔除杂草，沙石压面归安；台基坍塌部位的旧石料干渣归安，清除四周腐殖土，露出砖石散水。

1. Removal of the shrubs and their root systems, which have been growing around the ruins for many years; removal of grass and weeds and reinstatement of stringers [of the sill wall]; the old stonework of the collapsed areas of the platform should be put in order and reinstated; humus in the surrounding areas should be removed to expose brick and stone driplines and drainage.

二、支模板：在台基侧立面支20厘米厚灰土模板，根据散水变形的实际情况，在基址四周外边8厘米处开始向外弹出相距20厘米的两边线，先选择里边安装竖立档、横档及斜撑、钉侧板在顶部用线垂吊直、找平、钉实，再立另一边模板，上口加撑头中间用十号线固定后，将模板内打扫干净。

2. Erection of vertical boarding: around the sides of the platforms, to a distance of 20cm, were installed upright wooden boards to retain the lime-earth mixture. Depending on the drainage pattern, the inner vertical formwork was set about 8cm away from the footing and the outer vertical formwork was set a further 20cm away. Installed first were the vertical retaining posts, along with horizontal members, angled supports, and side boards for the inner formwork. A plumb bob was suspended from the top of the side boards to ensure they were perpendicular and level before firmly nailing them [in place]. Another retaining board was installed on the other side and top and spacer rods added and firmly affixed with 10-gauge wire. The inside of the formwork was cleaned out.

三、打灰土：将蛭石土灰搅拌均匀，在模板内虚铺约22厘米灰土搂平，先人工踩两遍，然后用夯筑打，按照传统的夯打程序分“行头夯”、“行二夯”、“行余夯”、“掖边”，然后铲平。整个过程重复三遍，使灰土密实之后，用水润湿，水量控制在将最底层灰土润湿为度，做到“冬见霜、夏看帮”，多次铺土夯实直到达到标高为准，然后回填内侧蛭石5厘米。

3. Mixing lime and soil: vermiculite, soil, and lime were mixed evenly together inside the formwork to a height of approximately 22cm before leveling. The mixture was then tamped down by foot before being rammed with a tool. This step followed traditional practice for which the guidelines are ‘tamp once, tamp twice, finish the tamping’, ‘compact the edges’ and then use a shovel for final leveling. This process should be repeated three times so that the lime and soil mixture is solid and compact before being lightly soaked with water. The amount of water applied should be controlled so that the bottom layer of the lime-earth mixture is slightly moist. Once the soil had been laid and rammed to the required height, a covering of 5cm of vermiculite was placed on the inside of the formwork.

四、按要求分层铺漫：干铺蛭石5厘米；白灰蛭石20厘米；黄土蛭石30厘米；三合土15厘米；工序同打灰土夯实，留出散水以防止积水。

4. Reburial layers: 5cm of dry vermiculite was laid, followed by 20cm of white lime and vermiculite, 30cm of loess soil and vermiculite, and 15cm of sand, clay, and lime mixture filling. The process was the same as that for the rammed filling. The apron was left exposed to prevent the collection of water.

五、为防止冬季冻融后边帮坍塌，经省局专家同意，保留部分外帮模板，不易保留外帮模板的地方作斜坡处理。

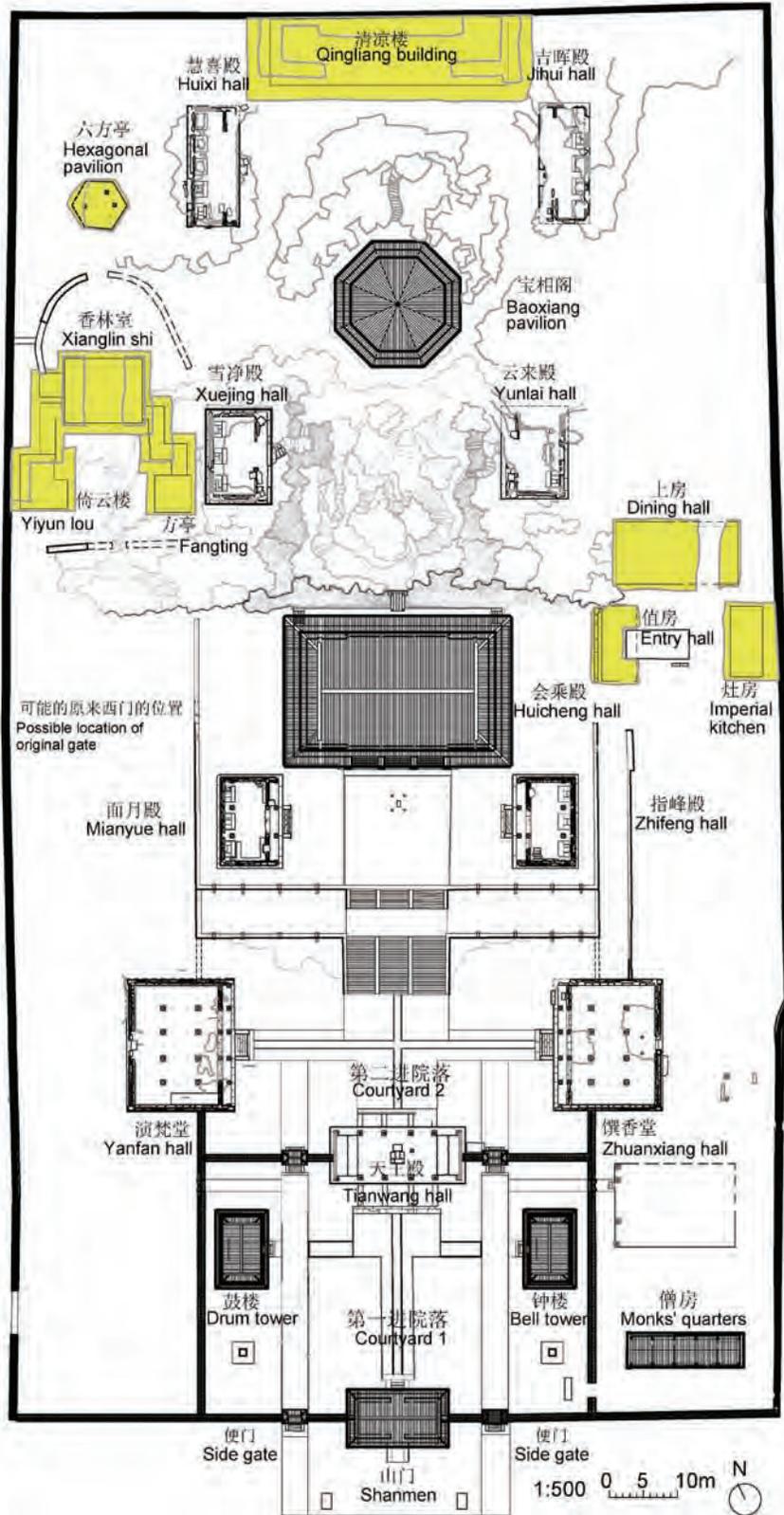
5. In order to prevent freeze-thaw in the winter and the collapse of the side ashlars, the Provincial Cultural Heritage Bureau agreed that some of the external retaining boards around the outside of the ashlars at the side of the platform should remain in place. Those areas where it would be difficult to leave the retaining boards were finished with earthen slopes [for better drainage].

该项工程自2004年11月23日开始实施，至12月29日完成，分别对“香林室”、“倚云楼”、“方亭”、“清凉楼”、“六角亭”等基址按照要求采取了保护。通过此项工作的实施，为避暑山庄及外八庙的基址保护提供了宝贵的经验。

This reburial project commenced on November 23, 2004 and was completed on December 29, 2004. Conservation work was carried out as specified above on the footings of Xianglin Room, Yiyun Building, the Square Pavilion, Qingliang Building, and the Hexagonal Pavilion. Through the implementation of this project valuable experience in the conservation of footings at the Imperial Summer Resort and the Outlying Temples was gained.

2004年12月28日，省文物局专家和承德市文物局文物科、工程管理科及施工单位共同对该项施工进行了现场验收，验收后认为该项工程基本达到了设计要求。但是由于施工期间已进入冬季，为防止夯土由于冻融因素因天气转暖发生散落、开裂等变化，因此应在2005年春季再对全部基址进行加夯。

On December 28, 2004, experts from the Provincial Cultural Heritage Bureau and the Chengde Municipal Cultural Heritage Bureau's Cultural Heritage section, Engineering Management section and the implementation team jointly inspected the project work on site and assessed the work undertaken as basically fulfilling the project design requirements. However, as some of the work was undertaken during winter, in order to prevent the rammed earth from becoming loose and cracking due to freeze-thaw and when the temperature becomes warmer, additional ramming for all the footings needs to be done in the Spring of 2005.



现存建筑、建筑遗址、回填建筑
Extant, Ruined, and Reburied Buildings

2006年1月
January 2006



1. 清凉楼，基址回填中
Qingliang Building, reburial in progress



2. 清凉楼，混合回填用的黄土与石灰
Qingliang Building, reburial, mixing soil with lime



3. 清凉楼，回填用的木结构
Qingliang Building, wooden formwork for reburial



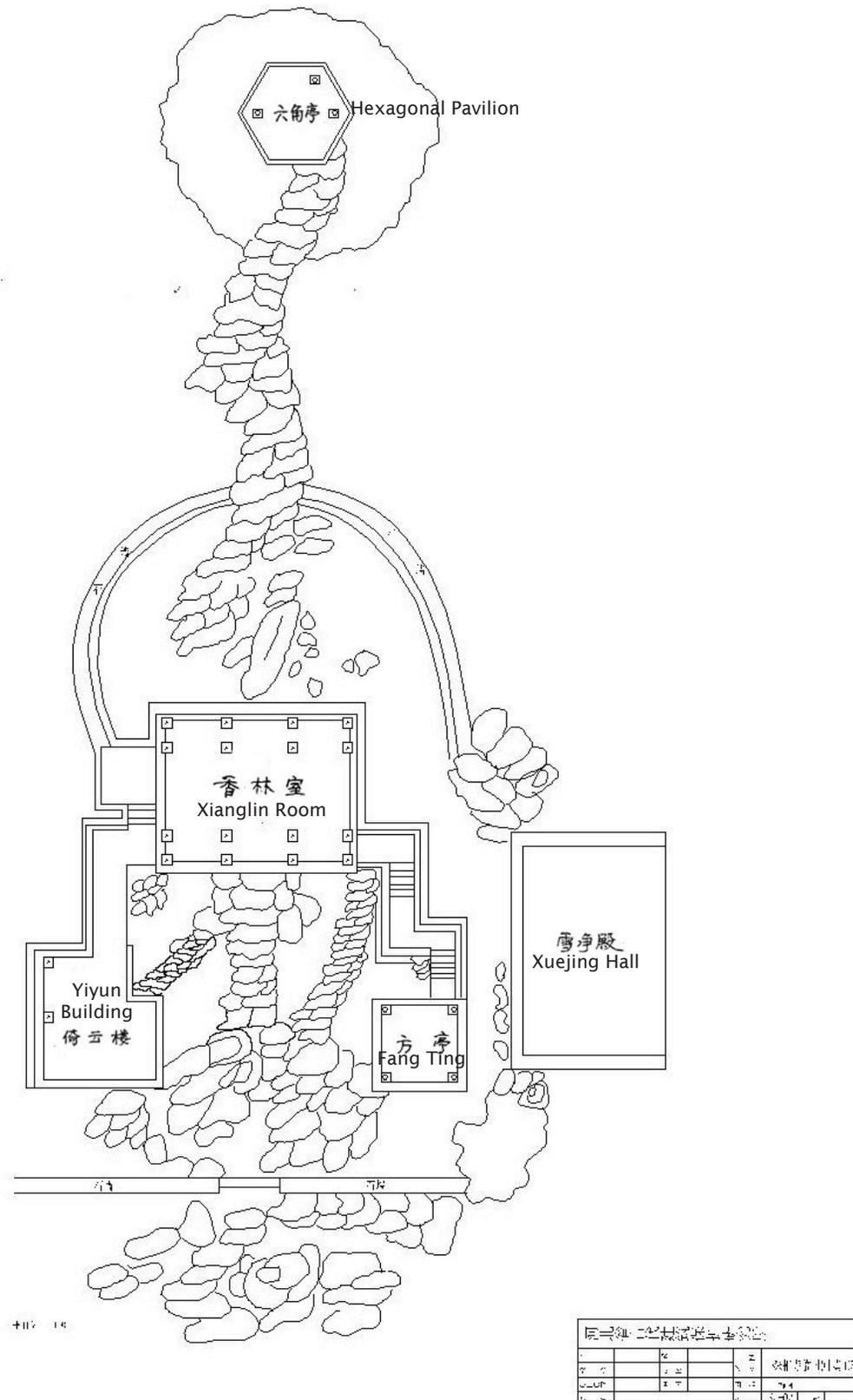
4. 香林室区域，基址回填中
Xianglin Complex, reburial



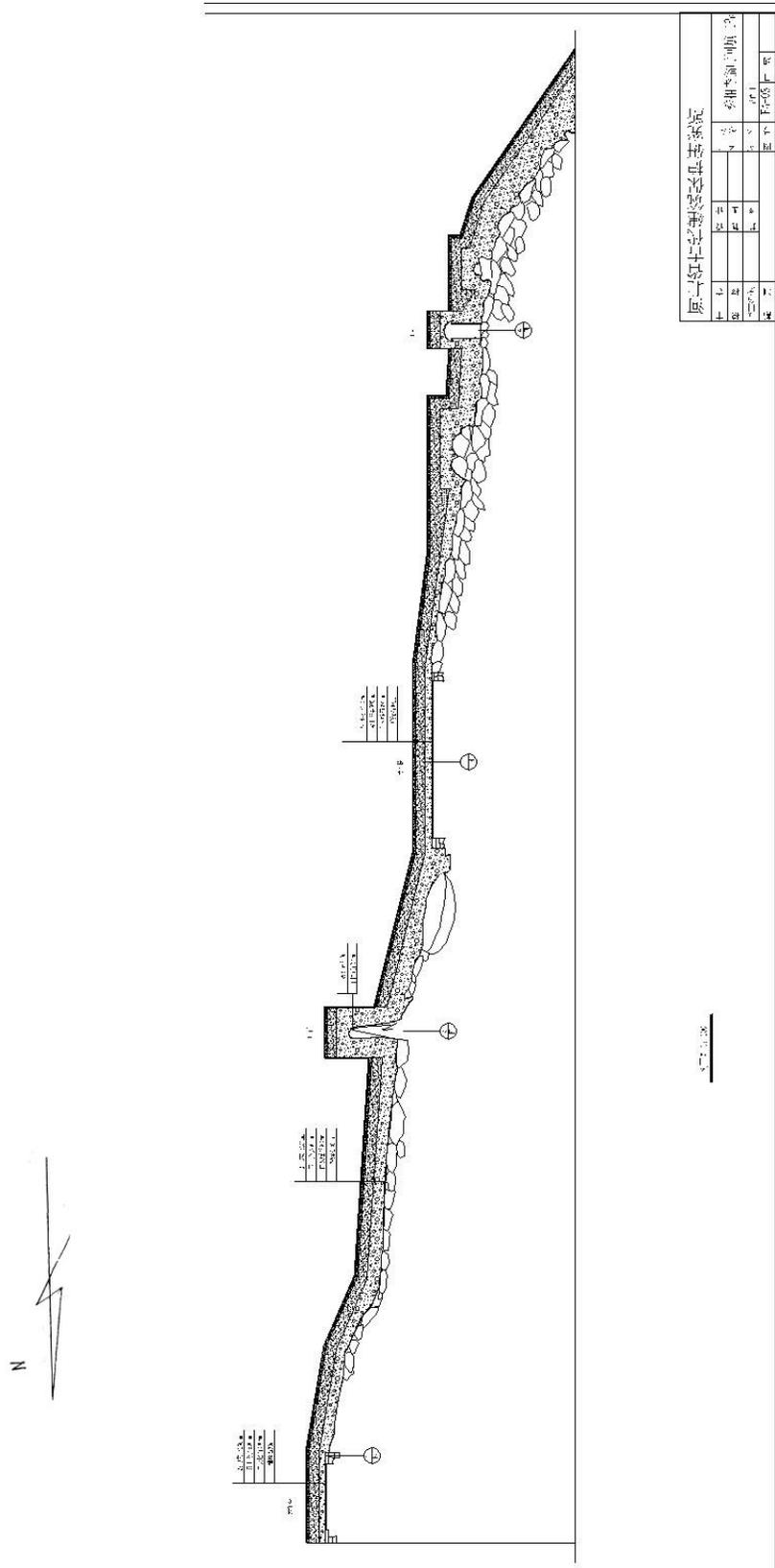
5. 香林室区域，已回填的区域
Xianglin Complex, reburied



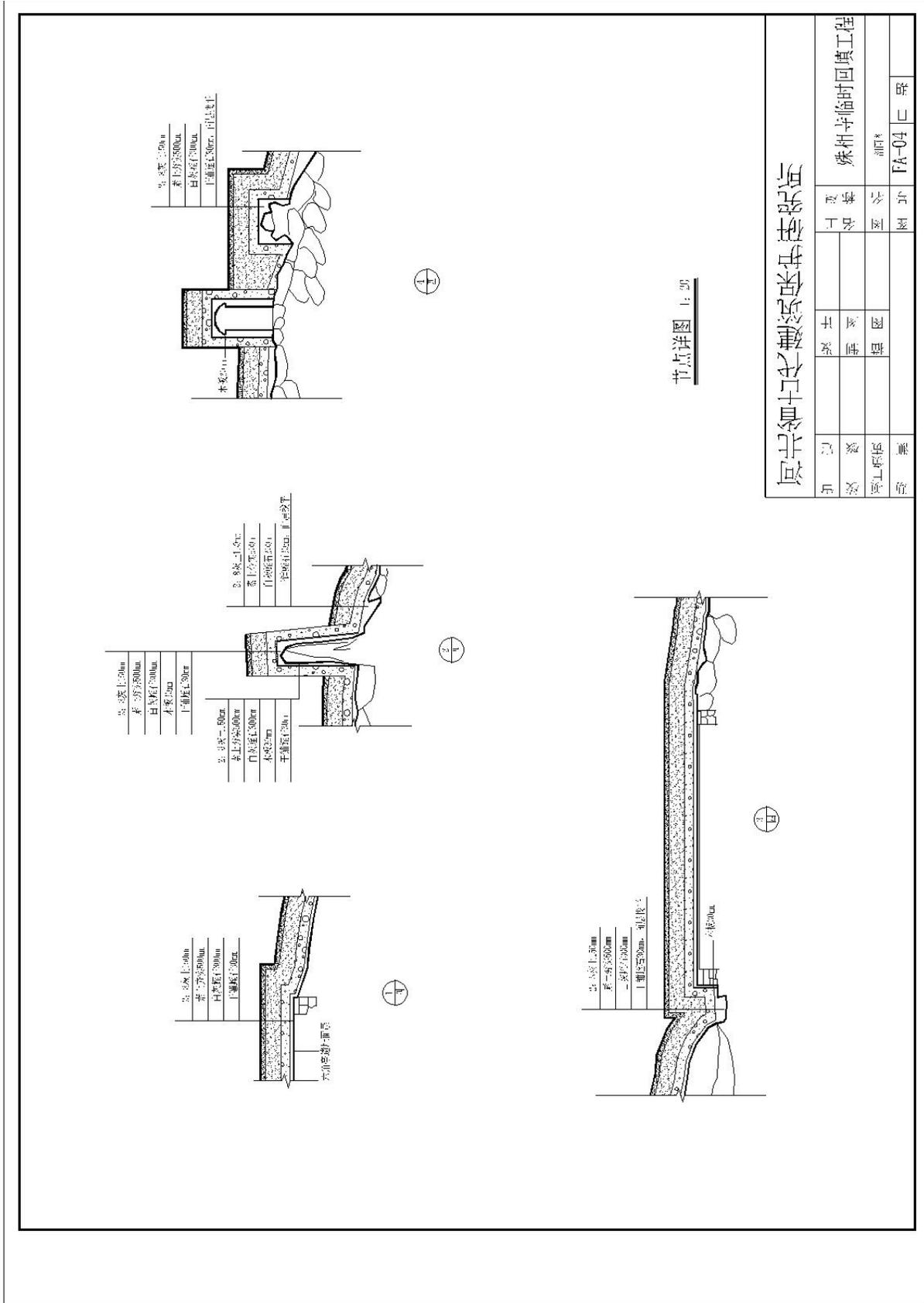
6. 清凉楼，用于回填的分隔层
Qingliang Building, detail of marker layer used in reburial



香林室及其附属建筑遗址平面图，2003年考古发掘
Plan of Xianglin Complex, as revealed by excavation (2003)



香林室及其附属建筑，基址回填剖面图
Xianglin Complex, site section with specifications for reburial (as designed)



香林室及其附属建筑，基址回填剖面详图
Xianlin Complex, specifications for reburial (as designed)

附件5：参考文献 APPENDIX 5: REFERENCES

参考文献

Reference documents

原始文件与有关的背景资料的复印件包括分析调查报告及宝相阁修复工程施工做法说明等均存档于承德文物局及洛杉矶的盖蒂保护所。

Copies of original documents and relevant background materials, including the Analytical Investigation Binder and the Report on the Restoration of Baoxiang Pavilion, are archived within the Chengde Cultural Heritage Bureau (CCHB) and the Getty Conservation Institute in Los Angeles.

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佛教名称、术语索引 Buddhist Terminology and Naming Convention

Chinese (Pinyin)	Sanskrit Name	Chinese	Convention
Amituo	Amitabha	阿弥陀	Amitabha
Guanyin	Avalokitesvara	观音	Avalokitesvara (<i>Guanyin</i>)
Milefo	Maitreya (as Buddha)	弥勒佛	Maitreya (<i>Milefo</i>)
Puxian	Samantabhadra	普贤	Samantabhadra (<i>Puxian</i>)
Dashi	Mahasattva	大士	Great Being (<i>mahasattva</i>)
Shijiamouni	Sakyamuni	释迦牟尼	Sakyamuni
Weituo	Skanda	韦驮	Weituo
Wenshu	Manjusri	文殊	Manjusri (<i>Wenshu</i>)
Hufa (<i>Heng/Ha</i>)	Lokapala	护法	Temple Guardians (refer to them by name when speaking of only one)
Tianwang	Maharajadevas	天王	Heavenly Kings
Xumi zuo	Sumeru	须弥	Sumeru pedestal
Ba bao	Ashtamangala	八宝	Eight Auspicious Symbols
Qi zhen (or qi bao)		七珍	Seven Gems
Wu gong		五供	Five Offerings
Dazang jing	Tripitaka ('Three Baskets')	大藏经	Tripitaka (Buddhist canon)

清朝历代皇帝统治时期 Table of the Qing Emperors' Reign Dates

顺治	Shunzhi	1644-1662
康熙	Kangxi	1662-1723
雍正	Yongzheng	1723-1735
乾隆	Qianlong	1736-1795
嘉庆	Jiaqing	1796-1820
道光	Daoguang	1821-1850
咸丰	Xianfeng	1851-1862
同治	Tongzhi	1862-1875
光绪	Guangxu	1875-1908
宣统	Xuantong	1908-1911

附件6：承德地区地震记录 and 环境污染报告

APPENDIX 6: RECORD OF SEISMIC EVENTS AND ENVIRONMENTAL REPORT FOR CHENGDE

承德处于燕山、阴山构造带边缘，岩性主要是古老的火成岩、花网岩、砂砾岩等。古代的地震地质构造运动，在冀北形成一系列构造带，其中有几条大断裂通过。

Chengde is located at the borderline of the Yan and Yin Mountains geological structural zones, with strata composed primarily of volcanic rock, granite, and conglomerates. During ancient tectonic movements, a series of geological structural zones, including fault zones, developed in northern Hebei.

属于大的地壳分区界线断裂有：

崇礼——赤城——古北口——承德县——平泉断裂

崇礼——丰宁——隆化断裂

属于正断裂的有：

昌平——新河口——隆化断裂

密云——兴隆——宽城断裂

多伦——围场断裂

新城(古北口)——兴隆断裂

There are two major continental divide fault lines.

1. Chongli, Chicheng, Gubeikou, Chengde County, and Pingquan Fault

2. Chongli, Fengning, and Longhua Fault

A few normal faults:

1. Changping, Xinhekou, and Longhua Fault

2. Miyun, Xinglong, and Kuancheng Fault

3. Duolun and Weichang Fault

4. Xincheng (Gubeikou) to Xinglong Fault

从承德的大小断裂分析，承德地区受远古地震地质构造运动的影响比较严重，地壳变迁较大。

The area of Chengde suffered major tectonic movements in its geological history and many different scales of fault lines developed as a result.

从已有的地震材料分析承德属于少震区，震级都不是很大，从描述的现象看，震级一般在1~3级，频度、烈度不是很高。在《热河志》中有关于本区的地震的记载：“是年（元世祖至元28年~公元1291年）4月，以地震故免侍卫兵籍，武平（者）今岁徭役”。据《热河志》记载，1864~1944年发生在承德的地震达14次之多。市内有外八庙、滦河、应营子、潘家沟等地。当时描述：“室内箱柜摇晃，发声如雷，物件作响，人员惊逃屋外……”。从1944年来，除去1976年唐山地震在全区有较大影响外，未发生4级以上地震。承德市历年发生地震情况分别列在表1和表2。

Based on recorded earthquake data, Chengde is not particularly prone to seismic activity and the scale of earthquakes that did occur was not significant. Most of them ranged between 1 and 3 on the Richter scale, as recorded in the Rehe Gazetteer. One record from the Yuan dynasty in the 28th year (1291 A.D) of Zhiyuan showed that military and labor conscription was waived for Wuping residents because of an earthquake. Another record mentions a seismic event that “shook furniture and objects with a rumble like thunder, and made people run from their houses...” Between 1864 and 1944 the larger Chengde area suffered 14

earthquakes at Chengde, Luanhe, Yingyingzi, and Panjiagou (Table 1). Although the Tangshan earthquake in 1976 had a relatively large impact on Chengde, the scale of earthquakes since 1944 has not surpassed 4 on the Richter Scale (Table 2).

表一、1864~1945年承德地震情况统计表

时间	位置	地震活动
1864年	外八庙处	室内箱柜摇晃，花盆震倒
1894年	滦江	陈旧草房少数坍塌，人惊（）屋外
1898年	应营子地区	
1900年	应营子、潘家沟	窗户发响
1908年	应营子	窗户等物发响，有人惊（）室外
1914年	滦江	人从睡梦中惊醒，感觉炕要翻倒、门窗发响
1916年	应营子、潘家沟	应营子屋顶掉土、碗架发响。潘家沟有声如雷
1921年	大庙北梁	有声如雷、窗纸发响
1934年	外八庙处	有声、人站不住
1942年	西小街	有声如雷
1944年	大庙北梁	有声如雷、房屋摇动
1945年	外八庙处、潘家沟	有声如雷、潘家沟山上有的旧门楼被震塌

Table 1. Chengde earthquakes between 1864 and 1945

Time	Location	Effects
1864	Outlying Temples	Chests and shelves shook and flower pots fell
1894	Luanjiang	A few old thatched cottages collapsed, people fled
1898	Yingyingzi	
1900	Yingyingzi, Panjiagou	Windows shook and rattled
1908	Yingyingzi	Windows and objects rattled, people fled
1914	Luanjiang	People were awakened to the sensation of falling, windows shook and rattled
1916	Yingyingzi, Panjiagou	Roofs collapsed, shelves shook and rattled at Yingyingzi. Panjiagou experienced a rumble like thunder.
1921	Damiao Beiliang	Rumble like thunder, windows shook and rattled
1934	Outlying Temples	Rumble, people unable to stand
1942	Xixiaojie	Rumble like thunder
1944	Damiao Beiliang	Rumble like thunder, houses shook
1945	OutlyingTemples, Panjiagou	Rumble like thunder, old houses collapsed at Panjiagou

表二、1973~1988年承德市地震情况观测表

发震时间						震中位置				
年	月	日	时	分	秒	纬度	精度	地点	震级	Km 深度
1973	1	4	18	55	46	40°09'	117°09'	承德	1.0	
1973	10	11	16	40				承德附近	1.5	
1973	10	20	16	18		41°02'	118°00'	承德附近	2.1	
1974	11	16	00	57		41°02'	118°00'	承德东北	1.3	
1975	11	3	18	05		40°51'	118°16'	承德东南	1.4	
1977	2	10	17	17		41°49'	118°07'	承德东北	1.6	
1979	10	8	13	36	13.3	40°46'	118°14'			
1981	3	25	09	47	35.7	40°50'	118°30'	承德东南	2.3	<5
1982	2	21	22	59	35.0	40°57'	117°49'	承德西	2.3	29
1983	2	4	14	57	34.7	41°09'	117°55'	承德北	2.4	22
1983	4	4	21	40	17.3	40°55'	118°20'	承德东南	2.5	10
1983	6	4	12	36	10.9	41°28'	118°19'	承德东北	2.1	
1983	10	20	13	14	13.5	40°42'	118°08'	承德西南	1.9	17
1984	11	3	18	19	23.8	41°07'	117°54'	承德北	2.1	

Table 2 Chengde earthquakes records between 1973 and 1988

Earthquakes Time						Epicenter				
Year	Mon	day	hour	Min	Sec	Latitude	Longitude	Location	Scale	DepthKm
1973	1	4	18	55	46	40°09'	117°09'	Chengde	1.0	
1973	10	11	16	40				Chengde vicinity	1.5	
1973	10	20	16	18		41°02'	118°00'	Chengde vicinity	2.1	
1974	11	16	00	57		41°02'	118°00'	NE of Chengde	1.3	
1975	11	3	18	05		40°51'	118°16'	SE of Chengde	1.4	
1977	2	10	17	17		41°49'	118°07'	NE of Chengde	1.6	
1979	10	8	13	36	13.3	40°46'	118°14'			
1981	3	25	09	47	35.7	40°50'	118°30'	SE of Chengde	2.3	<5
1982	2	21	22	59	35.0	40°57'	117°49'	West of Chengde	2.3	29
1983	2	4	14	57	34.7	41°09'	117°55'	North of Chengde	2.4	22
1983	4	4	21	40	17.3	40°55'	118°20'	SE of Chengde	2.5	10
1983	6	4	12	36	10.9	41°28'	118°19'	NE of Chengde	2.1	
1983	10	20	13	14	13.5	40°42'	118°08'	SW of Chengde	1.9	17
1984	11	3	18	19	23.8	41°07'	117°54'	North of Chengde	2.1	

2003年承德市环境状况

CHENGDE CITY ENVIRONMENT IN 2003

环境质量状况

Environmental Conditions

一、空气质量状况

1. Air Quality

2003年承德市环境空气污染指数为115，空气质量为III1级。首要污染物为二氧化硫，为轻微污染，其中一、四季度空气质量为III级，二、三季度空气质量为II级。由日报统计结果得出：全市环境空气为I级的天数57天，为II级的天数158天，全年达到II级空气质量标准的天数为215天，比2002年环境空气质量优良的天数多35天。另外，旅游区环境空气质量为优的天数为119天，优良以上天数277天。总体上我市环境空气质量在2003年度有历史性的突破。旅游区环境空气质量明显好于市区的环境空气质量。从全年环境空气质量来看，旅游区优良以上天数为277天，仅优的天数就达119天，市区内优良以上天数215天，二者差62天。

In 2003, the Chengde Municipality air pollution index was 115, air quality was ranked in Class III1, with the main pollutant being SO₂. Air quality in the first and fourth quarters was in Class III and the second and third quarters in Class II. Daily monitoring revealed that 57 days were Class I and 158 days were Class II; therefore, 215 days met Class II standard, which represents 35 days more than in 2002. Air quality in tourist areas ranked in Class I during 119 days and in Class II during 277 days, while air quality in the urban areas ranked in Class II for 215 days. Thus, the tourist areas had 62 more days of better air quality than the urban areas.

污染特征及原因分析

Characteristics of Pollution and Cause Analysis

承德市市区环境空气主要污染物为二氧化硫，且带有明显的季节变化性，由此表明我市环境空气污染呈典型的煤烟型污染特征。形成的主要原因是我市地处山谷盆地，冬季静风频率大，夜晚易形成逆温现象，污染物不易扩散。以燃煤为主的能源结构，机动车尾气排放，春季出现扬尘浮尘天气等，具体特征如下：

- 1、进入取暖期后，二氧化硫和硫酸盐化速率日均值持续上升，达到峰值。
- 2、二氧化氮全年日均值变化不大，但已出现超标现象，在四季度超标率达到1.7%。
- 3、可吸入颗粒物和降尘与往年比较明显下降，2003年度可吸入颗粒物日均值超标率3.4%，降尘月均值超标率为20%，2002年度可吸入颗粒物日均值超标率为35.3%，降尘月均值超标率为38.9%，二者相比变化明显。

The main pollutant in Chengde municipality during this period was SO₂ and its concentration changed seasonally, typical of pollution from coal-burning. The municipality is located in a valley basin. During winter, the days were mostly calm and at night a temperature inversion occurred preventing diffusion of pollutants. The characteristic impact of coal-burning pollution, automobile tailpipe emissions, and windblown dust in spring is evident:

- (1). As the cold season began, the daily average concentration of SO₂ and SO₄ continuously increased until peaking.
- (2). The change in the annual daily average of NO₂ was not as obvious, but its concentration exceeded the standard by 1.7%.
- (3). Compared with previous years, levels of both inhaled particles and dust fall were reduced. In 2003, the daily average for inhaled particles exceeded the standard by 3.4% and monthly dust fall exceeded

the standard by 20%. In 2002, the daily average for inhaled particles exceeded the standard by 35.3% and monthly dust fall exceeded the standard by 38.9%. Thus, there is a marked difference between the two years.

二、水环境质量状况

2. Water Quality

(一) 地表水质

(1) Surface Water Quality

全年分枯水期、丰水期、平水期。对我市七条河流25个断面进行监测，其中潮河、清水河河流水质较好，各水期基本达到水环境功能区划标准要求；滦河、武烈河、瀑河、柳河、伊逊河在不同河段、不同水期、水质均超标现象。25个断面中全年有28%的断面水质达到《河北省地面水环境功能区划》要求，其中枯水期能达到功能区划要求的占28%，丰水期能达到功能区划要求的占28%，平水期能达到功能区划要求的占36%。河流水质主要污染物为耗氧有机物、氨氮、总磷和粪大肠菌群。与2002年地表水环境质量基本持平。

Twenty-five monitoring cross-sections have been set to monitor seven rivers in Chengde whose flow can be divided into 3 seasons: high, medium, and low. Water quality at both the Chao and Qing rivers was good and always met the required functional standards, regardless of seasonal flows. The water quality of the Luan, Wulie, Bao, Liu, and Yixun rivers varied during different seasons and at different locations. Water quality at 28% of the 25 cross-sections met the requirements of Hebei Surface Water Environmental Functional Standard. Another 28% of met the standard at both high and low flow seasons; 38% met the standard during medium flow seasons. The major problem and bacteria pollutants were biological oxygen demand, ammonia-nitrogen, total phosphorus, and fecal coliforms. The overall quality was the same as that of 2002.

地表水污染原因分析

Cause Analysis of Surface Water Contamination

滦河的主要污染断面为上板城大桥和乌龙矾大桥，水质劣于V类，主要是由于城镇生活污水汇入河流所致。

The principal contaminated cross-sections at Luan River were at Shangbancheng Bridge and Wulongji Bridge. Water quality was worse than Class V because sewage flowed into the river from the town at these locations.

伊逊河主要污染断面为围场上游，主要污染物为耗氧有机物。从主要污染物的种类分析，造成该断面的污染与上游小淀粉加工厂的生产污水排入河流有直接关系。

The principal contaminated cross-section at Yixun River was upstream of Weichang. The main problem in river water was biological oxygen demand, which came primarily from runoff of a flour factory upstream.

武烈河主要污染断面为雹神庙，主要污染物化学需氧量、高锰酸盐指数、氨氮。主要原因为此断面处于市政排污口下游，城市生活污水未经处理直接排入河流所至。

The principal contaminated cross-section at Wulie River was at Baoshen Temple. The major problems were biological oxygen demand, permanganate index, and ammonia-nitrogen. The cross-section was located downstream of an untreated municipal sewage outlet.

柳河的主要污染断面为26号桥，水质为劣V类。主要污染物是耗氧有机物、氨氮、粪大肠菌

群。污染的主要原因是上游兴隆县城生活污水及工业污水排入河流所致。

The principal contaminated cross-section in the Liu River was at No. 26 Bridge, where water quality was worse than Class V. The major problems were biological oxygen demand, ammonia-nitrogen, and fecal coliforms from an untreated sewage outlet and industrial runoff upstream of Xinglong County.

瀑河的主要污染断面为党坝，全年水质为劣V类。主要污染物是氨氮、耗氧有机物。主要污染原因是由于平泉县城生活污水及工业污水排入河流所致。

The principal contaminated cross-section of Bao River was at Dang dam, where water quality was below the Class V standard. The major pollutants identified were biological oxygen demand, ammonia-nitrogen, and fluoride from untreated sewage and industrial runoff upstream of Pingquan County.

（二）地下水水质

(2) Groundwater Quality

全市2003年地下水监测点位20个，水质良好的点位8个，占监测井位的40%；水质较差的点位8个，占监测井位的40%；水质极差的点位4个，占总监测井位的20%。主要污染物为：（1）硝酸盐氮，检出率为100%，超标率为45.0%；（2）亚硝酸盐氮，检出率为25%，超标率为10%；（3）六价铬，检出率为5%，超标率为5%。

There were 20 monitoring points for groundwater at Chengde in 2003. Of these, eight points had good water quality; eight points had mediocre water quality; and four points had poor water quality. The main pollutants were: (1) Nitrate-nitrogen, whose total concentration exceeded the standard concentration by 45%. (2) Nitrite-nitrogen exceeded the standard by 10%. (3) Chromium (VI) exceeded the standard by 5%.

地下水污染特征及原因分析

Characteristics of Groundwater Contamination and Causes

根据地下水监测结果，冷冻厂、三塑一带硝酸盐氮出现超标；马圈矿新井、营子水源井亚硝酸盐氮出现超标，太平庄井六价铬出现超标。从受污染的地下水井位主要污染物分析，地下水受污染的主要原因一是浅层地下水受地表污染；二是工业固体废弃物，经雨水淋溶渗入地下。

At the areas near the icehouse and number 3 plastic factory, nitrate-nitrogen levels exceeded the standard. At Maquan Mine new well and Yingzi well areas, nitrite-nitrogen levels also exceeded the standard. At Taipingzhuang well, chromium (VI) levels exceeded the standard. Based on the pollutants, groundwater pollution was caused by shallow groundwater contamination and eluviation of industrial solid wastes by rainwater into groundwater.

（三）山庄湖区水质状况

(3) Summer Resort Lake Water Quality

避暑山庄湖区设立4个监测点位，主要污染物为总磷和总氮，总磷除芳园居点未超过地表水三类标准外，其它各点位均超标。从污染物种类看造成污染的主要原因为湖水的富营养化。

There were four monitoring points for water quality in the lake area. The main pollutants identified were total phosphate and total nitrogen. Water quality at all the monitoring points did not meet standards except at Fanyuanju, where total phosphate concentration was within surface water Class III standard. Lake water contamination was due to the presence of an excess of biological material.

工业污染物排放状况

Discharge of Industrial Wastes and Pollutants

一、工业废水排放状况

1. Industrial Waste Water Discharge

2003年全市工业废水排放总量为2175.93万吨；C O D排放量为1.92万吨；排放达标量为2063.14万吨；废水排放达标率94.81(%)。

The annual city industrial waste water discharge in 2003 was 21,759,300 tons and chemical oxygen demand waste was 19,200 tons. Of the total discharge, 20,631,400 tons, or 94.81%, met the standard.

二、工业废气排放状况

2. Industrial Waste Air Discharge

2003年全年工业废气排放总量为429.76亿标立方米,其中燃料燃烧废气排放量为206.13亿标立方米;生产工艺废气排放量为223.63亿标立方米。

The annual city industrial waste air discharge was 42,976,000,000m³, of which 20,613,000,000m³ were from fuel burning and 22,363,000,000 m³ were from industrial production.

三、工业固体废物排放状况

3. Industrial Solid Wastes

2003年,全市工业区固体废弃物产生量为597.90万吨。其综合利用量为208.34万吨,综合利用率为34.84%;贮存量为291.99万吨;处置量为97.51万吨。承德市生活垃圾产生量为15.14万吨,2003年12月28日,生活垃圾无害化处理场项目正式开工建设。

工业固体废弃物中冶炼废渣和尾矿分别占27%和52%,主要来源于钢铁冶金行业和铁选行业。

The annual city industrial solid waste was 5,979,000 tons, of which 2,083,400 tons (34.84%) were recycled; 2,919,900 tons were stored; and 975,100 tons were treated. Daily waste totaled 1,514,00 tons. Construction of a waste treatment facility was begun on 28 December, 2003. Of total industrial solid waste, 27% derived from metallurgy and 52% from mining gangue. Both of these figures were from the iron and steel industry.

承德市生态环境状况

Chengde Ecology

全市目前水土流失面积达18000平方公里。全市土地沙化面积为12.43万公顷,草场退化和沙化草化面积为7.7万公顷,占可用草地面积的48.0%。

2003年全市完成造林面积8万公顷。市区绿化覆盖面积达到147公顷,同比增长0.68%;园林绿地面积135公顷,同比增长0.74%;公共绿地面积72公顷,同比增长1.3%。

全市现有国家级自然保护区2个,省级自然保护区5个,自然保护区总面积达1810.084平方公里,占国土面积的4.6%。全市风景名胜区面积达到2394平方公里。目前,全市森林覆盖率为44%,森林公园面积为939.225平方公里。

Until the present, Chengde has lost 18,000km² of land to erosion; desertification affects 124,300 square hectares of land; 77,000 hectares of grassland, or 48.0% of usable grassland, have been degraded. In 2003, an additional 80,000 hectares of land were planted. Urban greenswards totaled 147 hectares, an increase of 0.68%. Park and landscape areas totaled 135 hectares, an increase of 0.74%. Public green areas increased to 72 hectares, an improvement of 1.3%. In 2003, Chengde had two nationally protected and five provincially protected nature areas. The total protected area in Chengde was 1810km², representing 4.6% of the national territory. The scenic area in Chengde totaled 2,394km²; forest park area was 939km²; and forest cover totaled 44% of Chengde territory.

